Case and Agreement Patterns in Turkish Nonsubject Relative Clauses

An Experimental Approach

Timea Szarvas

Matriculation number: 800158

A thesis presented for the degree of
MASTER OF SCIENCE

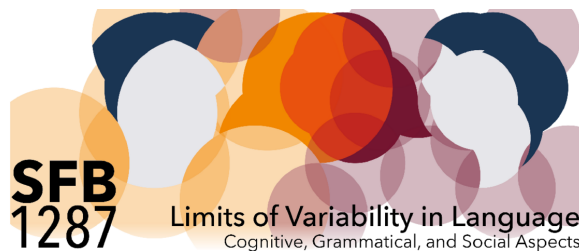**First Supervisor:**

Prof. Dr. Malte Zimmermann

Second Supervisor:

Andreas Schmidt, MSc

Date of Submission:

4th June 2021

Linguistics Department
Faculty of Human Sciences
University of Potsdam

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Zusammenfassung

Diese Arbeit behandelt die Kasus- und Kongruenzmuster von Subjekten in türkischen Nonsubjekt-Relativsätzen. Insbesondere wird experimentell untersucht, wie diese von der Art des relativisierten Nonsubjekts und der Spezifizität des Subjekts betroffen sind. In der Analyse von **Ouhalla1993** wird das Phänomen als eine Variante des Anti Agreement Effekts dargestellt, jedoch steht dies im Konflikt zu Daten, welche auf Unterschiede unter Nonsubjekt-Relativsätzen jenseits der Subjekt/Nonsubjekt-Asymmetrie hindeuten. **Kornfilt1997Kornfilt2000** stellt fest, dass die Spezifizität des Subjekts einen Einfluss auf die Kongruenzmuster hat, jedoch wird diese Ge-neralisierung auf alle Nonsubjekte angewendet, ohne auf Unterschiede innerhalb der Gruppe zu achten. Ein weiterer Ansatz von **Cagri2005Cagri2009** brachte hervor, dass es Unterschiede zwi-schen dem Verhalten von Relativisierungen von (direkten) Objekten und anderen Konstituenten gibt, und sagt vorher, dass sich die zulässigen Kongruenzmuster je nach gespaltener Intransiti-vität abwechseln können. Das aktuelle Experiment liefert erstmalig quantitative Daten zu diesen Untersuchungen. Keiner der bisherigen Ansätze kann ohne Einschränkungen belegt werden, stattdessen scheinen diese Momentaufnahmen einzelner Sprachvarietäten zu sein, welche auf Grundlage qualitativer Untersuchungen mit einer geringen Anzahl an Sprecher:innen zustande gekommen sind. Dies wird durch die hohe Variabilität zwischen Sprecher:innen bestärkt. Des Weiteren wird die Behauptung aufgestellt, dass Anti Agreement bislang zu streng definiert worden ist, da das Subjekt nicht extrahiert werden muss, um den Effekt hervorzurufen, sondern auch semantische Faktoren genügen können, um das Fehlen der Kongruenz zu ermöglichen. Die Befunde deuten darauf hin, dass die genannten Theorien nicht repräsentativ sind, und stattdessen ein neuer Ansatz von Nöten ist, der auf die Eigenschaften der verschiedenen Arten von Nonsubjekten abzielt, welche sich mit bzw. ohne Kongruenz und Kasus relativisieren lassen. Ich lege nahe, dass der Status des modifizierten Elements als Adjunkt oder Argument des Verbs als Grundlage für solch eine überarbeitete Theorie dienen könnte.

Abstract

This thesis explores the case marking and agreement patterns of subjects in Turkish nonsubject relative clauses and how they alternate based on the type of nonsubject targeted by the relativisation as well as the subject's specificity. Previous work aimed to analyse the phenomenon as an instance of the anti agreement effect, yet conflicting data uncovering differences among nonsubject relative clauses beyond the subject/nonsubject asymmetry is available; while another account predicts differences based on split intransitivity. Presenting experimental data, I argue that the patterns do not support either of the analyses fully due to inter-speaker variability, that the notion of anti agreement has been defined too rigidly, and that theories cannot capture the data unless they distinguish different types of nonsubject relativisations. I suggest that such a distinction could be based on the status of the relativised element as an adjunct or argument of the verb.

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1 Introduction

Subject agreement in Turkish relative clauses exhibits a special pattern. The verb of the modifier clause can take two distinct nominal suffixes, -AN or -DIK. It is maintained that the use of these suffixes is determined by the nature of the relativised element, with relative clauses targeting subjects being restricted to the use of -AN and all other relative clauses using -DIK (**Ouhalla1993**). The pivotal difference between these suffixes is the fact that only -DIK allows for an agreement morpheme to succeed it, while -AN blocks the marking of the subject's ϕ-features on the verb. In addition, suffix(es) on the verb go hand in hand with the case marking of the subject – the lack of agreement, i.e. the use of -AN, is only grammatical with a nominative subject, while the use of agreement, i.e. -DIK and ϕ-features, requires a genitive subject. This project is not concerned with the reasons why there are two agreement morphemes to begin with or why they behave the way they do regarding ϕ-morphology. Instead, the aim is to re-examine the cases in which these morphemes appear, explore which syntactic and semantic constraints govern them, and to find out which generalisation holds regarding their distribution. The current thesis focuses on relative clauses modifying two types of nonsubjects, direct objects and locatives, for which the reported patterns regarding case marking and agreement, despite my straightforward opening a few sentences prior, are particularly inconsistent.

While it has been sufficiently explored that differential subject marking in Turkish arises in nominalisations, research in this field is rather sparse for relative clauses.[1] For nominalised clauses in general, it is widely accepted that subjects are marked according to their specificity, resulting in semantically motivated marking, or based on the type of clause they are in, that is, marking based on syntax alone. The pattern found in relative clauses is accounted for through tiny extensions of the theory (**Kornfilt2003**), or is left out of analyses entirely (**Kornfilt2009**) – crucially, however, accounts dealing with differential subject marking in Turkish do not seem to be conceived with the case phenomena found in relative clauses in mind.

The reason for this becomes quite clear upon further inspection. At first sight, it may seem favourable to assume that relative clauses obey syntactic restrictions that enforce a certain case marking in subject relativisations and another in nonsubject relativisations. This is, very roughly, what has been proposed, although the perspective was fundamentally different from that of differential argument marking due to the strong interplay of case and agreement that is unique to relative clauses. Rather, in the few analyses that are available, the conclusion is that relative clauses do not exhibit a differential pattern per se, but are subject to the Anti Agreement Effect (AAE), in that the Ā-extraction of a subject, as it is implemented in relativisation, inhibits agreement between the subject and the verb. This leaves the verb without the subject's ϕ-features, and since these ϕ-features are responsible for licensing genitive case, subject marking

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1. This particular project is set within the generativist framework, but the phenomenon has also been explored from different theoretical perspectives, for example by **Barker1990GüngördüEngdahl1998**.

based on semantics is ruled out altogether.[2] Likewise, as the AAE is most prominently known as a phenomenon triggered by subject displacement, it has been maintained that this effect does not arise when targeting any other grammatical function: Ā-moving a (direct) object, for example, exhibits the expected -DIK morphology with agreement (**Kornfilt2000Kornfilt2008**). The notion of the AAE as a cross-linguistic phenomenon has been established by **Ouhalla1993**, who discusses some Turkish data as well.[3]

If the distribution of morphemes was truly this forthright – viz. -AN and nominative for subject relativisation, and -DIK+ϕ and genitive for nonsubject relativisation – we would not be facing a challenge and the efforts of this thesis would be dispensable. However, this project was inspired by the data presented by **GökselKerslake2005**, standing in opposition to the clear-cut subject/nonsubject distinction that anti agreement predicts. Given that there are no conflicts pertaining to subject relativisations, this work focuses on relative clauses modifying nonsubjects.

Most previous accounts address the agreement and case marking in nonsubject relative clauses as a marginal issue. While it is vital to establish the basics of a phenomenon to gain an understanding of it in the first place, it is equally important to acknowledge the value that lies in the exceptional patterns. Instead of pursuing the goal of pressing data into a mould that clearly has not been designed with a focus on its exceptional character, this work aims to examine exactly these unexpected phenomena, to learn from them and to subsequently put existing approaches into perspective based on experimental data. According to **GökselKerslake2005**'s (**GökselKerslake2005**) summary, which is strictly descriptive, relative clauses targeting locative expressions exhibit agreement according to the subject's specificity, while clauses relativising direct objects do not. As it will be explored further in this thesis, the data they present to illustrate the behavior of locatives incidentally reflect the findings of **Cagri2005Cagri2009**, which are in turn based on the Unaccusative Hypothesis (**Perlmutter1978**).

What all previous theories have in common is that they are based on rather small quantities of empirical evidence, with a systematic, quantitative assessment based on judgements of larger groups of people being due. This thesis examines how subjects behave in Turkish nonsubject relative clauses, taking into account the target of relativisation and the specificity of the subject given by context. Presenting new data and for the first time experimental data, my aim is to emphasize that agreement in Turkish nonsubject relative clauses is not merely motivated by the subject's specificity. It is affirmed that relative clauses exhibiting agreement are the default

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2. Note that the term differential argument *encoding* includes both case and agreement phenomena, and given the two nominal suffixes on the verb, it would not be wrong to deem the observed pattern an instance of differential subject encoding in principle. As it will become clear throughout this thesis, however, what truly makes this phenomenon special, or at least what is most promising to focus on, is the alternation between ϕ-agreement on the verb and the lack thereof. This is why the term anti agreement will be used – it is simply more precise, as differential encoding often entails the use of two distinct agreement or case morphemes.

3. Although only contrasting constructions with -AN with and without ϕ-agreement morphology, and not the distinction this work is exploring.

preferred across all conditions, yet at the same time, the claim that nonsubjects equally adhere to this pattern is challenged: While an anti agreement analysis is favourable based on clauses modifying direct objects, patterns in relative clauses targeting locative expressions contradict the strict division of subjects and nonsubjects regarding anti agreement.

Further, I claim that the AAE is not restricted to cases of subject *extraction*, specifically Ā-extraction, but can also be a side effect of regular A-movement or more precisely, the lack thereof in Turkish for bare, in situ subjects under certain conditions. Broadly, the goal is to show that persisting on the subject/nonsubject division may hinder us in uncovering the actual agreement pattern that Turkish relative clauses exhibit and may lead to the false unification of data that in reality has more to offer. I argue, based on my findings supporting neither of the existing analyses to the fullest extent, that this matter can only be clarified if our theories are sensitive to the different kinds of nonsubjects we make reference to, and even further, when we combine theoretical and experimental efforts. The data collected in this project supports the view that in order to uphold the notion of anti agreement, it is desirable to update the circumstances under which it surfaces, since we clearly observe that the subject does not need to be extracted to trigger the phenomenon. Further, I argue that the accepted patterns are shown to be subject to inter-speaker variability, explaining why theories postulate different properties governing the allowed patterns – this applies to locatives in particular. As a closing argument, or rather, an outlook, I propose a new perspective that takes into account the factors referenced both by **Cagri2005Cagri2009** as well as **Kornfilt2000**, but crucially, identifies the relativised element's status as an adjunct or argument to the verb as a possible factor enabling anti agreement and the differential case marking that goes along with it.

The thesis is structured as follows: In section 2, the foundations of the current study, comprised of a typological prelude, the structure of relative clauses in Turkish, and the concept of differential argument encoding across languages as well as its manifestation in Turkish and its most prominent prerequisite, specificity, are introduced. In section 3, previous ideas on how to deal with Turkish relative clauses are outlined, specifically the anti agreement approach based on the (undesired) licensing of *pro*, which patterns it can and cannot account for, and an alternative approach that draws upon the verb's transitivity or lack thereof. The aim of this thesis, elaborated in section 4, is to investigate how subjects of relative clauses modifying different kinds of nonsubjects, specifically direct objects and locatives, behave regarding case marking and agreement. The novelty this thesis presents is that for the first time, claims regarding this topic are supported by experimental data. In **??**, I argue that expanding our concept of anti agreement is necessary if we want to adequately account for the patterns, as well as generally taking into consideration independent observations (in the sense that they are not instrumentalised to support or refute a specific theory) and recognizing them to be complementary to one another rather than mutually exclusive. I further speculate about the trigger for the different agreement patterns found across nonsubject relativisations, hypothesizing that direct objects disallow anti agreement and differential case due to being arguments of the verb, while locatives allow for

alternations by virtue of being adjuncts. Section **??** concludes.

2 Foundations

2.1 Typological Classification

According to the World Atlas of Language Structures, Turkish is an agglutinating SOV-language belonging to the Turkic branch of the Altaic language family. This makes Turkish a close relative of Azerbaijani, Gagauz, Kazakh, Sakha and Uyghur, to name a few examples. As a head-final language it has strongly suffixing tendencies, which is why the case and agreement morphemes that I shall investigate in this thesis are found on the right edge of the respective noun or verb (**Wals**). Turkish is the main language spoken in Turkey and accounts for the vast majority of the total number of speakers of Turkic languages (**Kornfilt1997**).

Typologically speaking, the genealogical heritage of the Turkish language, the limits and in fact even the relatedness of the members of the Altaic family have been the subject of a long-standing debate. Some researchers have argued for the inclusion of Korean and Japanese, by virtue of them being considered language isolates with no obvious relatives to be identified, yet there is substantial evidence against this claim: In a recent paper, **YurayongSzeto2020** come to the conclusion that there are fundamental differences in grammar, but more importantly, that there is no proof of Proto-Altaic lexical items that would support a common history of the Altaic languages with Japanese and Korean. The few structural and lexical elements that the languages share are most likely merely borrowings. Even more prominently, it has been hypothesised that there is a shared link between Uralic and Altaic languages – at first sight, there are multiple reasons to assume such a relationship, like the presence of vowel harmony, the lack of gender, word order and the agglutinating nature of the members of both families. Nevertheless, this hypothesis is widely rejected nowadays. It is mostly accepted that Turkic languages form the Altaic language family together with Mongolian and Tungusic languages.[4]

2.2 The Structure of Turkish Relative Clauses

Turkish has two different types of relative clauses (RC). The first type, which is not of interest for this project, is a head-initial construction with a fully finite clause and an overt complementiser *ki*:

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4. Although **Dixon1997**, for example, notes that there is no convincing evidence to assume a genetic relationship between the individual branches and that the similarities could merely be a result of diffusion. Hence: The jury is still out on what is and what is not a relative of the Turkish language, with the Altaic group being proposed to be a sprachbund rather than a true family by authors such as Dixon.

(1)   Head-initial relative clause

bir adam [**ki** çoçuk-lar-ın-ı   sev-me-z] yalnız yaşa-malı-dır

a   man   **that** child-pl-3sg-acc love-neg-aor alone   live-neg-cop$_{epist}$

'A man who does not love his children must live alone.'   (**Kornfilt1997**)

This construction resembles relativisation in Indo-European languages – in fact, it has been borrowed from Persian and together with other constructions comprises a larger group of borrowed patterns for embedded clauses (**Kornfilt1997**). Compare (1) to the head-final construction with the modifier clause preceding the head:

(2)   Head-final relative clause

[**Ø$_i$** okul-a   gid-en] adam$_i$

Ø   school-dat go-an   man

'the man who goes to school'   (**Kornfilt1997**)

This second construction, which is the one 'native' to Turkish, reflects the expected typological pattern found across Turkic languages. Instead of an overt complementiser, we find a gap in place of the head as a result of extracting the relativised element (**Kornfilt2000**), and instead of a fully finite clause as we have seen in (1), the modifier clause ends in a 'participial' form carrying either the suffix -AN or -DIK. The crucial difference between these two suffixes is their ability to bear an agreement morpheme: While -AN cannot be joined by agreement, -DIK has to be. Relative clauses are considered to be nominalised due to exhibiting nominal, i.e. possessive, agreement morphology. As for the suffixes preceding the ϕ-features, different glosses can be found across the literature, some authors referring to them as participles (**Underhill1972Ouhalla1993Kornfilt1997**), others choosing not to gloss them – I will adhere to the latter strategy, given that as we will see later, especially the glosses SBJP and OBJP (**Kornfilt1997**), are not necessarily fitting. Note that the two morphemes are often written in capitals to indicate the fact that their form is sensitive to the respective requirements of vowel harmony – they will surface in different shapes across the examples in this thesis, but will always be identifiable through the glosses -DIK and -AN.

Given the structure of the head-final relative clauses, one might ask whether they are truly to be considered clausal, i.e. more or less fleshed out CPs, or rather an instance of deverbal adjectives modifying a noun. As Kornfilt explains, Turkological studies in particular often regard Turkish not to have actual RCs, despite convincing arguments that indicate otherwise. The fact that these modifier clauses can be enriched by several arguments and adjuncts, and even 'higher' adverbs (such as sentential adverbs like 'probably' and 'obviously', see **Cinque1999**) makes it clear that we are dealing with a construction that is at least in principle more CP-like than merely a participle:

(3) a. [Oya-nın herhalde e_i sev-e-me-diğ-i] bir insan$_i$
Oya-gen probably love-mod-neg-dik-3sg a person
'a person whom Oya probably cannot love'

b. [e_i herhalde Oya-yı sev-e-me-yen] bir insan$_i$
probably Oya-acc love-mod-neg-an a person
'a person who probably cannot love Oya' (**Kornfilt2000**)

Crucially for the current study, a modifying domain can also host a resumptive pronoun which is licensed by the possessive agreement morphology (**Kornfilt2000**), see the difference between the subject relative clause without agreement in (4a) and the clause relativising an object with agreement in (4b):

(4) a. [[e_i geçen yaz ada-da ben-i gör-**en**] kişi-ler$_i$]
last summer island-loc I-acc see-**an** person-pl
'the people who saw me on the island last summer' Subject as target

b. [[*pro* geçen yaz ada-da e_i gör-**düğ-üm**] kişi-ler$_i$]
last summer island-loc see-**dik-1sg** person-pl
'the people whom I saw on the island last summer' Direct object as target
(**Kornfilt2000**)

Furthermore, what moves in the clause to achieve the gap is an empty operator, and this assumption is based on subjacency effects observed in RCs such as the Complex NP Constraint by **Ross1967** – extractions out of a RC exhibit island effects due to the restriction of moving multiple operators to Spec, CP:[5]

(5) a. *[$_{CP}Op_j$[$_{IP}$ Hasan-ın [$_{DP}$[$_{CP}Op_i$ [$_{IP}$ e_i geçen yaz e_j ben-i gör-en]]
Hasan-gen last summer I-acc see-an
kişi-ler$_i$-i] tanı-dığ-ı]] ada$_j$
person-pl-acc know-dik-3sg island
intended: 'The island (such that) Hasan knows the people who saw me (on it) last summer'

b. [$_{CP}Op_j$ [$_{IP}$ pro^l [$_{DP}$[$_{CP}$ Op_i[$_{IP}$ pro^k_j ben-i e_i davet et-tiğ-i^k]] ada]-da$_i$ ev
I-acc invitation do-dik-3sg island-loc house
al-dığ-ım kaptan$_j$
buy-dik-1sg captain
*'the captain$_j$ who$_j$ I bought a house on the island$_i$ which$_i$ he$_j$ invited me to t_i'
(**Kornfilt2000**)

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5. An account which nevertheless postulates the movement of the relative head itself is presented in section 3.3.2. Note that according to another account, to be discussed in section section 2.3.3, island effects in Turkish complex NPs do not exist at all. For simplicity's sake, I shall only go into these considerations at a later point of this thesis.

In (5a), the first operator Op_i moves to SpecCP. Likewise, the second operator, Op_j is moved to the higher CP – this violates subjacency, as the lower CP is already occupied by the other operator. However, this effect can be repaired if the variable that violates subjacency (by virtue of being bound by the operator) is identified by an overt agreement element, in this case, a non-locally bound resumptive *pro*, as in (5b).

Additional features and properties of RCs shall be discussed in section 3.1 and subsequently the analyses that have been proposed, but first, an examination of differential (case) marking and the case marking of the subject is in order.

2.3 Differential Argument Encoding

Differential Argument Encoding (DAE) is present in many of the world's languages and may take on various different shapes. First reports about this phenomenon have been made by authors such as **Comrie1979** and **Silverstein1976**, and carried on prominently by **Aissen1999Aissen2003**. Whether an argument receives special, 'differentiated' marking depends on how archetypical the argument is. This marking can arise in the form of agreement with the verb or case marking, or both. To determine whether an argument should receive a marker, it is ranked on a scale based on a feature that vary cross-linguistically. For illustratory purposes, we shall have a look at the definiteness scale:

(6) Definiteness scale

Pronoun $\succ$ Name $\succ$ **Definite** $\succ$ Indefinite Specific $\succ$ Non-Specific   (**Aissen2003**)

Following **Keenan1976**, the feature [+definite] is considered typologically unmarked for subjects. Therefore, subjects are generally expected to be on the higher end of the definiteness scale. On the other hand, objects should archetypically exhibit the opposite features: their unmarked properties include the lack of definiteness. All things considered, arguments should receive marking if they deviate from the features archetypically assigned to them. This means that an object with highly ranked features should receive marking, while for subjects, those with low ranked features should. Let us think of a hypothetical language where this constraint holds: according to our scale, all objects that are [+definite] or bear a property that is ranked higher, i.e. to the left of **Definite**, should receive case marking. For subjects, the opposite should hold – all subjects bearing features to the right of **Definite** should be case marked. Cross-linguistic variation can be explained by postulating distinct cut-off points on the scale(s) for each language. In our hypothetical language, definiteness is the cut-off point. The prediction is that in languages exhibiting both differential subject and object marking (DSM and DOM, respectively), these two marking patterns should be the mirror-image of one another: subjects of low prominence and objects of high prominence receive special marking. A prime example of this marking strategy is Dyirbal, a Pama-Nyungan language native to Australia, where non-local person subjects and

local person objects receive a special marker:[6]

(7) a. Numa-ø   yabu-ŋgu   bura-n.
       father-abs mother-erg see-nonfut
       'Mother saw father.'   Ergative non-local subject, unmarked non-local object

    b. Nana-ø   nyurra-na   bura-n.
       we-nom   you-pl.acc   see-nonfut
       'We saw you(pl).'   Unmarked local subject, accusative local object

                                                    (**CoonPreminger2012**)

The driving forces necessitating differentiated marking and regulating it, according to **Aissen1999Aissen2003**, are iconicity and economy. Language should be as iconic as possible in order to unambiguously convey meaning, while being economically efficient, that is, only using morphological marking to the extent to which it is absolutely necessary. In terms of differential argument encoding, arguments should be marked in order to set them apart from other arguments if they exhibit features that would make them difficult to distinguish. An object that is [+definite] may be mistaken for a subject, while a subject that is [-definite] may be mistaken for an object. To avoid confusion, differential marking strategies are employed to unequivocally indicate the argument's status. On the other hand, marking an argument with archetypical features violates the economy constraint – if the semantic features of an argument are typologically unmarked, morphological measures are unnecessary as there is no ambiguity to be resolved. From that perspective, the main goal of a language should be to avoid redundancy.

Let us return to the prediction of such a mirroring relation between DSM and DOM. Although supported by languages like Dyirbal, the Turkish data in particular does not adhere to this mirroring relation. Differentiated marking for both objects and subjects is triggered by their specificity:

(8) a. (Ben) bir kitap oku-du-m.
       I   a   book   read-pst-1sg
       'I read a book.'

    b. (Ben) bir kitab-ı   oku-du-m.
       I   a   book-acc   read-pst-1sg
       'I read a (certain) book.'   (**Kornfilt2009**)

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6. Dyirbal in particular exhibits an extremely interesting pattern of differential case, since it has a *binary split* (**Silverstein1976**) – markers from the nominative-accusative and ergative-absolutive system can appear side by side due to the split operating over two distinct subsystems. In a construction where both the subject and object are non-typical and require case, the subject will be ergative and the object accusative, while in the typologically unmarked construction, the subject will be nominative and the object absolutive (**CoonPreminger2012**).

(9) a. Köy-ü   haydut-ø   bas-tığ-ın-ı   duy-du-m.

       village-acc   robber-nom   raid-dik-3sg-acc   hear-pst-1sg

       'I heard that robbers raided the village.'

   b. Köy-ü   bir haydut-un   bas-tığ-ın-ı   duy-du-m.

       village-acc   a   robber-gen   raid-dik-3sg-acc   hear-pst-1sg

       'I heard that a (certain) robber raided the village.'   (**Kornfilt2009**)

For subjects, as we shall see in the next section, matters are a bit more complex: Syntactic restrictions apply in addition to the semantic requirement of specificity. In sum, instead of differentiating arguments from one another via morphological marking, it much rather appears to be the case that both arguments are marked if they are particularly 'strong', i.e. exhibiting features that would make them more salient regardless. This results in both prominent objects as well as prominent subjects receiving case marking. In terms of **deHoopNarasimhan2009**, **Kornfilt2009** concludes that Turkish has an identificational, and therefore absolute approach to DAE, rather than the distinguishing or relative approach described by earlier authors.

2.3.1 The Notion of Specificity

As shown by the short preview I have given in the last section, in Turkish it is the specificity of a noun that plays a key role in determining case marking. The following section gives an overview of the most notable ideas and approaches that capture this relationship. It should be noted that the research on this topic is centred around the behaviour of objects rather than subjects – most likely due to the syntactic restrictions mentioned and elaborated on in the next section. Generally, it seems to be accepted that the same properties govern the marking of subjects from a purely semantic perspective, which is why all of the findings should be transferable to the current efforts.

Probably the most impactful effort to pinpoint what specificity means in Turkish and how it is encoded morphosyntactically was made by **Enc1991**. She argues that partitives, by virtue of being obligatorily case marked as objects, must be specific:

(10) Specificity based on partitivity

   a. Ali kadın-lar-in   iki-sin-**i**   tanı-yor-du.

       Ali   woman-pl-gen   two-3sg-**acc**   know-prog-pst

       'Ali knew two of the women.'

   b. *Ali kadın-lar-in   iki-sin-**ø**   tanı-yor-du.

       Ali   woman-pl-gen   two-3sg-**nom**   know-prog-pst

       intended: 'Ali knew two (non-specific) of the women.'   (**Enc1991**)

Based on this observation, she derives a definition of specificity rooted in the assumption that specifics are understood as always involving a partitive relationship. They are connected to a

discourse old entity by virtue of comprising a subset of it. Definiteness, in turn, is defined as being identical to the previously introduced entity.

While this approach has arguably started the discussion about the nature of specificity in particular, which can in part be attributed to the strong correlation of case markers and specificity, it does not quite predict the DOM-pattern correctly. Building on **Enc1991**'s (**Enc1991**) assessment, **Bliss2004** is concerned with the study of popular definitions of specificity and how they are encoded in Turkish, moreover, whether these definitions correctly predict the case marking of objects. The study involves specificity in terms of familarity, scope, and discourse. She emphasizes that the diagnostics do not result in a uniform pattern but yield mismatches, and that especially the discourse related definition of specificity would paint a grossly different picture of marking patterns if it were used in isolation. The single claim that may receive support from all diagnostics is that only bare nouns are unequivocally non-specific. Multiple studies by **vonHeusingerKornfilt2005vonHeusingerKornfilt2017vonHeusingerBamyaci2017vonHeusingerKornfiltK** emerged afterwards, where the notion of *referentially anchored indefinites* has been claimed to best describe specificity in Turkish. Based on **Higginbotham1987**, specific indefinites are considered entities which "the speaker has in mind" (**vonHeusingerKornfilt2017**). This is illustrated by the original example below:

> Suppose my friend George says to me, 'I met with a certain student of mine today.' Then I can report the encounter to a third party by saying, 'George said that he met with a certain student of his today,' and the 'specificity' effect is felt, although I am in no position to say which student George met with. (**Higginbotham1987**)

What this example correctly emphasizes is that contrary to Enç's notion of specificity as a partitive relationship and other theories postulating varying degrees of discourse-boundness of a specific indefinite itself, specificity in Turkish is best illustrated as the referent being "referentially anchored to *some salient discourse item*" (**vonHeusingerKornfilt2017**) rather than by being known to the speaker or itself having been part of the discourse at any previous point. This is visible in sentences where people with no knowledge of the entity that is disclosed by a specific indefinite report about them, see (11).

(11) Licensing of specific indefinites

    a. Ali: "Kütüphane-de çok başarılı   bir öğrenci-m-i   gör-dü-m."
        Ali library-loc   very succesful a   student-1sg-acc see-pst-1sg
        'Ali: "I saw a very successful student of mine in the library."'

    b. Osman: "Ali kütüphane-de çok başarılı   bir öğrenci-sin-i   gör-müş."
        Osman Ali library-loc   very successful a   student-3sg-acc see-rep.pst
        'Osman: "Ali (reportedly) saw a very successful student of his in the library."'

                                        (**vonHeusingerKornfilt2017**)

This notion of specificity has only been discussed at length for DOM and not DSM, understandably so due to the arguably more restricted nature of DSM, as we shall see in the next section. Nevertheless, I assume that referential anchoredness is the particular type of specificity that is case marked across grammatical categories in Turkish, as there is no reason to assume that Turkish has distinct definitions of the notion according to different categories. While the semantics of specificity are not at the forefront of this current project, it may be interesting to look further into this topic to get a comparably detailed assessment of subjects' behaviour in general.

It is to be noted that while genitive and accusative case are used to mark the specificity of an argument in Turkish, it is a bit difficult to distinguish the categories of definiteness and specificity due to what *has to be* and what *can be* marked. Take the specificity scale in (12) as a simplified guide:

(12)   Turkish specificity scale

	Proper Noun ≻	Definite ≻	**Specific Indefinite** ≻	Non-specific Indefinite
	Hasan-ın	kitab-ın	bir kitab-ın	bir kitap-ø
	Hasan-gen	book-gen	a book-gen	a book-nom

(**vonHeusingerKornfilt2005**)

While non-specific indefinites indisputably lack case marking and do not have to be accompanied by a determiner, specific indefinites are distinguished from non-specific ones by virtue of being case marked. In turn, what clearly sets them apart from definites, on the other hand, is the presence of the indefinite determiner. As Turkish does not have a definite determiner per se (employing a demonstrative to emphasize, but not to primarily mark definiteness), definites are case marked and do not have to be accompanied by a determiner. However, whether a case marked noun without a determiner is interpreted as merely specific or definite can be gradient and mostly depends on the context. As the contrast I am after in this particular study is that between specific and non-specific nouns, which is undoubtedly given by varying the presence and absence of case marking, I do not focus on the meticulous distinction of specific indefinites and (specific) definites. I will now turn to the discussion of the treatment of subject agreement in RCs this far and the supposed patterns that have been reported.

2.3.2 Differential Subject Marking in Turkish

DSM in Turkish only emerges in clauses that are nominalised to varying degrees due to the nominal agreement head licensing genitive ('subject') case, as **Kornfilt2003Kornfilt2006Kornfilt2009** lays out. Since subjects of fully verbal clauses are unanimously marked nominative and are thereby not subject to DSM, as well as the focus of this thesis being relative clauses exclusively, I shall only discuss nominalised clauses in the following. I will spare the reader the recapitulation of Kornfilt's finegrained analysis at this point (see **Kornfilt2003**), instead, this section

will focus on the empirical findings she summarises and further ideas authors have presented concerning the licensing and assignment of genitive case for subjects.[7]

Kornfilt2009 argues for an explanation of DSM based on clause type: Clauses which contain functional projections that belong to only one category (i.e. only nominal projections) are deemed 'categorially homogeneous'. Clauses containing functional projections of both verbal and nominal heads, on the other hand, are 'categorially hybrid' – the lower architecture of the clause has verbal features, while the agreement head located higher in the structure is nominal. This is the case for nominalised indicative (also referred to as factive) clauses, as they can be inflected for future tense, for example, whereas fully nominal clauses (i.e. subjunctives) have to take on the tense of the matrix clause. Overall, indicative clauses have rather TP/CP-like properties, similar to what has been observed about relative clauses, and subjunctive clauses are more restricted and seem to be more similar to NPs or DPs. Indeed, **Kornfilt2003** argues that RCs are hybrid nominalisations, and this is in line with the CP-like behaviour shown previously in (3) regarding sentential adverbs.

While all nominalised clauses employ the agreement morphemes from the possessive paradigm, the possibility and function of the genitive marker on the subject varies between these clause types. **Kornfilt2009** observes that DSM is most prominently dependent on specificity, with the genitive case signalling the feature [+specific] and the nominative being indicative of the feature [-specific]. Nonetheless, for hybrid embeddings, the genitive is only licensed in argument clauses, not adjunct clauses. Hybrid argument clauses like (13a) are sensitive to DSM in the semantic sense,[8] while adjunct clauses only allow for the nominative marker regardless of the specificity of the subject, see (13b):

(13) a. [Sen-in dün   sabah   ev-de   yemek pişir-diğ-in]-i   duy-du-m.
          you-gen yesterday morning home-loc food cook-dik-2sg-acc hear-pst-1sg
          'I heard that you cooked food at home yesterday morning.'

                                                                      (**Kornfilt2009**)

      b. [[Sen-(*in) yemek pişir-diğ-in] için]   ben konser-e   gid-ebil-di-m.
          you-(*gen) food   cook-dik-2sg because I   concert-dat go-abil-pst-1sg
          'Because you cooked, I was able to go to the concert.'

                                                                      (**Kornfilt2009**)

Nominalised subjunctive clauses like the one in (14), which are said to be more NP/DP-like and hence homogeneously nominal, must in turn always mark their subjects genitive. Suppos-

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7. The term Differential Subject Marking is described by **Kornfilt2009** to only be loosely applicable to the Turkish pattern due to the reasons discussed two sections prior concerning archetypical objects and subjects, that is, the criterion of using such marking in order to *distinguish* arguments from one another. Although arguments in Turkish seem to be differentially marked for identificational rather than distinguishing purposes, I do not necessarily think this qualifies as a reason not to use this term.

8. Notice that the vast majority of examples repeated here from the literature feature (local person) pronouns as their subjects, which is not ideal to illustrate DSM based on specificity – such pronouns will always be marked genitive unless the clause type constrains case marking, hence alternations cannot be shown clearly.

edly, in such clauses the presence of the overt agreement element licenses the genitive as subject case. Because this licensing is based on the category of the agreement element, i.e. that it is nominal, it takes place domain-internally, and does not require information about the clause's status as an argument or adjunct.

(14) [[Sen*(-in) yemek pişir-me-n]   için] ben ev-de   kal-dım.
      you-gen   food cook-nfn-2sg for   I   house-loc go-pst-1sg
      'I stayed at home so that you should cook (lit. for you to cook).'
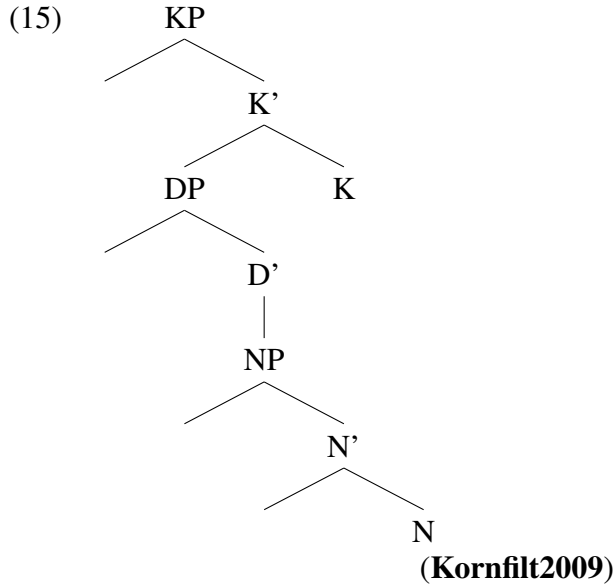
<div align="right">(**Kornfilt2009**)</div>

The behaviour of indicative clauses stands in opposition to the obligatory genitive. In hybrid domains, **Kornfilt2009** proposes dominance by an nP-shell (analogous to vP), with the nominal agreement morpheme (henceforth Agr) raising to the n-head, and this results in a category shift: The hybrid clause is turned into a fully nominal one and thus licenses genitive case. The proposed nP-shell is only present in argument clauses and not adjunct clauses, which is used to explain the difference in sensitivity to DSM. Adjunct clauses therefore do not license genitive case, so default (nominative) case applies instead. This assumption is based on the idea of **Rubin2002Rubin2003** postulating that modifier clauses (and phrases) are surrounded by ModP-shells, which are in complementary distribution to CP-shells – this distinction applies in terms of the nP and ModP shells being complementary, too, with argument clauses supposedly having an nP and adjunct clauses having a ModP-shell.

Notice, however, that this analysis alone does not account for RCs which are arguably adjunct clauses rather than argumental in nature according to **Kornfilt2003**, and have been shown to be more CP-like in section 2.2, hence of the hybrid type rather than strictly nominal. Since RCs are not complements, they do not receive primary θ-roles and also no index, so it raises the question as to why we observe the genitive in nonsubject RCs nevertheless. It is therefore proposed by **Kornfilt2003** that in RCs, by virtue of being 'necessary' complements, the nominal agreement element licensing genitive case is licensed itself through a predication relation between the head and the modifier clause, similar to how a subject and a predicate are related to one another, and even more so, very closely resembling the relationship between modifying adjectives and the head noun.[9] The 'indexation via predication relation' is based on **Chomsky1977**, expressing "a general notion of aboutness" (**Kornfilt2003**). Furthermore, the θ-role assignment to the modifying clause can be considered primary because it restricts the reference of the head, therefore coined as referential indexation (**Kornfilt2003**). Since internal licensing of nominal agreement is not possible as we are dealing with a hybrid clause, the index percolates down to the nominal agreement element to license it instead.

Agreement is also vital to genitive case assignment itself, according to **Kornfilt2009**. The structure in (15) is assumed for nominal elements. Since PF interprets narrow syntax, the semantic features relevant for DSM are encoded on the D-head of the DP and are read off the

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9. These parallels are drawn by **Williams1994**.

K-head in KP. If the nominal is specific, the N-head raises to D, then K, and if the entire KP is licensed for genitive case (that is, if the clause structurally allows for it), it is assigned.

(15)

```
            KP
           /  \
              K'
             /  \
          DP      K
         /  \
        D'
        |
        NP
       /  \
         N'
        /  \
           N
```
(**Kornfilt2009**)

In case of a non-specific nominal, there are two options. The first option is that there are no D- and K-layers at all, and in that case, the subject receives bare case.[10] The second option is that there is a determiner that provides a non-specific feature to D. N can then raise to D, but not to K – K is either assumed to be empty or nonexistent – therefore, although the genitive is structurally licensed, it cannot be read off K. Note, however, that K can be filled by agreement instead of N, too, and in that case, the genitive is licensed even if the nominal itself does not fulfill the semantic criteria, since the agreement morpheme requires an overt case marker **Kornfilt2009**. This is ensured by the Overt Nominal Head Constraint:

(16)   The Overt Nominal Head Constraint (ONHC):
        NPs/DPs must have an overt head, occupied by nominal features.   (**Kornfilt2009**)

Kornfilt therefore concludes that besides the widespread semantic function of DSM, the genitive marker is also an indicator of clause type. Whenever agreement morphology requires the nominal to have an overt head, the function of the genitive as a semantic marker is neutralised (**Kornfilt2009**), thus the genitive case on the subject is only a reliable indicator of specificity in hybrid argument clauses, whereas it is syntactically required in hybrid adjunct clauses. One of the topics that is discussed in more detail in other works is the interaction of case marking and word order (**vonHeusingerKornfilt2005vonHeusingerKornfilt2017**): Even in earlier works, it has been observed that bare subjects are highly unfavourable in positions other than the immediately preverbal one (**Johanson1977**). This is indicative of the fact that there are restrictions on movement according to case marking or vice versa: Word order is determined by (the lack of) specificity which in turn is marked morphologically via genitive, or as we shall see in section 3.3.2, nominals could be postulated to require moving for case, hence non-specificity may restrict movement and subsequently, case marking.

The view that subjects absolutely must occupy the immediately preverbal position in order to receive an unambiguous interpretation based on case marking does not seem to receive unlimited support. For example, in **vonHeusingerKornfilt2005** the authors maintain that only subjects in

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10. Kornfilt assumes a difference between bare and nominative case which I shall not go into here since it does not appear relevant for the research question at hand.

the immediately preverbal position can be clearly interpreted as (non-)specific, supporting the view that the semantic function of the genitive is neutralized in other positions. On the other hand, **Kornfilt2009** mentions in a footnote that things are not quite that obvious for her as well as most of her informants, explaining that it is more natural to interpret (accusative) case marked arguments as specific no matter which position they occupy.[11] The interpretation of genitive subjects beyond the immediately preverbal position thereby seems to be subject to some degree of speaker variability, despite the assumption that DSM may be neutralised due to syntax; and this further raises concerns about the nature of genitive case assignment and its motivation in general. One may even go as far as to say that some speakers do incorporate non-specifics while others do not – although I do not think it is adequate to make such bold statements at this point, as we shall further explore the option or lack thereof to incorporate further down the line.

Having given an introduction on differential case marking in Turkish, ideas on genitive case assignment and its interdependence with the Extended Projection Principle (EPP) are discussed in the following. The next subsection should provide a guide as to how and why researchers have argued for specific manners of subject case assignment in Turkish.

2.3.3 Genitive Subject Case and the EPP

For the previous analyses that shall be presented in the next sections, the EPP is of central importance. In principle, it requires clauses to contain an NP or a DP in the subject position, that is, Spec, TP in Turkish:[12]

> While subcategorised complements are obligatory for heads, the θ-marked subject is not, as we can see from passives or nominals [...] Furthermore, nonarguments can occupy the subject position, as in *it is clear that S, I expect* [*it to be clear that S*]; in fact, the subject position *must* be filled by a pleonastic element in structures lacking a θ-marked subject.
>
> (**Chomsky1982**)

The claim that the EPP should hold in Turkish is based on multiple observations. One of them is that non-specific subjects occupy a different position than specific subjects, and that they are more restricted in terms of movement (**Cagri2005Cagri2009vonHeusingerKornfilt2005Kornfilt2009**). Since non-specifics are assumed not to raise, it is hypothesised that an expletive is required which is supposedly *pro* in Turkish, and that in this case, only default agreement is available (**Kornfilt1996Kornfilt2000**). Parallels are drawn to the German expletive *es* in constructions such as *es regnet* (lit. 'it rains'). T is thereby identified as the host for the EPP feature and as the

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11. It is unclear why she refers to objects in the footnote referenced above despite discussing subjects in the main text. For our purposes, I shall assume that this intuition holds for subjects as well, as the specificity scale for both subjects and objects is nearly identical with the sole contrast being the choice of genitive or accusative case, respectively, see **vonHeusingerKornfilt2005**.

12. Note that the cross-linguistic definition of the EPP is more general, as it does not only apply to subjects, and also does not need to be on Spec, TP: Other positions can host EPP features as well, such as Spec, CP in German.

attractor of (specific), with Spec, TP being the most nearby position a subject could be attracted to.[13]

However, the EPP and case-driven Agree have been argued not to to be available in Turkish (**Öztürk2006**), and instead, a movement-free account of passivisation, that is the assertion that passivisation is an *in situ* phenomenon in Turkish, has been made due to facts stemming from morphological case realisation. **Öztürk2006** argues that there is no case-driven Agree with TP (and vP), and no EPP-driven NP movement. We shall focus on TP and the EPP for now.

The fact that TP is present and hosts the location of Tense in Turkish is undisputed and its association with subject case, and subsequently the EPP, have been assumed along the way without substantial discussions (**Kornfilt1997**). In earlier work, **Öztürk2002** argued in favour of the EPP being satisfied by verbal agreement – and thereby against the proposal that it needs to be projected at all times, such as in English, as well as against the obligatoriness of movement to Spec, TP. According to **Öztürk2006**, subjects do not seem to raise to their canonical position in unaccusatives, and constituents in general can stay in their theta positions based on scope relations:

(17) a. [$_{TP}$[$_{NegP}$[$_{AgentP}$ Bütün çoçuk-lar [$_{ThemeP}$ o test-e [$_{VP}$ gir-me-di]]]]]
          all child-pl that test-dat take-neg-pst
     'All children did not take that test.'   (*all>not, not>all)

      b. [$_{TP}$ Bütün çoçuk-lar$_i$ [$_{NegP}$[$_{AgentP}$ t$_i$ [$_{ThemeP}$ o test-e [$_{VP}$ gir-me-di-ler]]]]]
          all child-pl that test-dat take-neg-pst-pl
     'All children did not take that test.'   (all>not, *not>all)

                                                                      (**Öztürk2006**)

According to such a proposal, there is no case-driven A-movement into Spec, TP either, as T is not assumed to be the locus of the nominative case feature. Further, this implies that there cannot be an Agree relation if T has no case to host. Based on this observation, it is concluded that the T head plays no role in case feature checking in Turkish. Crucially, however, this far there is no mention of embedded clauses and of the genitive subject case that appears in them. We can therefore confidently assume that things may look quite different when considering non-verbal clauses and their agreement; T seems to be the source of genitive case, even if not the nominative. So while the EPP may not play a role in passives per se or regular verbal constructions, it does not become clear why such restrictions should hold for the genitive subjects of embedded clauses.

The approaches to case assignment are usually built on the idea that case is assigned in what can be called a 'pure Chomsky-style' manner (**Laszakovits2017**), i.e. through case licensing. It has been shown for Turkic languages, in particular Sakha (**BakerVinokurova2010**), that ac-

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13. It does not become clear whether the genitive is assigned to the subject in its base position, thus enabling the subject to move and satisfy the EPP feature on T, or whether the genitive case is assigned by T to the element in Spec, TP. As noted in this section, a connection between Spec, TP and genitive case seems to be presupposed, although it is a bit vague.

cusative and dative case are assigned in a configurational manner, that is, the assignment of these cases is dependent on the presence of other NPs as well as their relative position to one another. In more detail, accusative case is assigned to a c-commanded, unmarked NP in the CP-domain only if there is a higher unmarked NP, such as a subject, and also if the DO leaves the vP-domain and moves into the CP-domain. It appears that the properties of matrix *v* in terms of transitivity are irrelevant to the assignment of the accusative, which poses a problem for accounts proposing accusative checking via *v* (**Laszakovits2017**). Dative case is also assigned in a configurational manner, although not to the lower of two unmarked NPs as the accusative, but to the higher NP:

(18) a. Bahar Ali-yi ağla-t-tı.
            Bahar Ali-acc cry-caus-pst
            'Bahar made Ali cry.'
      b. Emre Caner-e Deniz-i öp-tür-dü.
            Emre Caner-dat Deniz-acc kiss-caus-pst
            'Emre made Caner kiss Deniz.'

(**Laszakovits2017**)

In (18b), the NPs are generated in VP, which is where the higher one of the two ('Caner') is assigned dative. Subsequently, the NP to be assigned accusative ('Deniz') raises into the CP-domain where it is c-commanded by the caseless subject and is marked accusative as the lower one of two caseless NPs in CP.

Without repeating the reasons why such a dependent case analysis is claimed to fare well for Turkish accusative and dative, I shall focus on the reasons why researchers have argued to extend this idea to nominative and genitive assignment. One might argue that it is undesirable to have two distinct case assignment systems operate side-by-side within one language. Since dependent case seems viable for Turkic languages and Turkish in particular, it should be applicable across all cases in the language – indeed, **LevinPreminger2015** claim that the analysis by **BakerVinokurova2010** can be simplified and must not postulate Chomskyan case licensing for subject cases either, in line with what **Laszakovits2017** argues for. In essence, the basis for assuming dependent case for subjects is the proposal that argument clauses in Turkish are complex NPs, while adjunct clauses are CPs (**Lees1965Aygen2007**) – recall that **Kornfilt2003Kornfilt2009** postulates this pattern for subjunctive (NP) versus indicative (CP) clauses rather than argument and adjunct clauses across types altogether.[14]

The consequences that differentiating between argument and adjunct clauses has are indeed beneficial for a configurational account of subject case – it is assumed that both the nominative and the genitive are unmarked cases (**Marantz1991**), specifically that the nominative is the

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14. Nevertheless, there are similarities between the proposals in the sense that clausal domains are postulated to be headed by an nP-shell according to **Kornfilt2009**, and in the same vein, the NPs Laszakovits proposes dominate a CP. The difference is that Kornfilt needs to account for the exceptional genitive in the supposedly CP-like indicative argument clauses via said nP shell, while **Laszakovits2017**'s (**Laszakovits2017**) approach excludes cases where supposedly clausal adjunct clauses lacking an N-layer only allow for nominal, i.e. genitive case on the subject.

unmarked case in clausal environments and the genitive the unmarked case in nominal environments. Case assignment domains correspond to the complements of phase heads (**Baker2015**), and therefore, the underlying clausal domain is shifted to a nominal domain by incorporating the null complementiser into a head noun, extending the phase and making N the phase head.

This structure is adapted for RCs as well, with the only difference that other argument clauses do not host an operator in Spec, CP, see (19). The idea is that the genitive case is assigned to the subject in environments where there is another N(P) c-commanding the subject, similar to the configuration we have observed for accusative and dative assignment. Hence the idea that argument clauses which allow for both nominative and genitive subjects are headed by an NP – although not explicitly stated in this proposal, I assume that non-specific subjects do not receive a genitive marker and hence do not raise to Spec, TP to account for DSM patterns observed in some argument clauses (and as this work explores, RCs as well). However, an obstacle for this postulation is the fact that there are adjunct

(19)
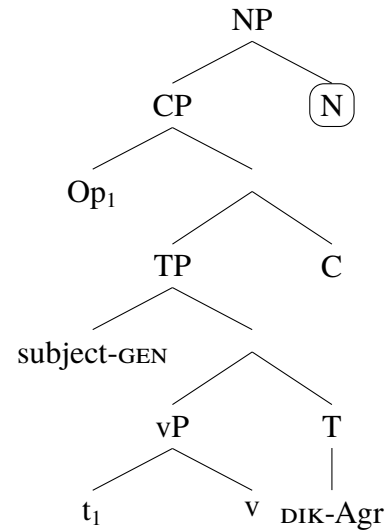
(**Laszakovits2017**)

clauses which enforce the genitive as a subject marker regardless of specificity. According to this division **Laszakovits2017** proposes, if adjuncts are CPs that are not headed by NPs, their unmarked case should be nominative. Setting up the genitive to be exceptional for the subjects of all adjunct clauses is however undesirable to say the least, as some of them cannot bear the supposedly unmarked nominative at all: "Subjunctive nominal adjunct clauses contrast with indicative nominalised adjunct clauses with respect to their subjects: those subjects are in the Genitive, just as they are in corresponding argument clauses" (**Kornfilt2003**). That being said, subjunctives also raise the issue of not being able to host (*wh-*) operators, they do not appear as modifying clauses in RC constructions (apart from irrealis subjunctives), and they also cannot be inflected for their individual tense, i.e. they must bear the tense dictated by the matrix clause (**Kornfilt2003Kornfilt2009**). It is, if we stay in line with **Kornfilt2003**'s (**Kornfilt2003**) reasoning, questionable whether subjunctive clauses project a CP at all due to their restricted nature compared to indicative clauses.

In order to correctly capture the data, one must overcome the problems that come with treating all adjunct and argument clauses equally. One could nevertheless combine the ideas from **Kornfilt2003**'s (**Kornfilt2003**) and **Laszakovits2017**'s (**Laszakovits2017**) approaches. Keeping the separation of clauses according to their indicative (CP headed by NP) or subjunctive (NP

without underlying CP) nature, while incorporating the case assignment mechanism that proposes the genitive as a default case for both types of domains. Ultimately, this could be achieved by assuming that both of them are headed by an NP, regardless of whether there is a truly clausal structure underneath. Note, however, that such a combined approach would have issues, too, as all clauses would still license the genitive, as proposed by **Lees1965** and **Aygen2007** and argued for by **Laszakovits2017**, which according to **Kornfilt2003Kornfilt2009** is ungrammatical in indicative adjunct clauses (recall the discussion of DSM in section 2.3.2, particularly the structure in (13b)).

This section ends on a somewhat inconclusive note – while there is agreement regarding the locus of the genitive case and the fact that T attracts nominals into Spec, TP, opinions are divided based on the underlying syntax of nominal clause types. That being said, the position to which genitive case is assigned is not discussed in detail, and it becomes blurry whether nominals are postulated to move *for* case[15] or move because they have been assigned case in their base-position via c-command, and hence become visible to T as a potential inhabitant of Spec, TP. A more detailed assessment of genitive case assignment would be vital to clear up these inconsistencies. Even more so and more crucially for the current matter, it does not necessarily seem to be clear what the exact clause type of RCs even is: **Laszakovits2017** treats them as distinct but very similar to argument clauses and contrasts them with the behaviour of adjunct clauses. In principle, the structure that is assumed for RCs differs from that of argument clauses only with respect to an operator in Spec, CP. This perspective is different from that argued for in **Kornfilt2003**, namely that RCs are adjuncts, although with a primary θ-role nevertheless because of the predication relation between the modifier clause and the head noun. Indeed, **Salzmann2017** compellingly summarises that the picture is equally multifaceted cross-linguistically, with empirical evidence often pointing towards complementation, but mainly theory-internal arguments, such that RCs appear to merge late, often favour an analysis rooted in adjunction. Although not the main focus, yet interesting to mention: There appears to be inconclusive evidence on whether Turkish complex NPs show island effects, a claim that has previously been used to explain why relativisation cannot involve the movement of the relative head, but must rely on an operator instead as introduced in section 2.2 (**Kornfilt2003**). **Laszakovits2017** concludes that since all of her postulated clause types, that is NP-headed CP argument clauses and 'simple' CP adjunct clauses, allow for the topicalisation of an argument, subjacency effects do not seem to be an issue, arguing that complex nominals do not exhibit island effects.[16]

The next section deals with potential perspectives one could take on RCs in Turkish, and in particular, two differing views that have been taken by authors: The Anti Agreement Effect by **Ouhalla1993**, elaborated and slightly modified by **Kornfilt2000**, and a more recent development under Minimalism by **Cagri2005Cagri2009**, arguing against incorporation-based approaches

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15. This idea will become relevant in section 3.3.2.

16. Nonetheless, **Laszakovits2017** sticks to an operator-based analysis of RCs, yet of course there may be other reasons why a head-raising analysis is unattractive.

that this work is not concerned with due to space limitations and for reasons that will become apparent when discussing the opposing view. Before that, however, I share some thoughts on how one could approach RCs based merely on their nominal nature, since the presented approaches do not necessarily aim to embed RCs within a more general theory of nominalised clauses.

3 Approaches to Agreement in Turkish Relative Clauses

3.1 Relative Clauses as Nominalisations

Let us focus on the potential agreement patterns we might expect based on what we have established about Turkish RCs thus far. Which patterns should we find from the perspective of nominalisations? Due to the approaches on the syntactic structure of embedded clauses of Turkish postulating an (underlying) CP for relative clauses, I shall not focus on the patterns exhibited by clauses that are arguably more restricted with regards to their agreement pattern and overall behaviour, and hence are usually regarded as complex NPs without clausal features.

For accounts based on case licensing mechanisms, rich agreement morphology (Agr in the following) is responsible for licensing case, and in turn has to be licensed itself before case assignment can take place (**Kornfilt2009**). Recall that Agr is licensed if it fulfills two conditions: It must have (i) the same categorial features as the functional heads it dominates and (ii) the same categorial features as the head which it co-occupies. In the opposing view, case is assigned in a configurational manner depending on whether the CP of the clause is headed by an additional NP, and this supposedly is the case for argument clauses which RCs are at least treated very similarly to in the respective approach (**Laszakovits2017**). Approaches agree that RCs are headed by a nominal element, yet the underlying structure, in particular whether there is or is not a CP projection, is debatable.

In a more general sense, current work by **DekanyGeorgieva2021** supports the view that it is undesirable to fundamentally distinguish nominalisations and RCs (**Kornfilt2003**). Much rather, it seems plausible to assume that RCs in Turkish share (at least some of their) underlying syntax with other nominalisations. This claim is based on the morphology that is shared across them: The same morphemes, namely -DIK and nominal agreement, are employed in (participial) RCs and deverbal nominalisations. This phenomenon is referred to as the 'participle-nominaliser polysemy' and has been observed in a typologically diverse sample of languages, comprised of Uralic, Altaic, Turkic, Quechua and Tibeto-Burman languages (**DekanyGeorgieva2021**).

(20) a.   Ali-nin pişir-diğ-i   yemek
           Ali-gen cook-dik-3sg food
           'the food that Ali cooked'   **Kornfilt2003**

b. Ali-nin kitab-ı   oku-duğ-un-u
    Ali-gen book-acc read-dik-3sg-acc
    '(that) Ali read the book' (as a direct object)   **Kornfilt2003**

Admittedly, RCs occupy an unpleasant 'neither-here-nor-there' spot judging by what has been reported in the previous section. They are hybrid adjuncts according to **Kornfilt2003Kornfilt2009**, yet they do receive a primary θ-role via predication relation. Evidence for this assumption in Turkish comes from the observation noted earlier, which is that RCs appear to merge higher than complements, as also noted by **Salzmann2017**:[17]

(21) a. [Ali-nin geçen gün dükkan-dan al-dığ-i] **bu** şahane   vazo
          Ali-gen past day shop-abl   buy-dik-3sg this magnificent vase
          'this magnificent vase which Ali bought at the store the other day'
      b. **şu** [[Ali-nin$_i$ [pro$_i$ aile-sin]-i   terket-tiğ-i]   söylenti-si]
          that Ali-gen   family-3sg-acc abandon-dik-3sg rumour-cmpm
          'that rumour that Ali abandoned his family'

                                                                    (**Kornfilt2003**)

The difference between RCs and nominalised argument clauses becomes evident from the position of the demonstrative in the above examples. In (21a), the modifier clause precedes the demonstrative, while in (21b), the embedded clause follows the demonstrative. Note that noun-complement constructions like (21b) do not allow for the reversed order where the demonstrative follows the clause, signalling that RCs are merged higher in the structure than complements. What follows is that RCs do not truly behave like complements, i.e. argument clauses. Otherwise, one would expect a nominative subject in a sentence like (20a) in case of a non-specific subject rather than a proper name like *Ali*, which is inherently specific.

(22) a. *adam-ø pişir-diğ-i   yemek
          man-nom cook-dik-3sg food
          intended: 'the food that a (non-specific) man cooked'
      b. ??adam-ø pişir-en yemek
          man-nom cook-an food
          'the food that a (non-specific) man cooked'

On the other hand, if they were hybrid adjuncts, they would not exhibit any case alternations and would instead always mark their subjects nominative, obscuring the exact intended interpretation of the subject regarding specificity. As noted in the introduction, RCs do not exhibit the pattern in (22a), with the supposed alternation displayed in RCs reaching beyond DSM. It involves not

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17. The suffix *-si* is glossed by **Kornfilt2003** as a compound marker, according to **GökselKerslake2005**, this is marker used on the latter of two juxtaposed nouns, and is indeed a 3sg nominal possessive suffix.

only case marking as in nominalisations, but also impacts agreement morphology – so even in the case of nonsubjects, instead of the usual -DIK and ϕ-morphology, we expect to be left with the -AN morpheme that is typically attributed to subjects only.

Table 1 should be a helpful guide as to what possible combinations are attested regardless of argument or adjunct status, that is agreement on the verb and case on the subject (note that -DIK is only grammatical with and -AN without ϕ features, so the former is encoded as +*Agr*, the latter as -*Agr*). While (22a) is definitely ungrammatical in RCs (although the pattern itself is viable in other nominalisations), it is more reasonable to expect some-

	Relative clauses	Other hybrids
+Agr, GEN	✓	✓
+Agr, NOM	✗	✓
-Agr, GEN	✗	✗
-Agr, NOM	✓	✗

Table 1: Case and agreement combinations across nominalised clauses.

thing like (22b). Nevertheless, given that we have just introduced RCs to be distinct from argument clauses judged by their structural position, case (and agreement) alternations should not occur – however, recall that according to **Kornfilt2003**'s (**Kornfilt2003**) analysis, RCs must receive a special treatment in order for the genitive case to be licensed at all, as hybrid clauses supposedly exhibit an asymmetry regarding their ability to assign genitive case – hybrid adjuncts only assign nominative to their subjects. RCs and adjunct clauses of nouns in general are seen as 'necessary' constituents in Turkish (**Kornfilt2003**). It is thereby not completely unreasonable to at least be a little sceptical about what is and what is not allowed in RCs, and we should not exclude semantically governed alternations right away when the RC is targeting a nonsubject. A brief consultation of the literature without going into detail, and this assumption appears to be borne out: It is maintained that in RCs modifying nonsubjects, the subject can be marked nominative if it is [-specific] (and relativised using -AN) (**Kornfilt1997Kornfilt2000**), just like one would expect in hybrid argument clauses.

Before we move forward and try to unravel why RCs do not adhere to the common pattern found in nominalisations, it is important to verify that nonsubject RCs do in fact leave room for alternations in agreement at all. This is in fact the crucial point of this thesis: Reports on which types of nonsubjects allow for these alternations are inconsistent. For example, one could search far and wide for empirical evidence that shows the case and agreement alternation in the relativisation of direct objects, as in (20a) compared to (22b) – the trigger of the alternation being the specificity of the subject, compare the proper name *Ali* to the bare, non-specific noun *adam*, 'man'. As far as I am aware, data supporting this matter for direct objects simply does not exist. While it has never been claimed by anyone explicitly that RCs modifying direct objects in particular are subject to DSM (or discrepancies regarding agreement), it is also rarely addressed that the individual types of nonsubjects are not equally affected by this phenomenon. We are therefore left with two rather vague ways of reporting: On the one hand, it is claimed that there is a strict distinction between subjects and nonsubjects, while on the other hand, this claim is often

corrected to account for the alternation observed in RCs targeting nonsubjects, but neither of these claims addresses the permissibility of a semantically motivated alternation *across different types* of nonsubjects. Based on the data presented in such reports, or rather, based on what kind of data is not presented, it does not seem to be the case that all nonsubjects across the board allow for the -AN pattern. Crucially, the number of studies dedicated to why relativising a direct object with -AN should be less permissible than for example relativising a locative, given the prerogative that the context enforces the subject to be [-specific], is incredibly sparse.

Arguably, it is not quite as surprising that differences do arise between RCs and nominalisations – given the nature of relativisation, which involves the extraction of an element, it is more than likely that the key to these contrasts can be found in the underlying structure of RCs themselves, in particular the operator or *wh*-element, depending on which analysis one assumes. Still, what is puzzling is that even within RCs the patterns could be inconsistent, as illustrated by (23) and (24):

(23) Relativisation of a locative

    a. şarab-**ın** yıllan-**dığ-ı** kiler
        wine-**gen** age-**dik-3sg** cellar
        'the cellar where *the wine* ages'   specific, definite reading

    b. ?şarap-**ø** yıllan-**an** kiler
        wine-**nom** age-**an**   cellar
        'the cellar where *wine* ages'   non-specific, generic reading

(24) Relativisation of a direct object

    a. kedi-**nin** yakala-**dığ-ı**   top
        cat-**gen** catch-**dik-3sg** ball
        'the ball that *the cat* catches'   specific, definite reading

    b. *kedi-**ø** yakala-**yan** top
        cat-**nom** catch-**an**   ball
        intended: 'the ball that *a cat* catches / *cats* catch'   non-specific, generic reading

Based on the literature, there is no evidence for alternations such as (24),[18] yet something like (23) is indeed reported, which is one of the points this study is concerned with. In the next section, we shall be having a look at what has been said about the behaviour of RCs from a formal perspective, and how (some of) the patterns have been accounted for thus far.

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18. However, the sentence itself can be grammatical if both arguments are animate – i.e. if the relativised element would be 'mouse' instead of 'ball'. In that case, the interpretation would be that the relativised element is the subject of the clause, as it resembles the structure of a subject relativisation. This possible interference is briefly discussed in section 4 detailing the experiment.

3.2 The Anti Agreement Effect: Subject/Nonsubject Asymmetry

In the most prominent approach that has gained widespread cross-linguistic acclaim, the Turkish pattern among data from many other languages is discussed by **Ouhalla1993** as an instance of the Anti Agreement Effect (AAE): In some languages, agreement between the verb and subjects extracted via Ā-movement is ungrammatical. While Fiorentino and Trentino trigger the AAE when subjects are extracted both over short and long distance, languages like Berber, Celtic and Turkish only trigger this effect over short distance:

(25)   a.   geç gel-**en**   hoca-lar
            late arrive-an lecturer-pl
            'the lecturers who arrived late'

       b.   geç gel-**dik-leri**-ni   söyle-diğ-in hoca-lar
            late arrive-dik-3pl-acc say-dik-2pl   lecturer-pl
            'the lecturers who you said arrived late'   (**Ouhalla1993**)

The AAE can generally arise within different phenomena, such as *wh*-movement or focus, yet it is restricted to RCs in Turkish. What follows is that the morphological split, viz. the use of -AN instead of the default -DIK, also only surfaces in RCs and nowhere else.

Kornfilt2000 discusses why there are two distinct morphemes to begin with, despite one of them being exclusively employed in this AAE context. The explanation she gives is reminiscent of iconicity (and economy) based principles of language – "alternations between overt agreement morphology and lack thereof are not very salient perceptually, and thus two distinct, phonologically unrelated nominalisation markers are used in addition to that alternation" (**Kornfilt2000**) – that is, the alternation of the two morphemes may be a strategy to emphasize the differences between the clauses even more. I shall not go into this any more deeply, since it is not the aim of the current study to answer this particular question.[19]

Returning to the AAE and its predictions for Turkish: Simply put, the AAE should be exclusive to subject RCs due to putting the main emphasis on the *extraction* of the subject. **Kornfilt1985** shows that *wh*-phrases in Turkish preferably remain in situ, and this is reaffirmed by **Ouhalla1993**.[20]

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19. As a side remark, using three means to encode the differences between RCs seems overly ambitious – there's case, which according to most analyses is directly connected to agreement, the lack or presence of agreement itself plus another additional morpheme to express the same information. Within this explanation, this particular structure is far from economical. However, I do not have a more satisfying explanation for this issue at hand either.

20. Contrary to this view, **Baier2018** attempts to unify a large number of AAE-patterns across languages by postulating that the effect is not triggered by Ā-movement, but rather by the presence of Ā-features alone – applying this to Turkish *wh*-elements, their feature could potentially suffice to trigger the AAE, even if they remain in situ (this prediction is not borne out, but note also that the use or visibility of these features according to **Baier2018** varies from language to language). This is exactly what he proposes for Tundra Nenets, a Uralic language, the object marking pattern of which is taken as central evidence for the feasibility of the AAE despite the absence of Ā-movement. Unfortunately, Baier's account is not inclusive of the surrounding (semantic) factors that may play into these phenomena (**Nikolaeva2014**). While it is not of particular interest to this thesis, it is to be pointed out that the range of factors impacting anti agreement is subject to ongoing debate.

The system governing the agreement morphology of Turkish subjects in RCs is often broken down to the grammatical function of the targeted element. If the relative clause modifies the subject, the subject does not agree with the matrix verb of the clause, which results in the verb carrying the -AN suffix. If, however, the relative clause modifies a nonsubject, the subject will receive a genitive marker and elicit the -DIK agreement strategy (**Kornfilt2000Kornfilt2003**):

(26) a. [[e_i geçen yaz ada-da ben-i gör-**en**] kişi-ler$_i$]
            last summer island-loc I-acc see-**an** person-pl
        'the people who saw me on the island last summer'   Subject as target

     b. [[*pro* geçen yaz ada-da e_i gör-**düğ-üm**] kişi-ler$_i$]
            last summer island-loc see-**dik-1sg** person-pl
        'the people whom I saw on the island last summer'   Direct object as target
                                                                    (**Kornfilt2000**)

This is very much in line with what the AAE predicts: By Ā-moving the subject over short distance as in (26a), it fails to agree with the verb and is not assigned genitive case. The reason for this is that nominal agreement morphology (Agr) licenses a resumptive pronoun which would lead to ungrammaticality, regardless of whether it is overt or merely *pro*. Turkish only exhibits subject agreement, not object agreement, so *pro* can only be licensed as a subject. Therefore, if it's not the subject that is Ā-moved, this effect should not occur, since we have a subject in place that the verb can agree with. If the subject is a pronoun and can be dropped (Turkish being a null-subject language), Agr licenses *pro* instead, as in (26b), which is a welcomed effect and perfectly grammatical. A more detailed description of this licensing procedure and why the AAE is essentially the logical prerequisite to avoid it is given in the next section.

3.2.1 Avoiding the Licensing of *pro*

In principle, the assumptions about the AAE are rooted in one of the core conditions of Government & Binding Theory (**Chomsky1981**). The presence of Agr, that is the -DIK morpheme and its accompanying ϕ-features, would license *pro* as a subject, which violates Principle B: Pronouns must be free in their governing category, and said *pro* would be c-commanded by the operator of the coreferent subject. Kornfilt rephrases this condition to more generally apply not only to A-binding but also Ā-binding, reproduced here as (27):

(27) The Ā-Disjointness Requirement:
      A pronoun must be (Ā-) free in the smallest Complete Functional Complex (CFC) which contains it.   (**Kornfilt2000**)

If we try to relativise a subject with agreement, our resumptive *pro* is bound by an operator, which leads to the ungrammaticality observed below:

(28) *[$_{CP}$ **Op**$_i$ [$_{TP}$ **pro**$_i$ ada-da   ben-i gör-düğ-ü] kişi$_i$]
island-loc I-acc see-dik-3sg person
intended: 'the person who saw me on the island'   (**Kornfilt2000**)

What follows is that the relativisation of a subject must lack agreement in order to avoid the licensing of the undesired *pro*. Given that -DIK must take agreement morphemes, the only option left is to use -AN instead. Based on this observation, **Kornfilt2000** elaborates on **Ouhalla1993**'s (**Ouhalla1993**) proposal and presents an analysis for both subject and nonsubject RCs. It additionally benefits from the assumption that *pro* is obligatory wherever it is licensed:

(29) If an empty category is licensed and identified by AGR, it must be *pro*. (**Jaegli1984**)

On the basis of examples like (26), which are the overwhelming majority when discussing RCs in Turkish, the account made by **Ouhalla1993** and subsequently by **Kornfilt2000** seems quite favourable. Nevertheless, the patterns are not as clear-cut as these data may suggest. Exceptional cases in which the subjects in nonsubject RCs do not occupy the canonical subject position or are missing altogether are also conceivable, and in those very cases this subject/nonsubject asymmetry does not hold anymore:

(30) [e_i otobüs-e bin-il-en]   durak$_i$
bus-dat   board-pass-an stop
'the stop where one boards the bus' (i.e. 'the stop where the bus is boarded')
(**Kornfilt2000**)

Why does the suffix supposedly reserved for subjects surface when relativising a nonsubject, too? This is quite easily explained for cases like (30), as we are dealing with an impersonal passive and hence there is no surface subject at all that could trigger agreement with the verb. Consider an example like the one below for the more complex case:

(31) [Ø$_i$ keçi-ler gir-en]   bahçe$_i$
Ø   goat-pl enter-an garden
'the garden which goats entered'   (**Kornfilt1997**)

The subject in (31) does not receive genitive case and does not move to its canonical position in Spec, TP due to being [-specific], so it cannot agree with the verb: A subject that is not overtly case-marked or rather, is not in its canonical position, cannot be considered for agreement.[21] Instead, it is an expletive *pro* that occupies the Spec, TP position (**Kornfilt2000Kornfilt2003**). These assumptions only hold for relativisations targeting oblique objects and those involving impersonal passives (**Kornfilt2000**): Resumptive *pro* is obligatory wherever it is licensed by

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21. I adhere to more recent terms for the syntactic positions assuming CP and TP projections, while earlier works like **Kornfilt2000** refer to this position as SpecAgrSP.

Agr (**Jaegli1984**), and while not discussed explicitly,[22] the expletive *pro* in Spec, TP arises independently because of the Extended Projection Principle's (EPP) requirement on the T-head. Non-specific subjects, by virtue of being NPs, cannot raise to T. Opposed to this, specific subjects are DPs which must get genitive case and raise.[23] The view on whether the EPP is actually crucial for Turkish is not entirely undisputed as discussed a few sections prior, but there is evidence for an expletive *pro* in impersonal passives based on agreement restrictions (**Kornfilt2000**) – impersonal passives can only exhibit 'weak' or default third person singular agreement, and agreement with an oblique object in regular passives as in (32b) leads to ungrammaticality. Thereby, the possibility of taking an overt element as a subject is excluded, since only accusative objects can be considered as subjects for impersonal passives:

(32) a. Oya$_i$ [PRO$_i$ öp-ül-mek]   isti-yor.
          Oya   kiss-pass-inf want-prog
          'Oya wants to be kissed.'
      b. *Oya$_i$ [PRO$_i$ yardıım ed-il-mek] isti-yor.
          Oya   help   do-pass-inf want-prog
          intended: 'Oya wants to be helped.'   (**Kornfilt2000**)

It is reported that there is a general preference for the lack of agreement (**Kornfilt1997**), in the sense that whenever a nonsubject is relativised and "there is no surface subject bearing a thematic role" (**Kornfilt1997**), the verb bears the -AN morpheme and the subject is bare by virtue of remaining to the immediate left of the verb. Note that there is no separate analysis for nonsubject RCs – the claims for impersonal passives, where there is no subject at all, supposedly apply to nonsubject RCs with non-specific subjects, too. Quite importantly, however, it is to be pointed out that the example presented above in (31) deviates from the classic examples used to show the subject/nonsubject asymmetry the anti agreement analysis favours. At first sight, it may seem that the nonsubject *bahçe*, 'garden' is the direct object of the verb *girmek*, 'to enter' based on the English or German counterpart (less visible in English, but clear in German: '*den Garten betreten*'). Yet upon further inspection, the base sentence reveals that the nonsubject bears dative case rather than accusative, and therefore is not the direct object of the clause:

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22. See **Kornfilt1996** for a more detailed assessment of the licensing of expletive *pro*.
23. In general, article-less language have been argued to lack a D-layer altogether – this is quite problematic for directly connecting case marking to the presence of it. Especially Slavic languages, which do not have determiners at all, exhibit rich case morphology. For further discussion, see the points put forth by **BoskovicSener2014**. Turkish in particular appears to pattern with languages such as Serbo-Croatian with regards to scrambling, radical pro-drop, as well as the fact that possessors can c-command out of their NP inducing violations of Principles B and C of G&B Theory. Nevertheless, note that Turkish has an indefinite determiner that despite looking and sounding identical to the numeral *one* ('bir'), occupies a distinct syntactic position (**Kornfilt1997**).

(33) a. Bahçe-ye   gir-di-ø.
          garden-dat enter-pst-3sg
          '(S)he entered the garden.'

      b. Bahçe-yi   gör-dü-ø.
          garden-acc see-pst-3sg
          '(S)he saw the garden.'

It certainly appears that the target is a noun expressing the location of the activity described in the RC, in particular a bare one that is not accompanied by a postposition.[24] It raises the question whether (i) the description provided above really applies to nonsubjects at all and (ii) if it does, whether all types of nonsubjects are to be treated equally. Given that RCs are nominalisations and in particular, that the jury is still out on their status as adjuncts or arguments or whether they should be treated as a separate category entirely (**Kornfilt2003Laszakovits2017Salzmann2017**), it would not be surprising to find evidence for this alternation in general as described in the previous section. Nonetheless, what is unexpected even after consulting the findings based on the AAE, is the array of nonsubjects to allow for this alternation to distinct degrees – the target of relativisation should not have the capacity to alter the type of the clause (which supposedly determines the cases that are licensed, recall argument/adjunct asymmetries in hybrid nominalisations), and if it makes a difference nevertheless, it may be reasonable to reconsider these categories and possibly reorganize the viewpoints under which DSM phenomena have been analysed. The reason why this seems unexpected is that the main contrast is supposedly caused by Agr, or rather, the resumptive *pro* it licenses – this *pro* can strictly be licensed in place of a subject and not for any other category (**Kornfilt2000**), but crucially, it does not predict contrasts between locatives and direct objects. The same applies to the expletive *pro* supposedly present due to the EPP on T.

   At this point, it has to be acknowledged that the subject/nonsubject division is deeply rooted in this exact derivation by **Ouhalla1993** adapted to Turkish by **Kornfilt2000**. The resumptive *pro* that invokes the Ā-Disjointness Condition is licensed by Agr, which in Turkish can only be subjective agreement. It is quite likely that the subject/nonsubject label got stuck because of this very analysis: It could have simply been a matter of convenience to help readers and listeners quickly grasp what is at the core of the issue, namely that *pro* can only be licensed for subjects, and not nonsubjects. So while the choice of terminology is plausible in principle, it is rather misleading and paints a falsely unified picture of the data, especially when only presented with the examples conforming to the established norm.

   What could be considered a bit problematic about this approach is the basis of assuming the EPP for Turkish. As touched on in section 2.3.3, **Öztürk2006** argues that passivisation in

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24. Researchers differ with regards to the terminology they use when referring to these constructions: Some use the term adverbial, others refer to oblique objects in general. As locative expressions are of particular interest to the current study, I shall be focusing on them and simply refer to them as locatives.

particular is an in situ phenomenon that does not make reference to the EPP at all, which is a conclusion that stands in conflict with the presented approach drawing its very core from impersonal passives (**Kornfilt2000**). Nevertheless, we have established that the referenced account does not make reference to embedded clauses, particularly to genitive subjects of embedded clauses. Assuming there truly is an expletive in Spec, TP in the case of impersonal passives, and assuming that the agreement data backing the claim is quite convincing (**Kornfilt2000**), it remains unclear how to model the differences between individual types of nonsubjects within an analysis that is based on their uniform treatment opposed to subjects, like anti agreement is. I shall work through these points in the next two sections, moving on to the reported data that stand in conflict with the AAE-analysis and a different perspective introducing previously unconsidered factors.

3.3 Disentangling Different Types of Nonsubjects

3.3.1 Independent Observations

In a more descriptive rather than analytical fashion, reports exist on the fact that RCs relativising adverbials do allow for both patterns depending on the intended interpretation of the subject, and it is explicitly noted that RCs targeting direct as well as oblique objects do not (**GökselKerslake2005**). This leads to a differentiation between different kinds of nonsubjects and supports the view that while RCs relativising some of them are sensitive to the specificity of the subject, others are not. Such data are in favour of an object (both direct and oblique) versus adverbial distinction, which is relevant for our case comparing direct objects and locatives. **GökselKerslake2005** extensively report about extracted possessors of various elements exhibiting alternations, too, but the behaviour of possessors is unfortunately beyond the scope of this thesis. Instead, let us focus on one particular case they report on that is especially relevant for the current efforts. For example, among the cases that allow for the use of -AN, the following instance is listed:

> In clauses where the relativised constituent is a noun phrase expressing the location of
> the activity expressed by the relative clause: In these constructions the relative clause
> itself contains a subject with categorial status, and the verb has passive marking:

(34) kitap imzala-n-an yer
      book sign-pass-an place
      'the place where books are signed'   (**GökselKerslake2005**)

The option to passivize certain verbs in Turkish and the particular choice **GökselKerslake2005** made in terms of their example is discussed in the next section, but for the time being, let us take this as supportive evidence for the data presented by **Kornfilt2000** about impersonal passives

being only acceptable without agreement. On the other hand, it is stated that relativising direct objects can only elicit the -DIK strategy and nothing else (**GökselKerslake2005**):

(35) bil-diğ-im   bir turizm şirketi
      know-dik-1sg a   tourism agency
      'a tourist agency that I know'   (**GökselKerslake2005**)

We do not have the means to clearly tell whether a different pattern is excluded given that the subject is a pronoun (first person singular), which is an inherently specific category, yet it would be truly surprising if the authors would have left out a possible pattern from such a concise overview, which is why we shall assume that the alternation I have suggested in (24), reported here again as (36), should not be grammatical:

(36) a. kedi-**nin** yakala-**dığ-ı**   top
          cat-**gen** catch-**dik-3sg** ball
          'the ball that *the cat* catches'   specific, definite reading
      b. *kedi-**ø**   yakala-**yan** top
          cat-**nom** catch-**an**   ball
          intended: 'the ball that *a cat* catches'   non-specific, generic reading

Data like these clearly suggest the impact of context and specificity on the choice of relativisation morphology only in some types of RCs, and not in others. This suggests that claims unifying all types of nonsubjects under an umbrella where specificity-related effects are possible are rather misleading – the most prototypical type of a nonsubject that comes to mind based on the examples used in the literature is a direct object, which visibly does not seem to be impacted by this alternation at all. The matter of differentiating nonsubjects in a syntactic analysis beyond reporting observations was not pursued until fairly recently, considering these patterns in Turkish RCs have been reported as early as the 1970's (**Underhill1972HankamerKnecht1976**). In line with these observations, an analysis has been developed by **Cagri2005Cagri2009** taking an opposing view on many factors, targeting the very shortcomings of grouping all nonsubjects together, and introducing the relevance of transitivity and even split intransitivity.

3.3.2 Minimalism to the Rescue?

In her dissertation, **Cagri2005** makes an effort to model the agreement phenomena in Turkish RCs based on minimalist assumptions. She follows a Kaynian derivation by assuming the relative head to have a *wh*-feature and thus moving itself before being extracted from Spec, CP (**Kayne1994**), opposed to **Kornfilt2000** who assumes the movement of an operator. The analysis postulates that in the case of non-specific subjects, the EPP feature on T attracts the relative head, that is, the extracted element, to Spec, TP and therefore, agreement is not triggered as there

is no subject in Spec, TP to agree with. This assumption is based on the foundation that Turkish has two types of nominals, those with and those without a D-layer, making non-specifics NPs and specifics DPs.[25] Evidence for the movement of nonsubjects to Spec, TP comes from the observation that locatives are shown to satisfy the EPP if the subject is non-specific:

(37) a. *Bir tavuk   piş-iyor.
          a   chicken cook-imperf

    b. Bu-ra-da   bir tavuk   piş-iyor.
        this-place-loc a   chicken cook-imperf
        'A chicken is cooking here.'

<div align="right">(Cagri2005)</div>

Note that *burada* means 'here' in Turkish, but it can be dissected to reveal its nominal nature as demonstrated above, and can also take various case markers other than the locative.

    The analysis presented in this section heavily relies on the premise that the -AN strategy is triggered by the temporary occupation of T by a nonsubject nominal with a *wh*-feature, such as the relative head. The following shall be a shortened version of the proposal made by **Cagri2005** focusing on the crucial claims and where they stem from. The core of the minimalist analysis is the application of **PesetskyTorrego2001**'s (**PesetskyTorrego2001**) T-to-C movement. The authors originally use the proposed mechanism to account for the *that*-trace effect in English. It is assumed that C must contain an uninterpretable T feature, uT, as is evident from *do*-support in English. This uT feature needs to be deleted by T through the movement of T° to C°, as assumed by the Head Movement Constraint (**Travis1984**). The Attract Closest X condition, a revised, more restricted version of Attract Closest F (**Chomsky1995**) by **PesetskyTorrego2001**, prevents a head with multiple uninterpretable features from targeting across any element that could potentially delete one of its features, which in turn imposes ordering on feature checking of C. It is assumed that C° always has a uT feature which can be deleted by moving T° to C°. Embedded C°s have an additional uninterpretable *wh* feature, (u*wh*).[26] Uninterpretable features can be satisfied by movement from T° to C° to check uT, and movement of a *wh*-element to Spec, CP to check u*wh* The uT feature will always be satisfied before the u*wh* feature because the local movement from TP to delete C's uT feature will usually proceed the movement of another element to check its u*wh* feature. That is, unless both elements are within the same minimal domain – the features of C target the closest element with matching features. Crucially, when the *wh*-expression is not the subject, T-to-C movement is forced. The uT feature on C° can be deleted by movement of a nominative DP from Spec, TP[27] or by head movement from T° to

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25. The idea that non-specific nominals may lack a D-layer is also briefly entertained by **Kornfilt2009**, as well as **Danon2006** to explain DOM in Hebrew.

26. Both uninterpretable features are assumed to host an EPP feature.

27. Motivating the lack of *do*-support in a sentence like 'Who bought the book?', the authors argue "that nominative case is, in fact, uT on D" (**Cagri2005**). T and D are assumed to have uninterpretable features that result in D

C°. Movement of a *wh*-subject satisfies both features in one move from Spec, TP to Spec, CP– and thus will always be chosen over T-to-C due to being more economical.

In **Cagri2005**'s (**Cagri2005**) adaptation of this mechanism to Turkish, the -DIK morpheme is handled as a compound of the tense morpheme -DI and -k, which is a morpheme also found in infinitival verb forms. In particular, the -k morpheme is assumed to be a reflex of T-to-C movement. The compound -DIK is taken as an indicator for C's features being checked via T-to-C, which predicts that whenever the subject is the relative head, T-to-C is unnecessary and therefore the morpheme never appears – instead, it is -AN that is employed. Similarly, it quite easily accommodates the presence of the -DIK morpheme in nonsubject relativisations, as C targets the closest head, that is T, to check its uT feature, and no *wh*-element intervenes in Spec, TP that would make T-to-C unfavourable. Nonetheless, the proposal by **PesetskyTorrego2001** does not readily account for the exceptional appearance of -AN in nonsubject relativisations.

Some necessary extensions to the theory are therefore proposed: One of them is the assumption that all DPs must have their case checked or assigned, but that the case-assigning heads do not need to discharge their case – this is supported by the fact that NPs in Turkish do not raise for case,[28] and yet the sentences including them are supposedly grammatical, that is, the EPP is somehow satisfied nevertheless. Essentially in the same vein as **Kornfilt2000**'s (**Kornfilt2000**) analysis, a *pro*[29] raises to T instead of the subject and checks the EPP feature. It is further proposed, in contrast to **PesetskyTorrego2001**, that C has an uninterpretable T feature that makes it select T – the focus is thereby shifted from uT features on C to uC features on T, instead. Only a *wh*-expression can move to Spec, CP, whereas no such restrictions apply to Spec, TP. T is therefore thought of as a hybrid A-projection with *wh*-like features. uC on T can be checked or deleted by movement of a *wh*-DP to Spec, TP or by T-to-C movement.

With these tools at hand, it is maintained that all possible agreement patterns in Turkish relative clauses can be explained, and indeed, the proposal seems very promising, in particular for the cases we have witnessed in the previous section where certain nonsubject RCs targeting locative expressions do allow for both patterns according to the subject's specificity. In addition to these observations, **Cagri2005** claims that the agreement patterns for RCs targeting the possessor of a nonsubject are entirely optional, meaning that they do not have an impact on the

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properties on T ("nominative") and T properties on D ("agreement"), if they are checked by one another. Thereby, movement of a nominative DP can delete the uT on C.

28. **Cagri2005** makes these assertions while also maintaining that 'in Turkish a DP receiving structural case must raise to the specifier of the case-assigning head' (**Cagri2005**). It is therefore suggested that raising and case marking are interdependent, and hence genitive case is assigned in a Spec-Head configuration. Note, however, as discussed in section 2.3.2, that this contrast is not prevalent for all speakers. **Kornfilt2009** maintains that genitive subjects are interpreted as specific regardless of the position they occupy based on the judgements of her and her informants, which makes it appear unlikely that raising for case is obligatory.

29. The analysis gets a bit unstable at this point, as **Cagri2005** assumes that there is a locative *pro* due to the context entailing 'a contextually relevant time and place' expressed by it. Whether this is a resumptive or an expletive as proposed by **Kornfilt2000** remains unclear, as the contextual considerations as well as the notation point towards a resumptive pronoun, while the fact that it appears in such sentences without a proper specific subject to saturate the EPP points to an expletive.

subject's interpretation specificity-wise. **GökselKerslake2005** also report on optionality, yet in a different case: When relativising a locative expression, both forms are allowed under the proviso that the subject is modified by an indefinite determiner (or quantifier, depending on how one chooses to categorize *birkaç*, 'some, few'). The preference for agreement supposedly increases if the specificity of the subject is increased, say, by embedding an additional RC making said subject more specific. Exploring possessor relativisation and multiple embeddings is beyond the scope of this thesis, although optionality per se may be an interesting factor after all, to be discussed briefly at the end of this thesis. For now, let us turn to the derivation of nonsubject RCs under the presented minimalist assumptions.

(38) a. [bayan-ın Ø$_i$ otur-duğ-u] divan$_i$
          lady-gen Ø   sit-dik-3sg   sofa
          'the sofa that the lady is sitting on'

   b.
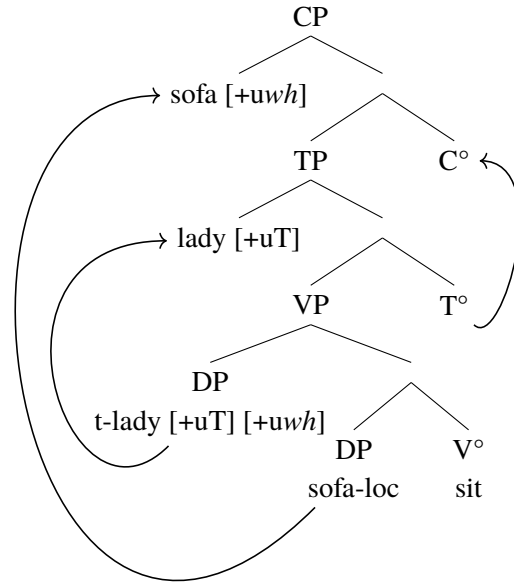
(**Cagri2005**)

The presence of agreement in clauses relativising a direct object depicted in (38) is easily accounted for with the original account (**PesetskyTorrego2001**). When the extracted element is not the subject, T-to-C is always allowed as it is the most economical move. The order of operations is as follows: First, the subject is attracted from VP to Spec, TP to satisfy the EPP feature. Because the subject is not a *wh*-element, it cannot check u*wh* on C. Therefore, as a second step, movement of the *wh*-DP, the head of the relative clause, to Spec, CP is required. The third and last step of the derivation requires T-to-C movement to check C's uT feature. Hence, two moves need to be initiated to check the features on C, on the one hand, the movement of the relative head to Spec, CP to check u*wh*, and on the other hand, T-to-C, in order to check uT on C°. Nevertheless, this is the most economical case as the subject, which could potentially check both by moving to Spec, CP, is not a *wh*-element by virtue of not being the target of relativisation. T-to-C in this case arises because the subject terminates in Spec, TP.[30]

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30. T-to-C is prohibited due to economical considerations when the subject is a *wh*-element, that is, the target of relativisation. Subjects are first attracted to Spec, TP and then move further upwards to to Spec, CP. In this case,

Moving on to one of the more exceptional cases presented by **Cagri2005**, the extraction of a nonsubject can trigger the -AN strategy, too. The key difference between the structures in (38b) and (39b) is that the subject is assumed to be a DP in the derivation triggering agreement while it is an NP in the derivation that does not. Subject DPs must raise for case to Spec, TP, NPs do not. They remain in situ, are unspecific and thereby do not have a D projection.

(39) a. gemi-ø   yanaş-an liman
          ship-nom sidle-an   harbour
          'the harbour that a ship is sidling up to'

b.
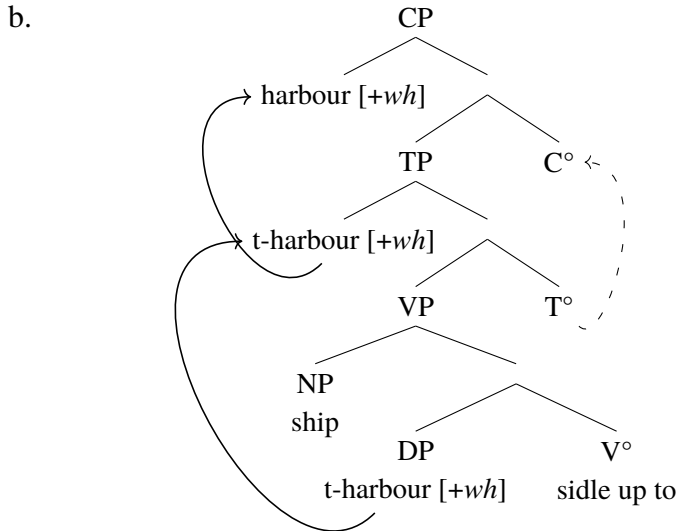
(**Cagri2005**)

By not raising to Spec, TP, the subject leaves that position vacant: The relativised element, as it is a *wh*-expression, can now make its way up to Spec, CP through Spec, TP. The first step of this alternative derivation hence requires the movement of the target of relativisation to Spec, TP, where it can check the postulated uC feature of T. In a second step, to check the u*wh*-feature on C, the DP moves to Spec, CP. This is the more economical version of the derivation where T-to-C becomes redundant. As a result, since the -dik morpheme is thought of as a reflex of T-to-C movement, it is not triggered – instead, the -an strategy is employed.

An additional factor that may come into play in determining the grammaticality of the constructions has been explored, too, in the form of yet another extension to this theory by **Cagri2005Cagri2009**. The next section is concerned with split intransitivity, or rather, the position the subject is base-generated in according to the θ-role it is assigned.

3.3.3 The Role of (Split In-)Transitivity

Upon making a first step towards a systematic effort to distinguish the patterns found in RCs relativising nonsubjects, a step further is taken to differentiate between the nature of nonsubjects that allow for these patterns. **Cagri2009** details the fact that agreement in Turkish RCs is

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the subject can check both the uT and the u*wh* feature on C by moving to Spec, CP, as it is a *wh*-element. Therefore, the nature of subject extraction by definition leads to the licensing of the -AN strategy only.

sensitive to the transitivity of the verb, and in particular to two types of intransitivity. This is a new perspective that has previously not been considered by authors. Her proposal aims to show that the alternation of agreeing and non-agreeing subjects cannot merely be a matter of (pseudo-) incorporation (as proposed by **Öztürk2005** for structures other than RCs in Turkish). Instead, the perspective is that the position of base generation varies from subject to subject depending on its θ-role (**Perlmutter1978**), and that this position, that is, the subject's proximity to the verb determines whether it can incorporate or not. What is particularly relevant about this analysis is the observation that not all verbs pattern equally with respect to agreement in RCs. The following is a short sketch of the two types of intransitives we shall be dealing with **Cagri2005**'s (**Cagri2005**) as well as **Cagri2009**'s (**Cagri2009**) explanation as to why they behave the way they do.

Split intransitivity describes the distinction of intrasitives into unergative and unaccusative verbs, and this distinction can, but does not have to be, based on their morphosyntactic behaviour. Unergatives are intransitive verbs whose sole argument is an agentive subject, such as the verbs *run, talk,* and *resign*. Unaccusative verbs, on the other hand, also only take a subject as an argument, yet this subject is a patient, examples include *fall, break* or *melt*.
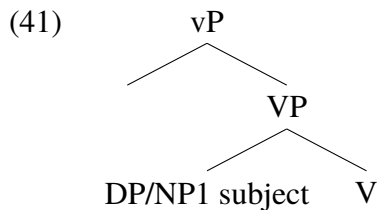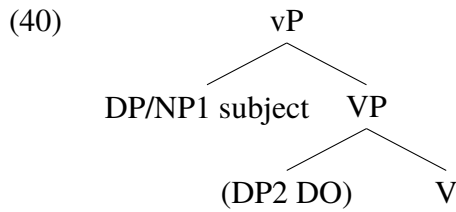
This contrast prompted **Perlmutter1978** to postulate the Unaccusative Hypothesis (UH): Unaccusative verbs have an underlying object that is promoted to the subject position, while unergatives have a base-generated subject. It is argued that the relativised head needs to move through the canonical subject position Spec, TP to trigger the -AN agreement pattern, rather than postulating the necessity of subject incorporation.

(40)

(41)

(**Cagri2009**)

To recapitulate the gist of **Cagri2009**'s (**Cagri2009**) proposal, let us consider the predicted agreement patterns. In the case of a transitive clause, the subject is base-generated in vP. The subject then moves to Spec, TP (supposedly for case) and the relativised DO is moved directly to Spec, CP. Take (40) as a simplified illustration on why a transitive subject cannot incorporate into the verb. Regardless of whether we assume a third DP like a locative or assume the subject to be an NP that remains in situ – the subject is base generated in vP and is therefore structurally too high to incorporate. Confronted with a transitive verb and in particular a clause that modifies the direct object, the subject has no chance to incorporate into the verb, which is why the crucial mechanism cannot be incorporation according to **Cagri2009**. The same facts hold for unergative RCs where there

is no second DP, yet by the assumption that agentive and patientive subjects of intransitives are generated in distinct positions, the subject would still be too high to incorporate. On the other hand, assuming that a patientive subject is generated in the object position to be promoted to the subject position subsequently, the starting point is the one depicted in (41). The non-specific subject of an unaccusative verb can incorporate into the verb in such a scheme. By virtue of leaving the subject position vacant for the relative head, the omission of agreement is permitted. Recall the example from the last section, repeated as (42):

(42) a. gemi-ø   yanaş-an liman
          ship-nom sidle-an   harbour
          'the harbour that a ship is sidling up to'
      b.
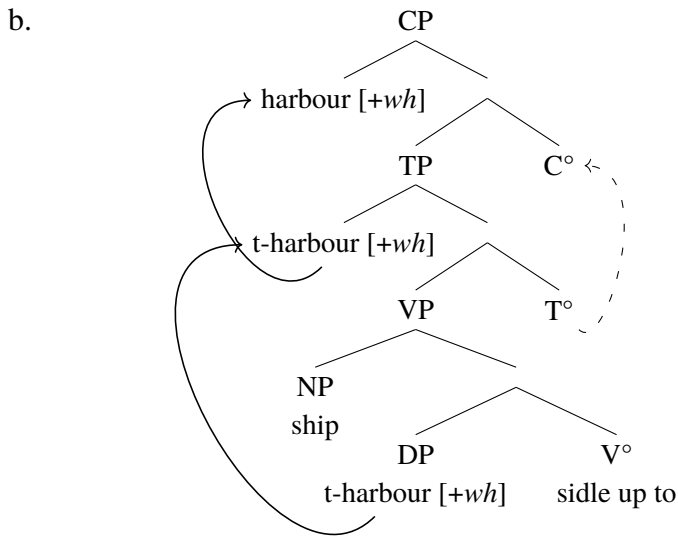
(**Cagri2005**)

The target raises from its VP-internal position to Spec, TP, which should trigger the -AN strategy for agreement (**Cagri2005**). The relativised element subsequently raises to Spec, CP before being extracted from the clause. Note that it is this intermediate landing site that makes the difference according to this account. If the relativised DP moves to Spec, CP directly from its base position because the subject is specific and occupies Spec, TP before the target gets the chance to move, T-to-C has to apply to check C's uT feature, which triggers agreement. This latter case is illustrated by (43).

(43) a. gemi-nin yanaş-tiğ-ı   liman
       ship-gen   sidle-dik-3sg harbour
       'the harbour that the ship is sidling up to'

     b.
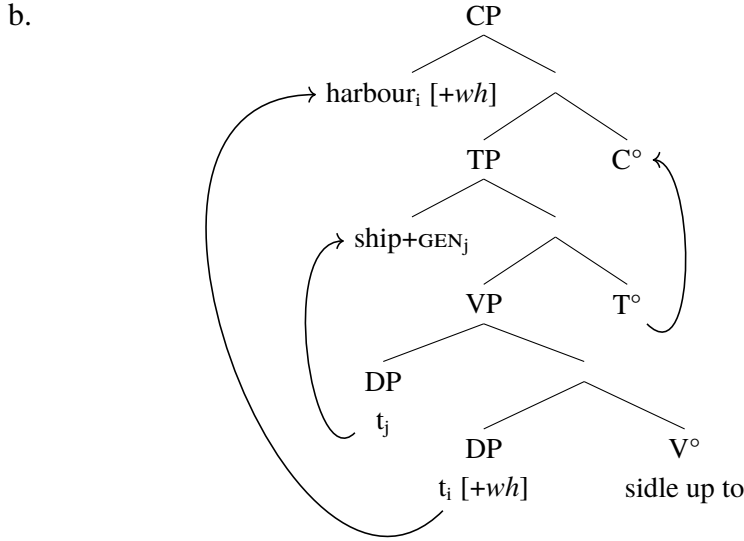
                                                                  (**Cagri2005**)

Very briefly, it is mentioned that the reason why agreement is obligatory in unergatives and transitives is the fact that the relative head cannot move through Spec, TP in such cases. The *wh*-element is generated in a lower position than the DP/NP subject, and therefore regardless of the subject's specificity, it cannot move past the subject as it would violate the Minimal Link Condition (**Chomsky1995**). The subject, by virtue of being generated in vP instead of VP, is "in the way" (**Cagri2009**).

Going back to the notion of split intransitivity and the properties that such verbs have, one of the characteristics of unaccusatives is that passivisation is ungrammatical or fails altogether as there is no agentive subject. Recall the example given two sections prior from **GökselKerslake2005**, repeated here once more as (44):

(44) kitap imzala-n-an yer
     book sign-pass-an place
     'the place where books are signed'   (**GökselKerslake2005**)

Whether this particular example (and another one that falls into the same category) has been chosen by the authors for a distinct reason to illustrate that the lack of agreement is only grammatical with passive clauses relativising (locative) nonsubjects is not further elaborated. For our purposes, I shall assume that the authors have either been genuinely unaware of or have chosen not to pursue this possible link due to space limitations. **GökselKerslake2005** mention in their grammar that nouns expressing the location of an activity can be relativised using -AN, however only if the verb is passivised and thereby does not have a surface subject. Unaccusative

verbs, by virtue of not having a 'true', i.e. agentive subject at the point of base-generation, cannot be passivised – this is only possible with unergative or transitive verbs which have a true base-generated subject. Thus, the claim they make that passivisation is key to enable the -ᴀɴ agreement strategy implies that the authors may have only considered verbs with an agentive subject. It would be plausible to have done so, considering that agentive subjects are the most prototypical ones that come to mind. Despite being merely able to hypothesize about the authors' intuitions and intentions, and acknowledging the possibility that these observations are strongly impacted by dialectal variation, their data nonetheless affirm the idea that split intransitivity may play a crucial role regarding which contexts allow for DSM in relative clauses.

The analysis by **Cagri2005Cagri2009** points out an important misconception about incorporation, yet also seems to show that incorporation, when identified correctly, can predict the patterns. The next section will summarise the advantages and shortcomings of the presented accounts as well as possible contradictions that arise.

3.4 Interim Summary – Shortcomings and Contradictions

I have presented formal considerations and some of my own musings about the picture that is painted about Turkish nonsubject RCs in the respective literature. Looking to find the exact patterns in RCs as they surface in nominalisations is of no avail – while the basis is arguably the same, the fact that we are dealing with displaced structures indicates that there is a fundamental difference between the two construction types that enable more or less unexpected patterns to arise. The fact that the status of RCs in terms of being adjuncts or arguments is not sufficiently proven is not beneficial for our cause either. Particularly unexpected are differences in patterns according to the type of target that is relativised, specifically beyond the subject/nonsubject asymmetry.

In terms of RC-specific proposals, I have outlined the efforts of the anti agreement approach, and how it draws upon one of the basic principles from Government & Binding Theory. The main issues with the AAE is that it only predicts the -ᴀɴ pattern in case the subject is Ā-moved. This is only the case if it is itself the target of the modifier clause – so the predictions by **Ouhalla1993**, in a narrow sense, do not seem to be borne out. If we would argue that the key to the AAE is not *extraction* (of the subject or any other element for our purposes) but merely semantic features, it would remain puzzling that the case marking of the subject does not concur with agreement in other nominalisation – the AAE is limited to RCs and does not surface elsewhere in the language.

Considerations connecting the Turkish phenomena in more detail to the AAE have been discussed thereafter. By postulating the licensing of an expletive *pro* based on the EPP, it is attempted to account for the patterns found in impersonal passives and supposedly nonsubject RCs with non-specific subjects (**Kornfilt2000**). While **Kornfilt1997Kornfilt2000** does address these constructions (opposed to **Ouhalla1993**'s (**Ouhalla1993**) analysis focusing on the more widespread subject/nonsubject asymmetry), her aim has still been to account for these cases

within the existing theory of anti agreement. Nominal agreement enables DSM based on specificity – this prerequisite is given by default. The alternations in nonsubject RCs supposedly arise due to an expletive that is required by the EPP on T, and agreement in those cases would be ungrammatical. Nevertheless, we have seen that some issues remain, like the possibility of contrasts among nonsubjects – and expletive *pro* in direct object relativisations seems to lead to an ungrammatical structure. Objections to the EPP's legitimacy seem to be lacking substance when applied to this particular matter, however. The argument is based on fully verbal clauses with nominal subjects that do not seem to move to Spec, TP, whether its for case or due to case (**Öztürk2006**) – things are quite different for nominalised clauses, and for relatives in particular, **Cagri2005** proposes that movement is even necessary in order to assign genitive to the subject.

Lastly, I presented a proposal that leaves the term anti agreement behind and instead takes a minimalist perspective on agreement in RCs. The account nevertheless arrives at similar conclusions as the ones rooted in the AAE: Subject extraction by its nature inhibits agreement due to being the most economical move to check the uninterpretable features on C while satisfying the EPP on T, making the movement that would supposedly trigger agreement redundant and unfavourable in all instances. The account further makes predictions about the differences between nonsubject RCs based on their transitivity or lack thereof, which is something that previous accounts do not feature. Its central effort is to show that the lack of agreement is not a matter of incorporation, as transitive and unergative subjects are too far away to incorporate. Nevertheless, this appears to be a contradiction, as the fact that unaccusative subjects can incorporate opposed to unergative and transitive subjects entails exactly the patterns that **Cagri2005Cagri2009** reports to be grammatical. Rather, what the focus should be on is the fact that incorporation has not been defined accurately as it indeed does not seem to target the subjects of all verbs equally, as predicted by the UH (**Perlmutter1978**). In turn, with the movement of the relative head through Spec, TP taken to be the crucial factor, **Cagri2009** points out that the relative head must move directly to Spec, CP as it cannot A-move to a position above another NP or DP (Spec, TP being such an A-position), as this would violate the Minimal Link Condition.[31]

In this sense, it is not surprising that the presented accounts also differ with regards to the nature of relativisation that they assume: While **Kornfilt2000** claims that the account can be conceptualised regardless of whether one takes relativisation to involve the movement of an operator or a *wh*-element, this detail has the potential to make or break the account by **Cagri2005Cagri2009**. However, **Kornfilt2003** maintains that the operator of RCs does not bear a *wh*-feature, and that assuming an operator instead of movement of the relative head itself is crucial for the approach to DSM in nominalised clauses presented in section 2 – since RCs are considered complex nominals subject to the subjacency effect, extractions out of islands are not allowed. It is difficult to say anything meaningful about the status of RCs as adjuncts or arguments, hybrids or homoge-

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31. Note that it is briefly discussed that scrambling around the subject is not an option either, as scrambled elements in Turkish are assumed to be frozen for further movement. Scrambling the *wh*-element to a hypothetical position between VP and TP would thereby hinder the subsequent movement to Spec, CP.

neous projections, as the facts point towards different directions. They are merged higher than arguments, yet display less restricted behaviour than adjuncts; the observed case facts do not provide a conclusive picture either, as an obligatorily genitive subject, as is supposedly present in DO-relativisations, is reminiscent of purely nominal subjunctive clauses, while nominative and genitive alternations based on specificity point to indicative, that is hybrid CP-like clauses dominated by an NP.

Among the presented accounts, the one that goes into the most detail in explaining different types of data is also the most stipulative one. Certain operations seem to be employed by **Cagri2005** only to account for data rather than having an independent motivation. Assuming a uC feature on T is one of these assumptions, along with the claim that specific subjects must move to Spec, TP. This leads to the strong interdependence of movement, case, and agreement, since it is assumed that genitive case can only be assigned to a DP that has moved to Spec, TP. Why this assumption is made is not entirely clear. This is necessary for the derivation to be successful in those cases where alternations can occur, as the DP-subject inhabiting Spec, TP blocks the passing of the target of relativisation through Spec, TP, and hence also blocks the anti agreement effect by virtue of enforcing T-to-C. As mentioned above, in the case of transitive and unergative verbs the inability of the relative head to move to Spec, TP is accounted for by the Minimal Link Condition, yet when the relative head is generated above the subject and is hypothetically free, the subject moves to Spec, TP first (if it is specific).

Another disadvantage that this account in particular seems to be suffering from, however, is the fact that non-specific NPs (or whichever projections one assumes, whether all nominals are DPs or lack the D-layer only when non-specific) are not supposed to get case, yet it appears that this is forced upon them when relativising certain nonsubjects, direct objects in particular. **Cagri2005Cagri2009** emphasizes multiple times in both works that NPs need to remain in situ and cannot (i.e. must not) raise to Spec, TP for case. One would have to postulate that all subjects that fail to incorporate must raise to Spec, TP, and in addition, that these subjects are all assigned genitive (following in the footsteps of the presented account, likely at Spec, TP). Therefore, one would also have to assume that the genitive is assigned to both NPs and DPs which would account for the fact that the subjects of agreeing relative clauses are genitive, yet it would also be sketchy to say the least. Even more so, it is not borne out that specific subjects must leave their immediately preverbal position (**Kornfilt2009**). The fact that the assertions about movement for case are disputed has been discussed in section 2.3.2: Unlike non-specifics, specifics do not have to occupy a fixed position in order to yield a grammatical construction. For most speakers, they are free to be either to the immediate left of the verb or in their canonical position. Word order does not seem to have a crucial effect on the semantic interpretation of a subject, yet case does. Nevertheless, it is maintained that non-specifics do not raise, since the caseless subjects of nominalisations are strongly preferred in the immediately preverbal position. This further supports the view that case is assigned via c-command rather than in a Spec-Head configuration.

Furthermore, the link between specificity and genitive case as well as agreement in RCs is assumed to be particularly strong by **Kornfilt2000**, to the point of ungrammaticality in sentences where the intended interpretation and morphosyntactic features do not match. It is certainly not impossible that this semantic function of case marking is neutralised when only the option to agree (and to assign genitive) is available – recall that it has been proposed in section 2.3.2 that the Agr morpheme can raise to K instead of a specific nominal due to the ONHC. Nevertheless, it would have been important for the accounts to present minimal pairs of constructions clearly showcasing the allowed and disallowed alternations to clear up such uncertainties. The approach by **Kornfilt2000** does not explicitly challenge the claim that all nonsubject RCs pattern alike, yet it does not demonstrate the possibility of case and agreement alternations in direct object RCs.

The bottom line is: relativisations behave distinctly from other nominalisations and seem to challenge previous theories of case assignment in nominalised clauses. Accounts specifically dedicated to relativisation in Turkish make different predictions and even more strikingly, the most popular approach, i.e. anti agreement, barely touches on these patterns at all. To help clear up these uncertainties, I propose to exploit the potential that lies within the study of more unexpected patterns. It may be particularly fruitful to treat these data as a potential basis to learn about the underlying syntax of Turkish rather than regarding them as bothersome exceptions to a rule, trying to incorporate them into an approach that is based on the regularity of the most frequent cases. On the other hand, we may find out that these exceptions are truly not even as meaningful after all – it is completely unclear how frequent or infrequent these patterns are and whether they should carry a lot of weight when conceptualizing a theory. Furthermore, by adhering to the denominations of subject and nonsubject relativisation, we exclude an entire group of nonsubjects based on the technicality of holding on to an account that appears to oversimplify the data. We risk falsely unifying diverging patterns under accounts that do not go beyond the 'traditional' contrasts, and it may be reasonable to explore the option of expanding the definition of anti agreement altogether. The next section is the heart of this thesis, as it comprises the experimental study aiming to put all theoretical considerations into perspective.

4 Bridging the Gap between Theory and Experiment

4.1 Motivation for a Quantitative Study

Given the somewhat mixed reports on subject agreement in nonsubject RCs, a systematic assessment of the agreement patterns may help shed some light on the underlying mechanisms governing them. As I have introduced, previous accounts identify the target of relativisation and the specificity of the subject as the crucial factors determining agreement, with alternative insights coming from the theta role of the subject rather than the target of relativisation. While these claims are supported by empirical evidence, it is unclear in which particular settings the utterances taken as examples could occur, whether they are only acceptable in a particular context,

how much of them is subject to dialectal variation and speaker preference, as well as whether the claims altogether hold on a larger scale. One of the disadvantages of such theoretical studies is that the reader is usually unaware of the number of people whose insights and judgements the theories are based on – considering that the number of informants is low enough not to be mentioned in most instances, I shall assume that previous research has either been carried out by means of introspection by the author, strictly qualitatively or possibly with no structured data collection at all.[32]

Having said this, the field of linguistics would not have come far without these smaller scale studies and the reflections of native speakers, and especially in languages that are less studied, it is particularly important and essentially the only reasonable option to assess speakers' judgements qualitatively and possibly gain insights through personal communication and introspection. However, as we can observe regarding case and agreement in Turkish nonsubject relative clauses, theories tend to pinpoint different focal points which have to be disputed. Arguably, Turkish is a language that has been studied quite well in the past couple of decades, and with the knowledge we have gathered so far, we shouldn't be facing too many obstacles when deciding to expand our methods to quantitative studies and experimental efforts. While qualitative assessments are absolutely vital to ensure we have a good basis for testing, the appeal of theories is arguably limited if we do not have data from unbiased sources to back them up – and in many instances, the strengths and weaknesses of them are only spotted when we apply them to a larger population.

Most prominently, the data presented in favour of case and agreement alternations in relative clauses targeting nonsubjects are based on the relativisation of locatives. For this reason, as well as the lack of data showing this effect in direct object RCs, the following study chooses to focus on the potential divergence between the modifying relative clauses of locatives and direct objects in Turkish. Special attention is payed to the context in which the sentences are presented in, as they enforce either a specific or non-specific reading of the subject, which the exhibited case and agreement patterns strongly depend on according to all theories. While not the main focus of the study, it shall also be explored whether there is a substantial difference between locative RCs with unaccusative and unergative verbs, ultimately pursuing the goal of deducing implications not only for case and agreement phenomena, but for the structure of RCs overall.

4.2 Questions, Hypotheses and Expectations

The assumptions this study aims to clarify are first, whether the specificity of the subject is the factor determining the preferred case and agreement pattern in Turkish direct object and locative relative clauses in the first place, as well as second, whether there are substantial differences between direct object and locative relative clauses with regards to the preferred patterns. Based

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32. **Cagri2009** mentions that her work relies on the judgements of one native speaker only, and could therefore very well capture features of a particular dialect rather than representing the standard version of the language.

on the approaches presented in section 3, the following expectations should hold for the current experiment, strictly based on the individual accounts (in chronological order according to the date of publication):

I. **Ouhalla1993**: Nonsubjects should not allow for the -AN strategy, i.e. they should not *require* it, as the pattern can only be invoked by subject extraction to avoid the licensing of a resumptive *pro* – given that Turkish only has subjective agreement, Agr is not responsible for the licensing of *pro*s for nonsubjects, which is why no violations can occur.

II. **Kornfilt1997**: Nonsubjects allow for the -AN regardless of their exact type, as long as the clause has no subject at all or no meaningful one, that is a bare, non-specific subject that does not occupy the canonical subject position.

III. **Kornfilt2000**: Same assumptions as **Kornfilt1997**, with the introduction of the EPP's relevance – Spec, TP needs to be filled by an expletive *pro* in case the subject is unable to move by virtue of being incorporated due to its lack of specificity, or by not being present at all (i.e. for impersonal passives).

IV. **Cagri2005Cagri2009**: Nonsubject RCs allow for the -AN pattern if their subject is non-specific, by virtue of the relativised element (assumed to have a *wh*-feature) being attracted to Spec, T by the EPP before resuming to move to its external position through Spec, CP – that is, if there is no nominal intervening between the relative head and Spec, T, such as in unaccusatives where the subject is supposedly generated below the nonsubject, and hence the movement of the latter does not violate the Minimal Link Condition, -AN is allowed.

The aim is, however, not to assess the validity of each individual account separately. Instead, conclusions are drawn from previous findings, their differences and commonalities. These predictions serve as the hypotheses implemented in the subsequent statistical analysis:

Hyp. 1. Direct object relativisations should be unacceptable without agreement, whereas locative RCs should allow for an alternation.

Hyp. 2. The alternation in locative relativisations should be led by the specificity of the subject in the modifier clause and possibly the agentivity of said subject.

Hyp. 3. Inter-speaker variability is expected for the agreement alternation in locative RCs.

Note that the hypotheses above make reference to interactions as well as the effect of certain variable(s) within one another. Expecting an effect of predictors on their own is not necessarily

intuitive in this design. The target of relativisation itself should not make a sentence more or less acceptable – relativising a direct object should be equally grammatical in general as relativising a locative. However, what should induce a difference in acceptability is the interaction of the target of relativisation with the agreement pattern that is employed.

Although I do not expect the -DIK and -AN alternation to be viable in DO relativisations, it could be that enforcing a non-specific reading upon an agreeing genitive subject is less acceptable than cases in which contextual prerequisites and agreement patterns match. The question is essentially whether the genitive marker loses all of its ability to mark specificity in such configurations, or whether there are certain trace effects that would favour a specific reading over a non-specific one. Nevertheless, nominative subjects and the lack of agreement should be unacceptable across the board for DO relativisations.

4.3 The Experiment

The OSF repository with the materials used for the experiment and subsequent analysis including items, code, anonymous results and demographic information can be found <u>online</u>.

4.3.1 Participants

A total of 82 Turkish native speakers have been recruited via the platform Prolific. Participants were required to have been raised monolingually to ensure the exclusion of heritage speakers. Information about subjects' language learning history, the region they originate from and whether they consider themselves speakers of a certain dialect were recorded due to authors reports about dialectal variation with regards to differential marking, but also agreement in Turkish RCs

Nationality	Turkish
Country of birth	Turkey
First language	Turkish
Monolingual upbringing	Yes
Fluent languages	Turkish, English

Table 2: Criteria for participant recruitment.

(**Kornfilt2000Cagri2009**). Participants received monetary compensation. Because Prolific allows for the pre-screening of study participants, the study has been chosen to be available only to participants who fit the criteria in Table 2. Demographic information revealed that participants' backgrounds were rather heterogeneous, both regarding the languages they spoke apart from Turkish (a varied mix of Germanic, Slavic and Romance languages for the most part) as well as their region of origin within Turkey – the sample therefore encompassed a group of people that should depict multiple facets of the language.

4.3.2 Materials

The study features 24 experimental items in 8 conditions, corresponding to the combinations of the three predictors with two levels each. The predictors are the following: T(arget) o(f) R(elativisation) with the levels *DO* for RCs targeting direct objects and *Loc* for those targeting locative expressions; Agreement with the levels *+Agr* for genitive subjects with -DIK and nominal ϕ-features on the verb, and *-Agr* for nominative subjects with -AN without ϕ-features on the verb; and lastly, Context, with the levels *+spec* for an enforced specific reading of the subject, *-spec* for a non-specific one. The conditions are listed in Table 3.

Condition	ToR	Agreement	Context
a	DO	+Agr	+spec
b	DO	+Agr	-spec
c	DO	-Agr	+spec
d	DO	-Agr	-spec
e	Loc	+Agr	+spec
f	Loc	+Agr	-spec
g	Loc	-Agr	+spec
h	Loc	-Agr	-spec

Table 3: Combinations of factor levels across conditions.

All sentences were presented with an English context spanning the length of two to three lines to enforce either a specific (definite) or non-specific (generic) reading. The specificity of the subject in particular is deemed to be the driving force behind the case marking of the subject, and depending on the theory, should facilitate its movement to the canonical Spec, TP position in order to receive case or enable it to move to Spec, TP. Regardless of which mechanism one assumes, specificity should be crucial in determining the acceptability of the items, given that agreement on the verb and genitive case go hand in hand in Turkish relative clauses.

The items have been translated by a native speaker informant, aged 34, born in Istanbul and raised with Turkish as their single native language. Therefore, the items used in this experiment match the standard dialect of Turkish spoken in Turkey. Examples are given for each condition below – items are listed pairwise with *+Agr* and *-Agr* due to limitations of space. (45) represents conditions a and c, (46) applies to b and d, (47) to e and g, and finally, (48) to f and h:[33]

(45)   Conditions a and c: *DO, +/-Agr, +spec*

   Ali is playing with his dolls. He wants them to be princes and princesses at a castle, but he does not have all the clothes and items to act that out properly. Instead, he is using his imagination. He proudly shows the princess to his mother, explaining:

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33. The suffix -DIr is used with the predicative adjectives at the end of each sentence. This suffix is described as a causative by **GökselKerslake2005** and surfaces in all of the items. From my understanding, this suffix appears to have more of a copular use in these cases rather than a causative per se. Note also that the suffixes -AN and -DIK are somewhat ambiguous between past and present tense, with an additional emphasis needed for a past interpretation. I decided not to specify this feature any further as it does not make a difference for the current study, and corresponding to my translator's judgements, no ambiguities should arise from tense.

    a. Prenses-in   giy-diğ-i   elbise parıltılı-dır.

        princess-gen wear-dik-3sg dress sparkly-caus

        'The dress that the princess wears is sparkly.'

    b. ??Prenses-ø   giy-en   elbise parıltılı-dır.

        princess-nom wear-an dress sparkly-caus

        intended: 'The dress that a princess wears is sparkly.'

(46) Conditions b and d: *DO, +/-Agr, -spec*

    Ali is playing with his dolls. He wants them to be princes and princesses at a castle, but he is disappointed that he doesn't have clothes for them to make them look the way he imagined. He complains:

    a. Prenses-in   giy-diğ-i   elbise parıltılı-dır.

        princess-gen wear-dik-3sg dress sparkly-caus

        'The dress that the princess wears is sparkly.'

    b. ??Prenses-ø   giy-en   elbise parıltılı-dır.

        princess-nom wear-an dress sparkly-caus

        intended: 'The dress that a princess wears is sparkly.'

(47) Conditions e and g: *Loc, +/-Agr, +spec*

    The children in kindergarden are learning about cats. One of the girls remarks that her cat loves comfort over everything, saying:

    a. Kedi-nin uyu-duğ-u   kanepe yumuşak-tır.

        cat-gen   sleep-dik-3sg sofa   soft-caus

        'The sofa where the cat sleeps is soft.'

    b. Kedi-ø   uyu-yan kanepe yumuşak-tır.

        cat-nom sleep-an sofa   soft-caus

        'The sofa where a cat sleeps is soft.'

(48) Conditions f and h: *Loc, +/-Agr, -spec*

    The children in kindergarden are learning about cats. One of the girls remarks that cats love comfort over everything, saying:

    a. Kedi-nin uyu-duğ-u kanepe yumuşak-tır.

        cat-gen   sleep-dik- sofa   soft-caus

        'The sofa where the cat sleeps is soft.'

    b. Kedi-ø   uyu-yan kanepe yumuşak-tır.

        cat-nom sleep-an sofa   soft-caus

        'The sofa where a cat sleeps is soft.'

Note that the items in conditions a–d and e–h are not minimal pairs. The reason for this is that **Cagri2005Cagri2009** reports a substantial difference between verbs with agentive and patientive subjects. Therefore, the verbs used in the conditions had to be different by design – there is no way to come up with minimal pairs involving three different types of verbs and additionally differing with regards to the target of relativisation, as there would not be much left of the items to make them truly minimal or necessarily pairs for that matter. A verb assigning the θ-role of an agent and nothing else cannot be involved in a relative clause modifying a direct object, as such a verb cannot take a direct object to begin with.[34] The same goes for an unaccusative verb for the same reasons, with the difference that it assigns a single patientive role. Similarly, a monotransitive verb by definition assigns two θ-roles. In conditions a–d, items 1–24 all involved monotransitive verbs with the modifier clause targeting the direct object. For locatives, that is conditions e–h, items 1–12 featured unaccusative verbs, while items 13–24 featured unergative verbs. It is to be noted that the data across these three types is not equally balanced, as it is also not the main goal of this experiment to look at the impact of these features, but rather a small additional question to be explored briefly.

To conceal the intention behind the study, 40 fillers were designed with varying degrees of grammaticality – eight of them were perfectly grammatical, eight marginal, and 24 completely unacceptable due to grammatical violations, such as the omission of the ϕ-marker from the verb nominalised using -DIK. The fillers were also presented with a context, which did sometimes enforce a certain semantic interpretation similar to the targets, but in most cases they included simple background information about the activity described in the sentence.

4.3.3 Procedure

Participants had to rate the items' acceptability on a scale of 1 (completely unacceptable) to 5 (completely acceptable). The study materials have been implemented using the online software L-Rex (**StarschenkoWierzba2021**). Questionnaires consisted of two blocks: First, the five training items were presented, followed by the 40 fillers and 24 of the 192 target items (= 24 items * eight conditions) that have been pseudo-randomised. Each participant only saw one condition per item, yielding a proper Latin Square design.

As practice, participants were guided through five training tasks including feedback. These training sentences featured three embedded sentences, but not relative clauses, while two of them were sentences featuring DOM. Two of the embedded clauses and one of the DOM clauses

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34. All items featuring DO relativisations comprise an animate subject and an inanimate direct object. The reason for this is an observed pragmatic effect – DO relatives where both arguments are animate may be judged as acceptable even if the agreement morpheme is omitted solely based on the fact that the sentence may receive an interpretation in which the intended object of the sentence is instead the subject. For example, in a construction such as *kedi yakalayan fare*, where *kedi* 'cat' is the intended subject and the relativised element, *fare* 'mouse', the intended DO, participants will most likely interpret the construction as one where the mouse is the subject, of which it is described in the modifier clause that it catches the cat. Although not the typical interpretation, this could have easily led to falsely accepting sentences due to misinterpretation.

included case or agreement violations, while the remaining two were grammatical. Upon rating the sentences, participants received a feedback indicating how they were expected to rate the sentence and what this expectation was based on. For example, the following embedded sentence was presented with a case violation:

(49) *Demet threw a surprise party for her roommate Oya. Her mother is curious how she did it, since they are usually both at home around the same time and it's difficult for Demet to do anything unnoticed. Demet explains that she had some time alone last Friday, saying:*
*Oya-nın konser-e git-tiğ-ı-de ben ev-e dön-üyor-du-m.
Oya-gen concert-dat go-dik-3sg-loc I home-dat return-prog-pst-1sg
intended: 'When Oya was going to the concert, I returned home.'

Instead of the genitive, the subject of the sentence should be in the nominative (according to **Kornfilt2009**, due to the clause being a nominalised hybrid *adjunct* clause, see section 2.3.2). Participants therefore received the following feedback:

> There is a mistake in this sentence: It should be "Oya" instead of "Oyanın", which is why it should be given a low (1–2) rating.

For correct sentences, participants received positive feedback indicating that there were no mistakes:

> There are no mistakes in this sentence. It is completely acceptable, which is why it should be given a high (5) rating.

A filter for participants who did not complete the questionnaire meaningfully was implemented through the 24 ungrammatical fillers. They served as "traps", with their analysis yielding the basis for the exclusion of participants based on either the lack of attention or misunderstanding the task. Participants whose average rating of such sentences was above 2.5 were excluded. The threshold was chosen because people were expected to be rather lenient, and with ratings hovering somewhere between 1 and 3, an average of 2.0 still seemed reasonable and did not necessarily entail that the participant did not fill in the questionnaire meaningfully.

Participants were directed to read the context and judge the acceptability of the sentences in the given context. They were specifically asked not to dwell on the tasks for too long, prompting a spontaneous response according to how they feel about the sentences based on their initial intuitions without overthinking. Participants had the option to give a comment to each of the ratings if they felt that the rating on it's own did not express their judgements fully or if they wanted to give a further explanation as to why they rated the sentence the way they did. In total, participants had to judge 64 sentences, excluding the five training tasks. One session was estimated to take around 30 minutes including preliminary questions about their demographic.

4.3.4 Design

The experiment has a 2x2x2 design – three independent variables with two levels each. The variable Context has been nested in ToR, while the main effects (ME) of ToR and Agreement are to be assessed independently. For Context, this means that its potential effect is viewed within each level of ToR, that is, within direct object (Context$_{DO}$) and locative RCs (Context$_{Loc}$), due to expected differences between the effect of Context between these two levels. These factors are subsequently used in the main analysis. The additional independent variable Agentivity (+*agent, -agent*) is introduced to view the subset of the data about locatives in isolation as an additional mini-analysis. Thus, while the locative RCs are analysed in the main analysis alongside the direct object RCs, the patterns found within locatives are also of interest. Not only is this fruitful in order to explore a possible impact of split intransitivity, but to generally assess any variation these construction may be subject to, as that is not expected for direct objects to a comparable degree. In the analysis of locatives only, the number of factors and levels therefore does not change, as the factor ToR is excluded and instead, Agentivity is introduced. The reason for this is quite plain: In all of the sentences involving the relativisation of a direct object, the verb is inherently (mono-) transitive, making the subject an agent and the direct object a patient. Therefore this factor per definitionem cannot apply to DO relativisations.

4.3.5 Statistical Analysis

All calculations were executed using the R, version 4.0.5 (**Rcore**) via RStudio, version Version 1.4.1106 (**Rstudio**). Visualisations were also generated in RStudio, using the package ggplot2, version 3.3.3 (**ggplot2**). Data analysis was carried out in the Frequentist Framework, running an ordinal regression using Cumulative Link Mixed Models (**ordinal**). For significance testing, a conservative alpha level of 0.05 was defined. The maximal random structure that the data allowed me to fit has been implemented, including random intercepts and slopes for both items and participants. In particular, the intercepts and slopes for participants are of importance due to the expected inter-speaker variability. In making these assumptions, I rely on **Barretal2013**'s (**Barretal2013**) study showing that a maximal random structure is the most adequate with regards to keeping Type I error rates low, and that even the inclusion of factors that are less critical to the reduction of Type I error helps reduce overall noise and improve the sensitivity of the test.[35] Preliminary predictor checks have been implemented via model comparison using the anova function of the package 'stats' (**Rcore**) to assess the significance of the individual vari-

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35. The authors do not include by-item random slopes, justifying it based on their study design: "[...] words are nested within word types – no word can be both type A and type B – so it is not sensible to ask whether words vary in their sensitivity to word type" (**Barretal2013**). Given that we are dealing with multiple factors in this study, including by-item random slopes is out of question, however one may argue that items similarly do not show a sensitivity with regards to them being direct object or locative relativisations – checking the Log likelihood estimation of the models via anova (**Rcore**, package 'stats') with and without ToR as a predictor for random slopes however reveals the superiority of the model's fit including ToR. A more detailed discussion about the ideal random structure for models is beyond the scope of this paper and tangential for current purposes.

ables. Contrasts have been defined using custom contrasts due to the number and complexity of predictors before data collection – MEs, nested and simple, have been contrast coded accordingly, while interactions did not receive separate codings but were computed within the model.

The maximal model including both nested factors was not chosen since Context$_{DO}$ was revealed to be completely insignificant and made the model unnecessarily complex. Inclusion of four MEs, i.e. ToR, Agreement, Context$_{DO}$ and Context$_{Loc}$ without interactions, led to convergence errors already – for reasons detailed in **Barretal2013**, cutting down on the random structure was avoided, so instead the predictor for which no effect was expected (and indeed, no effect seemed to arise upon initial inspection), was omitted. The convergence error indicates that there was not enough data to make reliable estimations about the effect of the involved factors.[36] On the other hand, the reason why nested effect(s) have been explored instead of including three MEs without nesting (ToR, Agreement and Context) and inspecting the interactions is twofold. First, the research question centers around the difference of the effect of Context within the levels DO and Loc of the predictor ToR rather than the overall interaction of the two predictors. I do not simply expect these factors to influence one another, but crucially want to explore whether it holds that Context has an impact in locative RCs, but not in DO relatives. Secondly, it is often difficult to interpret interactions (**Schadetal2020**), while nested effects yield a clearer picture. Based on all of these considerations, the model has been simplified to include the variables Rating as the dependent variable; ToR, Agreement and Context$_{Loc}$ as independent variables as well to estimate by-item and by-participant random slopes and intercepts. The model also included the interaction of ToR and Agreement as well as Context$_{Loc}$ and Agreement. Unfortunately, including the interactions in the random structure led to convergence errors, which is why the random structure was limited to the MEs of the independent variables:

(50) rating $\sim$ tor $*$ agreement $+$ context$_{loc}$ $*$ agreement $+$
      (tor $+$ agreement $+$ context$_{loc}$ | participant) $+$
      (tor $+$ agreement $+$ context$_{loc}$ | item)

As the amount of data collected for agentive and patientive subjects is not balanced and there was no intention to pursue a full analysis comparing these types, the locatives are singled out for an additional (and rather small) exploration of the question how split intransitivity impacts case and agreement patterns. As presented a few sections prior, the items featuring locative RCs have been designed in a 50:50 split regarding intransitivity. The independent variable Agentivity is introduced instead of ToR. The number of conditions and factors thereby stays the same, although we do not employ any nesting at this point to simplify the analysis due to dealing with only half the data, which makes conclusions drawn from this analysis by far less strong

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36. More specifically, the encountered error was a rank deficiency, meaning that there was not enough information to estimate the desired model. In such a case, coefficients are dropped and the model is simplified to the point at which the matrix is full rank (**ordinal**) – essentially, the model I chose to work with in the end is identical to this corrected version returned by the clmm function (**ordinal**) upon the occurrence of the rank deficiency.

than those to be drawn from the overall experiment. The conditions are the following for this locative-only analysis: Conditions A–D (note the capitals to distinguish them from the main experiment) are unaccusative verbs with alternating *+/-Agr* and *+/-spec* features, while for E–H, the same holds with unergative verbs. I expect conditions A–D to even more clearly exhibit the contrast described above for locatives, whereas agreement is only preferred if the subject has a specific reading, and the lack of it being preferred if the subject is non-specific. Again, custom contrasts have been applied, and a model has been fit including Rating as the dependent variable, and Agreement, Agentivity and Context as independent variables. Likewise, the maximal random structure has been maintained, including the three aforementioned predictor variables for the estimation of by-participant and by-item random slopes and intercepts, again, without interactions. In contrast to the main analysis, no convergence errors were encountered, which allowed the employment of the maximal model with all three variables and their interactions (including a three-way interaction), being revealed via anova to be the superior model:

(51) rating $\sim$ agentivity $*$ agreement $*$ context +
      (agentivity + agreement + context | participant) +
      (agentivity + agreement + context | item)

4.4 Results

4.4.1 Descriptive Statistics

A total of three participants had to be excluded from the data analysis. Two participants were compensated and excluded upon inspection of their responses, with one of them being excluded based on the ungrammatical "traps": They scored an average rating of 3.13 for clearly ungrammatical fillers, indicating that they either did not fully grasp the task or did not pay attention (recall the threshold of an average rating ≥ 2.5 to qualify for exclusion).[37] The second participant has been excluded from the analysis based on overall low ratings for all experimental items. The participant's comments revealed a strong distaste for the causative/copula suffix on the adjectives each target sentence ended in, which resulted in ratings ≤ 2.0 for sentences scoring very high ratings overall. Completion times of the trials that were included in the data analysis range from just above eight minutes up to an hour and a half – exclusion based on the completion time was pursued only in the case of one participant who took less than seven minutes.[38] This left us with 79 participants whose data were used in this analysis.

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37. Another four participants' ratings were ≥ 2.0, with the vast majority of participants scoring an average of ≤ 2.0.
38. Exclusions due to taking too long were avoided. While it is arguably quite reasonable to exclude participants who took too long for a study due to reservations about whether they completed the questionnaire meaningfully, it did not seem critical in this experiment, as L-Rex does not allow the participant to go back and forth between answers, but requires responses one by one.
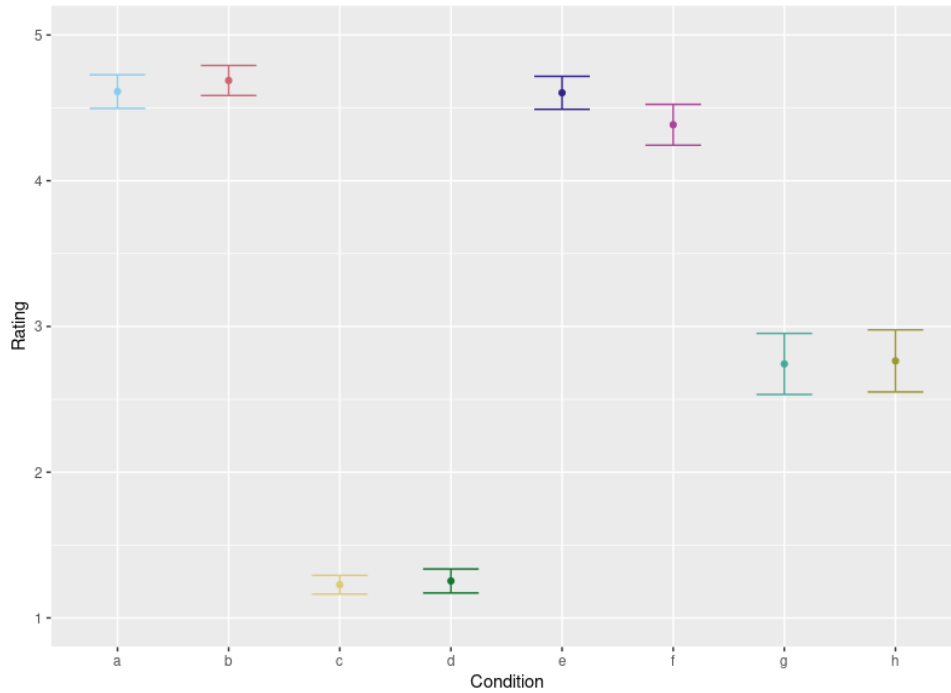
Figure 1: Mean ratings of items (y-axis) in complete dataset, grouped by conditions a–h (x-axis). Error bars indicate standard error.

Preliminary visualisation of the raw data, see Figure 1, revealed that DO RCs indeed seem to pattern quite clearly as expected, that is not allowing for -AN regardless of context. As for the locative RCs, a similar tendency became visible, although to a slightly lesser extent. While average ratings for conditions f and g were expected to be low and e and h to be high, we instead observe mediocre ratings for g and h, a grouping not predicted considering the supposed effect of context, and high ratings for e and f. The trend we observe in direct object relativisations therefore also seems to be present in locatives. Instead of clear differences in acceptability between the agreement patterns in combination with either matching or non-matching specificity features (i.e. non-specific subjects allowing for the use of -AN and nominative case), a general tendency emerges that overlaps in both direct object and locative RCs. Nevertheless, g and h seem to have a clear advantage over c and d – suggesting that while participants had a very clear opinion on what is and is not viable with direct objects, their judgements were less straightforward for items involving locatives. This first impression raises the question whether context had anything to do at all with the prediction of items' acceptability.
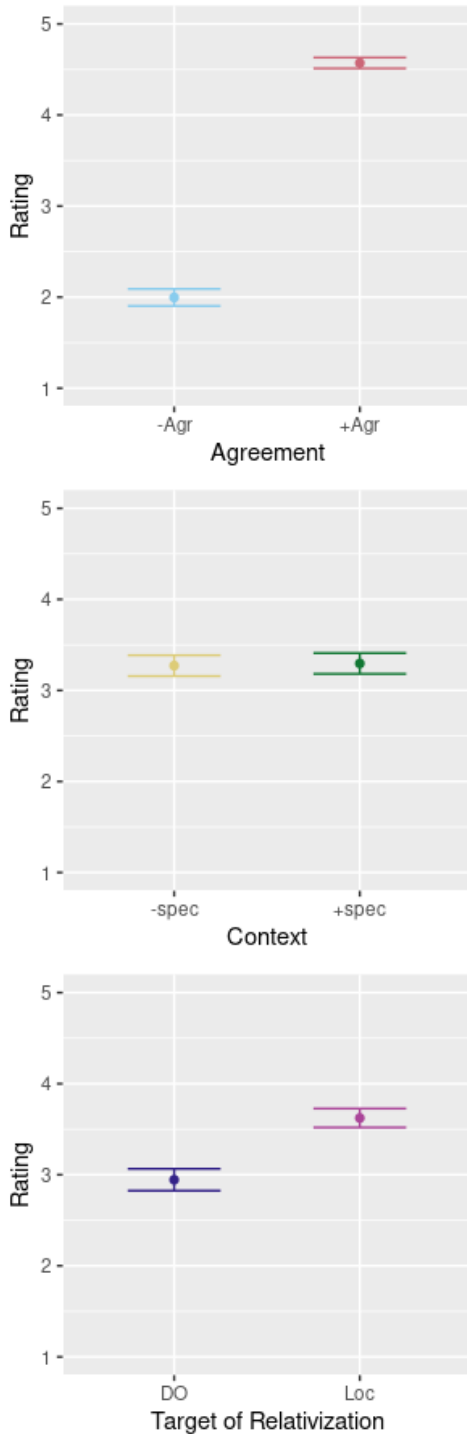
Figure 2: Mean ratings of items (y-axis) in complete dataset grouped by Agreement, Context and ToR (respective x-axis). Error bars indicate standard error.

Further inspection of ratings according to the individual predictors makes it clear that the factors had very different impacts than previously expected. What is especially striking is that differences in rating seem to be traced back the least to Context, contrary to the strong prediction that Context should play the most crucial role. Instead, ratings seem to be more accurately correspond to differences in ToR, but most clearly, Agreement appears to be connected to the rating chosen, with the -DIK strategy being clearly favoured across the board. This is not entirely unexpected, as it has been postulated that direct object RCs should not allow for the -AN pattern in general, whereas locative relativisations should – nevertheless, a certain impact of Context was expected to be visible at least slightly, given that it is maintained to be the main governing factor.

An important aspect to clarify when encountering such mediocre averages is whether they are truly comprised of mediocre individual ratings, i.e. whether participants have actually given the items medium ratings, or whether this is a result of inter-speaker variability that is concealed by the mean values. In the following plot, the eight conditions are depicted by three illustrations each. On the left, the mean ratings of individual participants can be seen, with each dot representing the mean rating of one participant for the given condition. In the centre, the violin plots represent the density of the values – wherever the plot is the widest is where most participants' means are

located. Right of the violin plots, the error bar indicates the standard error, with the point in the middle of the bar indicating the mean rating given for that condition overall:
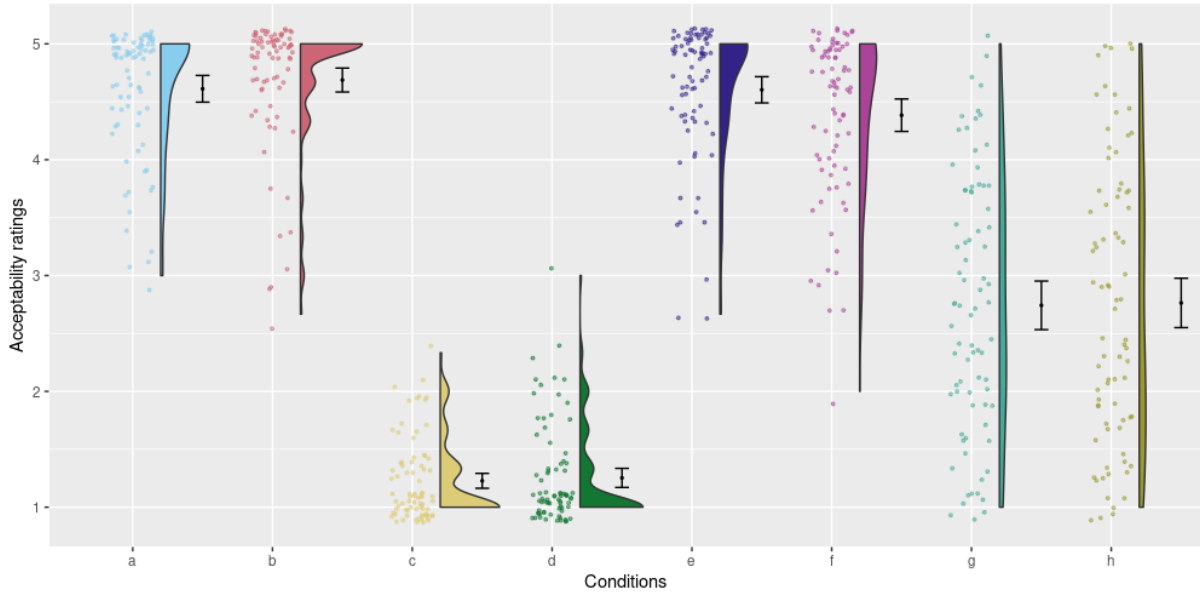
Figure 3: Inter-speaker variability sorted by conditions. Coloured points indicate mean ratings of participants sorted by condition; coloured violin plots indicate the density of mean ratings given by individual participants. Error bars indicate standard error, point in the middle of each bar indicates mean rating for respective condition.

Beginning from the left, that is, direct object RCs in conditions a–d, matters are rather clear: Except for a few outliers, the predicted patterns appear to be borne out in the data. Conditions a and b received overall high ratings, whereas condition c and d, where direct objects were relativised using -AN, scored very low ratings. Turning to locatives, conditions e–h, matters become a bit less transparent. Since the pattern in e looks similar to what we observe in a and b, we can still confidently assume that items in this conditions were rather well received. Moving on to f, a spread towards mediocre ratings becomes more prevalent, although the majority of participants still gave positive ratings. On the other hand, and this is a pivotal outcome of this study, the reported mean ratings of conditions g and h do not appear to be a result of participants judging the items to be mediocre overall, but rather a varied picture of all kinds of judgements emerges – not to mention this graphic does not depict the tendencies within participants.

Assuming that the effect of Context expected in e–h is concealed by ToR: Does the picture become clearer when viewing locative RCs in isolation? Apart from an at best minor tendency for agreeing items to be judged more positively in specific contexts than their non-agreeing counterparts (4.60 > 4.38), mediocre ratings appear to be evenly spread both in specific as well as non-specific contexts for the lack of agreement, see Table 4.

Agreement	Context	Rating	Std. Error
-Agr	-spec	2.76	0.11
-Agr	+spec	2.74	0.10
+Agr	-spec	4.38	0.07
+Agr	+spec	4.60	0.06

Table 4: Mean ratings of locative relativisations according to Agreement and Context.