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Dialektsyntax

Relative *wo* in Alemannic: only a complementizer?*

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Abstract

The paper discusses possible scenarios on the development of the particle *wo* that occurs regularly in relative clauses in Upper German dialects. We claim that *wo* originates from the equative particle *so* – despite its homophony with the w-version of the locative adverb. *So* is the equative particle whose usage as a relative particle was fairly widespread in Early New High German. We will demonstrate that the semantics of the equative particle is well suited for its function in relative clauses. The scenario sets Upper German dialects in a row together with (many) Scandinavian languages/variants, in which the relative particle is *som* – again an equative particle that is historically directly related to *so*. It will be shown that a unified analysis of the syntax of relative clauses in the two variants of Germanic is plausible in that both variants show the same relevant properties.

1 Introduction

Southern German dialects (Alemannic[1], Bavarian, also Hessian dialects and many others) as well as Swiss German are known to build their relative clauses with the invariable particle *wo* and – depending on the dialect and further syntactic conditions – an additional d-pronoun, respectively a resumptive pronoun.

[1] The following variants belong to the Alemannic dialect: dialects that are spoken in the region of Baden-Württemberg (southern Germany), Vorarlberg (Austria), Swiss German and Alsace (France). Although not entirely correct, we use Alemannic (ALM) for the variants from Baden-Württemberg, where most our own data come from in contrast to Swiss German where we draw our data mostly from the literature – although clearly both are Alemannic dialects.

As such they contrast with Standard German that builds its relative clauses solely with a demonstrative pronoun as the relative clause introducer (RCI henceforth), as illustrated in (1) and (2):

Demonstrative pronoun, Standard German (SG):

(1)   ... der   Mann ***der***   seine Schuhe verloren hat
         ... the   man Pron.Dem his   shoes   lost   has

Particle, Alemannic, Bavarian (*wo*):

(2)   ... dea Mo (dea)   ***wo***   seine Schu verlora   hot
         ... the man Pron.Dem   PRT   his   shoes lost   has

In this article, we will discuss the development of the relative particle *wo*. While most treatments of Southern German relative clauses concentrate on the (non-) occurrence of the d-pronoun, see Bayer (1984) and/or formulate conditions on the occurrence of resumptives, Salzmann (2006, 2009), the question on the origin and properties of the particle *wo* has never been in the focus. One reason is that it is taken more or less for granted that relative *wo* is the wh-version of the local adverb (*da* = there) – due to the homophony of the two elements. The assumption is that the relative pronoun *wo* has been re-analyzed as a complementizer, specialized to relative clauses. But to our knowledge nobody ever considered in a modern framework whether such a development can indeed be traced back in the historical sources, respectively whether there are plausible predecessor constructions.

On the other hand, it is well known that particles, introducing relative clauses are (i) a universally very common strategy and (ii) that particles were (in addition to the use of relative pronouns) also a wide spread strategy in German(ic) throughout its history. The question then is whether the relative particle *wo* can be traced back directly to a particle, making a process of reanalysis of a w-pronoun superfluous.

And this is indeed the route we want to follow in this article. Specifically, our claim is that *wo*-relatives are a direct continuation of *so*-relatives, i.e. relative clauses that were introduced by the equation particle *so*, exemplified in (3) and (4).

(3)   dër Sache ***sô*** ir   meinent
       the thing ***so*** you   mean
       'the thing that you mean'
       Reinfried von Braunschweig, 14[th]century (quoted after Paul 1920:238)

(4)   hier das Geld ***so*** ich neulich   nicht habe mitschicken können
       here the money***so*** I   recently not   have   send-with   can
       'Here the money that I recently could not send with'
                Schiller to Goethe 127 (quoted after Paul 1920:238)

These sentences would look like in (5) and (6) in a contemporary Southern German dialect, here exemplified with Bodensee-Alemannic (BA):

(5)   dere Sach   ***wo*-n- ir   moanet...   [BA]
       This thing   PRT   you   mean
       'this thing that you mean'

(6)   do   s'   Geld ***wo*-n-i** neulich   it ha   mitschicke   künne [BA]
       here the money**PRT** I recently   not have   send with   can
       'Here the money that I recently could not send with'

The sole difference between the two elements is that *wo* belongs to the w-series of pronouns/particles/complementizers whereas *so* belongs to the d-series[2]. The syntax and the semantics remain (essentially) stable. The analysis has several advantages from a conceptual point of view and we can bolster the claim with diachronic and synchronic comparative evidence.

The conceptual advantages are the following:

i.   No reanalysis process is necessary, instead merely a change from the d-series to the w-series must be postulated – and this is a very common 'low level change', as we will show below.

ii. *so/wo* as the equative particle is an optimal candidate for an RCI in the sense that it delivers the right semantics. Additionally, it does not bear φ-features nor case, its use thus avoids a possible clash between the features of the head noun and those of the pronoun in the relative clause.

Empirically, we would like to mention here already the main points, namely:

iii. According to Paul (1920:238) *so*-relatives were most widespread in those areas where we find nowadays *wo*-relatives, namely in the Upper German areas.

iv. *Wo*-relatives occurred at the same time when the equative particle *als* (< *also*) changed to the w-series and became *wie*, see Jäger (2010).

v.   The use of the equative particle as an RCI is found also in other Germanic languages, notably in the Scandinavian ones, where the most common relativization strategy is the insertion of the equative particle *som*.

Taken these points together, we think that our hypothesis that *wo* emerged out of *so* is a serious alternative to a reanalyzed locative adverb.

The suggested origin out of *so* furthermore leaves the analysis of *wo* as a complementizer intact such that the fact that it can co-occur with the d-pronoun – a classical instance of a doubly filled Comp for which the Southern German dialects are well known, see e.g. Bayer (1984) – can still be accounted for. However, the issue of the additional d-pronoun will be neglected in the following. We will briefly take it up in the last section.

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[2] *So* has a deictic/demonstrative function – despite its initial consonant being /s/ and not /d/ as is typical for German pronouns/demonstratives. Note that it has probably the same origin as the /s/ occurring in the feminine personal pronoun.

The paper is organized as follows. In section 2, we give a brief overview about the various RC-formation strategies that are found in the Germanic languages and we will concentrate on the fact that the particle strategy was always part of the German(ic) grammar. In section 3 we discuss previous studies of the particle strategy and alternative scenarios for the emergence of *wo*-relatives. Section 4 presents our analysis of *wo* as a relative clause introducer. Section 5 deals with Scandinavian relative clauses and compares their properties with the Alemannic ones. Section 6 finally concludes and gives an outlook on further implications of our analysis.

2   RC formation strategies in Germanic

Throughout the recorded history of Germanic, we find various possibilities to build relative clauses. A common strategy for all Germanic languages alike is the use of a d-pronoun illustrated in (7) with Old High German (OHG), Old English (OE), Middle High German (MHG), and Early New High German (ENHG), see Harbert (2007, ch. 6.5) for more examples from further Germanic languages.

(7) a. See   miin   sunu, ***den***   ich   gechos…   [OHG]
         see   my   son   d-acc   I   chose
         'See my son, who I have chosen…'   (Monseer, Matth.12.18)

     b. gelaðede Cenred   þone   cyning   ***þam***   he   Myrcna
         invited   C.   the   king   d-dat   he   M.
         rice   sealde   [OE]
         kingdom   gave
         'Cenred invited the king whom he had given the kingdom of
          Myrcna.'   (Bede, Hist. Ecc. 464/7)

     c. Der   was   der   selbe valke, ***den***   si   in   ir
         this   was   the   same   falcon d-acc   she   in   her
         troume   sach   [MHG]
         dream   saw
         'This was the same falcon that she saw in her dream.'   (Nib C, 19)

     d. Es ist zemercken   ain   ander argument **das**   noch
         it is to-note   a   other argument d-acc   even
         lüttrer und   verstentlicher   ist   [ENHG]
         clearer and   more-understandable   is
         'One should note another argument which is even clearer and
          better understandable.'   (Neidhart Eunuchus, 11)

Note that relative clause formation obviously did not change from its earliest attestations on to the modern version of German. We will not discuss the analy-

sis of d-pronoun introduced relative clauses[3]. There is however one thing we will briefly dwell on, namely the fact that – with the exception of later stages of English – the Germanic languages did not use the w-version of a pronoun as the relative pronoun. This is remarkable since many of the texts from the earliest period are translations from Latin. And Latin draws its relative pronouns from the w-series, as one can see in (8). Nevertheless, Germanic sticks to the d-pronouns. This tells us that the strategy to use d-pronouns is a very robust one:

(8)   Audite,   filii   [carissimi]   regulam   fidei,
       Hloset-ir,   chindo   liupostung   richti   der calaupa
       Listen you-2.pl children [most beloved]   the rule   of   belief

       quam Ø   in corde memoriam   habere   debetis…
       dera ir   in herzin cahuctliho   hapen   sculut
       that   you   in heart strongly   have   should
                  Verpflichtung der Taufpaten (Exhortatio, 802) AHD Lesebuch, p. 28

Standard German and (also Dutch)[4] still uses d-pronouns as RPs. Now a rather common assumption about *wo*-RCs – at least implicit – is that the RCI *wo* is an RP, used to relativize (an abstract notion of) PLACE and that later spread to other environments such that it could relativize all types of head nouns. The reanalysis as a head then lead to the contemporary situation where *wo* is obviously a complementizer, see below for further elaboration. Here, we will only mention the problem that if this was true then we would expect that w-pronouns occurred regularly as RPs in the respective German variants – from which then the reanalysis process could start. However, this seems not to be the case since d-pronouns are still the typical[5] RPs in contemporary German (if used) and this is true for all its stages.

Beside the RP-strategy, there existed – also attested from the earliest records on – a particle strategy, i.e. RCs were introduced by an invariant particle that obviously headed the CP since it could co-occur with an RP.

Among the particles that can introduce relative clauses in Germanic is the particle *the* in OHG cf. (9) and OE *ðe*, see (10).

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[3] Especially we will refrain from taking a stand whether a head-raising analysis, as proposed in Kayne (1994), de Vries (2006) among others is an adequate approach or whether an external head analysis should be preferred, as recently argued for by Boef (2012). It will become obvious in the following that this question is orthogonal to the issues discussed here because *wo*-relatives and d-pronoun relatives differ in their structure (and derivation) probably much more than previously thought. However, we will come back to this issue briefly in section 6.

[4] With the exception of the so-called R-pronoun – if used as relative pronouns, see section 3 for detailed discussion.

[5] We do not have to say anything about *welch*- RPs as in the following examples. We simply follow the general opinion that these were introduced into the German language by a loan-process, see e.g. Behaghel (1928:721) for this conclusion, based on the time line and its restriction to literary texts.

(9)   Audite,   filii   [carissimi]   regulam   fidei,
         Hloset-ir,   chindo   liupostun   richti   der galaupa
         Listen you-2.pl children [most beloved] the rule of   belief

         quam Ø   in corde memoriam   habere   debetis…   [OHG]
         thé   ir   in herzin kahuctliho   hapen   sculut
         PRT   you   in heart strongly   have   should
         'Listen you-2.pl, children [most beloved], the rule of belief, that you in
         heart strongly have should.'
              Verpflichtung der Taufpaten (Exhortatio, 1, Handschrift B) AHD Lesebuch

(10)   Đa sende se biscop   ðæm   wife   ðe   þær   untrum
         then sent the bishop   the-dat wife   that   there sick
         læg sumne dæl   þæs   haligwætres   [OE]
         lay a   part of-the   holywater
         'Then, the bishop sent the woman who lay sick there some of the holy
         water.'   Fischer et al (2000:58)

Und (=and) could introduce RCs in MHG, cf. (11, 12) as well as *als* (=as), see
(13) and – most important for us, the particle *so*, (14):

(11)   Al die wîle ***und*** ich   lebe   [MHG]
         All the wile ***and*** I   live
                   (Erec 4556 quoted after Ferraresi &Weiß, 2011:86)

(12)   Die wile ***und*** ich   daz   leben habe
         The wile ***and*** I   the   live have
                   (Gottfried, Tristan, 1238 quoted after Ferraresi & Weiß, 2011:86)

(13)   ... und begerten   solichen schaden ***als***   sie
         ... and demanded   such   damage ***as***   they
              deshalben   gelitten
              because-of-that   suffered
                   (Chr. V. Mainz 220 cited after Ebert at al (1993: 447)

(14)   die leute ***so*** mit   dir   haddern   sollen umbkomen
         the people ***so*** with   you   quarrel   shall die
         'The people that quarrel with you shall die.'
                   (quoted after DWB, Grimm, [Bd.16,Sp.1382])

That *und* in cases like (11) and (12) must indeed be analyzed as a subordinating
complementizer has recently been shown by Ferraresi & Weiß (2011). The most
compelling evidence is the verb-final order that is typical for embedded clauses,
which is especially clear in (12). Concerning (13) and (14), note that the parti-
cles are essentially the same kind of element as *so* since *als* is a shortened form
of *al-so* which in turn is a strengthened form of *so*. Both elements occur in
equative (and comparative) constructions as well, see Jäger (2010). Whereas the
coordinating conjunction *und* is attested sparsely, the equation particle seems to

be rather common as an RCI, at least from Early New High German on. Below, we illustrate this type of RCI with some more examples, all cited from the DWB, taken from the entry under *so* (vol. 16, col. 1381–1388):

(15)   ... die   brunnen   *so* Abraham het   graben   lassen
          ... the   fountains *so* Abraham has   dig   let
          'the fountains that Abraham let dig'...

(16)   ... alle   die   *so* angel   ins   wasser   werfen
          ... all   those   *so* fishing rod   into   water   throw
          'all those that throw the fishing rod into the water'...

(17)   ... das   *so*   ich gesagt habe
          ... that   *so*   I   said   have
          'that what I said'...

(18)   ... dem   lager *so* vor   sinem schlosz   Muntabant   lag
          ... the.dat camp *so* before his   castle   Muntabant   laid
          'the camp that lay before his castle Muntabant'...

(19)   ... das   land Moesia   *so* iezo   Bulgarei   heist…
          ... the   land Moesia   *so* now   Bulgarie   is-named
          'the land Moesia which is now called Bulgarei…'

As one can see from the examples all types of DPs may occur as a head noun of the relative clauses (common noun with definite determiner (15), quantifier (16), and mere pronoun (17)). (18) shows – contrary to what is claimed in Paul (1920:238) – that the construction is not restricted to nominatives and accusatives, also datives are possible head nouns. Finally, (19) shows that appositive RCs use the same particle. This is parallel to the contemporary situation in the dialects under discussion where *wo* can be used for appositives and restrictives alike.

The equative particle *so* (and its variants) serving as an RCI is thus by no means a singular phenomenon. We can only speculate about the reason why it occurs so scarcely in the older stages. Note that – although the pronoun strategy seems to be present in (nearly) all contemporary variants of Germanic, they seem to occur mostly in written variants, see Fiorentino (2007) for the same observations for other Germanic and Romance languages, whereas the particle strategy is a property of the spoken language. Taking into consideration that especially in OHG, most of our sources consist of religious, even ritual texts that have been laid out very carefully, they surely reflect the actual spoken language only to a limited extent. Similar considerations apply to MHG from which we know that most of its texts are written in a kind of a standardized/artificial language. Only in later times, we find more common texts, written not only by highly educated people. And exactly during this time, we find the particle strategy more often in the written texts. Taking further into consideration that especially most of the OHG texts have a Latin model, using relative pronouns, it

might very well be that the late 'rise' of *so*-relatives in the history of German is an artefact due to the sources we have. However, that *so*-relatives were part of the grammar of German already in very early times is proved by the example in (20) from the Heliand text (about 830):

(20)   sulike   gesidos   ***so*** he im   selbo gecos
         such   companions ***so*** he him   self   chose
         'such companions that he chose for himself'   (Heliand, 1280)

Finally, as already mentioned in section 1, according to Paul (1920:237), *so*-relatives are most prominently found in the Upper German regions. While this claim still awaits validation by a careful quantitative examination of the available texts, we take it in the meanwhile for another indication that the replacement hypothesis *so > wo* is a plausible scenario, given that the areas where they both occur coincide.

In sum, we have seen that the particle strategy can be found through all stages of German(ic) and that it has always been an alternative[6] to the d-pronoun strategy. Among the particles that can introduce relative clauses is the particle *so* which is otherwise used as an equative particle. Important for the discussion in this paper are the following facts:

(i) *so*-relatives do not show any restrictions on their head noun; (ii) they do not distinguish between appositives and restrictives; (iii) they were always part of the grammar of RC-formation; (iv) they are most frequent in the areas where we find *wo*-relatives today. Taken these facts into consideration, the hypothesis that *wo*-relatives are a direct continuation of *so*-relatives seems plausible. Before we present are own analysis in detail, we will briefly review alternative scenarios.

3 Previous analyses

According to our knowledge, there are two scenarios for the development of *wo*-relatives that have been explicitly proposed in the literature and one that is often implicitly assumed without spelling out the details. The latter one is the already mentioned assumption that *wo* is a locative adverb which has been reanalyzed as a complementizer. This will be discussed in section 3.1. Section 3.2 discusses the proposal by Paul (1920:227ff) who suggests that *wo* as an RCI emerged out of the splitting of R-pronouns of the type *da*-P and its w-version *wo*-P, stranding the preposition and thus giving eventually input to a construction with mere *wo*

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[6] We will remain silent in this paper on whether there are interpretational differences between the two strategies. For OE, it has been claimed that pronouns go with the appositive interpretation whereas the particle occurs mostly with restrictives, see Molencki (1988). However, for Upper German dialects we cannot (yet) confirm at the moment whether this is true, but see Wiltschko (ms) for Austrian German. Whether there is an interpretational difference is the topic of ongoing detailed investigation in SynAlm. For Standard German, which has only the pronoun strategy, the supposed correlation does trivially not hold.

in the C-position. Finally, there have been explicit suggestions that *wo* evolved from the free relative construction in which w-versions of the pronoun are used canonically. This idea is implicit in the entries of *so* and *wo* in the DWB; it has been suggested explicitly in Johnson (1913) – although for English. This approach will be discussed in section 3.3.

3.1   Scenario I: Rel-*wo* has its origin in the locative adverb

The first scenario we would like to discuss has an initial plausibility in that it may apply also to other languages. As is well known, many so-called substandard varieties (i.e. spoken languages, not conform to the rules provided by school grammarians) use a locative pronoun as an RC-introducer. This situation is found with "(…) French *ou*, English *where,* Greek *pou*, or German *wo* (…)" (Fiorentiono, 2007:278). Note that in the languages just cited (with the exception of German, if we are right) the particle indeed unambiguously corresponds to the w-version of a locative adverb. As already mentioned, many authors, most recently Bidese et al. (2012) that deal with *wo* in Upper German dialects assume without further discussion that the locative adverb is the source of this element, probably due to its homophony with the locative adverb. However, as far as we know, nobody has ever spelled out a detailed scenario for this situation. In the literature on grammaticalization, see e.g. Hopper & Traugott (1993), it has been observed that a locational expression is rather easily transferred to other domains, e.g. temporal ones. But an extension to all types of entities (i.e. those that can be relativized) is not so obvious. Let us therefore try to build an explicit proposal and then see whether it matches with what we know about the construction.

One possibility to make the assumption of 'widening the contexts' a bit more precise is to assume that every DP has as a general domain restriction, a silent 'location argument', comparable to the *event argument* assumed with VPs, first introduced by Davidson (1967). The idea is then that the locative adverb relativizes this abstract 'location argument' instead of the nominal expression itself and thus the usage of a locative adverb finds a natural explanation.

(21)   Ich   lese   gerade   [das   Buch   (HIER/DA)$_i$]   ***wo**$_i$*   du
        I   read   just   the   book   here/there   wo   you
        mitgebracht   hast
        with-brought   have.2.SG
        'I am reading the book that you brought'

We have to take into account that there is a (still ongoing) discussion on whether every VP (including those that denote states) has an event argument or whether

its occurrence is confined to VPs that denote activities[7]. Transferred to the DP-domain, an analysis like in (21) presupposes that <u>every</u> DP has a locational argument since all types of DPs can be relativized with this strategy.

But note that relativization with the particle *wo* is also possible with negated head nouns like *nobody* for which it is not immediately clear whether the assumption of 'locational argument' can be justified. Even an indefinite in an intensional context can be relativized with *wo*, as in (22). (22) is a constructed example whereas (23) is from a newspaper in which texts occur in the Alemannic dialect:

(22)   Ich   suech ebber   ***wo***   mer   helfe   künnt
        I   search somebody   ***wo***   me-dat   help   could
        'I am looking for somebody who could help me'

(23)   … oder kenned ihr   ebber   ***wo***   freiwillig   zuegäe
            … or   know   you   somebody   PRT   voluntarily   admit
            dät   dassâ er   schpinnt.
            do-subj that   he   spins
            '… or do you know somebody who would voluntarily admit that he is crazy!'[8]

Here it is even more questionable whether there is a locational argument, given that the indefinite in this context is not even known to be existent. This makes a 'location' rather difficult. We will refrain from a detailed discussion of these issues but the examples in (22) and (23) show that the intuitively very attractive idea cannot be executed so easily if one considers the distribution of the *wo*-relatives in more contexts.

The second argument against this analysis (at least for German) has already been mentioned above. This is the fact that there are essentially[9] no other w-pronouns used as relative pronouns in German. Even if we would assume that the change from the d-series to the w-series took place only after the reanalysis from a phrase to a head, then we would nevertheless expect that there is a predecessor construction in which *wo* occurs as *da/do* in the function of the general relative RCI. This is to our knowledge not the case[10]. So proponents of this theory must assume that both changes, i.e. the widening to other contexts, (respectively the postulation of a location argument also in intentional contexts) and the change to the w-series, happened at the same time. But there is no evi-

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[7] cf. for example Kratzer (1995) who distinguishes stage-level and individual level predicates by means of presence/absence of the event argument.

[8]   http://www.wochenblatt.net/archiv/wafroes-alem-dialektik/wafroes-alemannische-dialektik-detail/browse/3/article/wafras-alemannische-dialektik-41.html?tx_ttnews[pS]=1348477589& tx_ttnews[backPid]=34&cHash=9ed8e55d676f238bedd282a244a2e2d0 (27.10.2012)

[9] There are some exceptions: *was* (what) can be used as an RCI if the head consists merely of a pronoun or the quantifier *all*. But it is very likely that this construction is indeed a free relative, see section 3.3 for discussion.

[10] But see below for *da/do* occurring with R-pronouns and a stranded preposition. However, even in these cases, the head noun in nearly all examples refers to a location.

dence for this. In contrast, the theory that we suggest, i.e. that *so* has been replaced by *wo*, must only explain one change – and the change from d-complementizers to w-complementizers is a quite regular one – as we will show below.

To summarize, although the locative adverb strategy seems to be quite plausible and can surely be executed somehow in a satisfactory way and especially in light of the fact that it occurs in other languages, cf. French substandard varieties and Modern Greek – there is no evidence that it is the general source of the modern Upper German *wo*-relative construction. We will not dismiss this scenario as conceptually completely implausible – it may even very well be the case that this very same strategy is also used in Alemannic and may have lead to stabilize the contemporary pattern with *wo*.

3.2 Scenario II: Rel-*wo* has its origin in the split R-pronoun construction

In this scenario, the idea is that the *wo*-relativization strategy has its origin in the split R-pronoun construction which is attested during the whole history of German, although it is varying especially w.r.t. its areal distribution, see Fleischer (2008) for an overview about the diachronic development.

R-pronouns are a 'speciality' of West Germanic and their most prominent feature is that the argument of a preposition occurs as an invariable particle *da*- resp. *wo*- linearly before the preposition by which they are selected. In case the preposition starts with a vowel, an -R- is inserted in order to avoid a hiatus – therefore its name, see van Riemsdijk (1978):

(24) a. da-mit   – wo-mit   there/where with
      b. da-r-an – wo-r-an   there/where at

R-Pronouns can be split such that the first part either ends up in the Spec-CP position in root clauses (declarative or interrogative) or in a position in the left periphery in interrogative and relative clauses, the latter being the relevant case for us, see the illustrations in (25) and (26):

(25) a. ***Da***   weiss ich nichts   ***von***
          There   know I   nothing   of
          'I know nothing of this.'
      b. ***Wo***   hast   du   nichts   ***von***   gehört?
          Where have   you   nothing   of   heard?
          'What did you hear nothing about?'
      c. Ich weiss nicht ***wo***   er das   ***mit***   bezahlen will
          I   know not   ***where*** he that ***with***   pay   wants
          'I don't know with what he will pay this.'

(26)   des isch   s' messer   *wo*-n i   Brot mit   abe   koue   ha
       this is   the knife   *wo*-N I   bread with Prt   cut   have
       'This is the knife with which I cut off (some) bread.'

                                                        (Staedele, 1927:28)

The example is cited from a description of a version of Bodensee-Alemannic (BA) by Staedele (1927). He suggests – while mentioning this construction – that this is "obviously" the base for the contemporary *wo*-relatives in Alemannic, see also Paul (1920:227) who suggests this analysis, citing the very same example (although not in the Alemannic version).

In order to evaluate this proposal, it is necessary to find out how widespread this possibility was. We rely here on the discussion in Behaghel (1928:733ff). The basic observation is that this construction was relatively frequent but with an important constraint: In most of the cases the 'head noun' consists of an adverbial, an abstract noun, or some other non-personal noun. As soon as the head noun refers to a person, a pied piping construction is chosen if the thematic role in the relative clause is expressed via a prepositional phrase:

(27)   unz   sie   vierzec   tusent   heten und   mer,   *mit*   *den*
       until they   forty   thousand   had   and   more   with   them
       sie wollten   riten   in Burgonden   land
       they wanted   ride   in B.   land
       'Until they had forty thousand and more with whom they wanted to ride to Burgund land.'   Nib 8,3 (cited after Behaghel 1928:735)

In (28) we listed some examples extracted from the 'Schwabenspiegel[11]', Druck 1473 (http://www.opera-platonis.de/landrecht.html). We translate only the head noun, marked with italics:

(28)   a.   in dem *Bistum* *da* er *in* gesessen ist oder…   (diocese)
       b.   in dem *gericht* *da* er gut *inne* hat   (area for which a court is responsible)
       c.   zu der ewigen *würdigkeit* *da* er den menschen *zu* erwelet hat
                                                                        (dignity)
       d.   er sol in allen *steten* *da* bistumb *inne* seind   (cities)
       e.   *stüle* *da* sy *auff* siczend   (chairs)
       f.   in dem *gerichte* *da* er *inne* wonhafft ist oder *da* er gut *in* hat nach gewonheit,   (=b)
       g.   Unnd hat aber yeman in gehört die *sprach* geredet *da* er *ynne* gefangen ist   (language)
       h.   er ist ime der *schulde* gebunden *da* der eyde *für* gelopt was (debt)

The head nouns thus either express an organizational unit or a location much in line with Behaghel's observation. Thus, whatever the constraint is that restricts the R-pronoun to a certain class of head nouns, it seems obvious that the strat-

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[11] Schwabenspiegel is a text source from the 12th century containing the description of laws.

egy did not generalize such that any type of head noun may serve as the antecedent of a split (and thus moved to a C-position) *da/do* or *wo*.[12]

Fleischer (2008) in his overview on the development of the split R-pronoun construction makes very clear that the construction was rather widespread (at least occurred regularly) in OHG and MHG. Even in ENHG there are attestations of it – although in free variation with the non-split construction. However, crucially shortly after the ENHG period, this possibility disappears. One of the latest examples is from Grimmelshausen Simplicissimus:

(29)   *abstract head noun* ...[***da***   ich soll   ***auff***   schwören]
                                         there   I   shall   on   swear
         ....   upon which I should swear
                 (Simplicius Simplicissimus 19, cited after Fleischer 2008:215)

Note that the RCI in this example still belongs to the d-series.

In sum, a scenario which takes this construction as the basis for the general *wo*-relativization strategy in Upper German must make several quite ad-hoc assumptions:

i.   A pronominal element has already grammaticalized to a certain extent, namely such that it spreads from concrete spatial expressions to abstract notions. If it were the same element that refers later to any type of concrete noun again, this would constitute a reversed development in the grammaticalization path.

ii. The pronoun is part of a complex expression (with the preposition left behind in case of movement). A reanalysis process must be assumed which is rather uncommon in that one part of a complex lexical item is isolated and reanalysed whereas the other part, i.e. the preposition, disappears.

iii. It is known that the splitting of R-pronouns is restricted to certain areas of the German speaking area, see Fleischer (2002, 2008) Alemannic is one of those dialects that only very hesitantly uses this construction[13].

iv. Most importantly: the construction in (26) is no longer accepted by Alemannic speakers today. Instead, a (resumptive) pronoun is inserted or a different construction (paratactic) is chosen. It would be hard to argue that a construction first spread to enlarge its applicational environment but that then later the original environment does not allow it anymore.

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[12] We will not claim that such a development is in principle impossible. It seems as if in Dutch the relativization strategy based on split R-pronouns has been very successful. The following data are taken from the SAND database and they show that it can be used even if the head noun is a personal noun:

   (i) [de jongen [***waar***   de moeder ***van*** opnij   troudis]] stond   achter   mij
         the boy   where   the mother of anew   married stood   behind   me

So we will not claim that such a development is impossible – rather it is implausible for the Upper German dialects that we discuss here.

[13] In Alemannic, splitting is basically restricted to the R-pronoun *da-mit* and even then a doubling of the d-component is preferred.

Taken all these considerations together, the split R-pronoun strategy seems to be a highly unlikely source for the common *wo*-relativization strategy in contemporary Alemannic and other Upper German dialects.

3.3   Free relatives as the source of *wo*-relatives

According to the discussion in DWB, Grimm[14], relative and conjunctional *wo* evolved out of the OHG free relative (locative adverbial) construction. Under this analysis, the problem of the change from d-series to w-series is non-existent since the claim is that *wo* always had this form. However, the important property of free relatives in older stages of German(ic) is that they are not introduced by a simple w-pronoun, as it is the case in contemporary German, but rather the w-pronoun was surrounded by two instances of the element *so*:

(30)   ***So   ware   so*** (se)   ich cherte   minen zoum…
        So   where   so (se)   I   guided   my   rein   [MHG]
        'Wherever I guided my rein…'
                                        (Bairischer Psalm 138, cited after Lühr, 1998:267)

We will not go into a more detailed discussion of free relatives here but note that it is clear from the discussion in the literature that free relatives have a different semantic type and thus show also a different syntactic behavior, see for a survey Capinogro (2003). Also with respect to the question whether there is always a (hidden) head present or not, we will remain neutral. Important for us is the fact that even if there is a head, it may only be realized either as the universal quantifier *all* or as a simple demonstrative pronoun, matching in φ-features with the w-pronoun in the relative clause. As soon as an NP-restrictor shows up, we have to switch to a d-pronoun:

(31)   ich   esse   (das/alles)   was   du   kochst
        I   eat   that/all   what   you   cook

(32)   ich   esse   das   Gericht,   *was/das   du   gekocht   hast
        I   eat   the   dish   what/that   you   cooked   have

Coming back to the OHG free relatives, we assume here without further discussion that the *so* element that occurs after the w-expression is situated in the C^0-position. The preceding *so* is obviously related to discourse and has a deictic function in these cases. We tentatively assume that it is adjoined either directly to the w-expression or even to CP directly.

    Concerning the occurrence of both *so* (or *swa* as in Old English), there is great variation, see Johnsson (1913). Thus, in some texts the preceding *so* is missing, in others the following *so*.

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[14] The German Dictionary DWB (Deutsches Wörterbuch) is freely accessible under: http://woerterbuchnetz.de/DWB/.

With respect to OHG, the dropping of the second *so* seemed to be the rule and the preceding *so* incorporated eventually into the w-word such that we get the following forms that are very common in MHG and correspond to the contemporary complex forms built with *ever*:

(33)　　　swer　　　　swaz　　　　swenne
　　　　　who(ever)　　what(ever)　　when(ever)

The typical constructions in which these amalgamated forms occur are what might be termed as a 'correlative construction' in which the second clause (actually the matrix clause) contains another instance of the pronoun - but in this case as a d-pronoun:

(34)　　***swer***　　　sleht　die　　Nibelunge,　***der***　　tuot　iz　âne
　　　　　who(ever)　beats　the　　N.　　　　this (one)　does　it　without
　　　　　mich
　　　　　me
　　　　　'Whoever fights the Nibelungen, he will do it without me.'
　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　(Nibelungen C, 1900)

The assumption is that later the initial s- was dropped such that we find the bare w-pronouns in free relatives as it is familiar from contemporary German:

(35)　　　Wer die Nibelungen erschlägt, (der) muss es ohne mich tun
　　　　　'Whoever fights the Nibelungen, he will do it without me.'

Now concerning specifically the development of *wo*, it is suggested in the DWB that the *so+wo+so* free relative construction has developed as shown in table 1 below. At the time of the 14th century the first *s* was no longer visible and in consequence the form was homophone to the local adverb *wo*:

Table 1: development of the ***so + wo + so*** to ***wo*** according to Grimm (DWB)

wo	Time Period	
sô (h)wâr sô	Old High German	
so huuar so	Benediktinerregel	6. Jh.
so war so	Otfried	800
so war ders	Otfried	800
souuar	Notker	900
sua	Dollmayr -Wiener Genesis	
swo	Passional	13. Jh.
wa	Elisabeth bei Rieger	14. Jh.
wo	Märterbuch von E.Gierach (1928)	14.–15. Jh.

However, even if the table represents adequately the development of *wo*, it is not clear whether this *wo* is indeed our RCI that occurs in restrictive and appositive RCs in Upper German. To the contrary, there is no clear evidence that this is the correct historical scenario.

The important point is that although the morpho-phonological development is surely correct, it is not the case that with this change also a change in the semantics/syntax of the element took place. We checked for the occurrences of sw-pronouns in several texts from the MHG period on and it turned out that we found barely any headed relative clauses. The *souuar, sua* and *swo* word forms (checked for Wiener Genesis, Passional) cited in Grimm were mainly used in temporal or conditional environments (conjunctional use) but not in headed relative constructions.

The instance of *wo* found in the Märterbuch also cited by Grimm (see table 1 above) is however found in headed relative constructions as in (36). But note that again the head noun describes a place, i.e. it is severely lexically restricted:

(36)   a.   Do   sy   chomen   zü   der   stat   ***wo*** der   povel sich
               There   they   came   to   the   city   ***wo*** the   poor-ones
               hat gesammet…
               has gathered…   (Märterbuch VI Polykarp,1363–64)
        b.   und   do   er an das   lant   cham ***wo***   zway
               and   when   he at the   country   came ***wo***   two
               ross   chomen züsam
               horses came   together… (Märterbuch IX, Agatha, 2539–40)

Given this sparse empirical justification, we conclude that this scenario is not adequate. Furthermore, the scenario postulates that there is only "a small step" from a free relative clause headed by a (possibly empty) demonstrative or the universal quantifier to a restrictive relative clauses with a full head noun. But we know that the syntactic environment in which free relatives occur is fundamentally different from that of headed relative clauses. This holds for contemporary German as well as for older stages. Thus the mere morpho-phonological change of dropping the initial s- on w-pronouns occurring in free relatives is very unlikely to reflect such a deep rooted semantic and thus syntactic change.

A final point should be mentioned, namely that from this scenario, we would expect that w-pronouns occurred generally as relative pronouns in German: there is no reason why this change should be confined to the relative pronoun relating to PLACE (even in a rather abstract sense). Rather, why this development should only have happened to *wo* remains then a mystery – to say the least. From this we conclude that an extension from the free relative clause construction to restrictive relative clauses with a head noun is not a viable way to account for *wo*-relatives in Upper German dialects.

In sum, the scenarios for the development of *wo* as an RCI that have been suggested in the literature are empirically not adequate. For this reason, we think that our suggestion that *wo*-relatives are the direct continuation of the widely attested *so*-relatives – which have from their first attestations on the same distribution (in terms of the type of the head noun) as the contemporary *wo*-relatives.

4   *Wo* as a relative clause introducer

In section 2, we have seen, that *so* became a relatively wide spread RCI and that there is good evidence from the time line and the areal distribution that *so*-relatives are a plausible source for the modern *wo*-relatives in Southern German dialects. With this background, we can now ask more precise questions:

i.   How come that the semantics of an equation particle fits with the semantics of a relative clause?
ii. What about the change from the d-series to the w-series?
iii. What about the combinations of d-pronouns and particle?

4.1   An equation particle as RCI?

Let us first turn to the question in which way an equation particle may fulfill the demands that are laid upon an element marking a clause as a relative clause. We will take as a starting point de Vries's (2002) general characterization of a relative clause as (i) being a subordinate clause and (ii) having a 'gap' that is connected in some way to the matrix, i.e the head noun, see Grosu (2002) for a more detailed discussion. Most treatments of the syntax and semantics of RCs concentrate on the relative pronoun and the role it plays in the interpretation of the RC. However, as we have seen, there are many instances of RCs that are introduced merely by a particle. Whether these pronoun-less RCs can be treated in terms of simple PF-drop of the pronouns remains to be shown, see section 6 for a brief discussion. But let us first concentrate on the role of the equative particle and the semantics of (restrictive) RC.

4.2   A simple semantics (and syntax) for RCs

First we have to become clear about what the equative particle does in its 'natural environment', so to speak. In a very informal way, we can state that an equative particle takes two elements and equates them in the sense that they show the same properties in terms of amount, degree, manner etc. To take a simple example, consider (37):

(37)   Hans   läuft   (so)   schnell   wie   der   Wind
       Hans   runs   (so)   fast   as   the   wind
       'Hans runs as fast as the wind blows.'

An informal paraphrase would be:

(37')   The rapidity of Hans' running is equal to the rapidity of the wind

We can transform this into a bit more formal expression:

(37")   Hans' running has a rapidity (= x) <u>and</u> the wind has a rapidity (= y),
          whereby *wie* states that x = y

Note that this paraphrase contains a conjunction (and). And this brings us im-
mediately to the interpretation of restrictive relative clauses. The common view
is that semantically a restrictive relative clause – which is taken semantically to
be a predicate[15] is conjoined with the NP of the head noun, Heim & Kratzer
(1998). The conjunction of the two predicates leads to an intersection such that
the restrictor of the head noun is enriched by more semantic content. Consider
the following example from Alemannic:

(38)   des Buech **wo**   ich g'lese ha   liit   uff em Tisch
          the book PRT   I   read have   lies   on the table
          'The book that I read lies on the table'   [ALM]

An adequate paraphrase of (38) is (38'):

(38')   for the thing on the table the following properties hold:
          (i)   it is a book   <u>and</u>
          (ii) I've read it

However note that (38') expresses how we <u>interpret</u> the sentence in the end but
not what we find in the sentence in (38): in the RC there is no reference to *the
book* nor any (pronominal) element that refers to it; the object itself is not real-
ized, i.e. there is merely a gap. Thus, if we are true to the linguistic input, the
following paraphrase is more adequate:

(38")   (i)   x is a book   <u>and</u>
          (ii) I read something (= y)
          whereby *so/wo* states that x = y

We end up with the same type of paraphrase as in the case of the equation and
so we can see that there is a natural connection between equatives and restrictive
relative clauses in the sense that both necessarily contain a – at first sight hidden
– conjunction[16]. The difference to the 'normal' equative construction is that in
this case it is not the properties that are equaled but rather the elements for
which the properties hold. Under this perspective, the equative particle is a natu-
ral candidate for an RCI. Assuming now that *so/wo* is situated in the C-position
– as seems uncontroversial – we have all the ingredients that characterize a
relative clause: (i) the clause is embedded, (ii) it has a 'gap' which is connected
via the equation to some element in the matrix.
    The simple semantics for restrictive relatives argued for here has already
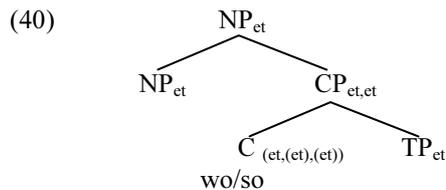been suggested. Such a simple version of a REL-operator, requiring merely the

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[15] See below for further elaboration of this notion in the context of RCs.

[16] Recall that during the MHG period, the coordinating conjunction *and* was used also as an
RCI. Furthermore, in the Celtic languages the equivalent of *and* is the most common RCI, (Melanie
Joitteau, p.c., David Adger, p.c.)

conjunction of two predicates (of the type (e,t)) is given in (39), taken from v. Stechow (2007), see also Steedman (1987):

(39) REl_{attr} Type (e,t),((e,t),(e,t))

Expressed in syntactic terms, this is an adjunction of the CP to the NP that both express a property and the node dominating them is of the same type, i.e. a property. The structure would then look like as follows:

(40)

$$NP_{et}$$

$$NP_{et} \qquad CP_{et,et}$$

$$C`_{(et,(et),(et))} \qquad TP_{et}$$

$$wo/so$$

The NP then in turn is taken by the determiner of the head noun and as such can be inserted as an argument of the main clause.

This simple analysis has been rejected on the basis of the assumption that the REL-operator is represented by the relative pronoun and thus the relative pronoun is constitutive for the interpretation of a relative clause. Since a relative pronoun is an element that bears φ-features and a theta-role, it seems an implausible candidate for such a simple kind of operator. But if we look at the type of particles (conjunction and equative particles) that are found in the history of German(ic) as well as in the contemporary dialects, especially Southern German, the idea that these particles are a sufficient basis for the interpretation of a relative clause as in (38) seems plausible.

However, in the Heim/Kratzer style of deriving relative clauses, the relative pronoun is not only necessary in order to realize the REL-operator – its movement 'turns' the CP into a predicate. Thus, the next question we have to address is the type-theoretic status of the elements involved.

As already said above, an NP by itself is a predicate and thus corresponds to a property per se, i.e. is of the type (e,t). In order to conjoin with an NP, the CP must also be of the type (e,t). Now a full fledged CP is normally of the type t. It is a predicate only if an argument is missing, i.e. if there is a gap. Therefore, in many analyses, especially the one advanced in Heim & Kratzer (1998), movement of the relative pronoun out of the clause is a necessary ingredient to interpret a relative clause: only via this movement, a 'gap', i.e. the trace and thus a variable may occur in the clause and thus turn the RC into an unsaturated expression, i.e. a predicate.

But note that the important point is the gap and not the movement per se. In light of the commonness of the particle strategy, where there is no sign of a pronoun[17], nor the movement of a pronoun, we will assume that the gap itself in

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[17] Resumptive pronouns e.g. in Swiss German cannot be taken to be a spell out of the relative pronoun in its base-position. Recall that 'relative pronouns' belong either to the d-series or the w-

the relative clause is sufficient to turn the clause into a predicate and that especially no movement is necessary. In section 5, we will take up this issue again. There it will be shown that Upper German *wo*-relatives do not have the same structural properties as pronoun introduced RCs and that thus the non-movement hypothesis is justified also on empirical grounds.

4.3   On the parallel development of equative and relative particle

Now that we have seen that there are good reasons for the assumption that an equative particle can fulfill the demands of an RCI, let us consider in more detail the development of the equative particle in German and relate it to the development of the RCI.

An equative construction necessarily consists of two elements (the comparee and the standard, according to the terminology introduced in Haspelmath & Buchholz 1998). Both elements are in general marked by a special particle: the parameter marker (which is attached to the constituent referring to the property with respect to which the two elements are compared) and the standard marker:

(41)   Hans ist   ***so***   groß   ***wie***   Maria
        comparee   parameter marker   standard marker standard

If we now have a closer look at the form of the particles, we can see that in contemporary (Standard) German the parameter marker is *so* and the standard marker is *wie*, see (42) whereas in the OHG German example, (43) both markers are lexicalized as *so.* This situation is comparable to Modern English where also both elements belong to the d-series[18].

(42)   Hans ist ***so*** groß ***wie*** Maria
        Hans is so tall   as   Maria
        'Hans is as tall as Maria.'   [SG]

(43)   Sie   sind ***so*** sáma chuani sélb ***so*** thie Romani
        They   are so same keen   self so the Romans
        'They are as keen as the Romans themselves.'
                (Otfried 55.5, cited after Schlosser, p. 88)   [OHG]

The question now is: which is the 'real' equative particle? With the follow-up questions: are both necessary in order to mark an equation construction and which is the one that we postulate to be operative in RCs?

First of all, note that the parameter marker can be dropped quite easily. It seems only with certain gradable adjectives that an exact degree in terms of an

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series – but they never occur as simple pronouns (being subject to Condition B of the Binding theory) nor as determiners, see also Wiltschko (1998) for more discussion.

[18] Remember that *as* is a shortened form of *al-so* and we have seen above that it semantically belongs to the d-series. English is rather unique under the contemporary languages with this pattern. Most languages show a w-element as the standard marker.

explicit measure phrase is required. If we consider equative constructions where no measurable parameter is involved, we see that the marker can be easily dispensed with. This is true for OHG and for Modern Standard German:

(44)　thaz ich　ci chirichun　ni　quam, **so** ich　mit rehtu scolta
　　　　that I　　to church　　neg came, as　I　　with right　should-have
　　　　'That I didn't come to church as I should do.'
　　　　　　　　　(Fuldaer Beichte, line 11, cited after Schlosser 1998, p. 68)

In contemporary German the standard marker again would be realized as *wie*:

(45)　dass　ich　nicht　zur　Kirche　kam,　**wie**　ich　eigentlich　sollte
　　　　that　I　　not　　to　　church　came,　as　　I　　with-right　should
　　　　'That I didn't come to church as I should do.'

Interestingly, a rather natural version of (45) is (45') with an additional *so*, immediately preceding the standard marker in the adjunct clause:

(45')　dass　ich　nicht　zur　Kirche　kam,　**so wie**　ich　sollte
　　　　that　I　　not　　to　　church　came,　***as* as**　I　　should

What seems to happen here is that *so* is used as a phoric element that stands as a place holder for the whole proposition of the preceding clause whereas *wie* is in fact the element that realizes the equation[19].

Thus, we would like to suggest that the *so*-element preceding the adjective in an equative construction like in (41) is not a degree element nor does it directly contribute to the equation, it is rather merely a placeholder for the content expressed by the standard. The idea would be that underlyingly, an equation construction looks as in (46a) and the surface form is built via extraposition of the standard phrase and insertion of the correlative element *so*, as indicated in (46b):

(46)　a.　Hans　ist　[wie Maria]　gross
　　　　b.　Hans　ist　so_i　　　gross[wie Maria]$_i$

In this sense, phoric *so* builds a correlative construction together with the standard and its marker.

Note that this is possible since *so* has inherently a demonstrative/deictic function. In its pure deictic use, the standard is even not required to be linguistically present:

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[19] Under this perspective, the rather frequent occurrence of a doubled so, namely soso, sose, samaso in OHG equative constructions does not come as a mystery:
(i)　weset　wise　samaso nátrun　inti lúttare soso　tubun
　　　be　　wise　as　　addera　and candid as　　pigeons
　　　　　　　　　　(Tatian, p. 77, line 20–22, cited after Jäger (2010:470)
Soso is exactly the same element as *so wie* with the sole difference that *wie* did not (yet) occur as an equative.

(47)   Hans   ist *soo*[20]   groß (with a pointing gesture)
        Hans   is *so*   big

A further indication that this analysis is on the right track is the following contrast:

(48)   a. ? Wie   Maria könntest du   groß sein   (wenn du   gut
           As   Maria could   you   big be   (if   you   well
           essen würdest!)
           eat   would)
           'You could be as big as Maria, if you would eat well!'
        b. * Wie   Maria könntest du   **so** groß sein...
           As   Maria could   you   so big   be...

Although (a) is not a perfect sentence, the contrast to the b. version is very clear. Now, (48b) is basically an instance of a strong cross over effect, i.e. the bindee crosses over its binder. The same difference in grammaticality occurs with 'classical' correlative constructions where we find a pronoun co-indexed with an extraposed clause:

(49)   a. Hans   hat (es) geglaubt [dass er eingeladen   wird]
           Hans   has (it) believed [that he invited   will-be]
        b. [dass er eingeladen   wird]   hat   Hans   (* es) geglaubt
           that   he invited   will-be   has   Hans   it believed
           'Hans believed that he will be invited.'

From this discussion we can conclude that the standard marker is the functionally relevant equative particle whereas the phoric element *so* plays only a secondary role. Note that *wie* – if the standard consists of a clause, as in (45) – obviously functions as a complementizer, i.e. is a C-element, since the verb-final order is mandatory in these examples – be it in OHG or in Standard German. And as we will see in section 4.4 exactly for these elements, the change from d- to w-series is found in other instances as well.

The final question to answer is now how is it possible that two seemingly rather different elements in their surface shape, namely *wo* and *wie* (which have in its interrogative use clearly a distinct meaning) happen to fulfill basically the same function, namely that of equation – be it in 'real' equative constructions or in relative clauses where we saw that the semantics of a RC fits very well with that of equation.

We would like to point out that in the dialects we discussed here, there seems to be a certain interchangeability. First, in some Bavarian variants, relative clauses are not introduced by *wo*, but rather by *wie*:

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[20] In this usage, *so* must be stressed and thus the vowel occurs in a long form.

(50)   So   dass   ma do   ned   iba   de   norm koma san,   de
        such that   we there   not   above the   norm come be,   RP
        wia se   aufgschdaid   ham
        as   they   up-set   –   have
        'Such that we did not exceed the norm that had been set up.'

                                              (Eroms 2005:76)

On the other hand, some Swiss German dialects use *wo* in equatives, Claudia Bucheli (p.c.):

(51)   der isch so   gross ***wo***-n-i
        he is   so   big   ***as***-N-I
        'He is as big as I.'

Finally, temporal clauses that express simultaneity[21] are introduced in Alemannic dialects by the element *wo*, but in Bavarian by the element *wie*:

(52)   a.   ***Wo***   er   hom   gloffe   isch   het   's grenglet
             When the   home   walked   is   has   it rained
        b.   ***Wia***   ar heim   glauffen   is   hot   's gregnet
             When the home   walked   is   has   it   rained
             'It rained when he went home.'

We refrain from a detailed discussion of *wo* in temporal clauses, see Bräuning (2009) and in prep., but for the cases in (52) it is obvious that a semantic analysis must rely on an equation of the temporal reference. The usage of an equative particle thus does not come as a surprise.

It seems then that we are dealing in all the discussed variants with the same type of element, namely a w-version of the equative particle *so*, which has in some variants turned to *wie* and in others to *wo*. As concerns the question why there are two different outputs, we have to remain silent but we think that we have shown convincingly enough that the difference must be attributed to a surface phonology effect – which does neither affect the syntax nor the semantics of the element in question.

To summarize, we have seen in this section that the equative particle is a good candidate for a RCI since the 'hidden' conjunction it expresses is required both in equations and in relative clauses and thus there is a common semantic core, which is required in both types of constructions. Furthermore we have seen that it is the standard marker, which seems to bear this semantics whereas the *so*-element in contemporary German (= *as* in English) has a phoric function and thus does not directly contribute to the interpretation of the equation. The

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[21] *Wo* can also be used in temporal clauses that express anteriority. In these contexts a temporal conjunction expressing anteriority is missing and the anteriority reading is expressed by the sequence of tenses in the matrix and subordinate clause and the semantic properties of the verbs involved, see Bräuning (2009) for a more detailed description.

next question now is how the *so*-equative particle turned into a w-version, namely either *wie* or *wo*.

4.4   The change from d-series and w-series

In the discussion above, we assumed that *so* is an element of the d-series of pronominal elements. This assumption is justified because it is used as a demonstrative element – the only difference to 'regular' demonstrative pronouns being that it is neutral w.r.t. the category it may refer to, specifically to clauses and other non-nominal elements. The specific proposal we make is that *wo* is the w-counterpart of *so*, i.e. that it has turned from the d-series to the w-series. That RCIs turn from the d-series to the w-series in the history of Germanic is nothing new. A well known case is English – another case is Dutch where under certain conditions, w-pronouns occur in RCs. However, we have seen that *wo* should not be analyzed as a relative pronoun, rather as a particle occupying the C-position. The question thus is whether a change from the d-series to the w-series took also place in this realm. And this is indeed the case. As already mentioned, Jäger (2010) gives a very detailed overview about how the equative (and comparative) particle developed in German. From OHG until late ENHG, we find particles corresponding to *so*, i.e. the d-series, see the various examples cited above. Only in post ENHG times, the equative particle turned to the w-series (and spread then even to the comparative construction), Jäger (2010:476). Now interestingly, the time when this happens corresponds exactly to that time where *wo*-relatives are first attested, namely shortly after the ENHG period, according to Behaghel (1928:736), one of the first attestations in Swabian is from 1642.

That *so* as an RCI has survived even till later times is proved by the example in (4) from Schiller (who lived from 1759–1805). What is more, in a recent large scale study on Alemannic dialects that was conducted by the authors within the project SynAlm[22], at least 3 informants translated spontaneously a relative clause with the particle *so*:

(53) a. Dem   Maedle   *so* ses   Fahrrad   gstohle   hen,…
          the-dat girl   so they-the bicycle   stolen   have…
      b. Saell Maidli,   so 's-Fahrrad   gschdolle wore   ischt…
          that   girl   so the-bicycle   stolen   has   been…
          'The girl whose bicycle was stolen…'
      c. Des   Hues, *so* si's   Dach grad   ney   deche…
          the   house so they-the roof   right   afresh cover…
          'The house whose roof they freshly covered…'

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[22] http://ling.uni-konstanz.de/pages/home/synalm/

Thus, the change from the d-series to the w-series is relatively new. But still we have now to consider how the contemporary situation with the w-element might have come about. First recall that German kept throughout its history the d-series as far as relative pronouns[23] are concerned. On the other hand, if we have a closer look at complementizers apart from *dass* – which has a very stable usage in declaratives - we can detect that there seems to be a constant change between d-series and w-series. Consider first a change from d- to w-:

(54)　Pidiu　　ist dem　　　manne　　so guot, ***denn*** er zu demo
　　　By-this　is the-dat　　man-dat　so good　***when*** he to the-dat
　　　mahale　quimit
　　　court　　goes
　　　'Because of this it is good for the man if he goes to the court.'

　　　　　　　　　　　　　　　　　　　　　　　　　　(Muspilli 63,64)

As in the English gloss, present day German would use *wenn* (when). However, this change could also happen the other way round: the following is an example from Erec (Hartmann von der Aue, about 1180–1190, line 103–104):

(55)　Der ritter hete　im　　genomen den　　lîp
　　　the knight had　him　taken　　the　　life
　　　wan　　　　　Erec was　blôz　***als*** ein wîp
　　　then (since)　Erec was　bare　***as*** a　　woman
　　　'The knight would have killed him because Erec was bare (without arms) like a woman.'

In contemporary German, we would have *denn* instead of *wan*, i.e. a change from d- to w-. In the case of *als*, on the other hand, contemporary German would use *wie*. And as said above, *als* can be equaled with *so*. Here we have again an instance of a d- to w- change. So it seems as if the change between w-series and d-series in the realm of C-elements is a rather typical feature of German throughout its history. We will come back to the interchangeability below.

　A final striking piece of evidence that *wo* emerged out of *so* are the following examples. In different hand writings of the Nibelungen legend, *so* (although in this case not in its relative use) has been replaced by *wo* from one manuscript to the other:

(56)　da　　　zen　　Burgonden　***so*** was　ir　　　lant　　genant
　　　There　ART　Burgundy　　***so*** was　their　land　　called
　　　　　　　　　　　　　　　　　　　　　　　Nib., I, 5, 3B (5, 3, 5)

(57)　da　　　zen　　Burgonden　***wo***　was　ir　　　lant　　genant
　　　there　ART　Burgundy　　***PRT*** was　their　land　　called
　　　　　　　　　　　　　　　　　　　　　　　Nib., I, 5, 3C (5, 3, 5)

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[23] The only exception is *wo* that refers to locations, see the discussion in section 3. We will immediately turn to this issue.

(58)   ob Sifrit   niht   enlebte   *so* wurde   im   vundertan
        if Sifrit   not   neg-lived *so* became   him   subject
        Nib., XIV, 900, 3C (813, 330b, 867, 33v, 879, 330a) US

(59)   ob Sifrit   niht   enlebte   ***wo***   wurde   im   vundertan
        if Sifrit   not   neg-lived ***PRT***   became   him   subject
                                        Nib., XIV, 900, 3B (813, 330b, 867, 33v, 879, 330a)
                                        Der Nibelungen Not; all quoted after TITUS[24]

It can be concluded that the change between the d- and the w-series in embed-
ded contexts is a recurring phenomenon. Recall also that Romance generally
uses w-elements for its declarative complementizer, all based on Latin *que*
(= what!) whereas the Germanic languages use the d-series counterpart, i.e. *that*.
Obviously, in both language variants the respective element is able to fulfill the
same function. To put it simply: in case of C-elements it seems as if it 'doesn't
matter' somehow whether the element belongs to the w- or d-series. The ques-
tion now is of course: how than this be?

Turning first to pronouns, the interchangeability between d-pronouns and w-
pronouns in non-interrogative contexts is not only attested for Germanic; it
seems to be a pattern in many other languages, as discussed in detail by Diessel
(2003). The question thus is what do they have in common?

Both types of elements are quantificational in the sense that they require to
pick out one element from a construed set of possible candidates. In the case of
demonstratives, it is the speaker who delivers the value; with w-elements the
speaker requires the value from the hearer (in direct questions); in indirect ques-
tions, the w-element merely indicates that there is a value to be delivered[25]. In
all these cases, the same operation applies in that first a set of possible referents
is construed and then only in a next step the referent is established. In relative
clauses, the w-/d-pronoun is thus there in order to indicate that there is a search
space from which one member has to be picked out (i.e. the head noun) for
which the property holds that is expressed by the relative clause. Thus, both
elements can fulfill the required function. Which version is chosen by a given
language seems not to be related to a strict syntactic factor, cf. German that can
use *was* (what) as a relative pronoun if the head noun consists of a pronominal
like *(irgend)etwas* (something) but can also switch to *das*. However, this seems
not be possible if the head noun is animate[26]:

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[24] TITUS (Thesaurus Indogermanischer Text- und Sprachmaterialien) is a thesaurus provided by
the University of Frankfurt.

[25] Note that in case of a root clause, a w-element induces always interrogative force and then
there is no choice. It seems as if the interrogative force comes only about if the w-word is in a spec-
head relationship with the finite verb, i.e. the w-word in Spec-CP and the finite verb in C^0 – at least
in the Germanic languages. But we will not go into this, see Brandner (2010) for further discussion
of the role of the movement of the finite verb in these cases.

[26] This is true for Standard German. However, as Fleischer (2005b) and Weise (1916:64–66)
show, *was* can be used as a particle introducing relative clauses in several German dialects, includ-
ing Yiddish (*vos*) with all kind of head nouns, i.e. in these cases it is plausible to assume a reanalysis

(60) das, was/?das du getan hast
      that what/that you done have

(61) Jemand,   * wer/der   hier wohnt…
      Somebody   who/that$_{anim}$ here lives…

As concerns the complementizer-like elements like *that, when*, etc., we have seen above that there is variation either between languages (e.g. Romance vs. Germanic) or the versions can change during the diachronic development. Given that there are (obviously) certain parallels between relative clauses and other types of embedded clauses in the sense that both must be connected somehow to their matrix clause, the inconstant use of d- or w-elements doesn't come as a surprise[27].

   To sum up briefly this section: we have shown that *so/wo* as an equative particle is very well suited for fulfilling the demands of an RCI. The semantics of w-elements and d-elements in the realm of complementizer-like elements is close enough that they can be interchanged in the relevant contexts and thus the postulated change from *so > wo* is in line with a general change from d- to w-.

5 Scandinavian and Upper German relative clauses

As mentioned in the introduction, a further piece of evidence that our analysis is on the right track comes from Scandinavian relative clause formation. In Scandinavian[28], a relative clause is introduced by an invariant complementizer *som* that shows historically parallels to German *so* and behaves structurally similar to the Alemannic relatives introduced by the particle *wo*. The following sections show the structure of Scandinavian relative clauses, the properties they share with Upper German dialects and point out some differences which – however – can be traced back to independent differences between the two varieties of Germanic.

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process, see also the discussion in Harbert (2007, ch. 6) on whether this type of element is a pronoun or a particle. He advocates the particle analysis.

[27] We will here not go that far and claim that all (types of) embedded clauses are essentially relative clauses, see Kayne (2010) for a recent proposal along these lines; nevertheless, the considerations made here surely point in that direction. We leave this for further research but we are quite confident that a closer examination of the properties (and etymology) of the range of complementizers that occur in dialects (i.e. spoken variants) will reveal further data to settle such questions.

[28] We are aware of the fact that 'Scandinavian' is too coarse a 'label'. However, the same is of course true for the term 'Upper German dialects' – as we have seen in the preceding sections. Nevertheless, the broad picture that the varieties spoken in Denmark, Sweden, Norwegian and Iceland build their relative clauses with *som* is by and large correct.

5.1   Scandinavian relative clauses introduced with the complementizer *som*

As is well known, the Scandinavian languages build relative clauses with the particle *som/sem*; Like in Upper German dialects, the use of *som* as an RCI is independent from the grammatical function and occurs invariably as an RCI:

(62)   Vi   kender de   lingvister…   [Danish]
        We   know   the   linguist…
            a)…***som***   vil   loese   denne bog   (subject)
              …***who***   will   read   this   book
            b)…***som***   han   vil   besøge   (object)
              …**who**   he   will   visit
            c)…***som***   han   spurgte   efter   (oblique)
              …***who***   he   asked   after   Mikkelsen (2002: 74)

Again, as in the German variants we discussed until now, the use of the equative particle (in the following example realized as s*em*) as an RCI occurred already in the oldest stages of the language, namely in Old Norse:

(63)   Allum   guðs   vinum   ok   sinum   Þeim   ***sem***   Þetta   bref
        all   god.G friends.D and   his.Refl those ***PRT***   this   letter
        sjá   eðr   heyra
        see.3.P   or   hear.3P
        'to all God's friends and those of his own who see or hear this letter'
                                        (DN 11.4 quoted after Faarlund, 2004:259)

And, again parallel to German, *sem* was also used as a comparative particle in Old Norse:

(64)   svá   Þróttaust   folk   ***sem***   Þetta   er
        so   powerless   people.N ***as***   this.NEU.N   is
        'powerless as this people is'
                                        (Fbr 213.17 quoted after Faarlund, 2004:266)

From these parallels, we would expect that the syntactic behavior is also parallel. We will see immediately that this is not fully borne out; however, it will be shown that the differences that occur between Scandinavian and Upper German dialects can be traced back to independently attested differences between the two languages.

5.2   Differences between Scandinavian and Alemannic relatives

Let us then have a closer look at the usage of the *som*-particle in Scandinavian. In contrast to the Upper German dialects, *som* occurs in embedded questions (instead of a 'normal' complementizer, cf. the grammatical version of (66) from

Alemannic where *dass* occurs regularly with (complex) wh-phrases, see Bayer & Brandner (2008):

a) *som* in embedded wh-questions

(65) Vi   vet   hvem ***som*** snakker med   Marit
      We   know who   ***som*** talks   with Mary
      'We know who talks with Mary.'   (Taraldsen, 1986:150)

Assuming nevertheless that *som* is basically the same element as *wo* in Upper German dialects, one would expect that we find the same pattern in these dialects. However, this is not borne out:

(66) Ich woass it   weller Lehrer   ****wo*** /***dass*** mit   dr   Paula
      I   know   not   which teacher   ***wo***   ***that***   with ART   Paula
      schwätzt
      talks
      'I don't know which teacher P. is talking with.'

We have to admit that we cannot provide a satisfying answer why the RCI-element occurs in embedded questions, see Taraldsen (1986, 2001), Franco (2012) for a recent discussion. One possibility that comes to mind is that it is the relic of a cleft construction, i.e. it is based on a relative clause. Such an assumption could be justified with the observation that in most Scandinavian languages, the phenomenon is confined to subjects. And as is well known from cross-linguistic studies, the extraction of subjects is often constrained in the sense that it is either impossible or requires additional syntactic operations. A well-known phenomenon in this context is the *that*-t-effect. Now Scandinavian and Upper German dialects differ in this respect as well: (most) varieties of Scandinavian show rather strong *that*-t-effects, see Vikner (1995), but see for a recent survey about the amount of variation Lohndahl (2007). Upper German dialects on the other hand are known to allow subject extractions rather freely, see Bayer (1984). If *som*-insertion in these cases could be traced back to a cleft construction to avoid some constraint on subject extraction, its occurrence in (64) would find a natural explanation. Given that there are no such constraints in Upper German, the difference between (64) and (65) also would fall out directly. But we cannot pursue this issue further in this paper.

b) *som* can be omitted in RCs

Another difference between Scandinavian dialects and our Upper German ones is that *som* can be omitted – when the relativized element is not the subject[29]:

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[29] This is of course related to the phenomenon above, i.e. if *som*-insertion has something to do with the licensing of the subject (e.g. via a cleft-construction), it is obvious that it cannot be omitted.

(67)　　Jeg　har　to　døtre　　　_　bor　i　København
　　　　I　have　two　daughters　　live　in　Copenhagen
　　　　'I have two daughters who live in Copenhagen.'
　　　　　　　　　　　　　　　　　(Ejskjaer, quoted after Engdahl, 1997:66)

The situation again is different in Upper German, where a sentence like (66) is not possible:

(68)　　*Ich han　zwoa töchtere　_　in Konstanz woonet
　　　　I　have　two　daughters　　in Konstanz live
　　　　'I have two daughters who live in Konstanz.'

This difference can be traced back to a well-known (but not yet explained) property of continental West-Germanic (i.e. Dutch and German varieties) on the one hand and the Scandinavian languages as well as English on the other hand: the former languages never allow the omission of a complementizer and since *wo* is a complementizer, the impossibility of (67) is in line with this property.

c)　*som* can co-occur with other C-elements like *at*

This is a much discussed issue in Scandinavian syntax and especially Danish seems to play a prominent role in this, see Vikner (1991). Data[30] are cited after Mikkelsen (2002):

(69)　　Vi　kender　mange　lingvister ***som　at　der***　vil　loese
　　　　We　know　many　linguists ***who***　that　there　will　read
　　　　denne　bog
　　　　this　book
　　　　'We know many linguists who will read this book.'
　　　　　　　　　　　　　　　　　(Mikkelsen, 2002:69)

We have no instances of such a 'clustering' of complementizers in the Upper German dialects we looked at. A relative clause like in (69) is ungrammatical in Alemannic:

(70)　　*Des isch　der　Ma　***wo　dass***　d'　Paula troffa hot
　　　　This is　the　man　***wo　that***　ART Paula met　has
　　　　'This is the man who Paula met.'

However, this is not really surprising since at least in Alemannic[31], the co-occurrence of two complementizers – as it is familiar from Dutch dialects, see (69) from Barbiers (2009:1612) – seems never to be a possibility:

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[30] According to Danish informants this example is controversial and seems to be ungrammatical for most speakers.

[31] This seems to be slightly different in Bavarian. As H. Weiß and G. Grewendorf (p.c.) inform us, a sequence like d-pronoun + wo + dass (der Ma*, der wo dass*…) seems to be possible. Interestingly only in case the d-pronoun is present. We don't have to say anything about that at the moment. Note that in SNIB (Sprachatlas von Niederbayern) where several RC constructions were investi-

(71) Vertel niet wie of dat ze   geroepen hebben
      tell   not   who if that they called   have
      'Don't tell me who they have called.'

(72) *Ich woass it   wer ob dass aglüte het   [BA]
      I   know   not who if that called has
      'I don't know who has called.'

This is even true for (short) wh-words and the complementizer *dass* in embedded questions, as has been discussed by Bayer & Brandner (2008) thereby challenging the view that DFC-violations in Upper German dialects are 'optional':

(73) I woass it   wer (* dass) kunnt   [BA]
      I know   not who that   comes
      'I don't know who'll come.'

So whatever the factor is that excludes the co-occurrence of two (or more) head-like elements in the C-domain in Alemannic, this factor also excludes the co-occurrence of the C-element *wo* with a 'normal' complementizer. Such a restriction does not seem to hold for varieties of Danish (and maybe other Scandinavian varieties). A further detailed investigation into this kind of variation is necessary to provide us with answers that can explain the patterns observed. In the meantime we have to be content that at least the generalizations (only one C-element in Alemannic vs. several C-elements in Danish) seem to hold throughout – and relative *wo/som* is no exception to this rule.

The last difference between Scandinavian and Upper German dialects we want to mention is preposition stranding. This is attested in Scandinavian (illustrated here with Danish) in relative clauses as well as in questions whereas Upper German does not allow preposition stranding:

(74) a. Vi   kender de lingvister ***som*** han spurgte efter (=62c)
          we   know the linguist PRT   he   asked   after
          'We know the linguist who he asked for.'
      b. Hvem har Per snakket med?
          who has P.   talked   with
          'Who did Peter talk to?'

(75) a. * des   isch oaner   wo de Peter mit   g'schwätzt hot
           this is   someone   wo the Peter with talked   has
           'This is somebody (that) Peter talked to.'
      b. * Wer hot   de Peter mit   g'schwätzt?
           who has   the Peter with talked
           'Who did Peter talk to?'

gated, no single instance of this pattern is found. But it makes clear that much more careful and detailed investigation into the fine grained structure of relative clauses is necessary.

Given that the difference also shows up in questions we can safely assume that it has nothing to do with the way relative clauses are built in the two varieties. Thus we won't say anything further about this issue.

5.3　Extraction out of Upper German and Scandinavian relative clauses

We have seen in the preceding section that there are differences between Scandinavian and Upper German relative clauses. But these could all be traced back to independently attested differences between the two variants. This section addresses now a common property that directly hinges on our assumptions about the origin of the RCI in the two variants. This lends further support to our analysis that in both languages, the relative particle originates from the equative particle. The property we adhere to is that Scandinavian and Upper German allow both extraction out of RCs, see Engdahl (1997):

(76)　De　　blommorna　känner　jag　en man　***som***　säljer
　　　 those　flowers　　 know　 I　　 a man　***that***　sells
　　　　　　　　　　　　　　(Engdahl, 1997:54)　　 [Swedish]

(77)　a.　Sottige　 blueme　　wüsst　i　etzt　neamed　***wo***　bi　üüs
　　　　　 such　　 flowers　 know　I　now　nobody　***PRT***　at　us
　　　　　 verkauft　　　　　　　　　　　　　　　　　　　[ALM]
　　　　　 sells
　　　　　 'I know nobody who sells such flowers in our region.'
　　 b.　So　　a　alts　 Radio　wüsst ich　etzt　 neamed　***wo***
　　　　　 such　an old　radio　know I　 now　 nobody　***PRT***
　　　　　 no　 repariere　künnt
　　　　　 still　repair　　could
　　　　　 'I know nobody who can repairs such an old radio.'

(77) is judged by several informants as fully acceptable. This is also true for Bavarian. Interestingly, for both variants, there is a strong contrast as soon as a version of a relative clause with an additional d-pronoun is chosen – an option that is possible in these dialects, as we mentioned in the introduction:

(78)　a.　* Sottige blueme　　wüsst　i　etzt　neamed　***der***　wo　 bi
　　　　　 such　 flowers　 know　I　now　nobody　who　 PRT　at
　　　　　 üüs verkauft
　　　　　 us　 sells
　　 b.　* So　　a　alts　 Radio　wüsst ich etzt　 neamed　***der***　wo
　　　　　 such　an old　radio　know I　now　 nobody　who　 where
　　　　　 no　 repariere　künnt
　　　　　 still　repair　　could

This contrast is remarkable since it shows that an analysis in terms of a simple PF-drop of the relative pronoun together with the lexicalization of the C-

position via *wo* is obviously not feasible. If the pronoun were syntactically present also in the cases in (77) we would expect the same strong ungrammaticality if extraction took place. Thus, the structure of *wo*-relatives in contrast to d-pronoun-relatives must be in some sense fundamentally different. We will take up the issue briefly in the last section. Additionally, extractions like those in (76) and (77) are not unique. Cinque (2010) discusses similar facts from Romance and other languages, see also Kush et al. (in press) who show that similar effects are even observable in English with relative clauses introduced by *that*.

To conclude this section, we have seen that the parallelism between relative clause formation in Scandinavian and Upper German dialects is not restricted to the type of the particle – we find also remarkable syntactic similarities.

6 Conclusion and outlook

To conclude, we argued that w*o*-relativization in Upper German dialects is a direct continuation of a particle strategy of RC-formation that is attested in German(ic) throughout its history. Specifically, we claimed that *wo* evolved out of the equative particle *so* that was rather widespread in ENHG (but already attested in OHG). We showed that an equative particle fulfils very well the demands laid upon a relative particle to deliver the semantics of an RC. The important point is that an equation per se entails a conjunction (between two elements). The difference between a 'normal' equation and a relative clause is that in an equation it is the properties that are equaled whereas in an RC it is the individual to which the two properties apply.

The change from the d-series to the w-series coincides with the same change of the equative particle in German in 'normal' equative constructions. Further plausibility for the suggested analysis was gained by comparing Upper German RCs with Scandinavian *som*-introduced RCs where it was shown that they do not only share the same type of element; they also pattern alike in the relevant respects (extraction). Alternative scenarios were dismissed as empirically not adequate in the sense that they are not compatible with the diachronic data – although especially the suggestion that the RCI *wo* derives from the local adverb is in itself a plausible scenario, since it is attested in other languages. Further research will have to show to which extent this scenario nevertheless plays a role – especially in light of the fact that children acquiring *wo*-relatives today do of course not have access to diachronic data and thus a reanalysis seems plausible – at least in those dialects where there is no clue for assuming a connection to the equative particle, see the discussion around the examples where there is an interchange between *wie* and *wo* forms.

There are two important issues we did not address in this paper: first the issue of the distinction between appositive and restrictive RCs and second the role of the d-pronoun in a general theory on RC-formation. We restricted the detailed analysis of the equative particle as an RCI to restrictive relative clauses for

which it has always been argued that semantically there is a conjunction (intersection) between the two predicates, see Heim & Kratzer (1998). However, we mentioned above that Upper German (and also Scandinavian) does not distinguish on a formal basis between appositives and restrictives, i.e. they are both introduced by *wo/som*, cf. also the examples with *so* from ENHG. What we can take for sure is that appositives equally involve a conjunction structure, as they are 'additive' per se, see de Vries (2006) for a detailed proposal. The point then would be that the conjunction happens at a higher level, i.e. above the DP and that the conjunction involves the clausal predicate (the predication over the relativized DP) of the matrix clause and not only the restrictive part within the relativized DP. We can not go into further details here but it seems that there are no insurmountable problems to extend the analysis to appositives.

The second issue, i.e. the role of the d-pronoun, is of course essential for the recent discussions on relative clauses within the generative framework. They concentrate on the question whether the raising analysis (Kayne 1994, Bianchi 1999 among many others) or the matching analysis (Sauerland 1998, Salzmann 2006) or even the more 'traditional' external head analysis, defended recently by Boef (2012), are on the right track. Clearly, especially the raising/matching analyses hinge crucially on the presence of the d-pronoun. Since our main concern was the origin and the semantics of the relative particle we didn't touch upon these questions in this paper. However, there is one issue where our results are nevertheless relevant for this discussion: if we interpret the data concerning the extraction in the previous section correctly then we must conclude that the particle strategy is not merely a surface variant of an underlying raising/matching (or external head) structure – with an overt C and a dropped pronoun – rather they have a fundamentally different syntax. This entails that the general analysis of relative clauses must be rethought such that there exist two entirely different types of RCs, see Wiltschko (1998) for a similar view. Nevertheless, both versions obviously achieve the same interpretation. Note that – at least for Standard German – the d-pronoun strategy applies for restrictives and appositives alike, i.e. it seems implausible at first sight that the (non-) presence of a d-pronoun matters for the interpretation. As noted in footnote 6, however there are observations that point in this direction. The Upper German dialects with their (seemingly optional) additional d-pronouns seem to be an ideal testing ground. In a pre-test study for SynAlm, the informants were asked to translate an RC with a nominative head noun and nominative in the relative clause, i.e. possible requirements on obliques were controlled for:

(79)   Das ist der   Lehrer,   ***der***   immer   so   viel   geschimpft
        this is   the   teacher   ***RP***   always such-a-lot grumbled
        hat
        has

The expectation was that the majority of translations would merely involve *wo*. However, the following results were obtained:

Type	Number of translations	%
wo	145	48,2
d-pronoun	139	46,2
d-pronoun + wo	17	5,6
total	302	100

The percentage of *wo*-relatives and d-pronoun relatives are nearly equal whereas the co-occurrence of both elements seems to be the exception. Note that the d-pronoun strategy occurs to a much higher rate as one would expect it if was merely an interference effect from Standard German. On the other hand, the 'doubling' structure occurs to a percentage which is typical for interference effects. Although very preliminary, the data show us that (i) the 'doubling structure' – which is often taken to be typical for the Southern German dialects – is quite limited and (ii) that both strategies are equally available in these dialects. If it were true that the strategies disambiguate between appositives and restrictives, these results are not expected. However, it seems as if the test sentence was badly chosen. Note that RCs that are headed by a DP with a definite determiner are often ambiguous between a reading where the article is anaphoric and one where it can be deictic (at least in the languages under discussion). The context given for this test sentence forced a deictic reading, i.e. an appositive interpretation was very likely since the referent was already established. Nevertheless, both possibilities show up to a nearly equal extent. This tells us that in future research, the conditions must be controlled for to a much higher extent, e.g. with quantifiers that only allow a restrictive reading, proper names as head nouns for appositives and finally the different interpretations of the definite article – which is manifested in these language by different phonological shapes. Thus, while we think that we have delivered a plausible analysis of the RCI in Upper German, its interaction with the relative pronoun is still an open issue.

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