

To match or not to match: that's the question! Some considerations on German free relative clauses

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*To Cecilia on her 60th birthday.
An invaluable source of scientific inspiration,
A constant guide.*

0. Introduction

Free relative clauses (henceforth FRCs) have been thoroughly investigated in the literature and especially formal syntax has tried to provide theoretical accounts for the inter- and intralinguistic variation that can be observed in various languages (Bresnan & Grimshaw, 1978; Grosu, 1996; Bhatt, 1999; Cinque, 2008, 2013, 2016, 2020; Pankau, 2018; Poletto & Sanfelici 2018; Sanfelici & Poletto, 2021; Sanfelici, Poletto & Garzonio, 2022; Sauerland, 2003; specifically on German: Pittner, 1991; Fuß & Grewendorf, 2014; Hanink, 2018; Mewe, 2020).

The label “FRC” refers to relative clauses in which no overt head is lexicalized in the matrix clause and the subordinate clause is introduced by a *wh*- pronoun also in the languages which normally make use of another pronominal series. See the following example in English (1a) and its equivalent in German (1b):

- (1) a. Who loves nature is never truly alone
b. Wer Natur liebt, ist nie wirklich allein.

Despite the many efforts, no final word has been said on FRCs, as some issues still remain to be explained. Needless to say, this paper will not provide a solution for the many unsolved questions either, but it will rather offer a contribution – based on empirical data – so as to further understand which factors are at play, which analyses effectively account for the mechanisms observed, and what remains to be explained.

German is an excellent observatory to deal with FRCs since their grammar can help shed some light on case-mismatch, on the possibilities offered by morphological syncretism in its interface with the syntax, on the role of animacy and potentially on positional factors. The main focus will be nonetheless on the requirements on matching, from which many

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considerations can be derived. Specifically, the questions will be addressed (i) what accounts are acceptable in terms of theoretical adequateness for the empirical data coming from German to be explained; (ii) to what extent German can be considered a non-matching language with respect to the possibility of forming a FRC also in those contexts in which the requirements of the matrix verb and of the embedded verb are different.

To address these research questions, the present contribution will be articulated as follows: a first section presents the most influential theoretical accounts which have been proposed in the literature and briefly discusses them; in the second section data from German will be provided so as to illustrate the different phenomena which can be observed and specifically matching vs non-matching configurations. We will attempt an analysis of the data in terms of Accessibility Hierarchy (Comrie & Keenan, 1979; Pittner, 1991) and Case Containment (Caha, 2009) and try to provide an explanation for apparent inconsistencies. In addition, we will consider subjecthood and the reciprocal position of the FRC and the main clause as possible factors affecting the acceptability of the construction; subsequently, the understudied role of animacy will be touched upon, since it is well-known that languages such as Italian cannot build inanimate FRCs, German instead can. As for the inanimate *wh*-, the possibilities offered by syncretic forms will be taken into account. Moreover, we will sketch a syntactic explanation for matching and non-matching configurations in German along the lines of Sanfelici & Poletto (2021). Some speculations on future perspectives of matching vs non-matching FRCs in German and some final remarks conclude the paper.

1. Free relative clauses: headless relatives come with a head

Free relative clauses are often called headless relatives. This is due to the fact that in the varieties in which they are allowed they lack an overt head. The absence of a visible head in the matrix clause has led to two different approaches: the so-called “Head analysis” and the “Comp Analysis”.

1.1. The “Head Analysis”

The “Head Analysis”, which dates back to Bresnan & Grimshaw (1978) and has been revived in recent times among others by Cecchetto & Donati (2011, 2015) proposes that the *wh*- phrase is located in the matrix clause, therefore outside the CP of the relative clause and occupies the position normally hosting the external head. FRCs allegedly only involve a bare head which raises and projects as a determiner, as exemplified below.

[D_{wh}- [CP [TP t_{wh}-]]]

Such an analysis assumes that wh- interrogatives' and FRCs' structure is identical, which does not seem to be the case because of the different properties the two constructions display. As pointed out by Cinque (2020), a "Head Analysis" can only be compatible with some residual cases which can be observed in languages such as Italian, in which forms like *chiunque* (whoever) can act as a head of a regular relative clause (2).

- (2) Uccise i suoi nonni... il cognato e poi chiunque per cui venisse pagato.
He killed his grandparents, brother-in-law, then anyone he was paid to.

Notice that the example above could not be rephrased with a single FRC, since the mismatch between the case required by the matrix clause and the one of the internal head would not be acceptable. If we leave these limited cases aside, for which such a hypothesis can be tenable, this proposal cannot account for the cases of mismatch which are actually tolerated in some languages. Specifically, it cannot predict why a mismatch between the case required by the embedded verb and that required by the matrix verb can be solved in favour of the former, for instance in languages like Ancient Greek and German (see Cinque, 2020: 98 and references cited therein). Namely, in a "Head Analysis" configuration, examples such as (3), accepted by a good number of German speakers, should be ruled out. The verb *treffen* ("meet") requires the Accusative, while the verb *vertrauen* ("to trust") the Dative and the latter prevails.

- (3) Ich treffe, wem du vertraust.
I meet wh_{DAT} you trust.

If the wh-phrase coincided with the external head, we would expect that the wh- bears Accusative case or that the construction is ungrammatical.

A further point which can be made against the "Head analysis" is underpinned by extraposition. As Haider (1988: 120 cited by Cinque, 2020: 98) points out, German does not allow for extraposed FRCs if the relative clause is part of a PP (4):

(4) Der Reporter hat sich auf *(das) gestürzt, was man ihm zeigte.

The reporter jumped on what one showed to him.

(Haider, 1988: 120)

A “Head Analysis” in which the *wh*- phrase occupies the external head position implies that there is actually no silent head.

1.2. *The “Comp Analysis”*

The “Comp Analysis” assumes that the *wh*- phrase sits in the Specifier of the CP of the relative clause. This account is compatible with two different implementations: either the FRC is considered a bare CP or it may be postulated that a FRC is actually a relative clause in which the antecedent is silent (Groos & Van Riemsdijk, 1981; Kayne, 1994; Pittner, 1995, Benincà, 2012; Cinque, 2020). Assuming that FRCs are bare CPs as has been done for instance by Vogel (2001) a.o., and thus treating them as a “regular subordinate clause” lacking a relative clause status is problematic in many respects and does not account for the DP-like behaviour of FRCs, which exhibit strong island sensitivity and have the same distribution as DPs. German provides interesting evidence on this point, since it shows that CPs can never be complements of verbs requiring the dative (Bayer, Bader, and Meng, 2001), FRCs instead – if all other restrictions are satisfied – can be even complements of main verbs requiring the Dative, like *helfen* (“help”) as exemplified in (5).

(5) Ich helfe, wem du auch hilfst.

I help whom you help too.

This is a clear clue of their DP status. A silent head has to be postulated and has the advantage of preserving the isomorphism of relative clause structures.

1.3. *The nature of the head*

In the frame of a generalized double headed analysis of relative clauses, Cinque (2020: 98) suggests that the *wh*- pronoun is embedded in a larger DP. There, it is merged in a specifier which modifies the external head matching the internal one.

The question on the nature of the silent head is far from being trivial. Along the lines of Kayne (2004), Cinque (2020: 100) finds it reasonable to argue for a functional head of the kind *THING* for the inanimate *wh*- “what” or *PERSON* for “who”. This hypothesis is consistent

with the idea that possibly all DPs modify a functional noun, which is silent in most languages, but spelt out in some other (see Kayne, 2007).

(6) (We gave him) [DP the [CP what THING_i [C [we bought t_i]]] (THAT) THING]

Cinque (2020: 100, ex. 109a)

Citko (2004: 248) has a slightly different take on this and assumes for German that FRCs derive from light-headed relative clauses, i.e. relatives whose head is lexically lighter than a full DP and is pronominal in nature (7).

(7) a. Derjenige, der sagte, dass Gewinnen nicht alles ist, hat noch nie etwas gewonnen.

The one that said winning isn't everything, never won anything.

b. Wer sagte, dass Gewinnen nicht alles ist, hat noch nie etwas gewonnen.

Who said winning isn't everything, never won anything.

In more recent times, Hanink (2018) refined previous analyses of FRCs in terms of light-headedness, in that she suggested that FRCs are super light-headed relative clauses in which the external head undergoes a haplology-like process due to featural redundancy over adjacent pairs. On the basis of German data, Catasso (2013) suggested instead that the external head has the form of a light demonstrative as highlighted by sentences like (8), in which the external head is overt:

(8) Die Ausstattung beinhaltet genau das, was man benötigt.

The equipment includes exactly (lit. that) what you need.

I will not dwell on the nature of the silent head, which is not crucial for the purposes of the present paper, but for the reasons which have been outlined and especially because of evidence coming from German, I will assume there is one silent head whose semantic content is very poor – be it pronominal or a light DP.

1.4. Case-matching in FRCs

Building on robust previous literature on case-matching, Cinque (2020: 119-123) identifies three types of languages with respect to their morpho-syntactic behaviour in FRCs:

- (i) Fully matching languages (for instance English)¹, in which the morphosyntactic requirements on the *wh*- and the external head have to fully coincide for the latter to remain silent.
- (ii) Non-matching languages in which the case conflict is resolved in favour of the internal head like in Latin (see Cavallo & Bertollo, 2014; Bertollo, 2014), Old Middle and New High German (see Sanfelici & Poletto, 2021) and Modern German² (see Pittner, 1991).
- (iii) Non-matching languages in which the case conflict is resolved in favour of the external head like in Ancient Greek (see Harbert, 1989).

For the purposes of this paper, the second category is the most interesting, since it needs to be further refined in German: not all conflicts can be resolved in favour of the Case of the *wh*- and the grammaticality judgements of German speakers are heterogeneous, although some configurations are consistently rejected.

¹ Citko (2000) and Cinque (2020) insert in this group also Italian. Nonetheless, there is evidence that case-mismatch can be resolved in favour of the external head provided that the *wh*- is in a structural case, thus avoiding prepositional clashes (Bertollo & Cavallo, 2012). See for instance the following example:

- (1) Do la penna a chi la chiede.
I'll give the pen to those who ask for it.

And contrast it with (2):

- (2) *Do la penna a per chi lavori.
I'll give the pen to for whom you work.

Notice that so-called “missing P” (Grosu, 1996), i.e., the haplology of one preposition if it is identical both for the external head and the *wh*- governed by it, is possible in Italian, as well (3).

- (3) Do la penna a chi serve.
I'll give the pen to those who need it.

² Although it is simplistic to insert German in this group, I will not dwell on the details now, since this discussion and the related phenomena will constitute the core of the present contribution.

2. Case matching in German FRCs

2.1. Fully matching or “moderate” case mismatch?

German is a privileged environment to observe the morpho-syntactic behaviour of FRCs with respect to non-matching contexts. Matching configurations are considered standard and thus legitimate for most speakers³ (9):

- (9) Wer die Vase zerbrochen hat, hat eine neue gekauft.
Who broke the vase bought a new one.

The constructions in which the case required for the external head and the case on the *wh*- do not fully overlap deserve instead thorough attention (10). As has been mentioned above, following Cinque (2020) and longstanding literature, German can be considered a language in which cases of non-matching can be resolved in favour of the internal case, i.e., the case displayed on the *wh*- is the one required by the verb of the subordinate clause. This is the reason why examples such as (10) are ruled out.

- (10) *Ich vertraue, wem_{DAT} du liebst
I trust who you love

The verb *lieben* “love” requires an Accusative case, while the *wh*- in (10) displays Dative case, selected by the matrix verb *vertrauen* (“trust”). Dative should therefore be the case borne by the external head but clashes with the requirements of the embedded verb.

Nevertheless, the picture is definitely more fine-grained than it might appear at first glance and grammaticality judgements on non-matching configurations in which the case on the *wh*- is the one which is expected, based on the requirements of the embedded verb, are not always consistent. The heterogeneity collected on grammaticality judgements concerning German FRCs led some authors to think of two different grammars: so-called German A and German B (Vogel, 2001). German A is representative of the variety spoken by those people who only accept matching configurations and syncretism⁴, while German B refers to the variety in which mismatch is tolerated provided that it is solved in favour of the internal head.

³ Notice that, based on an experiment run by Vogel & Frischer (2003: 102), the rate of rejection of fully matching sentences has statistical relevance. 27.1% of the participants even rejected sentences under matching conditions.

⁴ Syncretism will be dealt with in the course of the paper.

Interestingly, the fact that the requirements on the *wh*- phrase are respected is not sufficient for the sentence to be acceptable even in German B. Crucially, Case Accessibility Hierarchy (Comrie & Keenan, 1979) and its refinements such as the Universal Case Containment (Caha, 2009) plays a deciding role in determining what configurations are possible and what are instead ruled out although all morphosyntactic requirements on the *wh*- are met.

As highlighted by Caha (2009), given the case sequence NOM – ACC – GEN – DAT – INS – COM⁵, the cases on the right can morphologically contain the cases on the left. In the terms of Comrie & Keenan (1979), cases on the left of the scale are less marked than the cases on the right and are easier to relativize and eventually to recover. This allows for strong empirical predictions, which are largely confirmed by German data, according to which only cases “contained” in the other can remain covert. If this does not happen, i.e., the case borne by the *wh*- does not “contain” the case of the external head, the latter has to be made overt for the sentence to be grammatical.

Coherently, sentences like (11) are not acceptable, since they violate this principle, while (12) is grammatical in so-called German B.

(11) *Ich vertraue_{DAT}, wen_{ACC} du liebst.

I trust who you love.

(12) Ich treffe_{ACC}, wem_{DAT} du vertraust.

I meet who you trust.

Interestingly, not all speakers – not even those convincingly tolerating mismatching – consider the kind of sentences in (12) as well-formed. Case Containment is a *conditio sine qua non* but is not sufficient to guarantee for grammaticality.

Further factors at play seem to concern genericity vs specificity, position and animacy⁶. The maximalizing nature of FRCs probably influences also a preference for generic interpretation, which has to be a semantic possibility for the sentence to be acceptable. Given the sentence in (13), in which the internal case prevails:

(13) ?Ich beneide_{ACC}, wem_{DAT} du hilfst

I envy who you help

⁵ Notice that GEN and DAT are in the reverse order in Keenan & Comrie’s (1977) hierarchy.

⁶ Animacy will be analysed in the following paragraphs.

informants argue that, although they are not sure whether they would actually accept sentences like (13), if they did, they could only interpret it as generic, the meaning being: I am envious of whoever you happen to help because it is nice being helped by you. If one wants to indicate that envy is addressed to the very specific person who is being helped by you, some more indications have to be provided and the interpretation needs to be somehow forced towards this direction, being the default interpretation generic.

Some unexpected problems also arise for combinations in which the external head is assigned a structural case, while the *wh*-phrase is governed by a P (14). The preposition seems to interfere with a proper interpretation of the external head and the acceptability rate diminishes. Example (14) has been judged as not fully acceptable by my informants⁷.

- (14) ?Heute treffe ich, mit wem du ausgehst
Today I'll meet who you go out with

The marginality of the construction is not limited to the presence of the preposition, as can be seen from the examples (15) and (16), which many native speakers are not prepared to accept:

- (15) */?Ich hasse_{ACC}, wem_{DAT} immer kalt ist
I hate people who are always cold
(16) */?Ich hasse_{ACC}, wem_{DAT} Thriller gefallen
I hate people who like thrillers

It can be argued that the low rate of acceptance for these sentences is connected to the specific nature of the embedded verbs, a perception and a psychological verb, respectively. This means that also Theta-roles impact on the grammaticality. Nevertheless, also “true datives” *wh*-phrases in which a Beneficiary is involved are problematic.

- (17) ?Ich kenne nicht, wem_{DAT} du den Kuli gegeben hast
I don't know who you gave the pen to

⁷ Even by those accepting case mismatch configurations.

2.2. *Subjecthood and positional factors of FRCs*

All examples which have been provided so far involved an external head selected by a matrix verb as its complement. It is now of interest to investigate whether subjecthood, and thus the fact that the external head is assigned Nominative case plays a role. In other words, it remains to be answered whether external heads which are subjects can be kept silent provided that the *wh*- phrase meets the requirements of the embedded verb.

If we consider Case Hierarchy and Case Containment, the Nominative is the least marked Case and, in principle, there should be no constraint on the grammaticality of this kind of sentences, as potentially every *wh*- contains the Nominative, or coincides with it. Nevertheless, especially if the FRC is in post-matrix position, many sentences even respecting these constraints sound decidedly odd to native speakers normally accepting mismatch configurations:

(18) ??Heute kommt, wen_{ACC} du in Paris kennen gelernt hast.

Whom you got to know in Paris comes today.

(19) ??Zu seinem Fest kam, wem er geschrieben hatte

People to whom he had written came to his party”

(20) ??Gestern kam, mit wem_{DAT} sie ausgeht.

The person on whom she goes out came yesterday

(21) ?Wem_{DAT} du das Buch geschenkt hast, ist dir gar nicht dankbar⁸

The person to whom you donated a book is not grateful to you

A slight improvement takes place if the free relative clause is shifted to the beginning of the sentence. This could be due to a preference for a positional prominence of the subject, which makes interpretation easier, especially when the subject is particularly heavy, like in this case in which it contains a full subordinate clause. Even though the first position alone does not ensure that the output is grammatical, positional factors are not trivial⁹. The *Vorfeld*, i.e., the specifier position of a CP, can host (a.o.) DPs which would not be accepted in other clausal fields such as the *Nachfeld*¹⁰. Matrix clause verbs in a synthetic tense do not overtly realize the

⁸ I will cite one of my informants' comment with respect to this sentence, as it is revelatory of the general attitude towards this kind of configuration: “This sounds something I might say, it's fairly marked, and I might be the only one using it even jokingly”.

⁹ See also Mewe (2019: 157) for a discussion on the frequency of pre-matrix FRCs in the different cases and on their respective acceptability rate.

¹⁰ In the German grammatical tradition, which divides the sentence into syntactic fields, the *Nachfeld* is the postverbal field which normally hosts subordinate clauses or right dislocated PPs. It can be overtly realized only

right parenthesis and therefore do not block FRCs in post-verbal positions, which actually represent the *Mittelfeld*, i.e., a clausal internal position. In these cases, no actual extraposition has taken place. Ultimately, the post-verbal position is at least disfavoured for subject FRCs if compared to the pre-verbal order. If we think of the DP nature of FRCs, it does not come as a surprise that they dislike the *Nachfeld* position, which can host CPs and postponed PPs, but no DPs.

The empirical observation on a preferred preverbal position for FRCs serving as the subject of a matrix clause is confirmed if we consider another kind of FRCs, i.e., so-called d-FRCs, in which the relative pronoun does not have the form of an interrogative but the d-relative pronominal series is used (22).

- (22) Aber die_{NOM FEM PL} das sagen, sind Leute, die keine Ahnung haben oder nicht biken.
But who says it is people who don't have any idea or do not bike.

(http://www.radroutenplaner.hessen.de/mtb_info.asp?dbspalte=43)

Fuß & Grewendorf (2014), who investigated this type of FRCs, argue that such constructions are impossible in *Nachfeld* position (23) and preferably occupy the *Vorfeld*.

- (23) *Wir stellen nächste Woche ein, die/den_{ACC} du uns empfohlen hast.
Next week we'll hire the person who you recommended to us.

Fuß & Grewendorf (2014)

Interestingly, d- relatives differently from regular FRCs imply specificity and exhaustiveness and their pre-matrix clause position is often not unmarked but related to left dislocation as the frequency of resumptive pronouns show. The acceptability of d- free relatives is not common to all German speakers – even under matching –, since some of my informants rejected the construction as not belonging to their varieties, other judged it as old-fashioned (*veraltet*). Furthermore, case mismatch in d- FRCs is unlikely to be accepted, unless the non-matching FRC is left dislocated and then resumed by a pronoun as in (24).

- (24) Der_{DAT-FEM} du eine Puppe geschenkt hast, das_{NEUT DEMONSTRATIVE} ist meine Tochter.
The child to whom you donated a doll is my daughter.

when the right parenthesis is realized as well, this means in those cases in which the verb is a particle verb or is in a compound tense, since the right parenthesis hosts past participles and particles of particle verbs.

It does not come as a surprise that the dislocation of the FRC allows for more freedom in the configuration, as is expected for topicalised noun phrases. Marked positions are evidently not excluded for FRCs, on the contrary, like other DPs they can be fronted and resumed. Cinque (2020) recalls that German FRCs built by means of a *wh*- phrase can even occupy an extraclassical position as happens for instance for conditionals of irrelevance (d'Avis, 2004), which do not affect the veridicality of the matrix clause (25).

- (25) Wenn du vorbeikommst, um elf bin ich immer im Büro.
If you come along, I'm always in my office at eleven.

A clear diagnostic to determine whether the FRC is actually extraclassical and therefore in a *Vor-Vorfeld* position, thus being a free adjunct, is offered in German by the position of the verb of the matrix clause, which is apparently Verb Third (26).

- (26) Wen_{ACC} auch immer du einlädst, Maria wird nicht kommen.
Whoever you may invite, Maria will not come.

(D'Avis, 2004 cited by Cinque, 2020: 118)

Admittedly, this kind of FRCs, in which an extraclassical position is occupied, behaves as if they were conditionals of irrelevance. This fact would deserve further investigation, since they are probably not FRCs in their own rights, but rather subordinate clauses and thus CPs.

2.3. *The role of +animate in FRCs*

Up until now, it has been pointed out to what extent mismatching configurations can be accepted and under which circumstances. It has been highlighted that once the Case Containment Hierarchy is respected in favour of the case assigned by the embedded verb to the *wh*-, mismatching is expected to be tolerated. Nonetheless, further factors such as the position of the FRCs and the nature of mismatch can impact on the acceptability of the construction. It is now worth investigating whether animacy may play a role. In other words, it is of sure interest to understand whether the featural array of +animated *wh*- phrases is a favouring or an inhibiting factor for mismatch configurations to be considered grammatical.

An analysis of the grammaticality judgements provided by native speakers highlights an asymmetry in the acceptability rate of configurations involving an animate entity on the one

side and an inanimate entity on the other. The bundle of features contained in the *wh-* pronoun in German is both syntactically and morphologically richer for the +animate, thus involving extra-processing and feature checking. The asymmetry between +animate and -animate is all the more evident if mismatching configurations are considered in which the *wh-* is governed by a P for the animate and is represented by a pronominal adverb of the type *worauf, wozu* etc. for -animate.

While the FRCs in which the configurations P + *wh-* phrase bearing the +animate features are not easily accepted by speakers despite the fact that the Case Containment Hierarchy is perfectly respected, like in (27), pronominal adverbs – which can only be used for inanimate entities – are perfectly fine as introducers of FRCs under mismatch, as exemplified in (28) and (29):

(27) ?Hans ruft an, mit wem du ausgehst.

Hans phones whom you go out with

(28) Wovon er spricht, interessiert mich gar nicht

What he speaks about does not interest me at all”

(29) Ich habe nachgedacht, worüber du gesprochen hast

I’ve reflected on what you said.

Inanimate FRCs also seem to be less sensitive to positional factors. Inanimate entities are good candidates for being objects or oblique complements and can comfortably sit in post-verbal position. Parallely, if they are the subject, the pre-matrix position is the preferred option, but other positions are not excluded.

The pattern which clearly emerges is that there are specific constraints concerning the animacy of the referent. Animate entities are less “prone” to be maintained silent as heads, probably because of their richness in features. This interacts with the relatively scarcer morphological forms of inanimate entities, usually not employed in the dative form and rendered as a unique component in syntactic contexts in which the inanimate *wh-* would be governed by a P (see Bayer, Bader, Meng, 2000 for a thorough discussion on the nature of the Dative). The decreased richness in features of inanimate entities, their avoidance in the bare dative, as well as their morphologically syncretic forms allow for configurations which are not even perceived as mismatching by speakers and are therefore accepted also by those who consider Case mismatching ungrammatical.

2.4. *Why is syncretism a resource? Less is more: the role of impoverishment*

While the *wh*- pronominal series of animate FRCs does not display any syncretic case in German, the inanimate is expressed via *was* both in the Nominative and Accusative Case, while in the Dative it is scarcely used. Interestingly, syncretism guarantees for the grammaticality of configurations which would not be accepted by “matching only” speakers of German, like in (30):

- (30) *Was*_{ACC} du zubereitest, ist immer lecker.
What you prepare is always tasty.

As can be seen in (30), the subject of the main clause, i.e., the external head which is assigned Nominative Case, is kept silent, while the *wh*- bearing Accusative Case is overt. This configuration respects the Case Containment Hierarchy according to which the Nominative is “contained” in the Accusative.

However, under syncretism the reverse configuration would be perfectly acceptable as well (31), which is unexpected if we consider the Case Containment Hierarchy, but is well-known in the literature (Pullum & Zwicky, 1986):

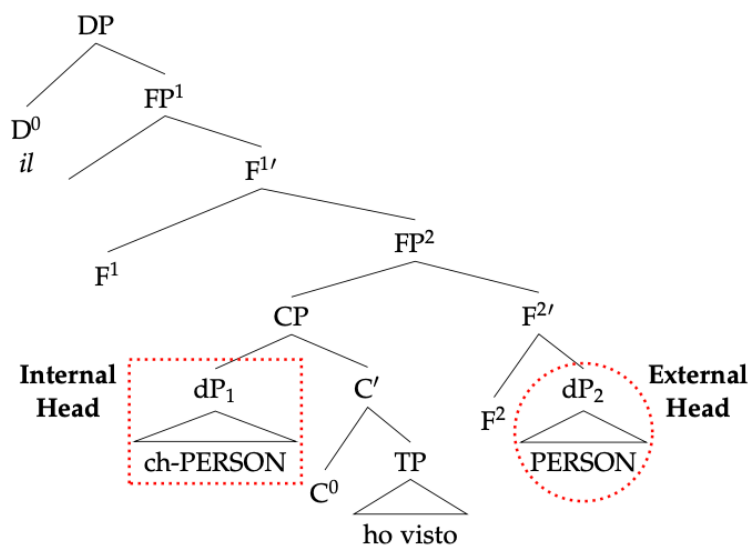
- (31) Ich esse gerne, *was*_{NOM} von dir zubereitet wird.
I eat with pleasure what is prepared by you.

In (31) the external head is assigned Accusative Case by the matrix verb, but the case which is made overt is the one of the internal Head, which is assigned Nominative Case. How is it possible? Surely, the morphological form is identical for the inanimate, but in principle a morphological identity does not correspond with a syntactic identity between the two. One proposal to account for the acceptability of the structure is that matching effects are sensitive only to the phonological form of the relativizer as pointed out in van Riemsdijk (2006). More convincing proposals (Hanink, 2018: 284-285 and literature cited therein) suggest that the inanimate pronoun undergoes Impoverishment so that case features are removed from the *wh*-. The removal of these features would explain why the Case Containment Hierarchy is not at work and prevents from possible mismatches. It is still to be debated, whether this is a case of true Impoverishment or if it is rather Underspecification. In any case, it must be a pre-syntactic operation, so that the morphological realisation has an influence on syntactic operations (Müller, 2007). In any case, syncretism, which in this domain is only possible for inanimate

entities, offers possibilities that are totally excluded under case conflicts which are morphologically overt and circumvents all the restrictions which “only matching” speakers normally do not overcome.

2.5. *A syntactic explanation for matching and non-matching*

In recent times Sanfelici & Poletto (2018, 2021) have proposed a syntactic account for Old Italian FRCs in which case mismatch can be accepted. Along the lines of Caha (2009) and Cinque (2016), they argue that the Case Containment Hierarchy applies under c-command, since it is an Agree operation. The probe includes the goal and is therefore richer in features. According to Sanfelici & Poletto (2021) the features on D_0 , i.e., the head of the DP which is assigned the external case from the probe within the matrix clause, must be identical to the features on the internal head in terms of Case in all matching configurations.



Sanfelici & Poletto (2021: 5)

Deriving a syntactic configuration which correctly predicts case mismatch in which the internal head prevails is more challenging, since the internal head would have to c-command D_0 , for the internal head to contain the case of the external one, which is not the case. Sanfelici & Poletto (2018: 25) “conclude that the Case on D_0 is at least shared onto the external head, namely PERSON in order for the internal head to contain the external Case” (see Ouali, 2008 specifically on the operation SHARE).

If we apply this analysis to German, what follows is that for those speakers who only accept matching, there is no inclusion relation, but rather identity between the features of the

internal and external head, while for the German speakers who allow for case conflicts provided that the internal head prevails, feature sharing must take place so that the external head inherits the features of D_0 and these are contained in the internal head. What may be assumed for syncretic cases in which the inclusion operation does not seem to take place is that at a pre-syntactic level, both heads are impoverished so that they fully match, being possibly unmatching features already removed. A lesser number of features to coincide with one another facilitates identity and therefore acceptability. For those cases in which the Case Containment Hierarchy over-generates non-matching configurations, it can be argued that further factors intervene, which mostly have to do with a recoverability (Chomsky, 1965) and a processability problem. This is for instance the case in which a heavy DP (i.e., a FRC) serving as the subject is displaced. But it is also the case in which the internal head is governed by a P which blocks the proper interpretation of the external head bearing a structural case.

2.6 To match or not to match: where are we heading to in German?

The classification outlined in §1.4 concerning the requirements on case matching in various languages shows that there is a certain degree of variability with respect to the configurations allowed. German (even in the standard) shows that such variability can be found even within one and the same language, with no clear diatopic distribution. As for German, what remains consistent is that no speaker accepts configurations under which the external case prevails. It is therefore interesting to think of a possible outline for German and whether we have to expect that FRCs head towards rigidity, i.e., stricter matching, or if Case conflict resolutions will be more easily tolerated. The answer to such a question may only be stipulative at the moment. Investigations would be needed at least among native speakers belonging to different generations to detect cues of possible future developments. Nonetheless, if we adopt a broader diachronic perspective some stipulative tentative hypotheses can be made. As pointed out by Sanfelici & Poletto (2021) Old Italian was much freer with respect to case conflicts in FRCs, even in contexts in which the case mismatch was morphologically overt. This was also the case of Latin (Cavallo & Bertollo, 2012). As for Modern Italian (Bertollo & Cavallo, 2012; Sanfelici & Poletto 2021) mismatching is allowed in favour of the external case also because of morphological syncretism of the *wh*-, which is identical for all syntactic functions, making the mismatch in the processing by the speaker only partially visible.

If we consider previous stages of the German language such as Old and Middle German and New High German (Fuß, 2021) what emerges is that all these varieties allowed for case mismatch provided that the internal case prevailed. In the course of the time, prescriptive

grammars as well as the behaviour of speakers who perceive mismatch as disturbing because of conflict, and, potentially, the influence on local speakers of “matching only” dialects like East Franconian (Hanink, 2018) led to a progressive rigidity in the acceptability of the structure and a regularisation of the pattern in favour of full identity, which may become a tendency.

3. Conclusions

One of the main aims of this paper was to investigate the mechanisms that regulate FRCs and in particular matching from the perspective of the German language, which offers some interesting insights on the different phenomena.

Firstly, a brief illustration of some of the most influential theories on FRCs was provided, so as to check them against the empirical data to be observed in German. In this respect, the “Comp Analysis” in which a silent external head is postulated – thus preserving the isomorphism with other relative clauses as proposed by Cinque (2020) – manages to account for the different phenomena. Theories which do not recognize the DP nature of FRCs fail to predict island sensitivity and the possibility for FRCs to be selected by a verb which would require the Dative. Similarly, the “Head Analysis”, according to which the *wh*- is in the matrix clause, cannot account for case-mismatch in which there is an overt clash between the case required by the matrix verb and the case exhibited by the *wh*-.

Secondly, following Cinque (2020) a classification of the languages was presented in which the different types are identified on the basis of their morpho-syntactic behaviour with respect to the availability of case-mismatch in FRCs. Some languages require strict matching, i.e., a full identity between the case selected by the matrix verb and the case selected by the embedded verb, some other can resolve case conflicts in favour of the internal head (the case assigned to the *wh*- by the embedded verb prevails) as is in Latin and some varieties of Modern German, a third group only allows for case mismatch provided that the external head prevails like in Ancient Greek.

The general claim that German belongs to the group of languages which tolerate case-mismatch if the internal case prevails has been refined in the paper also to detect what factors block case-mismatch and what further factors do not really manage to inhibit it but are disfavoured factors for case-mismatch to be accepted. The grammaticality of non-matching FRCs has been checked against various aspects: (i) the role played by the Accessibility Hierarchy (Comrie & Keenan, 1979) and its refinements in terms of Case Containment (Caha, 2009); (ii) the role of subjecthood and positional factors; (iii) animacy; and (iv) syncretism.

As for (i), German data show that not all speakers are prepared to accept case mismatch and if they are, the internal head prevails. Furthermore, even though this requirement is respected, the Case Containment Hierarchy allows us to predict what configurations are ruled out. In particular, the external head cannot be maintained covert if the internal case – i.e., that of the *wh-* – does not contain it. Nonetheless, also configurations which meet these requirements may be affected by other factors which diminish their rate of acceptability. One of them is connected with the syntactic function assumed by the FRC (ii). If it is the subject of the main clause, especially under case mismatch, there is a strong preference for the FRC to be placed in a prominent position, i.e., as the initial constituent. This has probably to do with interpretation. Parallely, object FRCs are preferably to be placed in post-matrix position. Peripheral positions, which eventually cross the clausal borders, are not impossible. On the contrary, if FRCs are extra-clausal some further possibilities are allowed, which integrated clauses do not have. In the light of the DP nature of FRCs it does not come as a surprise that FRCs cannot occupy the so-called *Nachfeld*-position. As far as (iii) is concerned, it has been discussed whether animacy plays a role. It is undeniable that FRCs involving animate and inanimate entities do not behave alike: they use two different pronominal series, the inanimate pronoun shows syncretism in Nominative and Accusative Case, inanimate relativizers governed by a P give rise to pronominal adverbs of the type *wovon* (literally: of what), which act as a unique syntactic component. According to the grammaticality judgements of the speakers, especially these latter forms are more easily accepted than equivalent PPs with an animate referent in which the P and the *wh-* cannot be fused. The presence of a P in its syntactic independence governing a *wh-* seems to constitute an obstacle for the acceptability of a mismatching configuration even though Case Containment is respected. The question of animacy is connected to morphological syncretism (iv), which leads to an identity between the nominative and the accusative for the inanimate. Syncretic cases which facilitate case mismatch and even allow for a violation of Case Containment – for instance when *was* is nominative and the accusative object of the matrix clause is dropped – lead us to think that in a pre-syntactic operation case features are removed from the relativizer, so that it is impoverished or underspecified (Hanink, 2018). This means that both heads (the internal and the external one) deprived of their case features fully match.

After a discussion on the factors affecting case-mismatch, a syntactic account for the different configurations of FRCs in German has been proposed. Along the lines of Sanfelici & Poletto (2021), who claim that the Case Containment Hierarchy applies under c-command, it being an Agree operation, I have proposed also for German that in all those varieties in which full-matching is required, the relation between the internal and the external head is an identity

relation. It is definitely more challenging to account for case-mismatch, especially when the internal case prevails. In these constructions, which are to be found in German, I will assume that the external head inherits the features of the internal head via sharing (Ouali, 2008), since the internal head cannot c-command the external one.

Finally, a more speculative question has been posed, to which only a stipulative and tentative answer can be given, since evidence is still lacking. The issue concerns the future of mismatch, i.e., whether the German language is heading towards an increasing rigidity or to a bigger tolerance of mismatch. If we look at the history of German, but also of Italian, in which mismatching was much more common, it seems to be the case that standardization as well as the behaviour of native speakers who tend to perceive non-matching as disturbing, disfavour mismatch in favour of more comfortable matching configurations, or canonical relative clauses in which the external head is made overt and does not have to be recovered.

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