

EAST MEETS WEST:

ABOUTNESS RELATIVES IN SWISS GERMAN

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1. Introduction¹

Grosu (2002:145) defines relative clauses as follows:

- (1) a. A relative clause is subordinated.
b. A relative clause includes, at some level of semantic representation, a variable that ultimately gets bound *in some way* by an element of the matrix.

Grosu goes on to state that "...[(1)] assumes the existence of distinguished **syntactically represented** elements in both the matrix and the relative clauses." Interestingly, this statement seems to imply that anything that counts as a variable *at some level of semantic representation* is represented in syntax. This may very well be too strong an interpretation of the mapping between syntax and semantics. On the other hand, Grosu suggests that the definition in (1) may be appropriate as a "characterization of a **prototypical core** of relative constructions," and indeed in his section 7 (Grosu, 2002:157) he discusses, among others, one type of relative clause that might not be properly characterized by the above definition. Among the examples he cites are *such that* relatives in English and a Japanese example cited from Kuno (1973:257, ex.(35b)), both repeated here as (2).

- (2) a. The mathematical system such that two and two are four is Peano arithmetic
b. California-syuu-ga Nihon yori ooki America-wa hontooni ooki kuni desu
Calif.-state-Nom Japan than big America-Top really big country is
'America, such that the state of California is larger than Japan, is a really big country'

What these two examples have in common is that the relative clause does not in any obvious sense contain a variable that could be said to be bound by an operator coindexed with its head. In (2a), the relation is vaguely a locative one: we are talking about a mathematical system such that *in it* two and two are four. In (2b) on the other hand the relationship is one of a part to a whole, California is a state of America. In both cases it is certainly imaginable that there is a syntactic variable. In (2a), there could be a gap corresponding to an element like *there*, bound by an empty locative operator, and in (2b) there might be a genitive gap adjoined to the

¹ This article is dedicated to Hans den Besten. Already during our student years in the 70s and ever since, his high standard of scholarship has been an example that I have tried (often in vain) to follow. The title, incidentally, was inspired by a stray association between a Dutch proverb and Hans' name: Oost West – Thuis Den Besten.

For helpful discussion, I would like to thank Hans Broekhuis, Marcel den Dikken, Joe Emonds, Alex Grosu, Riny Huijbregts and Craig Thiersch.

noun California, bound again by a corresponding empty operator.

There is virtually nothing in the literature about *such that* relatives, but relative clauses of the type given in (2b), often referred to as ‘gapless relative clauses,’ though the name begs the question, are a frequent phenomenon in the languages of the Far East. At least they are found in Chinese (cf. (3a)) and in Korean (cf. (3b)).

- (3) a. ta xiu che-de fangfa Wu (2000:95) cited from Ning (1993)
 he repair car-DE method
 ‘the way in which he fixed the car’
- b. thayphwung-i cinaka-n huncek Chung & Kim (2003:ex. (37a))
 typhoon-Nom passed.by-PNE debris
 ‘the debris that resulted from a typhoon passing by’

About these types of relatives, there is an abundant literature. The gaplessness of Chinese relative clauses of the type illustrated in (3a) is contested. Ning (1993) in fact argues (contra i.a. Tsai (1994)) that Chinese has four null *wh*-operators, corresponding to PLACE (‘where’), TIME (‘when’), MANNER (‘how’), and REASON (‘why’). These four types correspond quite closely to the cases in English where these notions are directly expressed in the head of the relative clause, but where the expected preposition can be absent:

- (4) The place he lives vs. The house he lives *(in)
 The day she left vs. The interval *(during which) she left
 The way we solved it vs. The accuracy *(with which) we solved it
 The reason you came vs. The funeral you came *(for)

For more discussion about the situation in Chinese, see also Aoun & Li (2003). While perhaps not entirely uncontroversial, the situation in Japanese seems more straightforward and most analysts appear to agree that a *wh*-movement-like operation is not involved in the derivation of Japanese relative clauses, cf. in particular Fukui & Takano (2000). And what is true for Japanese appears to be true for Korean as well.

The question that arises in the analysis of relative clauses in languages like Japanese and Korean is whether syntax has any role to play in restricting the relationship between the head of the relative clause and the relative clause itself. Instead of examining examples from these languages, consider again *such-that* relatives in English. In example (2a) it cannot be denied that the relative clause “is about” the head. Consider the following contrasts.

- (5) a. a rectangle such that the long sides are twice the length of the short sides
 b. (#)a circle such that each of the four corners is 90°
 c. #a circle such that our parrot is whistling the Marseillaise

(5a) is perfectly OK, though, of course, some minimal knowledge of geometry is required to know this. The relative clause is about the head because the sides that the relative clause talks about can be taken to be the sides of the rectangle. In fact they must be the sides of that rectangle in order for the relative clause to be comprehensible. The status of (5c) is just that: incomprehensible. There is nothing in the relative clause that can plausibly be interpreted as

being about the head. (5b) is, perhaps, somewhat in between in that at least we are talking about properties of geometrical objects. The problem with this example, of course, resides in the fact that in our actual world circles do not have corners.

Still, it is necessary to define aboutness. Not every semantic relationship can license a gapless relative clause. And languages differ as to which semantic relationships can license them. In the examples in (2) and (5a), the relevant relationship can plausibly be characterized as a part-whole relationship. And what makes (5b) awkward is that a corner cannot be a part of a circle, while in (5c) it is hard to see what if anything is supposed to be a part of what. On the other hand, in Korean a cause-result relationship can also license a gapless relative clause, as seen in (3b). But such a relationship cannot license a gapless relative in Japanese.² Similarly, *such-that* relatives cannot be easily licensed by a cause-result relationship:

(6) ??the *wh*-island violation such that a *wh*-phrase is extracted from an indirect question

It is possible, however, that (6) is not fully grammatical because there is a second, more appropriate way to express the same relationship by an adnominal modifying clause in English, namely *when*-relative clauses:

(7) ?the *wh*-island violation when a *wh*-phrase is extracted from an indirect question

I will drop the problem of giving a semantico-pragmatic account of aboutness here. Instead I will turn to the main purpose of the present article, which is to examine the properties of apparently gapless relative clauses in one European language: Swiss German. And the main question to be addressed is whether or not there is a syntactically present gap bound by some operator.

2. Swiss Relatives Revisited

In Van Riemsdijk (1989) I argued that Swiss German, more specifically Züritüütsch (henceforth ZT), the dialect spoken in and around Zurich, forms relative clauses without the intermediary of *wh*-movement or a comparable process such as empty operator movement into Spec,CP. The main arguments given there were the following.

- headed relative clauses are introduced by an invariable relative complementizer, *wo*, but never preceded by a relative pronoun;³

² Thanks to Takashi Imai (p.c.) for confirming this point.

³ In this respect, ZT differs minimally from Bavarian (cf. Bayer, 1984, Pittner, 1995) where the relative complementizer *wo* always can and sometimes must be preceded by a *d*-pronoun. Compare (i) with (ii).

- in most positions we find an overt resumptive pronoun;
- the resumptive pronoun in question behaves like a ‘normal’ pronoun, not like a variable in that it is insensitive to island configurations;
- gaps are only found in the subject, direct object and, subject to dialect variability, the indirect object position of the top CP layer of the relative clause – these cases are best accounted for by assuming that these positions are also filled by a resumptive pronoun which behaves like a clitic and is adjoined to C° , putting it in a position where, being locally identified by the head of the relative clause, it can, and due to the Avoid Pronoun Principle must, be deleted.
- While couched in the Government-Binding (or: Principles and Parameters) framework, it seems to me that the overall thrust of the argument is still tenable.⁴

Let me briefly illustrate these main points. A typical example with a resumptive pronoun is given in (8).⁵

- (8) s mäitli wo de Leo immer mit *(ere) i’s kino gaat
 the girl WO the Leo always with her in the cinema goes
 ‘the girl that Leo always goes to the movies with’

Such resumptive pronouns are easily found inside island configurations, as shown in (9).

- (9) es mäitli wo öpper wo mit ere i’s kino gaat zimli mues spine
 a girl WO someone WO with her in the cinema goes quite must crazy-be
 ‘a girl that someone who goes to the movies with her must be quite crazy’

In the SU and DO positions of the top CP in the relative clause, we find a gap:

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- (i) I schenk’s dem Kind (des) wo mid da Katz spuid (BAV, adapted from Bayer (1984:216))
 I give it the child_{DAT} who WO with the cat plays
 ‘I give it to the child that is playing with the cat’
- (ii) I schänk’s em chind (*das) wo mit de chatz spilt (ZT)

⁴ Penner & Bader (1995), working on the Bernese dialect and in a minimalist framework come to a quite similar conclusion, though they assume that *pro* serves as a relative pronoun and moves to Spec,CP, triggered by a pronominal feature on *wo*. Note that the Bernese data are apparently somewhat different. For example, Bader & Penner (1988:40,fn20) note that resumptive object pronouns are sometimes licit in Bernese.

⁵ Many instances of ‘e’ in the ZT examples, in particular those in pronouns, articles and stressless syllables, are pronounced as schwa. The orthography is impressionistic and constitutes a compromise between phonetic accuracy and recognizability (based on Standard German). I use ‘a’ for the back vowel, ‘ä’ for the low front and ‘ë’ for the mid front vowel. Furthermore, Swiss German is rich in epenthetic consonants, mainly ‘n’, for example between *wo* and subject clitics starting with a vowel, as in *wo-n-i* (‘WO I’). These epenthetic consonants have been omitted in the examples.

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- (10) a. es mäitli wo (*si) gëörn i's kino gaat
a girl WO (she) gladly in the cinema goes
'a girl that likes to go to the movies'
- b. es mäitli wo mer (*si) gëörn i's kino mitnämed
a girl WO we (her) gladly in the cinema with-take
'a girl that we like to take along to the movies'

If the gap were the result of a *wh*-movement type process, we would expect long movement patterns⁶ and consequently gaps should also be found in embedded SU and DO positions. But they aren't.

- (11) a. es mäitli wo mer säit das *(si) gëörn i's kino gaat
a girl WO one says that she gladly in the cinema goes
'a girl that they say likes to go to the movies'
- b. es mäitli wo niemer cha gläube das mer *(si) gëörn i's kino mitnämed
a girl WO nobody can believe that we her gladly in the cinema with-take
'a girl that nobody can believe we like to take along to the movies'

The relationship between the gap in (10) and the top of the relative clause is, in other words, clause-bound. And clause-boundedness is a property that it shares with clitic movement but not with *wh*-movement. Subject and object pronouns (and, to a certain extent indirect object pronouns) may move to a pre-subject position where it is generally assumed they adjoin to C° (here: *wo*). Hence my proposal in Van Riemsdijk (1989) that such examples are derived by having a resumptive pronoun adjoin to *wo*, whereupon it is in a configuration local enough (i.e. close enough to the licensing head) to be deleted.⁷ The proposal crucially rests on the idea that the Avoid Pronoun Principle of Chomsky (1981) forces deletion and, furthermore, that clitic fronting, normally optional, must apply when it feeds deletion.

In my (1989) article, there are two issues that I failed to address, the first factual and the second analytical. The first of these issues concerns the fact that resumptive pronouns are not always necessary in ZT, the second one has to do with the question of whether there could be hidden operator-like elements in ZT-relatives, rejoining the discussions that were alluded to in connection with Chinese, Korean and Japanese above. I will address the first matter directly and then turn to the second issue in the following sections.

⁶ ZT does have overt *wh*-movement in questions and also in free relatives, and it exhibits all the canonical diagnostic properties of *wh*-movement, (cf. Van Riemsdijk, 1998).

⁷ This idea was directly inspired by the proposals on specified deletion in Den Besten (1981), later reprinted in Den Besten (1983, and 1989).

ZT relative clauses are, in fact, similar to *such-that* relatives and to the type of aboutness-relatives found in Japanese. In particular, part-whole relations are sufficient to license a *wo*-relative in ZT. Here are some examples.

- (12) a. Es äuto wo d stoosstange fëält ghöört nöd uf d straass
 a car WO the fender misses belongs not on the street
 ‘A car that has no fender on it does not belong on the street’
- b. Familie wo de eltischt i soon s gschäft übernimt git’s hüt nöme vil
 families WO the oldest son the business over-takes gives-it today no-longer
 many
 ‘Families in which the oldest son takes over the business, there are not
 many any more today’
- c. Es drüüeck wo d sume vo de kwadmaat vo de zwäi chürzere siite gliich
 a triangle WO the sum of the squares of the two shorter sides equally
 grooss isch wie s kwadmaat vo de lengschte siite isch es rächteckigs drüüeck
 large is as the square of the longest side is a right-sided triangle
 ‘A triangle such that the sum of the squares of the two shorter sides equals
 the square of the long side is a right-sided triangle’

In all these examples, it seems reasonable to say that there is a part-whole relationship between the head of the relative clause and one (or several) of the nominal elements inside the relative clause: car – fender, family – son, triangle – sides/side. Other semantic relationships such as a resultative one (cf. (3b) and (6)) do not yield acceptable relative clauses:

- (13) a. *De waldbrand wo de blitz imene hööche bäum iigschlage hät isch glösch
 the forest-fire WO the lightning in-a high tree struck has is extinguished
 ‘The forest fire such that the lightning struck a tall tree has been put out’
- b. *D truur wo eltere iri chind verlüüred duuret immer lang
 the grief WO parents their children lose lasts always long
 ‘The grief when parents lose their children always lasts long’

It should be noted that these examples are, sometimes, marginally possible when *wo* is interpreted in a purely locative or temporal way.⁸

3. Placeholder Variables

Let us now turn to the second issue that was insufficiently addressed in my earlier work on ZT relatives. To what extent can we plausibly assume that in these apparently gapless rela-

⁸ More typically, though, such relations are obtained with adnominal *when*-adjunct clauses in English and *wän*-clauses in Swiss German. They do tend to require a more or less generic causal connection, however. An English example is seen in the translation of (13b).

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tives there actually is a gap nevertheless, albeit a hidden one. This, for example, is the answer given for Chinese by Ning (1993). Similarly, we may ask if the part-whole relationship could not somehow be explicitly (though covertly) present in the syntactic structure. By way of illustration, consider the following example.

- (14) en hund wo d oore z lang sind
a dog WO the ears too long are
'a dog whose ears are too long'

The relationship between the dog and the ears might be characterized as a possessive relation. There are two ways, in ZT, to express adnominal possessives: by means of a possessive adjective, or, if there is a full possessor phrase, that phrase will show up in the dative case next to the possessive adjective:

- (15) a. sini oore b. em hund sini oore
his ears the dog_{DAT} his ears

Could there be a variable corresponding to such a possessor phrase in (14)? There are good reasons to reject such a notion. First, possessives do not co-occur with articles:

- (16) a. *d sini oore b. *sini d oore
c. *d em hund sini oore d. *em hund sini d oore

Secondly, even if this problem can be overcome overt possessives can never be extracted from a containing noun phrase. While there is no *wh*-word for 'whose', a complex dative possessor phrase can be questioned only by pied-piping the containing phrase.

- (17) a. *wem sini sind d oore z lang?
who his are the ears too long
b. wem sini oore sind z lang?
who his ears are too long
'whose ears are too long?'

Hence, an operator-variable structure based on possessives seems to be difficult to defend.

In some cases, of course, possessors may be external to the noun phrase designating the possessed. In particular, possessive datives are often used, as in (18).

- (18) Si händ mer s chnüü operiert
they have me_{DAT} the knee operated
'They have operated my knee'

Such a structure would avoid the extraction problem.⁹ But dative possessor phrases of this kind are quite limited. Corresponding to (14), for example, there is no dative possessor alternative available:¹⁰

- (19) *D oore sind em hund z lang
the ears are the dog_{DAT} too long

Furthermore, a relative clause based on a possible and attested possessive dative construction such as (18) is ungrammatical.

- (20) *en maa wo si s chnüü operiert händ
a man WO they the knee operated have
'a man whose knee they operated on'

As a matter of fact, it appears that whenever a dative possessor construction is relativized, the possessive dative must appear overtly as a resumptive pronoun:

- (21) en maa wo si *(em) s chnüü operiert händ

Before turning to a potentially more promising hypothesis for ZT in the next section (section 4), let me briefly review the situation in English, German and Dutch.

Consider first the previously mentioned *such-that* relatives in English, as exemplified by (2a), repeated here as (22).

- (22) The mathematical system such that two and two are four is Peano arithmetic

Note first that the part-whole relation is not so obvious in this example. A paraphrase might be something like (23).

- (23) The mathematical system such that *in it* two and two are four is Peano arithmetic

On the other hand, we might also say that the equation “two and two are four” is, in some sense, part of the mathematical system called Peano arithmetic. Be that as it may, it is quite clear that there are many cases where a ‘silent locative’ will yield quite awkward results, as shown in the following examples.

- (24) a. a country such that you don’t feel so good #(in it)
b. a picture such that #(in it) Rosa has a snake near her

More convincingly, perhaps, there are cases where a locative might be appropriate, but not one with the preposition *in*. Take the English equivalent of (12c).

⁹ Thanks to Hans Broekhuis (p.c.) for suggesting this possibility.

¹⁰ Actually, (19) is grammatical on another, quite irrelevant, experimenter reading. On that reading, the sentence means that the dog feels that his ears are too long.

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- (25) a triangle such that (#in it) the sum of the squares of the two shorter sides equals the square of the long side...

The fact of the matter is that the sides are not in the triangle but, if anything on it, but *on* would not do either. Only a possessive expression is appropriate here: the sides *of* the triangle. And if, instead of a single placeholder variable we have a whole collection of them, this avenue becomes distinctly unattractive.

But there is a second avenue here. After all, *such-that* has a more or less transparent meaning in that *such* is a kind of pro-adjective that can also occur in predicative contexts. And indeed, the above examples have straightforward predicative counterparts.

- (26) a. This mathematical system is such that (in it) two and two are four
b. This country is such that you don't feel so good #(in it)
c. This picture is such that #(in it) Rosa has a snake near her

It seems quite plausible, therefore, to assume that *such-that* relatives are underlyingly predicative, but with covert *wh*-subject and copula.

- (27) a. the mathematical system ~~which is~~ such that (in it) two and two are four
b. a country ~~which is such~~ that you don't feel so good #(in it)
c. a picture ~~which is such~~ that #(in it) Rosa has a snake near her

We are still left with the question of why the b- and c-examples are not very felicitous without the locative, and, more drastically, why (5c) repeated here as (28) is quite deviant.

- (28) a. #a circle such that our parrot is whistling the Marseillaise
b. #a circle which is such that our parrot is whistling the Marseillaise

Given that the syntax is now fully transparent, the deviance must result from extragrammatical factors such as knowledge of the world, a matter that I will not pursue at this point.

Turning now to German and Dutch, it would appear that the closest approximation to the English *such-that* relative is a loosely locative one and a more or less possessive one in Dutch. Consider the following translations of (12c) and (25).

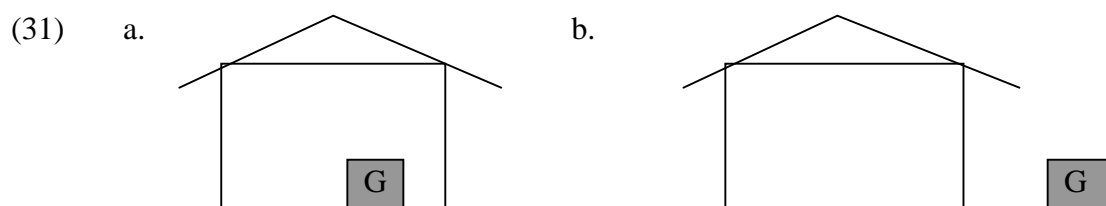
- (29) a. ein Dreieck, bei dem die Summe der Quadrate der beiden kurzen Seiten gleich gross ist, wie das Quadrat der langen Seite (German)
b. een driehoek waarvan de som van de kwadraten van de twee korte kanten net zo groot is als het kwadraat van de lange kant (Dutch)

German uses the preposition *bei* which ranges in meaning from 'near' via 'at' to 'in company of' and 'in connection with'. In other words, it serves to designate potentially very loose semantic relationships, making it quite appropriate for the task. Sometimes the *bei*-locative is

semantically linked to the verb, sometimes it has the status of a free adjunct. This can be seen in the following examples.

- (30) a. ein Haus bei dem eine Garage steht
a house near which a garage stands
'a house that has a garage next to it'
- b. ein Haus bei dem eine Garage fehlt
a house with which a garage is-missing
'a house that does not have a garage'

The two differ very clearly in meaning.



As such, *bei* is compatible with both of the two situations depicted in (31). But (30a) can only mean (31b), while the free adjunct reading obtained in (30b) is compatible with both situations. In the case of equivalents of the English *such-that* relatives it is clearly the free adjunct reading that comes to the fore. It appears that *bei*-adjuncts are pretty much compatible with just any clause or any meaning. They are also frequently used to introduce a topic, as in (32),

- (32) a. Bei diesem Wetter lohnt es sich nicht, den Rasen zu mähen
with this weather pays it REFL not the lawn to mow
'With this weather it isn't worth the trouble to mow the lawn'
- b. Bei einer solchen Farbenpracht muss ja sogar der Appel verblassen
with a such color-splendor must PRT even the Appel turn pale
'With such a splendor of colors, even Appel must turn pale'

And in each case, there is a corresponding relative clause:

- (33) a. ein Wetter, bei dem es sich nicht lohnt, den Rasen zu mähen
b. eine Farbenpracht, bei der ja sogar der Appel verblassen muss

Turning now to Dutch, the situation is less clear. Certainly, there is not a preposition such as *bei* that fits almost any circumstance as a free adjunct. Instead, frequent use is made of a rather loose version of the possessive relation expressed by the preposition *van* ('of'). Our triangle example, for example, would be expressed in this way:¹¹

¹¹ Marcel den Dikken (p.c.) informs me that for him a pure locative *waar* ('where') is also possible in such constructions.

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- (34) een driehoek waarvan de som van de kwadraten van de twee korte kanten even groot
a triangle whereof the sum of the squares of the two short sides equally big

is als het kwadraat van de lange kant noemen we een rechthoekige driehoek
is as the square of the long side call we a rectangular triangle

‘A triangle such that the sum of the squares of the two short sides equals the square
of the long side, we call a rectangular triangle’

Note that the status of the possessive *wh*-phrase *waarvan* is somewhat unclear. On the one hand, we seem to be talking about a possessive relationship: the sides **of** the triangle. But there are two occurrences of the noun corresponding to ‘side’ in the relative clause. We presumably do not want to say that *waarvan* is extracted from both noun phrases simultaneously, since we do not have an across-the-board configuration.¹² It would appear, then, that *waarvan* in such examples is also a kind of free adjunct, explaining perhaps why apparent extraction out of noun phrases, prohibited with just about every other preposition, is possible with *van*.¹³

Returning to German, there is another consideration that may be relevant. The quest for some element semantically neutral enough to establish an aboutness relation of the most general kind between the head and the relative clause is reminiscent of one of the main problems surrounding the partial *wh*-movement construction which is found, among others in German.¹⁴ Consider a typical example like (35)

- (35) Was glaubst Du mit wem Maria getanzt hat?
what believe you with whom Mary danced has
‘Who do you think Mary danced with?’

There are, in essence, two types of approaches to such constructions. One, dubbed the direct dependency approach, claims that the formative *was* is a scope marker, that has no source in the matrix clause. The other, called the indirect dependency approach, maintains that *was*

¹² The situation is not completely clearcut, however. As Riny Huijbregts (p.c.) points out to me, there are examples of Right Node Raising, often thought to be across-the-board-like, that do not involve coordinate structures:

(i) De argumenten voor zijn vele malen superieur aan de argumenten tegen deze oplossing
the arguments for are many times superior to the arguments against this solution

While RNR arguably does not involve movement, it may still be significant that this type of case arises primarily in equative structures, which is also what we have in the text example (34).

¹³ See Van Riemsdijk (1997) for more extensive discussion.

¹⁴ See Fanselow (to appear) for an overview and further references and Lutz, Müller & Von Stechow (2000) for much relevant discussion. One of the protagonists of the direct dependency approach is Horváth (1997) and the main champion of the indirect dependency approach is Dayal (1994, 1996).

originates in the matrix clause and is, correspondingly, a kind of semantically rather empty expletive element. On the latter approach, (35) consists of two questions that amount to a single one because the first is vague and the second specifies the first one. On this type of account, *was* is a kind of pseudo-argument, an expletive stand-in for the ‘real’ question, viz. who did Mary dance with? Consider again an example like (32a), but with an additional clausal layer built in.

- (36) Bei diesem Wetter glaube ich nicht, dass es sich lohnt, den Rasen zu mähen
 with this weather believe I not that it REFL pays the lawn to mow
 ‘With this weather I don’t believe that it is worth the trouble to mow the lawn’

There is a question here as to whether the adjunct *bei diesem Wetter* should be assumed to have undergone long movement or whether it originates in the matrix clause. It is not unreasonable to interpret such an example as stating that this weather gives rise to the belief that mowing the lawn isn’t worth the trouble. Such an interpretation seems to be closer to the mark than the one we would get on a long movement construal, though differences are subtle. The construal in which the weather gives rise to the belief may actually be characteristic for bridge contexts. Indeed, when the relatively neutral verb *glauben* is replaced by a semantically more complex non-bridge verb like *flüstern* (‘whisper’) a ‘matrix only’ construal is forced.

- (37) #Bei diesem Wetter flüsterte er, dass es sich nicht lohnt, den Rasen zu mähen
 with this weather whispered he the it REFL not pays the lawn to mow
 ‘With this weather he whispered that it isn’t worth the trouble to mow the lawn’

A long construal is next to impossible to get with this example, and the short construal does not make too much sense but is the one that imposes itself. And the same contrast is found in the corresponding relative clauses.

- (38) a. ein Wetter bei dem er nicht glaubt, dass es sich lohnt, den Rasen zu mähen
 a weather with which he not believes that it REFL pays the lawn to mow
 ‘a weather in which he does not believe that it is worth the trouble to mow the lawn’
 b. #ein Wetter bei dem er flüsterte, dass es sich nicht lohnt, den Rasen zu mähen
 a weather with which he whispered that it REFL not pays the lawn to mow
 ‘a weather in which he whispered that it isn’t worth the trouble to mow the lawn’

What these considerations appear to suggest is that if there is any gap in aboutness relatives at all, it is most likely the gap of a local (matrix) expletive adjunct.¹⁵ But note that that would not relieve us of the necessity to account for the actual semantic ins and outs of the aboutness relation in some syntax-independent way. And if that is so, the question remains as to why a gap should be required at all.

With this in mind, let us return to the examination of *wo*-relatives in Swiss German.

¹⁵ This is the term that I propose to use in the remainder of this article: ‘expletive (locative) adjuncts’ and ‘expletive (locative) variables.’

4. The Status of *wo*

Let us briefly take stock of where we are now. We have established that there are classes of expletive adjuncts that are prime candidates for establishing a syntactic operator variable structure in aboutness relatives. At the same time, such a variable does not seem to add much in the way of establishing a semantic connection between the head and the relative clause. Indeed, if the variable is in the top layer of the relative clause while the semantically relevant material (the material that contributes to aboutness) is embedded further down, then we understand why that material (e.g. resumptive pronouns, constituents that constitute a part of the whole represented by the head, etc.) can freely appear to violate island constraints. So consider again an example like (9) above, repeated here as (39).

- (39) es mäitli wo öpper wo mit ere i's kino gaat zimli mues spine
 a girl WO someone WO with her in the cinema goes quite must crazy-be
 'a girl that someone who goes to the movies with her must be quite crazy'

This would now effectively be interpreted as 'a girl such that in connection with her it must be the case that someone who goes to the movies with her is crazy.' Aboutness may now be established in two steps. First, between the head and the expletive variable, and second between the expletive variable and the resumptive pronoun. Similarly, in 'pure' aboutness relatives without any resumptive pronouns:

- (40) I familie wo scho lengst feststaat das de eltischt soon s gschäft mues
 in families WO already long determined-is that the oldest son the business must
 übernäë git's oft striit
 take-over gives it often quarrel

'In families in which it is clear from the outset that the oldest son must take over the business, there are often quarrels'

While the evidence in favor of the presence of what I have been calling an expletive adjunct may not be overwhelming, it does provide us with an answer for an otherwise quite thorny problem. As was mentioned in Van Riemsdijk (1998:72), locative relatives deviate from the general pattern to a certain extent. They are also introduced by the invariable *wo*, but they exhibit gaps despite the fact that there is no corresponding locative clitic that could be assumed to be fronted and deleted. Consider first the following examples.

- (41) a. s huus wo de Hans wont
 the house WO the Hans lives
 'the house where Hans lives'

- b. s fäscht wo de Hans anegaat
 the party WO the Hans to-goes
 ‘the party that Hans is going to’

Note, first, that the only correlative element corresponding to the locative is *deet* (‘there’), and *deet* is a strong form that has no weak counterpart (such as Dutch *er*, for example). If we were to assume that there is a kind of locative clitic, it must be one without phonetic shape. The question then arises whether this empty element behaves like a clitic (adjoining to the right of C^o) or like a true operator (moving into Spec,CP). This issue can be decided by looking at cases of long locative dependencies.

- (42) a. s huus wo mer säit das de Hans wont
 the house WO one says that the Hans lives
 ‘the house where people say Hans lives’
- b. s fäscht wo i ghöört han das de Hans anegaat
 the party WO I heard have that the Hans to-goes
 ‘the party that I have heard Hans is going to’

This suggests that a form of empty operator movement is involved here, since this is long movement and clitic movement is clause-bound. This conclusion is supported by the fact that such examples with an embedded gap are island sensitive.

- (43) a. *s huus wo d behäuptig das de Hans wont nie bewise worde isch
 the house WO the claim that the Hans lives never proven been has
 ‘the house that the claim that Hans lives there has never been proven’
- b. *s fäscht wo ich s mätli wo mit em Hans anegaat scho mal troffe han
 the party WO I the girl who with the Hans to-goes already once met have
 ‘the party that I have already once met the girl who goes there with Hans’

Note furthermore that (42) marginally tolerates the strong locative *deet* (‘there’) while (43) becomes acceptable if *deet* is inserted as a kind of resumptive element:

- (44) a. s huus wo mer säit das de Hans (?deet) wont
 b. s fäscht wo i ghöört han das de Hans (?deet) anegaat
- (45) a. s huus wo d behäuptig das de Hans deet wont nie bewise worde isch
 b. s fäscht wo ich s mätli wo mit em Hans deet anegaat scho mal troffe han

It seems reasonable to infer that (45) is really a regular case of an aboutness relative. And pursuing our hypothesis that an expletive adjunct in the matrix is involved. In other words, (45a) would amount to something like ‘the house in relation to which the claim that Hans lives there has never been proven,’ and similarly for (45b).

At this point that if the locative operator were overt rather than empty, we would expect its form to be [wo]. This is so because the corresponding question word, ‘where,’ is also *wo*. Does this mean that we have to revise our earlier claim that *wo* is a complementizer that occupies the C^o-position? No. First, non-interrogative embedded verb final tensed CPs always

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require an overt complementizer in Swiss German. Second, in the case of relative clauses of the type illustrated in (10), repeated here as (46), there is no plausible source for any kind of locative element.

- (46) a. es mäitli wo (*si) gëörn i's kino gaat
a girl WO (she) gladly in the cinema goes
'a girl that likes to go to the movies'
- b. es mäitli wo mer (*si) gëörn i's kino mitnämed
a girl WO we (her) gladly in the cinema with-take
'a girl that we like to take along to the movies'

I would maintain the clitic analysis that I have given earlier in Van Riemsdijk (1989) for these cases, meaning that *wo* has to be a complementizer here. The Bavarian data cited above in footnote 3 also support this conclusion. This leads to the following overall picture. There are two main strategies for forming headed relative clauses in Swiss German (more specifically, ZT):

- *wo*-complementizer plus clitic resumptive pronouns, deleted when adjoinable to *wo*;
- *wo*-complementizer plus locative *wo* (subcategorized or adjunct) moved into Spec,CP where the sequence *wo wo* is reduced to a single occurrence of *wo*.

The locative *wo* will sometimes be a subcategorized element, as in examples such as (41) above, and an expletive adjunct in the other cases characterized as aboutness relatives. It should be noted that not all cases involving (clitic) pronouns interpreted as referring to the head of the relative clause are to be identified as resumptive pronouns in the strict sense since those cases in which they are embedded in an island configuration must (in addition) involve an expletive adjunct in the top layer of the relative clause. Hence these cases reduce to aboutness relatives.

Regarding the reduction process of *wo wo* to *wo*¹⁶ there appear to be essentially two options. Either the locative operator is in reality an empty operator or a PF-deletion process removes one of the two occurrences of *wo*. The latter option seems more plausible to me since the former solution does not really explain why an empty operator is permissible in precisely those conditions. Further confirmation of the importance of the phonetic shape of the empty element (and hence for the haplology proposal) comes from a non-locative use of *wo* that we have not yet considered. *Wo* can also function as the *wh*-variant of the *r*-pronoun, i.e. as a stand-in for pronominal objects of prepositions, comparable to the English, more frozen, forms such as *whereby*, *whereof*, *wherein* etc. Some ZT examples are given in (47).

¹⁶ This process of haplology was already hinted at in Van Riemsdijk (1998).

- (47) [PP da dr-in] (there (thr-)in) -- [PP WO dr-in] (where (thr-)in)
 [PP da dr-a] (there (thr-)at) -- [PP WO dr-at] (where (thr-)at)
 [PP da dr-uf] (there (thr-)on) -- [PP WO dr-on] (where (thr-)on)

The *dr-* element, glossed here as ‘thr,’ is a kind of light pronominal copy of the full *wo/da*, cliticized onto the preposition. In typical stranding contexts, the PP is generally split, as shown in a question like (48).

- (48) Wo isch s buech dr-uf gläge?
 where is the book thr-on lain
 ‘What was the book lying on?’

And indeed, in the corresponding relative clause we seem to find a gap.

- (49) a. de tisch wo s buech dr-uf gläge isch
 the table WO the book thr-on lain has
 ‘the table that the book was lying on’
 b. d schublade wo mer din schmuck dr-ii gläit händ
 the drawer WO we your jewelry thr-in laid have
 ‘the drawer that we put your jewelry into’

Caution is in order, however, since the strong forms with *da* in (47) can often be replaced by weak forms without *da*, in which case the clitic *dr-* alone serves as a the pronominal element. Hence:

- (50) a. Mer leged s buech (da) dr-uf
 we put the book (there) thr-on
 ‘We put the book on that/it’
 b. Si läit de schmuck (da) dr-ii
 she lays the jewelry (there) thr-in
 ‘She puts the jewelry into that/it’

It does not come as a surprise, then, that the light form is also found in island contexts.

- (51) a. S git götter wo mer sich nöd cha vorstelle das es lüüt hat wo dr-aa gläübed
 it gives gods WO one REFL not can imagine that it people has WO thr-in believe
 ‘There are gods that you cannot imagine that there are people who believe in them’
 b. Das isch dää wald wo ich vil vründe ha wo regelmässig dr-in gönd go spaziere
 that is that forest WO I many friends have WO regularly thr-in go to walk
 ‘That is that forest that I have many friends who regularly go walk in it’

These examples, then, are best interpreted as aboutness relatives with an expletive adjunct *wo* in the upper layer of the relative clause, moved into Spec,CP and deleted under haplology at PF.

Another consideration pointing in the same direction is that we find the *da* counterpart of *wo* in left dislocation examples corresponding, for example, to (51).

- (52) a. Die götter, da cha mer sich nöd vorstelle das es lüüt hät wo dr-aa gläübed
 those gods, there can one REFL not imagine that it people has WO thr-in believe
 ‘Those gods, you cannot imagine that there are people who believe in them’
- b. Dëë wald da han ich vil vründe wo regelmässig dr-in gönd go spaziere
 that forest there have I many friends WO regularly thr-in go to walk
 ‘That forest I have many friends who regularly go walk in it’

It must be recognized, however, that *wo* and *da* in isolation, as in *wo*-questions or in sentences with topicalized *da*, tend to be interpreted not as expletive adjuncts but as full locatives. I assume that this is because, more generally, expletive elements cannot bear the full brunt of being the focus of a question or a topicalization. Expletive *it* in English, for example, can neither be questioned nor topicalized (*It I regret that I came, *What do you regret that I came?).

5. Conclusions and Questions

The above discussions have brought to light a fair amount of evidence, partly circumstantial and partly direct, that, contrary to my earlier conclusions (cf. Van Riemsdijk, 1989), ZT relatives are not truly gapless. Instead, whenever they appear to be gapless, there appears to be an expletive locative adjunct mediating between the head of the relative clause and the more deeply embedded semantic content of the relative clause. More generally, while aboutness considerations seem to play the main role in the semantics, the syntax does seem to require the presence of a syntactic variable. In this light, perhaps studies on Japanese and Korean that have reached the opposite conclusion should also be reconsidered.

For Swiss German (ZT) then, we may distinguish two main types of headed relative clauses, each with two subtypes:

(53) Headed Relative Clauses			
Resumptive Relative Clauses		Locative Relative Clauses	
fronted and deleted resumptive clitics	locally accessible resumptive pronouns <i>in situ</i>	true locative operator moved into Spec,CP and deleted at PF under hapology	expletive locative operator moved into Spec,CP and deleted at PF under hapology

A major question that remains largely open is why headed relative clauses do not avail themselves of the overt *wh*-movement strategy. ZT does use this strategy in *wh*-questions and in headless (free) relative clauses. Considerations of recoverability or visibility will readily explain why the alternative strategy of deleted clitics or deleted (expletive) operators will not work for *wh*-questions or headless relatives. But what forces headed relatives to avoid the overt *wh*-movement strategy remains a mystery to me.

Many other questions remain as well. Let me by way of a prospective ending list the above question and some of the additional questions that are prominent in my mind:

- Why is the overt *wh*-movement strategy avoided in ZT headed relative clauses?
- Can Japanese and Korean gapless relative clauses be analyzed along similar lines, that is, could they be taken to contain expletive (locative?) adjuncts as well?
- Are there any syntactic correlates beyond the expletive locative adjunct that figure in the establishment of semantic/pragmatic aboutness?
- What is the precise semantic relationship between expletive locative adjuncts and the part-whole relationship that is frequently at the core of aboutness?

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