

Conceptual restrictions on weakly
referential constructions

Evidence from adjectival modification

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Conceptual restrictions on weakly
referential constructions
Evidence from adjectival modification

Conceptuele beperkingen op referentieel
zwakke constructies
Adjectivale modificatie als bewijs
(met een samenvatting in het Nederlands)

Proefschrift

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aan de Universiteit Utrecht
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door

Maartje Elisabeth Schulpen

geboren 23 maart 1986
te Weert

Promotor: Prof. dr. H.E. de Swart

Algumas mal se vêem no ar lúcido.
São como a brisa que passa e mal toca nas flores
e que só sabemos que passa
porque qualquer coisa se aligeira em nós
e aceita tudo mais nitidamente.

from *Alberto Caeiro* – XXV

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CHAPTER 1

Introduction

1.1 What this dissertation is about

A vital function of language is that it enables us to refer to objects in the world. For this we use nominal phrases. In the languages I focus on in this dissertation, articles typically serve to indicate the referential status of the objects that are being talked about. So-called weakly referential constructions, however, are nominal constructions that involve the absence of an article in languages with a fully functional article system, or a non-standard use of articles. In short, weak referentiality includes all noun phrases which don't refer to an entity in the standard way (e.g. Kamp, 1981; Heim, 1982).

The first construction I will discuss in this dissertation is the so-called weak definite construction, in which the definite article is acceptable in contexts in which it doesn't refer uniquely. When we compare the regular definite construction *the book* in (1) to the weak definite construction *the newspaper* in (2) we observe that the former isn't felicitous in a context in which more than one book is mentioned, whereas the latter is perfectly fine in a context in which several different newspapers are mentioned.

- (1) a. **Context:**
Piet spent his holiday reading Hyperion, Dune, and A Wizard of Earthsea.
- b. # Piet spent his holiday reading the book.
- (2) a. **Context:**
Piet spent his evening reading The Guardian, De Volkskrant, and

Le Monde.

- b. Piet spent his evening reading the newspaper.

I also discuss bare predicates: nominal predication constructions in which the indefinite article is absent. In Dutch and a range of other languages bare predication and indefinite predication coexist. There is a slight meaning difference between these two constructions: the bare version seems to refer to professions or social roles, whereas the indefinite version refers to some more person-internal property. The Dutch bare predicate sentence in (3a) means that Gaaïke is an artist by profession, while the indefinite version in (3b) means that he is an artistic person.

- (3) a. Gaaïke is kunstenaar.
 Gaaïke is artist
 ‘Gaaïke is an artist.’
 b. Gaaïke is een kunstenaar.
 Gaaïke is an artist
 ‘Gaaïke is an artist.’

Finally, I discuss bare singular nouns, more specifically those in object position of so-called HAVE-verbs. Again, there is a range of languages in which both these bare nouns and their indefinite counterparts are available, and again, we see a meaning difference between the two constructions. In contrast to the indefinite in (*pis.ind0*), the Catalan bare noun in (4a) doesn’t refer to a specific apartment. Rather, it refers to a property, in this case part of the more complex property of being an apartment owner.

- (4) a. Té apartament.
 has.3SG apartment
 ‘(S)he has an apartment.’ (I.e. (S)he is an apartment-owner)
 b. Té un apartament.
 has.3SG an apartment
 ‘(S)he has an apartment.’

Weak definites, bare predicates and bare singular nouns share a set of several properties, one of which is that they don’t set up discourse referents in the usual way, but rather refer more abstractly to roles, properties, etc. Hence the term *weak referentiality* (Aguilar Guevara et al., 2014).

Furthermore, these constructions are selective in terms of what they can express. This property is the main focus of my dissertation. For instance, bare singular nouns are generally taken to refer to properties, but not just any property can be referred to by a bare noun: there are certain restrictions. The fascinating thing is that these restrictions have to do with the concepts weakly referential constructions can express. There is a wealth of comments in the literature describing these restrictions. For instance, Asudeh and Mikkelsen (2000, p. 5–6) on Danish bare singular nouns:

“the resulting predicate must denote an action that is ‘institutionalized’ [...] the denotation of the incorporated verb phrase must be an action or event which is conventionally associated with a certain structure or set of activities.”

A similar observation with respect to weak definites comes from Zwarts (2014, p. 273–274):

“Certain types of objects occur regularly and frequently in particular places and times with rather constant properties. We might say that they are *institutions* [...] So, when we partition out our world into certain temporal units (like days and weeks) or spatial units (like rooms, homes, buildings, towns, countries), or spatio-temporal combinations of these, then we tend to find entities fulfilling more or less the same constant functions across those units [...] The idea is then that weak definites pick up those types of entities that are uniquely given in such general *frames* as *roles* or *slots*”.

What these observations have in common is that they all refer to *conventions*, *institutions*, and generally allude to restrictions that are somehow grounded in world knowledge. Such restrictions, that have to do with the descriptive content of the construction and how this interacts with cultural knowledge, are what I refer to as *conceptual restrictions*. On the one hand, these restrictions make studying weakly referential constructions a great way to gain insight in the interaction between language and world knowledge: in these constructions restrictions that are conceptual in nature determine the linguistic form that is used. At the same time, though, the very fact that the restrictions are conceptual rather than linguistic can be frustrating if you’re trying to formalize the meaning of a weakly referential construction, as conceptual knowledge is hard to capture in semantic formulas.

The aim of my dissertation is to provide a better understanding of the conceptual, world knowledge related aspects of the meaning of weakly referential constructions. As a semanticist, I want to do this from a linguistic perspective, bringing together the conceptual and linguistic aspects. I intend to do this by using adjectival modification as a link between semantics and world knowledge.

Traditionally, in formal linguistics modification is seen as an operation that simply takes something and returns something of the same type. If *car* is of type $\langle e, t \rangle$, *new car* is also of type $\langle e, t \rangle$. The set of new cars is a subset of the set of cars. Conceptually speaking, then, the effect of modification is a further specification of the denotation of the modified noun. You would therefore expect that if a construction is subject to conceptual restrictions, part of the way these restrictions play out will be through restrictions on modification. This assumption is supported by the fact that modification of weakly referential constructions is restricted. The literature contains a lot of observations like the

following from Zamparelli (2008, p.105) about modification restrictions on bare predicates:

“[Bare predicates] can be modified by certain adjectives or nouns, when these help to define *what kind of N* the subject of the predication is.”

Dayal (2011, p. 137) is even more explicit about the interaction of modification and the conceptual requirement for Hindi bare nouns. She formulates this requirement in terms of the restriction that a bare noun must be a prototypical theme for the activity denoted by the verb. When discussing the sentence in (5), she notes the following:

- (5) anu sirf puraanii kitaab becegii
 Anu only old book sell.FUT
 ‘Anu will only sell old books.’

“of course, there are certain types of modification and conjunction that are not acceptable in incorporation. For example, (5) cannot have a modifier like *bhaarii* heavy. This is because modification must preserve proto-typicality, and while *old books* can enter into a prototypical relation with *sell*, *heavy books* cannot”

Observations such as these are common (see for instance Asudeh and Mikkelsen, 2000; Borthen, 2003 for similar observations regarding bare singular nouns, Carlson and Sussman, 2005 on weak definites, and de Swart et al., 2005 on bare predicates), which indicates that interaction with modification is a pervasive property of conceptual restrictions. However, so far it has remained just that: observations about isolated examples. In this dissertation I present the first systematic study of modification restrictions on weakly referential constructions. The idea behind this approach is that since we’re dealing with conceptual restrictions, the best way to understand the exact nature of these restrictions is by systematically modifying the content of a particular concept to see whether or not it can still be expressed by a weakly referential construction. For example, for Catalan and Spanish bare nouns Espinal and McNally (2011, p. 101–102) formulate the conceptual restrictions as follows:

“the [bare noun] is licensed only if, in the specific context of use, the verb phrase denotes a CHARACTERIZING PROPERTY of the external argument [...] of course, some properties that verb phrases with [bare nouns] describe are easy enough to imagine as relevant in this way, or are frequently enough treated in this way, so that they do not need any particular context at all to be felicitous or we can readily construct a context in which they would be.”

Now, *tinc cotxe* (‘I have car’) is acceptable as a bare noun construction in Catalan – that is, it’s in line with the above restrictions. How about *tinc cotxe*

elèctric ('I have electric car'), *tinc cotxe brut* ('I have dirty car'), and so on? Intuitively, having an electric car is more likely to be relevant in a particular context than having a dirty car. Modifying a bare noun by different types of adjectives and seeing whether the result is still acceptable is a way to get a detailed picture of what is in line with the conceptual restrictions and what isn't.

The assumption at the core of this approach is that although the (un)acceptability of a particular adjective in a weakly referential construction is ultimately based on world knowledge, it's still possible to trace back this acceptability or unacceptability to the lexical semantics of the various adjectives. In other words, conceptual restrictions have a reflection or a correlate in semantics. This means that I predict the (un)acceptability of adjectives to be systematic, according to adjective types. More concretely, I relate the (un)acceptability of certain types of adjectives to how (un)stable their interpretation is. For instance, an electric car will always be electric, but a dirty car won't always be dirty. I call this the stability hypothesis:

(6) **The stability hypothesis**

The more stable the interpretation of an adjective, the more acceptable it will be in a weakly referential construction.

This hypothesis forms the core of my approach, and comes back throughout my dissertation. It's based on the fact that many observations about conceptual restrictions involve reference to culturally stable concepts. The notion of stability plays a role in the lexical semantics of certain types of adjectives. The interpretation of an adjective is unstable if it depends on outside factors. For example, the interpretation of a stage-level adjective like *hungry* in (7) is unstable over time: it depends on the situation in which it's uttered, since Ana is only hungry some of the time.

(7) Ana is hungry.

Other types of adjectives, like *Mexican* in (8a), have an interpretation that's stable over time, as can be seen from the unacceptability of the frequency adverbial *sometimes* in (8a) (note the contrast with (8b)).

- (8) a. # Ana is sometimes Mexican.
b. Ana is sometimes hungry.

My claim is that the stability of the interpretation of an adjective and the likelihood that it's part of a culturally stable concept are related. Thus, according to the stability hypothesis an adjective like *hungry* is much less likely to occur in a weakly referential construction than an adjective like *Mexican*. In order to test this hypothesis, I collected experimental data on the acceptability of weakly referential constructions in several modification conditions. I did this for weak definites, bare predicates, and bare nouns. In the next section I take the opportunity to elaborate a little on my decision to collect experimental data.

1.2 Why do experiments?

There has been a lot of debate on whether or not formal/experimental methods of data collection are preferable to the more informal/traditional method in linguistics of providing single data points obtained in a non-experimental way (usually without anything being said about how those data points were obtained exactly). See for instance Sprouse et al. (2013) and the references they cite. Maybe surprisingly, Sprouse et al. show that in many cases the convergence between formal and informal methods is high. However, Sprouse and Almeida (2011, p. 35) note that “[f]ormal experiments are often necessary for the reliable collection of numerical ratings”, for instance when gradient acceptability is involved. Since the constraints I’m interested in are of a conceptual nature rather than semantic or syntactic, they are relatively context sensitive in the sense that the right context can render an otherwise unacceptable weakly referential construction acceptable (Dayal, 2011, Borthen, 2003, Klein, 2011). Keller (2000) argues that gradient acceptability and context dependence go hand in hand. All in all, gradient acceptability is exactly what I expect to find in the constructions I look at in this dissertation. I follow Sprouse and Almeida (2011) in the idea that this calls for a formal experimental method of data collection.

Note that a third method, in addition to the formal experimental and informal methods of data collection, would be corpus research. In fact, I report on a corpus study on bare singular noun modification in chapter 6. However, in this dissertation I favored the experimental approach, as this provided more options of systematically testing various modification conditions.

1.3 Outline of the dissertation

In chapter 2, I discuss the conceptual restrictions on weak definites, and I present a questionnaire that I ran in order to test the stability hypothesis. In chapter 3 I do the same for bare predicates. For both the weak definites and the bare predicates the results are in line with the stability hypothesis. These two chapters function as stepping stones towards the rest of my dissertation: I use them to establish my experimental approach, which I employ in more detail in chapters 4 through 6. In these chapters I investigate the conceptual restrictions on bare singular nouns. In chapter 4 I introduce the type of bare nouns that I’m particularly interested in: pseudo-incorporated bare nouns as complements of so-called HAVE verbs or of the preposition *with*. I look at these constructions from a cross-linguistic perspective. Chapter 5 contains a detailed discussion of the conceptual restrictions on bare nouns. I identify two different types: the conventionality type, with restrictions based on cultural background knowledge, and the HAVE type, which is much more context dependent. I argue that despite the differences between these two types of conceptual restrictions, at the core of both lies the notion of stability. My experimental study of bare

nouns focusses on the HAVE type. After this discussion I discuss the lexical semantics of the adjective types I use in the bare noun experiments. I show that from a compositional perspective, these adjective types all fit in equally well with the pseudo-incorporation semantics I assume for bare nouns. Based on this I conclude that any differences between adjective types in the experiments must be due to conceptual restrictions rather than to any purely semantic factors. The more in depth discussion of the lexical semantics of the various adjective types furthermore allows me to fine-tune the stability hypothesis for bare nouns. The bare noun experiments are presented in chapter 6. In these experiments I tested the stability hypothesis on a much larger scale compared to the weak definite and bare predicate experiments, using a wider range of adjective types. Chapter 7 concludes the dissertation.

1.4 Theoretical assumptions

In this dissertation I use the framework of formal truth-conditional compositional semantics (see for instance Heim and Kratzer, 1998; Chierchia and McConnell-Ginet, 2000). Truth-conditional, as the meaning of a sentence is comprised of the set of conditions in which it is true. Compositional, as the meaning of a sentence is derived from the meanings of its parts and the way these parts are combined, for instance through function application or predicate modification. Formal, as the tools that are used to capture meaning are such as type theory and lambda calculus. Throughout this dissertation I assume the reader to be familiar with the basics of these notions.

Finally, a note on notation. I use * to indicate ungrammaticality (due to syntactic or semantic clashes), and # to indicate unacceptability (due to world knowledge clashes).

CHAPTER 2

Weak definites

2.1 Introduction

In this chapter I investigate the conceptual restrictions on the so-called weak definites. These are definite constructions with several quirks relating to uniqueness and referentiality. Most notably, unlike regular definites like *the book* in (9), they are acceptable in contexts in which the definite doesn't refer uniquely (10).

- (9) a. **Context:**
Piet spent his holiday reading Hyperion, Dune, and A Wizard of Earthsea.
b. # Piet spent his holiday reading the book.
- (10) a. **Context:**
Piet spent his evening reading The Guardian, De Volkskrant, and Le Monde.
b. Piet spent his evening reading the newspaper.

The term *weak definites* dates back to Carlson and Sussman (2005), and the construction has received quite some attention since (see Aguilar Guevara, 2014 for extensive discussion). In sections 2.2 and 2.3 I will discuss the phenomenon of regular definiteness and the special properties of weak definites. The property that I am most interested in in this dissertation is the fact that not every noun, verb-noun, or modifier-noun combination can occur in a weak definite construction. This type of conceptual restrictedness is one of the hallmarks of

weak referentiality. As we will see in section 2.4, in addition to the restrictions on which nouns, verbs, and modifiers can occur in weak definite constructions, weak definites also come with what has been called meaning enrichment or semantic enrichment (Carlson and Sussman, 2005): an extra layer of meaning beyond the literal meaning. In section 2.4 I argue that this enrichment is closely related to the conceptual restrictions on weak definites. In section 2.5 I then present some of the main theories that have been proposed in order to account for the properties of weak definites, focussing on theories that address the conceptual aspect. In section 2.6 I review the data and claims regarding the conceptual restrictions. In one way or another, the conceptual restrictions on weakly referential constructions all seem to have to do with *stability*. In the case of weak definites I follow Aguilar Guevara (2014) and Zwarts (2014) in their claim that the conceptual restrictions on weak definites relate to the use or function of the noun denoted by the weak definite: first of all, in order to be able to occur in a weak definite construction nouns need to be associated with a function, and second, the use of this function needs to be relatively constant or stable. As my aim in this dissertation is to get a better insight into the linguistic aspect of such requirements, I need a linguistic and empirically testable way to connect the conceptual and the linguistic. I argue that modification provides such a way, in that the conceptual stability requirement on weak definites is reflected in the modification restrictions that hold for these constructions. More specifically, my claim throughout this dissertation is that the notion of stability is a factor in adjective interpretation as well: certain types of adjectives depend for their interpretation on outside factors, whereas others don't. For instance, the interpretation of evaluative adjectives such as *beautiful* or *funny* depends on whose opinion they express. In other words, the interpretation of evaluative adjectives is unstable across speakers. The interpretation of relational or kind-level adjectives such as *Mexican* or *electric* (see McNally and Boleda, 2004), on the other hand, is independent of outside factors and therefore completely stable. Throughout this dissertation, I argue that a linguistic correlate of the conceptual stability requirement on weakly referential constructions is that in terms of modification these constructions have a preference for adjectives that have a stable interpretation. I call this *the stability hypothesis*. For weak definites, I formulate this hypothesis as follows:

(11) **The stability hypothesis (weak definites)**

The more stable the interpretation of an adjective (across situations and speakers), the more acceptable it will be as a weak definite modifier.

In the rest of this book I will give similar hypotheses for bare predicates and bare singular nouns. In section 2.7, I report on the experiment I ran in order to test the stability hypothesis for weak definites.

2.2 (Weak) definiteness

In order to see what exactly is special about weak definites, we first need to have a picture of what regular definiteness is. This is what I will discuss in this section.

There are two main approaches to definiteness in the literature: the uniqueness approach and the familiarity approach. As its name implies, the former is based on the idea that definites refer to something that is unique (in some domain). To Russell this uniqueness requirement is part of the truth-conditional meaning of definites. Thus, the famous example in (12) can be paraphrased as *there is an x such that x is king of France, nothing else is king of France, and x is bald*. From this it follows that if there is no king of France or if there is more than one, (12) should be considered false.

(12) The king of France is bald.

Strawson (1950), on the other hand, treats the uniqueness requirement as a presupposition that comes with the use of a definite, an idea that was already implicit in Frege (1892). In this approach, if there is no king of France (12) the sentence simply isn't assigned a truth-value. Despite, this difference, the main idea of the analyses of Russell and Frege and Strawson remains the same:

(13) Uniqueness requirement:
A definite is only felicitous if there's one and only one entity that satisfies its descriptive content.

A challenge for the uniqueness approach is how to determine the domain relative to which uniqueness has to hold. For instance, the use of the definite *the whiteboard* in (14) is perfectly fine, even if it's uttered about one whiteboard in a building full of whiteboards.

(14) The whiteboard was filled with syntax and poetry.

A way to explain the use of the definite here is to assume that the definite refers uniquely in a particular domain, for instance within a classroom in which there is only one whiteboard.

The familiarity approach builds on the idea that definite expressions refer to things that are familiar to the participants in the discourse. An influential proposal in this tradition is Heim's (1982) File Change Semantics (FCT) (see Kamp, 1981 for the related proposal of Discourse Representation Theory (DRT)). Heim assumes a common ground that consists of discourse referents and information about them, which is updated as the discourse goes on. Indefinites introduce new discourse referents, whereas definites are only felicitous as long as they refer to something that is already present in the common ground, and thereby familiar. Familiarity can come about in various ways. For instance,

the referent can be familiar through a previous mention in the discourse (15a), by being perceptually salient (15b), or by being generally familiar (15c):¹

- (15) a. A man and a woman enter an exclusive perfumery in Paris. **The man** sits down and dozes for three hours while the woman chooses a new perfume.
 b. *Context*: A goat walks into a room where two veterinarians are having a coffee. *Sentence*: **The goat** stinks!
 c. **The moon** was very bright today.

The familiarity condition for definites can thus be summarized as follows:

- (16) Familiarity condition:
 The use of a definite is felicitous only if it refers to something that is assumed to be familiar to the hearer.

There is a type of definites that is problematic for both the familiarity condition and the uniqueness requirement: so-called weak definites (term due to Carlson and Sussman, 2005). The fact that (17a) (from Aguilar Guevara, 2014) is perfectly fine when uttered out of the blue shows that the weak definite *the newspaper* can be used felicitously even when it has in no way been made familiar to the discourse participants. The same use of a regular definite like *the letter* is not felicitous.

- (17) a. Laila bought a new book and a magazine. After pondering for a while what to read first, she decided to read the newspaper.
 b. Laila bought a new book and a magazine. # After pondering for a while what to read first, she decided to read the letter.

This shows that weak definites don't obey the familiarity condition.

Furthermore, we've already seen in (9) and (10) that weak definites don't obey the uniqueness requirement: in contrast to regular definites, weak definites can be used felicitously even in contexts in which their referent is non-unique. Note that this is different from the way in which (14) seems to disobey the familiarity condition. (14) is fine only if we set the domain in which uniqueness holds to a suitably small domain, in this case the domain of a single classroom with a single whiteboard. The example in (18a) shows that if the context makes clear that there are several relevant whiteboards to choose from, the use of a definite is infelicitous. However, weak definites are perfectly acceptable in exactly such a context, as (18b) illustrates.

- (18) a. # The teacher cleaned the whiteboard.
Context: The teacher filled the three whiteboards in the classroom and then cleaned only one of them.

¹Examples from Aguilar Guevara (2014).

- b. Laila was reading the newspaper.
Context: Laila was reading *The Guardian*, *De Volkskrant*, and *Le Monde*.

In sum, weak definites pose a challenge for the standard approaches to definiteness. In the next sections I'll discuss the most important characteristics of weak definites. For more details see (Aguilar Guevara, 2014) and the references she gives.

2.3 Properties of weak definites

2.3.1 Sloppy readings in VP-ellipsis sentences

Weak definites, such as *the hospital*, can get a sloppy interpretation in sentences with elided VPs, as shown in (19). This sentence allows the interpretation that Heidi went to hospital A while Teunie went to hospital B.

- (19) Heidi went to the hospital and Teunie did too.

In contrast, in a similar sentence containing a regular definite, only the strict interpretation in which Heidi and Teunie both went to the same restaurant is allowed:

- (20) Heidi went to the restaurant and Teunie did too.

This contrast between weak and regular definites follows from the absence of the uniqueness requirement for weak definites.

2.3.2 Narrow scope readings

Another way in which the non-unique reference of weak definites is manifested can be seen from the contrast between (21) and (22) (both from Aguilar Guevara and Zwarts, 2011).

- (21) Every boxer was sent to the hospital.
(Boxers could have been sent to different hospitals)

The weak definite *the hospital* takes narrow scope, allowing for a distributive reading in which different boxers were sent to different hospitals. The regular definite *the hotel*, on the other hand, gets a wide scope reading in which there is a unique hotel to which all boxers were sent:

- (22) Every boxer was sent to the hotel. (All boxers must have been sent to the same hotel)

Once again, this contrast is a reflection of the lack of uniqueness of weak definites.

2.3.3 Discourse referential defectiveness

Not only do weak definites not refer uniquely, as we've seen above, but it has even been suggested that they are not fully discourse referential. Aguilar Guevara (2014) discusses the following contrast between the weak definite *the saxophone* and its indefinite counterpart in terms of how well they can serve as antecedents of anaphoric expressions.

- (23) a. Alice played a solo on the saxophone_{*i*}. ? She did not realize it_{*i*} was out of tune.
 b. Alice played a solo on a saxophone_{*i*}. She did not realize it_{*i*} was out of tune.

In (23a) the weak definite *the saxophone* cannot so easily be referred back to by the anaphoric pronoun *it*. On the other hand, in (23b) the indefinite *a saxophone* is a perfect antecedent for *it*. This indicates that weak definites are not (fully) discourse referential.

However, the contrast between (23a) and (23b) doesn't seem to be that strong. This is corroborated by experimental work by Scholten and Aguilar Guevara (2010), who compared the discourse referential status of weak definites, regular definites, bare singulars and indefinites. Aguilar Guevara (2014) presents new statistical analyses on Scholten and Aguilar Guevara's data, based on which she concludes that their results don't provide any evidence for the contrast in (23).²

2.4 Conceptual restrictions on weak definites

In the previous section I discussed several of the semantic properties of weak definites, related to their lack of unique reference. In this section I will turn to the weak definite properties related to the conceptual restrictions they are subject to. The conceptual restrictions on weak definites are reflected in the lexical domain, in that there are restrictions on nouns, noun-verb combinations and modifiers that occur in weak definite constructions. In perhaps a more indirect way, they also seem to be reflected in the interpretation of sentences containing weak definites. Such sentences come with an enriched meaning: an extra layer of meaning on top of the literal meaning of the sentence. The content of this extra layer is related to the function or use of the object or place that the weak definite noun denotes. In sections 2.5 and 2.6 we will see that it is exactly this notion of stable functional use that lies at the heart of the conceptual restrictions on weak definites.

²The question is whether this means that there is no difference in referentiality between weak definites and indefinites, or whether it's just that discourse anaphora tests aren't the right diagnostic. My hunch is that it's the latter, as we will see in chapter 4 that discourse anaphora data are tricky to interpret for bare singular nouns as well.

2.4.1 Lexical restrictions on nouns and predicates

The nouns that occur in weak definites are (for the most part) restricted to specific classes. The following list is from Aguilar Guevara (2014):

- (24) Communication devices
Martha listened to the radio and Alice did too.
- (25) Means of transport
Martha took the bus and Alice did too.
- (26) Natural places
Martha went to the beach and Alice did too.
- (27) Establishments
Martha is in the hospital and Alice is too.
- (28) Home spaces
Martha spent two hours in the kitchen and Alice did too.
- (29) Professions
Martha called the doctor and Alice did too.

Aguilar Guevara claims that only functional nouns can occur in weak definites – that is, only nouns with a telic role à la Pustejovsky (1995).³

At the same time, however, not every noun that belongs to one of these classes is acceptable:⁴

- (30) Communication devices
Martha listened to #the walkie-talkie and Alice did too.
- (31) Means of transport
Martha took #the coach and Alice did too.
- (32) Natural places
Martha went to #the lake and Alice did too.
- (33) Establishments
Martha is in #the hotel and Alice is too.
- (34) Home spaces
Martha spent two hours in #the corridor and Alice did too.
- (35) Professions
Martha called #the physician and Alice did too.

³Nouns denoting natural places like *beach* may be seen as an exception to this, but Aguilar Guevara argues that these are attributed a telic role by convention.

⁴# here indicates that the weak reading is not available. The regular definite reading is still fine.

Furthermore, there are restrictions on the combinations of nouns and predicates that can occur in weak definite constructions. For instance, *the radio* in (36) can get a weak reading when it's governed by *listened to* ((36a)), but not when it's governed by *fixed* ((36b)):

- (36) a. Martha listened to the radio and Alice did too.
 b. Martha #fixed the radio and Alice did too.
- (37) a. Saulina is in the hospital and Alice is too.
 b. Saulina is #behind the hospital and Alice is too.

The generalization seems to be that only verbs or prepositions that are compatible with the functional use of the noun are acceptable: using a radio generally means listening to it, but not fixing it. Similarly, you can use a hospital by getting medical aid when you're in it, but not when you're behind it.

2.4.2 Modification restrictions

In addition to the lexical restrictions on nouns and predicates, Carlson and Sussman (2005) argue that modification of weak definites is restricted. They claim that the weak reading of the definites in 38 is blocked when modification is added (of course the regular definite reading is still available):

- (38) a. He went to the 5-story hospital.
 b. Each man listened to the red radio on the picnic table.

Interestingly, Aguilar Guevara and Zwarts (2011), argue that modification which leads to a subtype of the noun denoted by the weak definite does not have this blocking effect:

- (39) Lola is in #the new hospital. vs. Lola is in the psychiatric hospital.

A way to check whether the weak definite reading is blocked by a particular modifier is to put a modified weak definite in a VP-ellipsis sentence and to see if the sloppy reading is still available:

- (40) a. Lola went to the hospital and Sophia did too.
 b. Lola went to the new hospital and Sophia did too.
 c. Lola went to the psychiatric hospital and Sophia did too.

The sentence in (40a) allows the interpretation that Lola and Sophia each went to different hospitals. In (40b) this reading doesn't seem to be available, yet in (40c) it is. This is in line with Aguilar Guevara and Zwarts's claim that only modification resulting in a subtype of the noun is ok in weak definite constructions (see also Aguilar Guevara and Schulpen, 2014).

Intuitively, the data in (40) are in line with the idea that a crucial aspect of the restrictions on weak definites has to do with their function. A hospital has

a clear function (treating patients), and the modifier *psychiatric* adds information to this so that a psychiatric hospital has its own specialized subfunction: treating patients who need psychiatric aid. For *a new hospital* it doesn't work that way: the adjective *new* is inert with respect to the function of *hospital*, as there is no specialized function specific to new hospitals.

A modification restriction based on function – modification is only ok if it's in line with the function denoted by the noun – explains the modification data, and by extension the restrictions on weak definites as a whole, in an intuitive conceptual way. What I'm interested in, though, is to clarify the linguistic aspect: is there a semantic reason why some adjectives are acceptable as weak definite modifiers and others aren't? In section 2.6 I will argue that there is.

2.4.3 Meaning enrichment

As Carlson and Sussman (2005) noted, sentences that contain weak definites come with enriched meanings, that is, with meanings that contain more information than what is conveyed by the sum of their constituents. I illustrate with an example from Aguilar Guevara (2014):

- (41) a. Lola went to the hospital.
 Literal meaning: Lola went to a hospital.
 Enriched meaning: Lola went to get some medical services.
- b. Lola went to the store.
 Literal meaning: Lola went to a store.
 Enriched meaning: Lola went to do some shopping.

As a generalization, Aguilar Guevara proposes that the enriched meaning has to do with the stereotypical usage of the object or place denoted by the weak definite. In the case of hospitals this is getting medical services, in the case of stores this is to buy things. According to Aguilar Guevara this enriched meaning is partly truth-conditional and partly a conversational implicature. The truth-conditional part of the enriched meaning is that the event that's taking place, e.g. going to a hospital, has a stereotypical purpose. The conversational implicature part is the exact nature of this purpose. In the case of going to the hospital this would be to get medical help.

2.4.4 Summary

What the data in sections 2.4.1-2.4.3 have in common is that they all seem to be related to the function of the noun denoted by the weak definite. Weak definites contain predominantly functional nouns, modification only appears to be acceptable if the result is a recognized subtype, with its own specific function, and the enriched meaning component of weak definites directly refers to the function of the noun.

2.5 Theoretical approaches

In this section I give an overview of some of the main approaches to weak definites in the literature. This is by no means exhaustive – for a more detailed literature review see Aguilar Guevara (2014). I focus on the approaches by Aguilar Guevara (2014) and Zwarts (2014), as these are the two that address the topic of the conceptual restrictions on weak definites in most detail.

2.5.1 Carlson et al. (2013)

Carlson and colleagues propose an analysis of weak definites that treats them as part of so-called incorporation structures. Incorporation in its strict sense is the phenomenon of two words becoming one, often an argument being fused together with its verb. In the process the argument tends to lose its own case and occurs bare (even in languages with articles). Crucially, a full-fledged counterpart with the argument occurring as a regular syntactic argument of the verb is also available. The West-Greenlandic examples in (42) show the contrast between an unincorporated construction (42a) and one that involves noun incorporation (42b) (van Geenhoven, 1998):

- (42) a. Angunguu-p aalisagaq neri-v-a-a.
 Angunguaq-ERG fish.ABS eat-IND-[+TR]-3SG.3SG
 ‘Angunguaq ate the/a particular fish.’
 b. Arnajaraq eqalut-tur-p-u-q
 Arnajaraq.ABS salmon-eat-IND-[-TR]-3SG
 ‘Arnarajaq ate salmon.’

The sentence in (42a) contains a standard transitive verb construction, which has ergative case on the subject, absolutive case on the object, and object agreement on the verb. In the incorporation construction in (42b) the verb has become intransitive, the noun having become part of the verb. The subject has absolute case, and there is no object agreement on the verb anymore. ‘Pseudo-incorporation’ is the term for two words behaving as a semantic unit even though syntactically they’re independent (Massam, 2001; Dayal, 2011). An example would be bare singular nouns in the complement position of so-called HAVE verbs in for instance Catalan, as described by Espinal and McNally (2011). (43) shows the contrast between the regular construction in which the noun comes with an article (43a) and the pseudo-incorporated construction in which the noun occurs bare (43b).

- (43) a. Té un apartament.
 have.3SG an apartment
 ‘(S)he has an apartment.’
 b. Té apartament.
 have.3SG apartment
 ‘(S)he has an apartment.’ (i.e. (S)he is an apartment owner.)

Bare nouns like in (43b) occur in a wide range of languages, and they generally get a pseudo-incorporation analysis (see chapter 4 for an extensive discussion). Carlson and Sussman note that there is another type of bare nouns, illustrated in (44), which share certain properties with weak definites. For instance, lexical restrictions seem to hold for bare singulars, on both nouns (45b) and what governs them, in this case the preposition (45c).

(44) to go to bed, to be in prison

- (45) a. They found him in bed.
 b. *They found him in hammock.
 c. *They found him on bed.

Another property the bare nouns in (44) share with weak definites is that they come with an enriched meaning: being in prison doesn't just mean being in a prison, it means that you're a prisoner.

Moreover, Carlson and Sussman show that weak definites and bare singulars seem to alternate in some cases across languages (compare (46a) and (46b)), and even across dialects (compare (47a) and (47b)).

- (46) a. to be in prison (English)
 b. in de gevangenis zitten (Dutch)
 in the prison sit
 'to be in prison'

- (47) a. to be in the hospital (American English)
 b. to be in hospital (British English)

This leads Carlson and colleagues to extend the (pseudo-)incorporation analysis that bare nouns such as the one in (43b) tend to receive to weak definites as well. The biggest challenge for such an approach is how to deal with the definite article. Carlson et al. suggest that weak definites and regular definites have a different compositional structure: whereas in regular definites the article combines with the noun, after which the resulting DP combines with the verb (48), in the case of weak definites the noun combines with the verb directly, and the resulting VP then combines with the article (49).

- (48) a. Syntax:
 $[_{VP} \textit{read} [_{NP} [_{ART} \textit{the}] [_{N} \textit{book}]]]$
 b. Interpretation:
 read (DEF (book))

- (49) a. Syntax:
 $[_{VP} \textit{read} [_{NP} [_{ART} \textit{the}] [_{N} \textit{newspaper}]]]$
 b. Interpretation:
 DEF (read (newspaper))

Since the definite article doesn't combine with the noun in (49), the noun isn't semantically definite, which explains the apparent violation of the uniqueness requirement and the familiarity condition that is observed with weak definites. Instead, Carlson et al. argue that definiteness, or more specifically familiarity, is associated with the VP as a whole. In a weak definite construction such as *to read the newspaper* the definite serves to indicate the familiarity not of a particular newspaper, as would be the case with regular definites, but of the activity of newspaper reading. They see this as another link between weak definites and bare nouns. As we will see in chapter 4, the VP in pseudo-incorporated bare noun constructions such as in (43b) typically expresses a familiar activity or state: the construction in (43b) expresses the familiar state of being an apartment owner. By positing a similar restriction on weak definites, which would hold at the level of the VP, Carlson et al. explain the use of the definite: it serves to convey familiarity, just on a more conceptual level than usual.

The link between bare nouns and weak definites is an attractive aspect of Carlson et al.'s analysis. The main problem this approach faces is that the definite article needs to combine with a VP and it's not clear how that would work. Another question that comes up is where the familiarity in the conceptual restrictions on bare nouns comes from, since those constructions don't involve the definite article.

2.5.2 Aguilar Guevara (2014)

Aguilar Guevara (2014) claims that weak definites are uniquely referring, just like regular definites. However, they refer at the level of kinds rather than at the level of individuals as is the case for regular definites (see also Aguilar Guevara and Zwarts, 2011). In other words, she assumes that the weak definite denotes a kind, which is instantiated through the Carlsonian realization relation R . For the weak definite construction in (50a) Aguilar Guevara posits the logical form in (50b).

- (50) a. Lola is reading the newspaper.
 b. $\exists e [\text{Read}(e) \wedge \text{Agent}(e)=\text{lola} \wedge R(\text{Theme}(e), \text{NEWSPAPER})]$

This formula says that there is a reading event, the agent of which is Lola, and the theme of which is an instantiation of the *NEWSPAPER* kind. The fact that the theme is expressed through the functional expression $\text{Theme}(e)$ rather than a variable accounts for the lack of discourse referentiality of weak definites, similar to what for instance Espinal and McNally (2011) propose for pseudo-incorporated bare nouns in Catalan and Spanish (see chapter 4). The availability of sloppy readings and the obligatory narrow scope of weak definites also follow from this semantics. The former is derived through the fact that the realization of the kind is tied to the event variable locally. That is, in a sentence like (51a) there are two reading events, each with their own realization relation and hence each with a potentially different realization of the kind (51b).

- (51) a. Lola read the newspaper and Alice did too.
 b. $\exists e [\text{Read}(e) \wedge \text{Agent}(e)=\text{lola} \wedge \text{R}(\text{Theme}(e), \text{NEWSPAPER})] \wedge$
 $\exists e' [\text{Read}(e') \wedge \text{Agent}(e')=\text{alice} \wedge \text{R}(\text{Theme}(e'), \text{NEWSPAPER})]$

The obligatory narrow scope of weak definites follows in a similar way: the theme argument is tied to the event variable, and the event quantifier takes scope under any other scopable-bearing operators in the sentence:

- (52) a. Every librarian read the newspaper.
 b. $\forall y [\text{Librarian}(y) \rightarrow \exists e \wedge \text{Read}(e) \wedge \text{Agent}(e)=y \wedge \text{R}(\text{Theme}(e), \text{NEWSPAPER})]$

Weak definites combine with verbs through a lexical rule that turns standard transitive verbs into verbs that take kind themes:

- (53) Kind Lifting Rule
 If V is a transitive verb (or verb-preposition combination) with an internal argument Arg and V has the meaning $\lambda x_i \lambda e [V(e) \wedge \text{Arg}(e) = x_i]$, then V also has the meaning $\lambda x_k \lambda e [V(e) \wedge \text{R}(\text{Arg}(e), x_k) \wedge U(e, x_k)]$.

In order to capture the conceptual restrictions on weak definites, Aguilar Guevara proposes what she calls a *Stereotypical Usage Relation*:

- (54) Stereotypical Usage Relation
 $U(e, \kappa)$ if the event e is a stereotypical usage of the kind κ .

For Aguilar Guevara this relation is part of the truth-conditional meaning of a weak definite sentence, rather than being an additional, extra-semantic requirement as in the proposals of Carlson et al. (2013) and Schwarz (2014). This is a conscious choice, based on the fact that the enriched meaning of weak definites is non-defeasible and at issue (see Aguilar Guevara, 2014).

The U relation is incorporated in the weak definite semantics as follows:

- (55) a. Lola checked the calendar.
 b. $\exists e [\text{Checked}(e) \wedge \text{Agent}(e)=\text{lola} \wedge \text{R}(\text{Theme}(e), \text{CALENDAR}) \wedge U(e, \text{CALENDAR})]$

This formula says that “there is a non-empty set of events of checking in which the agent is Lola and the theme is a realization of the calendar kind, such that this set of events is part of the set of events in which calendars are used in ways that are stereotypical for their kind” (Aguilar Guevara, 2014, p. 49).

The assumption is that weak definiteness arises in a sentence like (56a) iff the intersection of the set of checking events and the set of stereotypical usage events (SUs) of the calendar kind is non-empty. In (56b) the weak reading isn’t available, because reading is not part of the SU of CALENDAR. A similar argument would explain the lack of the weak reading in (56c).

- (56) a. Lola checked the calendar.
 b. Lola read #the calendar.
 c. Lola checked #the book.
 d. Lola read #the book.

The absence of the weak reading in (56d) requires more explanation, as reading is what you typically do with books. Recall that Aguilar Guevara claims that only functional nouns, with a telic role, can occur in weak definites. In addition, this telic role must be specified as being stereotypical. She then assumes that a noun like *book* denotes a concept that is too general in terms of its function to be associated with a stereotypical telic role.

As to modification restrictions, Aguilar Guevara argues that adjective+weak definite combinations are stored as separate items in the lexicon with their own SUs, just like unmodified weak definites (see also Aguilar Guevara and Schulpen, 2014 for an earlier version of this idea).

2.5.3 Zwarts (2014)

Zwarts (2014) takes the idea of weak definites and stereotypical functions one step further, arguing that the nouns in weak definites refer to roles in functional frames rather than to kinds.

Frames are stereotypical scenarios with relatively stable properties, involving frequency and regularity, “conceptual/cultural idioms”, as Zwarts puts it. In his conception a frame consists of a finite set of roles:

- (57) TOWN: {HOSPITAL, CHURCH, PARK, ...}

The function of the definite article in Zwarts’s analysis is to pick out a unique role within a frame. Each of these roles has its own function (or telic role), which is a binary relation between what Zwarts calls a user and a usage event:

- (58) $\text{function}(\text{HOSPITAL}) = \lambda y. \lambda e. \text{get-treatment-from}(e, y, \text{HOSPITAL})$

In order to anchor these functions in the semantics of weak definites, Zwarts proposes a framing operation, which basically shifts predicates to apply at the level of roles:

- (59) For every transitive predicate P , $\text{FRAME}(P) =_{def} \lambda r. \lambda y. \lambda e. \exists x [\text{R}(x, r) \wedge P(e, y, x) \wedge \text{FUNCTION}(r)(y)(e)]$

This function takes a transitive verb (or verb-preposition combination) P , and maps it to a frame based interpretation by applying it to a role in a frame and adding information about the function of that role:

- (60) a. Bob listened to the radio.
 b. $\lambda e. \exists x [\text{R}(x, \text{RADIO}) \wedge \text{listen-to}(e, \text{bob}, \text{RADIO}) \wedge \text{RECEIVE-BROADCAST-FROM}(E, \text{BOB}, \text{RADIO})]$

Framing only works if there is a function in the frame that matches with the verb or preposition. The definite *the radio* in (61a) doesn't allow a weak reading, because *watch* doesn't match the function of RADIO.

- (61) a. Bob watched #the radio.
 b. $\lambda e.\exists x [R(x, \text{RADIO}) \wedge \text{watch}(e, \text{bob}, \text{RADIO})$
 $\wedge \text{RECEIVE-BROADCAST-FROM}(E, \text{BOB}, \text{RADIO})]$

Zwarts's analysis is attractive in its explanation of the nature of the conceptual restrictions that hold for weak definites, but it doesn't explain all of their semantic properties. For instance, the apparent lack of discourse referentiality of weak definites is unexpected since there's an existential quantifier introduced by the frame operator, as Zwarts notes.

2.6 Intermediate discussion

The main semantic properties of weak definites are the availability of sloppy readings in VP-ellipsis sentences, obligatory narrow scope, and discourse referential defectiveness. In addition, there are conceptual restrictions, which are reflected in restrictions on the nouns that can occur in weak definites, restrictions on verb-noun combinations, and on modification of weak definites. Finally, weak definites exhibit an enriched meaning, that seems to have to do with the function or typical use of the object or place denoted by the weak definite.

The pseudo-incorporation analysis of weak definites of Carlson et al. (2013) is attractive because it capitalizes on the similarities between bare singular nouns and weak definites. A more difficult aspect of this analysis, though, is the assumption that the noun and verb combine first, and that the definite article combines with the resulting VP. It's not clear how that works compositionally. Aguilar Guevara's (2014) analysis doesn't have this problem. The definite article is assumed to apply normally, except it selects unique kinds rather than unique individuals. The essence of Aguilar Guevara's and Carlson et al.'s approaches is quite similar: in both analyses, rather than operating on the level of individuals, the effect of the definite is lifted to a higher level. In Aguilar Guevara's approach the definite operates on the level of kinds. In Carlson et al.'s analysis on a more abstract event-related level, indicating familiarity of the state or activity denoted by the weak definite construction. Zwarts (2014) builds on Aguilar Guevara's analysis, but treats the conceptual restrictions on weak definites in terms of roles in functional frames, rather than kinds. This seems a promising approach, although the compositional semantics of his account still need to be worked out in further detail.

When it comes to modification, in Aguilar Guevara's analysis it follows from her claim that weak definites refer to kinds that only kind-level modification is ok in weak definite constructions. In fact, this is what we argued in Aguilar Guevara and Schulpfen (2014). Yet this doesn't cover all the data, because not every kind-level modifier can combine with every weak definite. For

instance, the kind-level adjective *psychiatric* in (62a) is fine as a weak definite modifier, as is evident from the fact that a sloppy reading is available. The same holds for *organic* in (62b). However, the unavailability of the sloppy reading in (62c) shows that *organic* blocks the weak reading of *the hospital*. This seems to have to do with the additional requirement that there be some reference to the functional use of what's denoted by the weak definite. *Psychiatric* is in line with the function of hospitals and *organic* is in line with the function of supermarkets, but it's not in line with the function of hospitals.

- (62)
- a. Lola went to the psychiatric hospital and Alice did too.
Possible that they each went to a different hospital.
 - b. Lola went to the organic supermarket and Alice did too.
Possible that they each went to a different supermarket.
 - c. Lola went to the organic hospital and Alice did too.
Not possible that they each went to a different hospital.

The upshot of this is that in Aguilar Guevara's analysis there are two constraints with respect to modification: the modifier needs to be kind-level, in order to combine with the kind-level denoting weak definite, and it has to be in line with the function of the object or place denoted by the weak definite.

In Zwarts's analysis, the definite doesn't refer to a unique kind, but to a unique role in a frame. Conceptually speaking the notions of kinds and of roles in frames are very similar, both refer to abstract entities at some higher conceptual level. A semantic consequence of the step away from kinds is that there is no longer the restriction to kind-level modification. In other words, kinds are a particular semantic type, that come with certain restrictions on the semantic type of the expressions they combine with, but roles aren't. Although Zwarts doesn't discuss modification, it follows from his analysis that there is only a single modification constraint, namely that modification has to be in line with the function the role denoted by the weak definite has in its particular frame. In this sense, Zwarts's analysis is more elegant than that of Aguilar Guevara. In what follows, I will therefore base my discussion of the conceptual restrictions on weak definites on Zwarts's frame-based approach, although I will still make use of insights from Aguilar Guevara, as both authors discuss the idea that the conceptual restrictions on weak definites have to do with a typical use of the function or the role of the object or location weak definites denote. Some indirect experimental support for this idea can be found in Klein (2011) and Schulpen (2011), who found that weak definites seem to be more robustly associated with typical functions than regular definites. Aguilar Guevara and Zwarts locate this function or role of weak definite nouns in the nouns' telic roles (see also Corblin, 2013), arguing further that this explains why the set of weak definite nouns predominantly consists of nouns denoting functional objects rather than natural objects (Wierzbicka, 1984). This seems to be on the right track, although as Aguilar Guevara and Zwarts note, there are exceptions to this generalization: some natural objects can occur as weak definites (e.g.

the beach), and there are functional nouns that can't (e.g. *the tape recorder*). This is where typicality comes in: weak definite nouns not only need to have a clear function/role, they also need to be associated with a typical use of this function/role. The question remains what *typicality* means exactly in this context. Zwarts's notion of *constant functions* seems very relevant to me. The relevant quote is this:

“A newspaper appears (or appeared...) in most households on a daily basis with more or less the same news, but not everyone receives magazines, let alone on the same days. Magazines and books also show much more variety in their content (entertainment, news, study, hobbies). Most houses have a radio, but not a tape recorder and what comes out of the radio has a more general content than what comes out of the tape recorder. On a somewhat bigger scale we have regular means of transportation in most environments (buses, trains), but taxis, bikes, and cars seem to lack that regularity. We can also imagine an idealized environment which has a hospital, a church, a school, a park. So, when we partition out our world into certain temporal units (like days and weeks) or spatial units (like rooms, homes, buildings, towns, countries), or spatio-temporal combinations of these, then we tend to find entities fulfilling more or less the same constant functions across those units [...] The idea is then that weak definites pick up those types of entities that are uniquely given in such general *frames as roles or slots*” [p. 273–274].

Now we're getting closer to a definition of typicality in the context of weak definites: the function of the entities denoted by weak definite nouns needs to be relatively stable across time and space. However, this discussion so far remains rather conceptual, and the aim of my dissertation is to get a more linguistic grip on notions such as *typicality*, which are a common theme in discussions of conceptual restrictions. In order to get there, we need a linguistic correlate of the notion of *constancy* Zwarts uses. My claim throughout this dissertation is that semantic stability is the linguistic counterpart of constancy. Such a claim should be empirically testable, and that is where modification comes in.

In the domain of adjectives we find a ready made opposition between adjectives denoting stable properties and adjectives that denote unstable properties. Certain types of adjectives depend for their interpretation on outside factors. Examples would be stage-level adjectives like *dirty* (Carlson, 1977; McNally, 1994; Kratzer, 1995; Fernald, 2000; Jäger, 2001; Maienborn, 2004), and evaluative adjectives like *beautiful* (Bierwisch, 1989; Bylinina, 2013). To illustrate, the sentence in (63), with the stage-level adjective *hungry*, is sometimes true, and sometimes false, depending on the situation it describes.⁵

⁵There's an extensive debate on the difference between stage-level and individual-level adjectives (see for instance Jäger, 2001). And see Mueller-Reichau (2011) for an elegant alternative which dispenses with the Carlsonian category of stages and stage-level predicates

(63) Ana is hungry.

Similarly, the sentence in (64), containing the evaluative adjective *beautiful*, will be true if I say it, but may be false when someone else says it, as its interpretation depends on the opinion of the speaker.

(64) The Dom tower is beautiful.

This dependency on outside factors such as situations or speakers is what I mean by semantic instability. Semantically stable adjectives are those adjectives that don't involve any such dependencies. Examples are relational adjectives such as *electric*. I follow McNally and Boleda, 2004 in their claim that relational adjectives operate on the level of kinds, and will refer to these adjectives as kind-level adjectives from now on; see also Arsenijević et al., 2010. Another example would be color adjectives like *red*.⁶ In chapter 5 I will provide a more extensive discussion of the lexical semantics of these types of adjectives in terms of stability.

Now, at the core of the conceptual requirement on weak definites lies the notion of constancy, and modification has to be in line with this requirement. I claim that the conceptual notion of constancy translates as *stability* in the domain of adjectives. Therefore, my hypothesis is that adjectives that denote stable properties will be better weak definite modifiers than adjectives that denote unstable properties:

(65) **The stability hypothesis (weak definites)**

The more stable the interpretation of an adjective, the more acceptable it will be as a weak definite modifier.

In the following chapters I will develop very similar versions of this hypothesis for bare predicates and bare singular nouns.

Note that I formulated my hypothesis in terms of more vs. less acceptable rather than as acceptable vs. unacceptable. I did this because the reasoning behind my hypothesis is that the modification restrictions I'm interested in are ultimately grounded in conceptual judgements or world knowledge. World knowledge related judgements are relatively fluid, because they can easily be influenced or accommodated by for instance context. For instance, very interesting experimental work by Klein (2011) has shown that it is relatively easy to establish novel weak definite and regular definite concepts in the right context,

altogether, and instead assumes that all properties are kind-level properties, some of which are simply more 'willing' to be spatiotemporally located than others, depending on their lexical-conceptual structure. For my purposes the details of this discussion don't matter and for simplicity I'll therefore stick to the Carlsonian view: I'm only concerned with the fact that some adjectives, which I'll refer to as stage-level adjectives, denote transient properties, whereas what I'll refer to as individual-level adjectives do not. See section 5.3.5 for more discussion.

⁶As Louise McNally pointed out to me, in some uses of color adjectives, such as *the traffic light is red*, the interpretation of the adjective is situation dependent in the same way that stage-level adjectives are. In my dissertation I'll disregard such uses.

yet the contrast she found between the two types of definites was relative rather than black-and-white. As a consequence of the fluidity of conceptually based judgements, I expect gradient acceptability differences between different types of adjectives modifying weak definites.

As Sprouse and Almeida (2011) argue, in order to test hypotheses involving gradient acceptability differences, it's best to use formal experimental methods. This is the reason that I ran questionnaires eliciting native speaker acceptability judgements in order to test the stability hypothesis. In these questionnaires I tested weakly referential constructions (weak definites, bare predicates and bare singular nouns respectively) in various adjectival modification conditions, collecting native speaker acceptability judgements. The prediction is that adjectives denoting stable properties, such as kind-level adjectives, will get higher acceptability ratings than adjectives denoting unstable properties, such as stage-level and evaluative adjectives. The weak definite questionnaire that I ran was the first step in developing this method. This questionnaire was a new version of the modification questionnaire that I ran as part of my MA thesis (Schulpen, 2011), which was discussed in Aguilar Guevara and Schulpen (2014) and Aguilar Guevara (2014). This improved version was run by Wivine Teuling, as part of her BA thesis (Teuling, 2014).

2.7 Questionnaire

2.7.1 Introduction

The original version of this questionnaire was meant to test the hypothesis, advanced by Aguilar Guevara and Zwarts (2011) that weak definites can only be modified by kind-level adjectives (see section 2.4.2). According to this hypothesis, *the psychiatric hospital* can get a weak definite reading, but *the new hospital* can't. In order to test this participants were asked to judge the acceptability of the sloppy reading in VP-ellipsis sentences containing weak and regular definites in several modification conditions. Recall that only weak definites allow a sloppy reading in such sentences. If a sloppy reading is not accepted in sentences containing modified weak definites, this is evidence that the modifier blocks the weak reading.

The most important difference between the current version of the questionnaire and the original version has to do with the types of adjectives that were tested (see section 2.7.6 for a list of all of the changes that were made). In the old version I tested unmodified weak and regular definites, weak and regular definites modified by (relational) kind-level adjectives, and weak and regular definites modified by object-level adjectives. This last category contained both stage-level adjectives such as *crowded*, and dimensional adjectives such as *narrow*. In terms of lexical semantic stability this category was not homogeneous, as the interpretation of dimensional adjectives is more stable than that of stage-level adjectives. In order to be able to test the stability hypothesis, instead of

this mixed class of adjectives we only used evaluative adjectives in the new version. If the stability hypothesis is on the right track, kind-level modification should be more acceptable for weak definites than evaluative modification.

2.7.2 Participants

72 native speakers of Dutch filled in the questionnaire.

2.7.3 Method and materials

In this experiment the interpretation of Dutch VP-ellipsis sentences was tested in six conditions: unmodified weak definites (66), weak definites modified by an evaluative adjective (67), weak definites modified by a kind-level adjective (68), unmodified regular definites (69), regular definites modified by an evaluative adjective (70), and regular definites modified by a kind-level adjective (71).

- (66) Daan ging naar de supermarkt en Eefje ook.
'Daan went to the supermarket and Eefje did too'
- (67) Daan ging naar de rare supermarkt en Eefje ook.
'Daan went to the strange supermarket and Eefje did too'
- (68) Daan ging naar de aziatische supermarkt en Eefje ook.
'Daan went to the Asian supermarket and Eefje did too'
- (69) Harrie ging naar de boerderij en Ben ook.
'Harrie went to the farm and Ben did too.'
- (70) Harrie ging naar de rare boerderij en Ben ook.
'Harrie went to the strange farm and Ben did too.'
- (71) Harrie ging naar de biologische boerderij en Ben ook.
'Harrie went to the organic farm and Ben did too.'

Definites were classified as either weak or regular based on a pretest which is reported in Schulpen (2011) and Aguilar Guevara and Schulpen (2014). For a full list of the test items that were used, see Appendix A.

With each item, participants were presented with a sloppy reading interpretation of that sentence, and were asked to indicate how acceptable they found this interpretation for the sentence on a scale from 0-7. A full item thus looked like this (Dutch original in (72a), translation in (72b):

- (72) a. Daan ging naar de supermarkt en Eefje ook.
Interpretatie: Ze gingen allebei naar een verschillende supermarkt.
Hoe goed mogelijk is deze interpretatie?
(totaal onmogelijk) 0 – 1 – 2 – 3 – 4 – 5 – 6 – 7 (heel goed mogelijk)

- b. Daan went to the supermarket and Eefje did too.
 Interpretation: They each went to a different supermarket.
 How plausible is this interpretation?
 (completely implausible) 0 – 1 – 2 – 3 – 4 – 5 – 6 – 7 (very plausible)

As sloppy reading acceptability is only associated with weak definites, not with regular definites, this is a good test to see whether a particular modifier is acceptable in a weak definite construction. If it isn't, then the weak reading – including the availability of the sloppy reading – is blocked, and only a regular definite reading remains.

In addition to the test items, two types of control items were used: lower baseline controls and upper baseline controls. For the latter, VP-ellipsis sentences like (73) were used, with a unique location referred to by its proper name (in this case Artis, a zoo in Amsterdam). Since Artis is the only zoo with that name, the sloppy reading in which Bart and Elise each went to a different Artis, was expected to be completely unacceptable.

- (73) Bart ging naar Artis en Elise ook.
 'Bart went to Artis and Elise did too.'

As upper baseline controls items like (74) were used.

- (74) Lucas ging naar muziekles en Kees ook.
 'Lucas went to music class and Kees did too.'

These items also involve VP ellipsis, this time with either bare nouns, such as music class, or with non-unique locations referred to by their proper names, such as McDonald's. These were expected to be completely acceptable with a sloppy reading.

2.7.4 Procedure

Participants were approached in classroom settings or individually to fill in the questionnaire. They were asked to judge the sentences and the accompanying interpretation on their acceptability as sentences of Dutch, to follow their intuitions and to not reconsider previous responses. The complete instructions can be found in appendix A.

2.7.5 Predictions

Based on the stability hypothesis my prediction is that kind-level adjectives, which denote stable properties, will be more acceptable as weak definite modifiers than evaluative adjectives, which denote unstable properties. This means that I predict the sloppy reading to be significantly more acceptable for weak definites modified by kind-level adjectives than for weak definites modified by evaluative adjectives.

(75) The stability hypothesis (weak definites)

The more stable the interpretation of an adjective, the more acceptable it will be as a weak definite modifier. More specifically: kind-level adjectives are more acceptable than evaluative adjectives.

For regular definites I predict no such effect of modification: for these definites the sloppy reading is predicted to be generally unacceptable.

2.7.6 Differences with Aguilar Guevara and Schulpen (2014)

Apart from the change in the adjective conditions that were used, several other modifications were made compared to the original version of this questionnaire, discussed in Aguilar Guevara and Schulpen (2014):

1. A different way of asking for judgements was used. Originally I presented participants with both the sloppy and the strict reading, asking them for each of the readings whether they accept them (yes/no), and then only looked at people's answers with respect to the sloppy reading. Results of that version were presented in terms of sloppy reading acceptance rate. As I noted previously, because of the conceptual nature of the restrictions on weak definites I expect to find gradient rather than black-and-white differences between the modification conditions. In order to better capture this gradience I decided to ask for acceptability judgements on a scale instead of binary judgements. Participants were only presented with the sloppy reading, and were asked how acceptable they found this reading on a scale from 0-7.
2. In the previous version of the questionnaire the kind-level modified condition was tested separately from the object-level modified and unmodified conditions (that is, in two different questionnaires with different groups of participants). In the current version all three conditions were tested in one single questionnaire, so that each subject got to see items of each modification condition.
3. Changes in the control items. The type and distribution of the controls were changed, partly because the three modification conditions were put together and so the predicted ratio of unacceptable-acceptable scores changed. In the previous version, only one of the four test conditions (the unmodified weak definites) was predicted to be acceptable with the sloppy reading. In the current version this changed to two out of six test conditions (unmodified weak definites and kind-level modified weak definites). In the new version 18 control items were used, of which 12 were upper controls and 6 were lower controls.

2.7.7 Analysis

I analysed the data using cumulative link mixed models (clmm).⁷ The first step was to compare possible models to find the model that best fit the data. The models were built incrementally, starting from the null model with no fixed factors. Fixed factors were added step by step, and for each factor it was tested whether it significantly improved the model fit, by comparing the log likelihood value of each model to that of its predecessor. In all the models, Score (i.e. sloppy reading acceptance) was the dependent variable, and the model included random intercepts for both Subject and Item.⁸ First, I compared the log likelihood values of the null model (M0) to those of M1, which contained Definite as a fixed factor. A chi square analysis showed that M1 better fit the data. I then went on to compare M1 to M2, which contained both Definite and Modification as fixed factors. It turned out that M2 was the better fit of the two. Finally, I compared M2 to the model that also contained the interaction between Definite and Modification, M3. M3 turned out to be the best model of all. This means that there was a significant main effect of both Definite and Modification and a significant interaction effect. See table 2.1 for the details of the model comparisons and figure 2.1 for an overview of the results.

Model	Fixed factor(s)	Random factors (intercept only)
M0	-	Subject, Item
M1	Definite	Subject, Item
M2	Definite+Modification	Subject, Item
M3	Definite*Modification	Subject, Item

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-3127.3			
M1	-3120.8	12.883	1	=.0003
M1	-3120.8			
M2	-3096.6	48.524	2	<.0001
M2	-3096.6			
M3	-3088.4	16.282	2	=.0003

Table 2.1: Overview of models and model comparisons.

⁷All analyses were conducted with the R software program (R development core team, 2008), using the ordinal package Christensen (2015).

⁸A maximal random effects structure was not possible, since as of the 30-09-2013 version of the ordinal package random slopes are not supported for clmm.

After having determined that M3 was the best model to analyse the data, I looked at the model summary for M3 to see the differences between the Definite and Modification conditions that I'm interested in. I did this by resetting the intercept of each condition when necessary and then running the model again. The comparisons I'm interested in are the differences between Definites per Modification condition (see table 2.2, and the differences between Modification conditions per Definite (see tables 2.4 and 2.3)).

As to the former: in both the unmodified and the kind-level modification conditions the weak definites got significantly higher scores than the regular definites ($\beta=1.8596$, $SE=0.2879$, $z=6.459$, $p<.0001$ and $\beta=0.9801$, $SE=0.2836$, $z=3.456$, $p=.0005$ respectively). Only in the evaluative modification condition was there no significant difference between the two types of definites ($\beta=0.1331$, $SE=0.2818$, $z=0.472$, $p=.6366$).

Comparison		β -estimate	Std. error	z-value	p-value
Unmodified					
Regular	Weak	1.8596	0.2879	6.459	<.0001
Evaluative					
Regular	Weak	0.1331	0.2818	0.472	=.6366
Kind-level					
Regular	Weak	0.9801	0.2836	3.456	=.0005

Table 2.2: Overview of comparisons between definites, per modification condition.

Now let's turn to the differences between modification conditions, per type of definite. For the regular definites, the unmodified condition got significantly higher mean scores than both the evaluative modification and the kind-level modification conditions ($\beta=0.9757$, $SE=0.2844$, $z=3.431$, $p=.0006$ and $\beta=0.9133$, $SE=0.2852$, $z=3.203$, $p=.0014$ respectively). The evaluative and kind-level modification conditions didn't differ significantly from each other ($\beta=-0.0623$, $SE=0.2824$, $z=0.221$, $p=.8253$).

Comparison		β -estimate	Std. error	z-value	p-value
Unmodified	Evaluative	-0.9757	0.2844	-3.431	=.0006
Unmodified	Kind-level	-0.9133	0.2852	-3.203	=.0014
Evaluative	Kind-level	0.0623	0.2824	0.221	=.8253

Table 2.3: Overview of comparisons between modification conditions, regular definites.

For the weak definites there is a similar detrimental effect of modification, but there the type of modification does make a difference. As for the regular definites, the unmodified condition got significantly higher scores than both the evaluative and the kind-level modification conditions ($\beta=2.7022$, $SE=0.2901$,

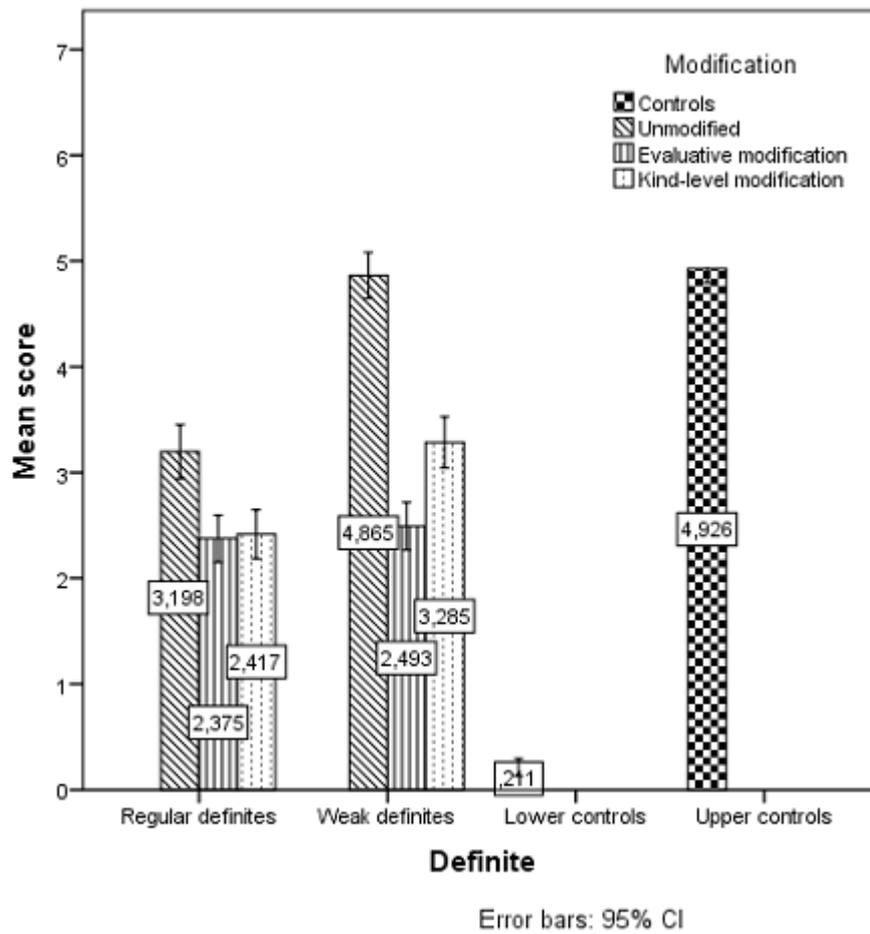


Figure 2.1: Overview of mean scores, by definite and modification.

$z=9.315$, $p<.0001$ and $\beta=1.7928$, $SE=0.2864$, $z=6.260$, $p<.0001$). Here, however, the kind-level modification condition got significantly higher scores than the evaluative modification condition ($\beta=0.9094$, $SE=0.2830$, $z=3.214$, $p=.0013$).

Comparison		β -estimate	Std. error	z-value	p-value
Unmodified	Evaluative	-2.7022	0.2901	-9.315	<.0001
Unmodified	Kind-level	-1.7928	0.2864	-6.260	<.0001
Evaluative	Kind-level	0.9094	0.2830	3.214	=.0013

Table 2.4: Overview of comparisons between modification conditions, weak definites.

2.8 Discussion

Based on the stability hypothesis, I predicted that the kind-level modification condition would get significantly higher scores than the evaluative modification condition. The results confirmed this prediction, and are therefore in line with my hypothesis. Interestingly, the kind-level modification condition still scored significantly lower than the unmodified condition, suggesting that there is a general detrimental effect of modification on the acceptability of the weak reading, on top of the negative effect that evaluative modification has. Support for this interpretation of the data comes from the regular definite results: here the kind-level modification condition and the evaluative modification conditions didn't differ significantly from each other, both scoring significantly lower than the unmodified condition. In sum, it appears that there is a detrimental effect of modification both on weak definites and on regular definites. Whereas for regular definites the type of modification doesn't matter, for weak definites kind-level modification is significantly better than evaluative modification. As we will see in chapters 3 and 6, similar effects occur in (part of) the bare predicate and bare singular noun data. I will get back to this issue in chapter 6.

The fact that the three regular definite conditions didn't all get bottom scores is striking. I didn't include the controls in the statistical analysis, as they caused model crashes (it wasn't possible to code the controls for Modification in such a way that it didn't make the design column rank deficient). However, when you look at figure 2.1, even without any statistics the control item data are pretty clear. The lower controls got bottom scores (mean=0.221), whereas the upper controls got mean scores more or less equal to those of the unmodified weak definites (mean=4.926 vs. mean=4.865). The difference between even the lowest scoring test conditions – evaluative modified weak and regular definites (means=2.493 and 2.375 respectively) and kind-level modified regular definites (mean=2.417) – and the lower controls is remarkable. The fact that the unmodified regular definite condition didn't get bottom scores shows that the difference between weak and regular definiteness is not a black-and-

white matter. This supports the view that weak definiteness is gradient and can quite easily be accommodated, as I discussed in section 2.6.

2.9 Conclusion

The main result of my questionnaire is that unlike for regular definites, for weak definites there was a significant difference between the kind-level and the evaluative modification conditions, a finding that is in line with the stability hypothesis. On a more general methodological level, it also shows that my method of using modification to probe the restrictions on weakly referential constructions is promising.

In this chapter I only compared two adjective types, but in order to test the stability hypothesis more thoroughly, a wider range of adjectives denoting stable properties and adjectives denoting unstable properties should be compared. Rather than expanding my weak definite questionnaire, I will turn to another weakly referential construction: bare singular nouns. A very practical reason for this decision is that the nouns in this construction predominantly refer to objects, for instance pieces of clothing, which easily take a wide variety of adjectives. An additional advantage of bare nouns over weak definites is that the acceptability of bare nouns can be targeted directly, whereas in order to test weak definites we have to work through the diagnostic of sloppy reading acceptability. Before I turn to bare nouns in chapters 4 through 6, in the next chapter I will first discuss the construction of bare predicates, and the questionnaire I ran in order to test modification of this construction. The aim of the bare predicate questionnaire was to select items that could function as control items in the bare noun questionnaire. Moreover, a replication of the weak definite results with bare predicates would be additional support for the stability hypothesis.

CHAPTER 3

Bare predicates

3.1 Introduction

The study of the conceptual restrictions on adjectival modification of weak definites in the previous chapter was the first step in my investigation of the conceptual restrictions on weakly referential constructions. It served to set up my approach of using modification as a bridge between the conceptual nature of the restrictions and the linguistic domain in which they have an effect. More concretely, I collected native speaker acceptability judgments on weak definites in several modification conditions. The results showed that kind-level modification was significantly more acceptable than evaluative modification. This result is in line with the stability hypothesis:

(76) **The stability hypothesis**

The more stable the interpretation of an adjective, the more acceptable it will be in a weakly referential construction.

The results of the previous chapter show that the modification method is promising, but in order to really confirm the stability hypothesis a wider range of both adjectives with a stable interpretation and adjectives with an instable interpretation need to be tested. At the end of the previous chapter I explained several practical reasons for doing a more elaborate version of my modification questionnaire with bare singular nouns rather than with weak definites. I will turn to bare singular nouns in the next chapter. Before I do so, in the current chapter I discuss the conceptual restrictions on so-called bare predicates, and I report on a questionnaire similar to the one I ran for the weak definites. The

aim of this questionnaire was to see if the results I found for the weak definites would be replicated for bare predicates, which we would expect if the stability hypothesis is on the right track. Additionally, the bare predicate questionnaire was aimed to select control items to be used in the bare singular questionnaire. This chapter therefore serves as the final stepping stone before I turn to the full-fledged version of the modification questionnaire for bare singular nouns.

In section 3.2 I discuss the properties of bare predicates in more detail. I then discuss two of the analyses that have been proposed to account for them in section 3.3. After providing some intermediate discussion in section 3.4, I present the questionnaires that were run in order to test the stability hypothesis for bare predicates in section 3.5. The results are discussed in section 3.6. Section 3.8 concludes the chapter. In the appendix I discuss some additional data regarding inflection patterns of adjectives modifying bare predicates.

3.2 Properties of bare predicates

Many Germanic and Romance languages have nominal predication in which the indefinite article is optional Matushansky and Spector (2005); Munn and Schmitt (2005); de Swart et al. (2005, 2007); Zamparelli (2008); Le Bruyn (2010); Castella (2014). Some examples from Dutch (77) and Spanish (78)¹:

- (77) a. Gaike is kunstenaar.
Gaike is artist
'Gaike is an artist.'
- b. Gaike is een kunstenaar.
Gaike is an artist
'Gaike is an artist.'
- (78) a. Nicolás es abogado.
Nicolás is lawyer
'Nicolás is a lawyer.'
- b. Nicolás es un abogado.
Nicolás is a lawyer
'Nicolás is a lawyer.'

Languages vary in how productive bare predication is. In English bare predicates are only acceptable if they refer to a unique role, as the contrast in (79) shows.

- (79) a. Mary is president.
b. *Mary is economist.

Other languages are more permissive and allow bare predication with any kind of role:

¹Example from Castella (2014).

- (80) a. Marie is president. Dutch
 Marie is president
 ‘Marie is president.’
 b. Marie is econoom.
 Marie is economist
 ‘Marie is [an] economist.’
- (81) a. I Maria ine proedhros. Greek
 the Maria is president
 ‘Maria is president.’
 b. I Maria ine ikonomologos.
 the Maria is economist
 ‘Maria is [an] economist.’
- (82) a. La Maria és presidenta. Catalan
 the Maria is president
 ‘Maria is president.’
 b. La Maria és economista.
 the Maria is economist
 ‘Maria is [an] economist.’
- (83) a. A Maria é presidente. Brazilian Portuguese
 the Maria is president
 ‘Maria is president.’
 b. A Maria é economista.
 the Maria is economist
 ‘Maria is [an] economist.’

In the literature, bare predicates seem to be defined mostly in terms of the conceptual or meaning restrictions they are subject to. More so than weak definites and bare singular nouns, as for these two constructions discussions of scope, number neutrality, etc. play a big role in describing how they differ from their regular definite or non-bare counterparts. In some way these discussions on scope, number neutrality and so on touch upon referentiality, or rather reduced referentiality. Unlike weak definites and bare nouns, bare predicates don’t occur in argument position, so referentiality isn’t actually much of a topic. I still treat bare predication as part of the set of weakly referential constructions because, as we will see below, it’s a construction in which the article is either absent or behaves in a non-regular way, and which has an enriched or specialized meaning.

The nominals that occur as bare predicates are usually defined as expressions that have a specialized meaning, mostly have human referents, and exhibit restricted modification. All of these properties have to do with the conceptual restrictions that hold for them. I’ll discuss each of them in turn.

3.2.1 Specialized meaning

It has often been noticed that bare predicates and their indefinite counterparts convey different meanings. Approaches differ in how exactly they capture this difference, but the main intuition seems to be shared across the literature. The phenomenon is illustrated in (84) (example from Castella, 2014).

- (84) a. He has been president without (ever) having been a president.
 b. He has been a president without (ever) having been president.

The sentence in (84a) conveys that someone had the job of president without having shown any of the characteristics that are associated with or required of presidents (e.g. being a natural leader, seeing the bigger picture, being a good representative of the country and so on). The sentence in (84b) conveys the opposite: someone had all the properties of a president without having actually had the job. From these examples we can distill the intuition that bare predicates refer to social roles and indefinite predicates refer to properties associated with these roles.

3.2.2 Preference for human reference

Many authors note that the nouns that occur in bare predicates tend to refer to humans (Matushansky and Spector, 2005; de Swart et al., 2007; Castella, 2014). This is of course in line with the intuition that bare predicates refer to social roles. Castella (2014) gives the following example from Italian to illustrate the aversion to non-human bare predicates:

- (85) ??/* *Ciò su cui sto scrivendo è quaderno.*
 that on that are.1SG writing is.3SG notebook
 Int.: ‘What I am writing on is a notebook.’

That it is a preference for human reference rather than a strict rule is illustrated for instance by the example in (86) (also from Castella, 2014).

- (86) *Gianni è tavolo.*
 Gianni is.3SG table
 ‘Gianni is a table.’

(86) is acceptable, but only in a reading in which *tavolo* (‘table’) is interpreted as a “humanized predicate” (Castella, 2014, p. 124). Le Bruyn (2010, p. 142) gives a similar example, from a description of a children’s game:

- (87) *Eén kind van het tweetal is rat, de ander raaf.*
 one child of the pair is rat the other raven
 ‘One child of the pair is a rat, the other is a raven.’

A slightly different example is also from Castella. In the Norwegian sentence in (88a) the bare predicate *er sykehus* (‘is hospital’) is predicated of a hospital. This is ungrammatical because being a hospital is not a role hospitals have, it’s their very nature (Castella analyses this in terms of extrinsic vs. intrinsic properties, see below). In (88b), on the other hand, the bare predicate is predicated of a tent in for instance the context of a refugee camp. For a tent, being a hospital is not its primary function or nature – rather, this tent became a hospital because people declared it so or used it that way.

- (88) a. * Dette er sykehus. (*Predicated of a hospital*)
 this is hospital
 Int.: ‘This is a hospital.’
 b. Dette teltet er sykehus. (*Predicated of a tent*)
 this tent.DEF is hospital
 ‘This tent is a hospital.’

This reinforces the idea that bare predicates refer to social roles.

3.2.3 Restricted modification

The modification restrictions that seem to hold for bare predicates are also in line with this intuition. Zamparelli (2008) gives the following examples of Italian and German bare predicate constructions in which modification results in ungrammaticality:

- (89) a. * Gianni è bravo medico.
 Gianni is.3SG good doctor
 Int.: ‘Gianni is a good doctor.’
 b. * Gianni ist guter Arzt.
 Gianni is.3SG good doctor
 Int.: ‘Gianni is a good doctor.’
 (90) * Carlo è insegnante anziano.
 Carlo is.3SG teacher old
 Int.: ‘Carlo is an old teacher.’

Some acceptable adjective-noun combinations he gives in Italian are the following:

- (91) a. infermiere diplomato
 ‘licensed nurse’
 b. tiratore scelto
 ‘sharpshooter’

He notes that

“[Bare predicates] can be modified by certain adjectives or nouns, when these help to define *what kind of N* the subject of the predication is. Such Adj+N combinations are probably best regarded as compounds.” [p. 105]

Under the assumption that the conceptual restriction on bare predicates is that they must refer to social roles, and that modification must be in line with this restriction, this observation by Zamparelli is not surprising. Social roles must be established somehow, and it makes sense that the most successful candidates for modifying such a role would be the ones that result in something that is relevant enough to be considered a subkind. This is reminiscent of the way functions and frames have to be established in Zwarts’s (2014) analysis of weak definites.

The above data are also in line with the stability hypothesis. The acceptable modifiers in (91) denote kind-level properties, the interpretation of which is stable, whereas the unacceptable modifiers in (89), (90) are either evaluative or stage-level properties, denoting unstable properties.

I should note here that de Swart et al. (2005) give some acceptable bare predicate modifiers that are apparent counterexamples to the stability hypothesis. In addition to the examples in (92), which are similar to Zamparelli’s acceptable modification examples in (91), they also give the examples in (93).

- (92) a. maatschappelijk werker
 ‘social worker’
 b. scheikundig ingenieur
 ‘chemical engineer’
- (93) a. voormalig president
 ‘former president’
 b. gepensioneerd leraar
 ‘retired teacher’
 c. werkloos visser
 ‘unemployed fisherman’

The adjectives in (93) all denote properties that are unstable over time, which means that under the stability hypothesis they shouldn’t be acceptable as bare predicate modifiers. However, this set of adjectives is quite restricted, and the meaning of the modified bare predicates in (93) doesn’t seem to be specialized or restricted compared to that of their indefinite counterparts. Recall the example from Castella (2014) in (84) which illustrates the specialized meaning – making reference to a social role – bare predicates typically get. The same example with the adjective *former* doesn’t make sense: there seems to be no meaning difference between the bare predicate *former president* and the indefinite *a former president*:

- (94) a. # He has been former president without (ever) having been a former president.
 b. # He has been a former president without (ever) having been former president.

This is not the case for the other cases of acceptable bare predicate modification Zamparelli and de Swart et al. give. In (95) we get a contrast between the bare predicate *maatschappelijk werker* ('social worker') and the indefinite *een maatschappelijk werker* ('a social worker'), similar to the contrast we see in (84). The sentence in (95a) would be uttered to describe a situation in which Marja's job is being a social worker, but she's not a very good one, whereas the sentence in (95b) describes a situation in which Marja is compassionate, has good social skills, etc., but she's not a social worker by profession.

- (95) a. Marja is maatschappelijk werker zonder ooit een
 Marja is social worker without ever a
 maatschappelijk werker te zijn geweest.
 social worker to be.INF be.PRT
 'Marja is [a] social worker without ever having been a social worker.'
 (She's a social worker by profession, but she doesn't have the properties typically associated to social workers)
- b. Marja is een maatschappelijk werker zonder ooit
 Marja is a social worker without ever
 maatschappelijk werker te zijn geweest.
 social worker to be.INF be.PRT
 'Marja is a social worker without ever having been [a] social worker.'
 (She has the properties typically associated to social workers, but it's never been her job)

In sum, the above data suggest that adjectives like *former*, *prospective*, *retired* play a different role in bare predicate constructions than adjectives like *social* or *technical*. Perhaps what sets them apart has something to do with the fact that these adjectives all belong to the class of privative adjectives: adjectives which seem to entail the negation of the property denoted by the noun (Franks, 1995; Partee, 2003; Del Pinal, 2015). I will leave this for future research. For now I'll leave this type of adjectives aside.

On a final note, I'd like to point out that it's relatively easy to establish roles given the right context. We've already seen some examples of this in section 3.2.2, and the same holds for modification. For instance, in an example similar to Le Bruyn's (2010) example in (87), the stage-level adjective *vrolijke* ('cheerful') in (96a) makes the sentence unacceptable when it's uttered out of the blue, in line with the stability hypothesis, but in the context in (96b), which establishes *vrolijke ninja* ('cheerful ninja') as a relevant role, the sentence is acceptable.

- (96) a. Jonathan is vrolijke ninja.
Jonathan is cheerful ninja
'Jonathan is a cheerful ninja.'
- b. Context: we're playing a game in which two teams have to take each others citizens hostage. Each team has some upset ninjas, who can take hostages, and some cheerful ninjas, who can free hostages.

The ease with which context can be used to make non-kind-level adjectives modifying bare predicates acceptable is very similar to what Klein (2011) found for weak definites. It shows that it's really the conceptual requirement of referring to an established social role, rather than a semantic requirement of operating on the level of kinds that is the most relevant. What I'm interested in is the question of whether we can then find the linguistic reflection of this conceptual requirement. In this dissertation I argue that we can, and this is where the stability hypothesis comes in. I will pick up this question in section 3.4, after discussing some of the analyses that have been proposed to account for the properties of bare predicates in the next section.

3.3 Theoretical approaches

As was the case in the previous chapter, the overview of the literature I give here is far from exhaustive (see for instance Castella, 2014 and the references she cites for a more complete overview). Here I focus on analyses that elaborate on the conceptual restrictions on bare predicates.

3.3.1 De Swart et al. (2005; 2007); Le Bruyn (2010)

de Swart et al. (2005) and de Swart et al. (2007) assume that nouns start out as type $\langle e \rangle$, and distinguish between two subtypes of e : kinds and capacities. The notion of kinds is familiar from the previous chapter, but the notion of capacities is new. It comprises things like professions, religions, and nationalities, and more generally just any type of social or cultural roles.

In order to occur in predicative position, nouns need to type shift from $\langle e \rangle$ to $\langle e, t \rangle$. Kinds are generally assumed to do that through the Carlsonian realization relation R (or REL) (Carlson, 1977), and de Swart et al. posit that capacities do that through the CAP operator. CAP takes a capacity and returns the set of individuals that have this capacity.

The gist of de Swart et al.'s analysis is that bare predication involves capacities, whereas indefinite predication involves (instantiations of) kinds. They assume that R is realized in NumP, while CAP doesn't have an overt realization and is therefore not tied to any particular syntactic projection. Since the indefinite article is also tied to NumP, the result is that whenever we have a NumP, we get kind predication with an article. If there's no NumP, there is no

indefinite article and no *R*, so no kind predication. Instead, in the absence of NumP what you get is bare predication through *CAP*.

Le Bruyn (2010) narrows down the realization of *R* from the NumP as a whole to the indefinite article in particular. He does this through a diachronic account of the relation between *R* and the indefinite article. He argues that the original function of the indefinite was to mark non-uniqueness. Furthermore, he argues that kinds require their sets to contain more than one element, whereas capacities don't. As a consequence, kind instantiation sets are necessarily non-unique, but this doesn't hold for capacity instantiation sets. He therefore concludes that the indefinite article was the most optimal candidate for realizing *R*. The reason why *CAP* doesn't get any overt marking is that in order to indicate a contrast between two items only one of them needs to be marked – in this case *R* – as the other can be inferred from the absence of overt marking.

As Le Bruyn notes, the advantage of his analysis over de Swart et al.'s is that in his analysis the link between the indefinite article and *R* is semantically motivated, rather than de Swart et al.'s stipulation that *R* is located in NumP. The drawback of Le Bruyn's analysis is that he has to assume that the indefinite is lexically ambiguous between its regular semantics and its *R* marking form.

On a sidenote, the link between the indefinite article and *R*, and the localization of both in NumP, has some interesting consequences for the analysis of adjectival inflection on bare predicates, or rather the lack thereof in Dutch. de Swart et al. note the contrast between Dutch indefinite predicates, in which adjectives get *-e* inflection, and bare predicates, in which they don't. They explain this by assuming that Dutch adjectival inflection is located in NumP. Since bare predicates are just NPs, that don't project a NumP layer, the lack of inflection follows.

- (97) a. Jan is een werkloze visser.
 Jan is.3SG an unemployed.[+INFL] fisherman
 'Jan is an unemployed fisherman.'
- b. *Jan is een werkloos visser.
 Jan is.3SG an unemployed.[-INFL] fisherman
 Int.: 'Jan is an unemployed fisherman.'
- (98) a. Jan is werkloos visser.
 Jan is.3SG unemployed.[-INFL] fisherman
 'Jan is an unemployed fisherman.'
- b. *Jan is werkloze visser
 Jan is.3SG unemployed.[+INFL] fisherman
 Int.: 'Jan is an unemployed fisherman.'

In section 3.7 I will discuss these data in more detail, adding a cross-linguistic perspective.

3.3.2 Castella 2014

Castella (2014) argues against the notion of CAPACITY as a separate lexical class. Rather than an ontological difference between kinds and capacities, she proposes that the relevant distinction is between intrinsic and extrinsic properties (Lewis, 1983). As a working definition, Castella gives:

“A property P is intrinsic iff the instantiation of P by an individual x is independent of the features of the environment of x; otherwise P is extrinsic.” [p.86]

The idea is that bare predicates denote extrinsic properties, whereas indefinite predicates denote intrinsic properties. To illustrate, BEING PRESIDENT is an extrinsic property since it depends on there having been elections and contracts signed. BEING A PRESIDENT is an intrinsic property that someone has independently, by showing the characteristics which are associated with or required of presidents, e.g. being a natural leader.

Castella’s formalization of this idea is as follows. Nouns normally denote properties of type $\langle e,t \rangle$, sets of all the entities that have the property the noun expresses. They differ from verbs and adjectives, which are also of type $\langle e,t \rangle$ in that they provide ‘the principle of identity’, information about whether two objects are the same or not. Castella localizes the principle of identity in a [COUNT] feature. Nouns can enter the derivation with a valued or with an unvalued [COUNT] feature. If it’s unvalued, at least a NumP layer is required to value it – this is what happens in indefinite predication. If the feature is valued, we get bare predication. Castella argues that bare predicates denote extensional properties of type $\langle e,t \rangle$, and indefinite predicates denote intensional properties of type $\langle s, \langle e,t \rangle \rangle$, functions from possible worlds to sets. This is also how she derives the link between kinds and indefinite predication: kind reference is not restricted to the actual world, but involves all possible worlds (see e.g. Carlson, 1989).

3.4 Intermediate discussion

Castella’s (2014) analysis has the advantage over the analyses of de Swart et al. (2005), de Swart et al. (2007) and Le Bruyn (2010) in that she doesn’t need to posit an additional ontological category. However, in her analysis the link between intensionality and intrinsicness on the one hand and the NumP layer on the other hand needs to be worked out more. For this reason, I’ll go with the de Swart et al./Le Bruyn (2010) line.

As we’ve seen in section 3.2.3, de Swart et al. suggest that only kind-level modification can modify bare predicates. In the light of the idea that the conceptual requirement for bare predicates is that they must refer to established social roles, this makes a lot of sense: bare predicates must refer to social roles,

social roles need to be established, therefore bare predicates can only take modifiers that result in a role that is established in itself. The most likely candidates for this are kind-level modifiers, as the very definition of kind-level seems to involve being (culturally) established as a relevant class.²

The more interesting question now is what it means for a role to be established, and more specifically whether we can find a linguistic correlate to this. In the previous chapter I argued that at the core of the conceptual requirements on weak definites lies the notion of constancy, and that this translates into linguistics as *stability*, which is a factor in adjective interpretation. As certain types of adjectives have an unstable interpretation, dependent on outside factors such as situations and speakers, and other types of adjectives have a stable interpretation, independent on such outside factors, adjectival modification is a tool with which the notion of stability can be targeted. My hypothesis was that stable adjectives, such as kind-level adjectives, would be more acceptable as weak definite modifiers than unstable adjectives, such as evaluative adjectives. I propose that the same notion of constancy is relevant for bare predicates: the requirement that the social roles referred to by bare predicates need to be sufficiently established is very similar to the idea that the roles in frames that weak definites refer to must have some constant function. I therefore formulate a similar hypothesis for bare predicates:

(99) **The stability hypothesis (bare predicates)**

The more stable the interpretation of an adjective, the more acceptable it will be as a bare predicate modifier.

The results of the weak definite questionnaire were in line with the stability hypothesis, and the question now is whether those results can be replicated for bare predicates. In the next section I will report on a set of questionnaires that I ran to test the hypothesis for bare predicates.

3.5 Questionnaires

3.5.1 Introduction

Rather than merely trying to replicate the weak definite results, I expanded my experimental setup in several ways in order to strengthen my methodology. First of all, I tested a different type of unstable adjective based on the reasoning that if a similar difference between adjectives with a stable interpretation and adjectives with an unstable interpretation were found for bare predicates, even though a different type of unstable adjective was used, this would be additional

²If we assume with de Swart et al. (2007) and Le Bruyn (2010) that capacities form an ontological category of their own, it seems to make more sense to say that capacity-level modifiers would be the most likely candidates for modifying bare predicates. However, it's not so clear what capacity-level modifiers are, or how exactly they differ from kind-level modifiers. This issue deserves further study, but I leave it aside for now.

support for the stability hypothesis. I therefore used stage-level adjectives instead of the evaluative adjectives I used in the weak definite questionnaire. The interpretation of stage-level adjectives is dependent on the situation with respect to which they are uttered: whereas a kind-level adjective like *electric* holds independently of the situation in which it's uttered, the interpretation of stage-level adjectives like *dirty* is much more temporally unstable. If you take any electric car (100a) is going to be true (unless you destroy it or greatly change it in a structural way), but if you take a dirty car, whether or not (100b) is still true tomorrow depends on the weather, whether there's someone who takes pleasure in washing it, etc. (see chapter 5 for a more detailed discussion of the lexical semantics of these and other types of adjectives).

- (100) a. This is an electric car.
b. This is a dirty car.

From the stability hypothesis it follows that bare predicates modified by kind-level adjectives will be significantly more acceptable than bare predicates modified by stage-level adjectives.

In addition, I added a cross-linguistic aspect, testing four different languages this time. The bare predicate questionnaire was run in Catalan, Dutch, Greek, and Brazilian Portuguese.³ Testing the same questionnaire in multiple languages allowed me to test the cross-linguistic validity of the stability hypothesis. The null hypothesis is that the conceptual requirements on bare predicates in these languages are similar, and therefore I predict that the results in the four language versions of the questionnaire will be the same. A second reason for testing these particular languages was that I used the bare predicate questionnaire to select control items for the bare singular questionnaire that I will report on in chapter 6, in which I tested the same languages. For that questionnaire I needed lower and upper baseline conditions to which the bare noun test conditions could be compared. I wanted the control conditions to contain items that were similar to bare nouns, so that the control items wouldn't be too obviously different from the test items. This is why I decided to use bare predicates rather than weak definites, which contain an article.

3.5.2 Participants

Nine native speakers of Greek filled in the Greek questionnaire, twenty-nine native speakers of Catalan filled in the Catalan questionnaire, twenty-five native speakers of Dutch filled in the Dutch questionnaire, and twelve native speakers of Brazilian Portuguese filled in the Brazilian Portuguese questionnaire.

³I thank Stavroula Alexandropoulou for her help in constructing and running the Greek version, Roberta Pires de Oliveira and Ana Elisa Costa Ferreira for running the Brazilian Portuguese version, and Raquel Santiago Batista for her help in translating the Catalan version.

3.5.3 Method and materials

In this questionnaire I tested the acceptability of sentence containing bare predicates in three modification conditions: unmodified bare predicates (101), bare predicates modified by a kind-level adjective (102), and bare predicates modified by a stage-level predicate (103).

- (101) Ik zie een vrouw die econoom is.
I see.1SG a woman that economist is.3SG
'I see a woman who is an economist.'
- (102) Ik zie een vrouw die financieel directeur is.
I see.1SG a woman that financial manager is.3SG
'I see a woman who is a CFO.'
- (103) Ik zie een vrouw die geïrriteerd accountant is.
I see.1SG a woman that annoyed accountant is.3SG
'I see a woman who is an irritated accountant.'

The way acceptability judgements were asked in this questionnaire differed from the weak definite questionnaire. Weak definites are ambiguous between the weak reading and the regular definite reading, which is why I used the roundabout way of asking how acceptable participants found the sloppy reading, which forces the weak interpretation. Bare predicates don't have this ambiguity problem, so the acceptability of bare predicate items can be targeted directly. The items in this questionnaire consisted of a short dialogue between a person A and a person B. A's sentence was always 'What do you see in the picture?', and B's answer contained the test item in bold font. Test items always had the structure *a man/woman who is [bare predicate]*. The test items were embedded in a carrier sentence which was always *I see....* The reason for using a dialogue was that I wanted to avoid participants interpreting the test items as headlines or captions, which are environments in which articles are naturally dropped for unrelated reasons. In the bare singular noun questionnaires, which I will report in chapter 6, the same setup was used.

For each item, participants were asked to rate the acceptability of B's sentence on a scale from 0 to 7. A full item thus looked like in (104a) (translation in (104b)):

- (104) a. A: Wat zie je op het plaatje?
B: **Ik zie een vrouw die econoom is.**
Hoe acceptabel vind je B's zin? Geef je antwoord aan op de schaal hieronder.
(totaal onacceptabel) 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 (totaal acceptabel)
- b. A: What do you see in the picture?
B: **I see a woman who is an economist.**

How acceptable do you find B's utterance? Indicate your response on the scale below.

(completely unacceptable) 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 (completely acceptable)

In each language version of the questionnaire 8 unmodified bare predicates and 14 stage-level modified bare predicates were tested. As there were some differences across languages as to how easy it was to construct kind-level modification items, the number of items tested in this condition differed slightly: in Catalan eleven items were tested, in Dutch and in Brazilian Portuguese thirteen, and in Greek sixteen. Apart from this difference the items that were used in each language were the same. For a full list of items that were used in each questionnaire see appendix B. Since this questionnaire was originally intended only as a pretest for the bare noun project (see chapter 6), no fillers or control items were used. In the Catalan, Greek and Dutch versions every participant saw every item. In the Brazilian Portuguese version the items were split over three lists, so participants saw only one third of the total number of items.

3.5.4 Procedure

The Brazilian Portuguese version was run as a pen-and-paper questionnaire in a classroom setting. For the other three languages participants received a link to the questionnaire made in Google forms and filled it in online. Participants were asked to judge the sentences on their acceptability as sentences of Catalan, Dutch, Greek or Brazilian Portuguese respectively, to follow their intuitions and to not reconsider previous responses. The complete instructions in each language can be found in appendix B.

3.5.5 Predictions

Based on the stability hypothesis, I predicted that unmodified bare predicates and bare predicates modified by kind-level adjectives, which denote stable properties, will be significantly more acceptable than bare predicates modified by stage-level adjectives, which denote unstable properties:

(105) **The stability hypothesis (bare predicates)**

The more stable the interpretation of an adjective, the more acceptable it will be as a bare predicate modifier. More specifically: kind-level adjectives are more acceptable than stage-level adjectives.

Under the assumption that the stability hypothesis holds cross-linguistically, this difference between kind-level and stage-level modification is predicted to occur in all four languages.

3.5.6 Analysis

Just like in the previous chapter I analysed the data using cumulative link mixed models (clmm) in the R software program (R development core team, 2008), using the ordinal package Christensen (2015). I first compared the log Likelihood values of all possible models, starting from the null model with no fixed factors, to see which model best fit the data. In all these models, Score was the dependent variable, and the model included random intercepts for both Subject and Item.

As there were too few datapoints in the Brazilian Portuguese dataset, adding the data from this language caused the model to crash as soon as Language was added as a fixed factor. I therefore chose to exclude the Brazilian Portuguese data from the statistical analysis, and I will only report the mean scores per condition for this language to give an indication of the results (see figure 3.1).

A chi square analysis of the log Likelihood values of M0, with no fixed factors and model M1, with Modification as a fixed factor showed that M1 was the better fit. I then compared this model to M2, which included both Modification and Language as fixed factors, and M2 turned out to fit the data better. Lastly, I compared M2 to M3, which also included the interaction between Modification and Language. M3 turned out to be the best model overall. This means that there was a significant main effect of both Language and Modification and a significant interaction effect. See table 3.1 for the details of the model comparisons.

Model	Fixed factor(s)	Random factors (intercept only)		
M0	-	Subject, Item		
M1	Modification	Subject, Item		
M2	Modification+Language	Subject, Item		
M3	Modification*Language	Subject, Item		

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-2983.1			
M1	-2934.0	98.266	2	<.0001
M1	-2934.0			
M2	-2930.8	6.341	2	=.0420
M2	-2930.8			
M3	-2911.2	39.122	4	<.0001

Table 3.1: Overview of models and model comparisons.

After having determined that M3 was the model that best fit the data, the next step was to look at the model summary for M3 to see the differences between the Language and Modification conditions that I'm interested in. I did this by resetting the intercept of each condition when necessary and then running the model again. The comparisons I'm interested in are the differences between Modification conditions per Language (see tables 3.2–3.4), and the differences between Languages per Modification condition (see table 3.5). See figure 3.2 for an overview of the results.

Let me start with the results in Catalan. The unmodified condition scored significantly higher than both the kind-level modification condition ($\beta=-1.0705$, $SE=0.3193$, $z=-3.353$, $p=.0008$) and the stage-level condition ($\beta=-5.6747$, $SE=0.3380$, $z=-16.790$, $p<.0001$). The kind-level modification condition in turn scored significantly higher than the stage-level condition ($\beta=-4.6042$, $SE=0.2861$, $z=-16.093$, $p<.0001$).

Comparison		β -estimate	Std. error	z-value	p-value
Unmodified	Kind-level	-1.0705	0.3193	-3.353	=.0008
Unmodified	Stage-level	-5.6747	0.3380	-16.790	<.0001
Kind-level	Stage-level	-4.6042	0.2861	-16.093	<.0001

Table 3.2: Overview of comparisons between modification conditions, Catalan.

In Dutch the results are similar: the unmodified condition scored significantly

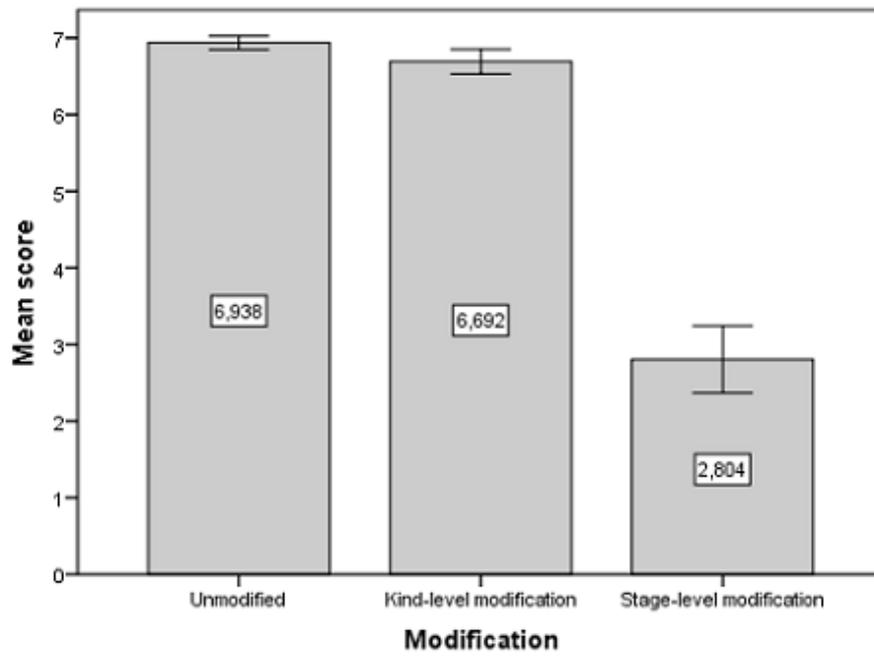


Figure 3.1: Overview of mean scores, by modification condition, Brazilian Portuguese.

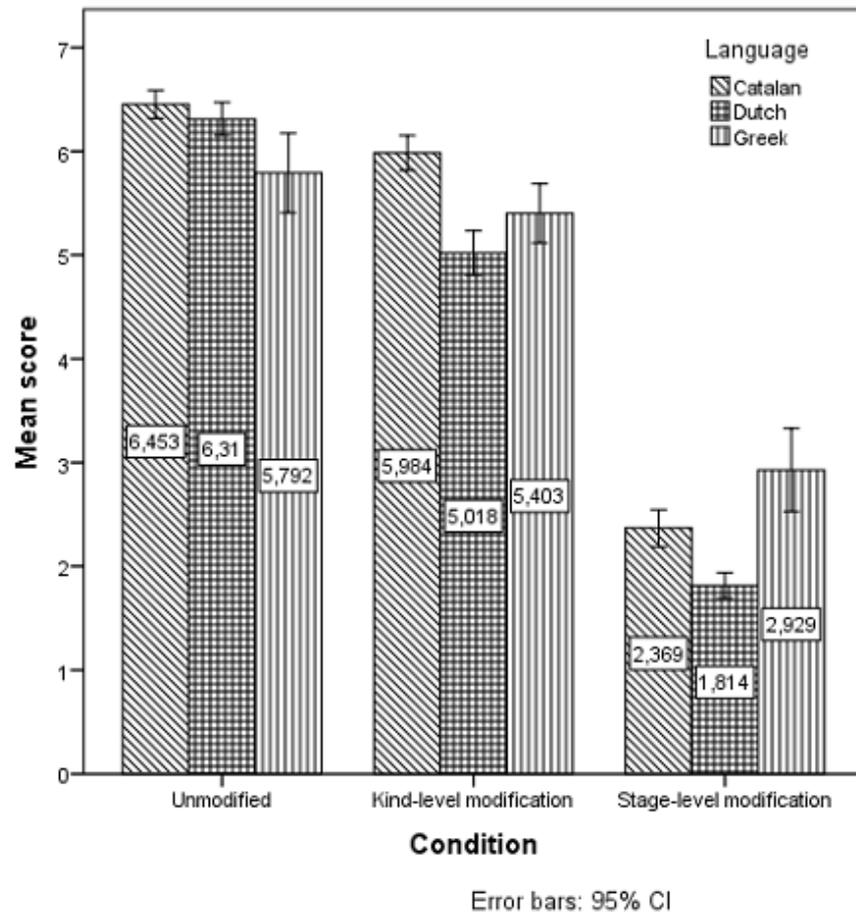


Figure 3.2: Overview of mean scores, by language and modification conditions, Catalan, Dutch and Greek.

higher than the kind-level condition ($\beta=-1.7519$, $SE=0.3121$, $z=-5.613$, $p<.0001$) and the stage-level condition ($\beta=-5.6227$, $SE=0.3362$, $z=-16.723$, $p<.0001$). The kind-level modification condition scored significantly higher than the stage-level condition ($\beta=-3.8708$, $SE=0.2745$, $z=-14.100$, $p<.0001$).

Comparison		β -estimate	Std. error	z-value	p-value
Unmodified	Kind-level	-1.7519	0.3121	-5.613	<.0001
Unmodified	Stage-level	-5.6227	0.3362	-16.723	<.0001
Kind-level	Stage-level	-3.8708	0.2745	-14.100	<.0001

Table 3.3: Overview of comparisons between modification conditions, Dutch.

In Greek the picture is slightly different, in that the unmodified condition and the kind-level modification condition didn't differ significantly from each other ($\beta=-0.6203$, $SE=0.3769$, $z=-1.646$, $p=.0998$). Both conditions scored significantly higher than the stage-level condition ($\beta=-3.9170$, $SE=0.4075$, $z=-9.612$, $p<.0001$ and $\beta=-3.2968$, $SE=0.3271$, $z=-10.080$, $p<.0001$, respectively).

Comparison		β -estimate	Std. error	z-value	p-value
Unmodified	Kind-level	-0.6203	0.3769	-1.646	=.0998
Unmodified	Stage-level	-3.9170	0.4075	-9.612	<.0001
Kind-level	Stage-level	-3.2968	0.3271	-10.080	<.0001

Table 3.4: Overview of comparisons between modification conditions, Greek.

Now let's turn to the differences between languages. In the unmodified condition the difference between Catalan and Dutch wasn't significant ($\beta=-0.8539$, $SE=0.4538$, $z=-1.882$, $p=.0599$). Catalan did score significantly higher than Greek ($\beta=-1.4765$, $SE=0.6290$, $z=-2.347$, $p=.0189$). The difference between Dutch and Greek wasn't significant though ($\beta=-0.6228$, $SE=0.6357$, $z=-0.980$, $p=.3273$).

In the kind-level modification condition Catalan did score higher than Dutch ($\beta=-1.5352$, $SE=0.4326$, $z=-3.549$, $p=.0004$). Neither Catalan nor Dutch differed significantly from Greek ($\beta=-1.0263$, $SE=0.6044$, $z=-1.698$, $p=.0895$, and $\beta=0.5089$, $SE=0.6081$, $z=0.837$, $p=.4027$, respectively).

Finally, in the stage-level modification condition Catalan didn't differ significantly from Dutch ($\beta=-0.8018$, $SE=0.4242$, $z=-1.890$, $p=.0587$), nor from Greek ($\beta=0.2813$, $SE=0.5944$, $z=0.473$, $p=.6361$). Catalan and Dutch didn't differ significantly either ($\beta=1.0829$, $SE=0.6060$, $z=1.787$, $p=.0740$).

Comparison		β -estimate	Std. error	z-value	p-value
Unmodified					
Catalan	Dutch	-0.8539	0.4538	-1.882	=.0599
Unmodified					
Catalan	Greek	-1.4765	0.6290	-2.347	=.0189
Unmodified					
Dutch	Greek	-0.6228	0.6357	-0.980	=.3273
Kind-level					
Catalan	Dutch	-1.5352	0.4326	-3.549	=.0004
Kind-level					
Catalan	Greek	-1.0263	0.6044	-1.698	=.0895
Kind-level					
Dutch	Greek	0.5089	0.6081	0.837	=.4027
Stage-level					
Catalan	Dutch	-0.8018	0.4242	-1.890	=.0587
Stage-level					
Catalan	Greek	0.2813	0.5944	0.473	=.6361
Stage-level					
Dutch	Greek	1.0829	0.6060	1.787	=.0740

Table 3.5: Overview of comparisons between languages, per modification condition.

Summing up, the differences between modification conditions per language are quite clear. Dutch and Catalan show the same pattern: unmodified > kind-level modification > stage-level modification. Greek differs slightly in that the unmodified and kind-level modification conditions didn't differ significantly: there the pattern is unmodified / kind-level modification > stage-level modification. The picture that emerges with respect to the differences between the three languages is basically that they don't differ that much. The only significant differences are that in the unmodified condition Catalan scores higher than Greek, and in the kind-level modification Catalan scores higher than Dutch.

The Brazilian Portuguese data also show clear differences between the unmodified and kind-level modified conditions on the one hand and the stage-level modification condition on the other hand. The difference between the unmodified and kind-level modification conditions is relatively small.

3.6 Discussion

Based on the stability hypothesis, which says that adjectives with a more stable interpretation will be more acceptable as bare predicate modifiers than adjectives with a less stable interpretation, my first prediction was that the kind-level modification condition would score significantly higher than the stage-level modification condition. My second prediction, based on the null hypothesis that

bare predication would be subject to the same conceptual restrictions in all of the languages I tested, was that this result would be present in all four languages. The results clearly show that both predictions were borne out.

Interestingly, in both Dutch and Catalan there was a detrimental effect of modification in general, similar to what we've seen with the weak definites in the previous chapter. In both languages not only the stage-level modification condition, but also the kind-level modification condition scored significantly lower than the unmodified condition. I will have more to say about this in chapter 6, as a similar effect occurred in the bare singular noun questionnaire. In Greek the difference between the unmodified and kind-level modification conditions wasn't significant. It could be that this has to do with the low number of Greek participants.

3.7 A note on adjective inflection

Before I conclude this chapter, I will discuss some data on the inflection pattern of adjectives modifying bare predicates, inspired by an observation by de Swart et al. (2007).⁴ In their discussion of bare predicates in Dutch these authors noted the peculiar inflection pattern of adjectives modifying bare predicates. Normally, adjectives modifying common nouns like *visser* ('fisherman') get *-e* inflection (106a). Without inflection on the adjective the sentence is ungrammatical (106b). In bare predicates the pattern is reversed: the sentence is only acceptable without inflection on the adjective (107a); the inflected version in (107b) is out.

- (106) a. Jan is een werkloze visser.
 Jan is.3SG an unemployed.[+INFL] fisherman
 'Jan is an unemployed fisherman.'
- b. *Jan is een werkloos visser.
 Jan is.3SG an unemployed.[-INFL] fisherman
 Int.: 'Jan is an unemployed fisherman.'
- (107) a. Jan is werkloos visser.
 Jan is.3SG unemployed.[-INFL] fisherman
 'Jan is an unemployed fisherman.'
- b. *Jan is werkloze visser
 Jan is.3SG unemployed.[+INFL] fisherman
 Int.: 'Jan is an unemployed fisherman.'

De Swart et al. explain these data by assuming that (i) Dutch bare predicates are NPs, whereas non-bare predicates are at least NumPs, and (ii) Dutch adjectival inflection is assigned in NumP. Since indefinites are at least NumPs,

⁴I thank Heidi Klockmann for the very useful discussions we had that led to this section.

they get inflected adjectives. The structure of bare predicates doesn't reach that high, so their adjectives remain uninflected.

When we take a cross-linguistic perspective, we see that this inflectional pattern is specific to Dutch. In the Romance languages that I looked at we don't see any inflectional differences between bare predicates and article predicates. In Brazilian Portuguese adjectives modifying bare predicates follow the standard inflection pattern, in this case getting feminine *-a* (108a), exactly the same as adjectives modifying indefinite predicates (108b).

- (108) a. Maria é professora aposentada.
 Maria is.3SG professor retired.[+FEM]
 'Maria is a retired professor.'
- b. Maria é uma professora aposentada.
 Maria is.3SG a professor retired.[+FEM]
 'Maria is a retired professor.'

The same holds for Catalan and Greek: in both the bare and the indefinite predicates the adjective gets feminine inflection.

- (109) a. La Maria és metgessa jubilada.
 the Maria is.3SG doctor retired.[+FEM]
 'Maria is a retired doctor.'
- b. La Maria és una metgessa jubilada.
 the Maria is.3SG a doctor retired.[+FEM]
 'Maria is a retired doctor.'
- (110) a. I Maria ine anaplirotria kathigitria.
 the Maria is.3SG substitute[+FEM] professor.
 'Maria is an associate professor.'
- b. I Maria ine mia anaplirotria kathigitria.
 the Maria is.3SG a substitute[+FEM] professor.
 'Maria is an associate professor.'

Based on these data we have to conclude that either the structure of Dutch and Romance/Greek bare predicates is different, or that adjectival inflection is located in different places in Dutch and in Romance/Greek.

An argument for the latter approach is that inflection in Dutch isn't just sensitive to grammatical gender but also to (in)definiteness: null inflection only occurs in neuter indefinites. Neuter definites and common indefinites both get *-e* inflection, as do common definites (see table 3.6 for an overview of the Dutch adjectival inflection paradigm). In the Romance languages adjectival inflection is sensitive to gender (and to number), but not to (in)definiteness. Similarly, Greek adjectival inflection is sensitive to case, gender, and number, but not to (in)definiteness (see tables 3.7 and 3.8 for an overview of the Brazilian

Portuguese, Catalan and Greek adjectival inflection paradigms)⁵. Assuming that sensitivity to the definite-indefinite distinction only becomes relevant in NumP, Dutch adjectival inflection would be located in NumP. Romance and Greek adjectival inflection, on the other hand, is located closer to the root noun. From the assumption that bare predicates are NPs cross-linguistically, it follows that adjectives modifying them get inflected in Romance and Greek, but not in Dutch.⁶

		Definite	Indefinite
Common gender	singular	-e	-e
	plural	-e	-e
Neuter gender	singular	-e	∅
	plural	-e	-e

Table 3.6: Overview of the adjectival inflection paradigm in Dutch.

		Definite	Indefinite
Feminine gender	singular	-a	-a
	plural	-as	-as
Masculine gender	singular	-o	-o
	plural	-os	-os

Table 3.7: Overview of the adjectival inflection paradigm in Brazilian Portuguese.

		Definite	Indefinite
Feminine gender	singular	-a	-a
	plural	-es	-es
Masculine gender	singular	∅	∅
	plural	-s	-s

Table 3.8: Overview of the adjectival inflection paradigm in Catalan.

Note also that the cross-linguistic inflection pattern we see in bare predication constructions also holds for regular adjectival predication. When pointing at a flower and saying that it's beautiful, in Dutch the adjective *mooi* ('beautiful') has to be uninflected (111a), even though *bloem* ('flower') is a common gender word and would normally get an inflected adjective. In Brazilian Portuguese

⁵The Greek paradigm is more complicated than the Romances ones, as adjectives inflect for case, and there are several different classes of adjectives with slightly different inflection patterns. These aren't relevant for the point I want to make here, so I merely illustrate the Greek paradigm by showing the inflection pattern for the adjective *omorfi* ('beautiful')

⁶See section 6.5.3 for a discussion of the inflection of adjectives modifying bare nouns.

		Definite	Indefinite
Feminine gender	singular	-i	-i
	plural	-es	-es
Masculine gender	singular	-os	-os
	plural	-i	-i
Neuter gender	singular	-o	-o
	plural	-a	-a

Table 3.9: Illustration of the adjectival inflection paradigm in Greek.

and Catalan *flor* ('flower') is a feminine word, and the adjective gets feminine inflection no matter the construction it occurs in (111b and 111c). The same holds for Greek, although now we're talking about an umbrella (*i obrela*) as flowers are masculine in Greek.

- (111) a. Die is mooi. Dutch
that is.3SG beautiful.[-INFL]
'That one is beautiful.'
- b. Aquela é bonita Brazilian Portuguese
that is.3SG beautiful.[+FEM]
'That one is beautiful.'
- c. Aquella és bonica. Catalan
that is.3SG beautiful.[+FEM]
'That one is beautiful.'
- d. Ine omorfi. Greek
is.3SG beautiful.[+FEM]
'That one is beautiful.'

There's a but to the Dutch story, though. Recall the bare predicate *ninja* example from section 3.2.3, repeated here for convenience. The bare predication sentence in (112a) is perfectly fine, but when it's modified by a stage-level adjective like *vrolijke* ('cheerful') it's unacceptable (112b). That is, unless it's uttered in a context like in (112c) which supports CHEERFUL NINJA as a relevant role.

- (112) a. Jonathan is ninja.
Jonathan is ninja
'Jonathan is a ninja.'
- b. Jonathan is vrolijke ninja.
Jonathan is cheerful ninja
'Jonathan is a cheerful ninja.'
- c. Context: we're playing a game in which two teams have to take each others citizens hostage. Each team has some upset ninjas, who can take hostages, and some cheerful ninjas, who can free hostages.

I gave this example to illustrate my argument that although usually (modified) bare predicates refer to culturally relevant social roles, in the right context anything can be established as a relevant role. What’s interesting for the purpose of this discussion is the fact that several native speakers of Dutch I consulted all agree that it should indeed be *vrolijke* and not *vrolijk* in (112b). People want the adjective to be inflected, even though I just argued that Dutch adjectival is located in NumP and that Dutch bare predicates are NPs. Thus, it looks like modification by a stage-level adjective introduces additional structure: the NumP level. This ties in with the idea that kind-level adjectives occur closer to the head noun than other types of adjectives, which is well-documented in the literature (Hetzron, 1978; Sproat and Shih, 1991; Cinque, 2010) and references he cites). Moreover, there is quite some literature that is concerned with adjective order and the various layers of nominal functional projections related to this Scott 2002; Laenzlinger 2005; Svenonius 2008. In this tradition, Beuseroy and Knittel (2012) assume a syntactic difference between kind-level adjectives (taxonomic adjectives, in their terminology) and other types of adjectives (which they call qualifying adjectives). In their analysis, the projections in which qualifying adjectives are located merge above NumP, whereas the projections which host kind-level adjectives merge below NumP. They use this to explain the distribution of adjectival modification in French activity nominals and event nominals. A similar assumption can be found in de Swart et al. (2005, p. 457): “[t]he only adjectives that occur in BPNs [bare predicate nominals] are those that modify the kind. Other adjectives modify the extension of the noun after application of the [*R*] operator to the kind”. This is in line with the assumption that the Carlsonian realization relation *R* (Carlson, 1977), which takes a kind and returns its object-level instantiation, is located in NumP (Déprez, 2005).

To sum up, there are reasons to predict that stage-level modification would raise the bare predication construction towards the NumP level. This does raise some interesting questions about the interplay between morphological/syntactic constraints, conceptual requirements, and the role of context. First of all, the question is why kind-level adjectives are located lower than other types of adjectives. Perhaps because the meaning of kind-level adjectives is independent of outside factors, unlike stage-level adjectives which depend on situations. One could argue that the syntactic consequence of the situation dependency of stage-level adjectives is that they require some more structure to be anchored (perhaps something like what Wiltschko, 2014 and Hachem, 2015 call the Anchoring Domain). Interestingly, though, in the way *vrolijke ninja* is used in (112c), the meaning of *vrolijke* seems to be more kind-level than stage-level. That is, it’s used to distinguish between types of ninjas in the game rather than to describe a temporary property of a ninja. Based on this you might expect that the adjective could remain at the NP level and that it would be uninflected, but apparently this is not how it works. Even though the context shifts the interpretation of *vrolijke* from a stage-level to a kind-level adjective, it remains in the stage-level location of NumP.

More research on the interaction of context, conceptual restrictions, and morpho-syntactic structure are necessary to settle these issues.

3.8 Conclusion

Let me put the results of this chapter in a wider perspective. I've now looked at the conceptual restrictions on two different constructions: weak definites and bare predicates. What these constructions have in common is that they both have a specialized meaning compared to their regular definite or indefinite predicate counterparts, but at the same time there are differences in the type of meaning that they express. We've seen that the enriched meaning of weak definites has to do with the typical use of entities that have a constant function, while bare predicates refer to established social roles. In this dissertation I attempt to make the commonality between the conceptual restrictions on weak definites, bare predicates and bare nouns more explicit, and more linguistically accessible, by putting it in terms of the linguistic notion of lexical semantic stability of adjectives. The result of this is the stability hypothesis.

In the previous chapter I reported the first questionnaire that I ran in order to experimentally test this hypothesis, setting up my method of eliciting native speaker acceptability judgements of weak definites in various adjectival modification conditions. In the current chapter I expanded this methodology, by testing a different type of unstable adjectives, and by adding a cross-linguistic perspective. My results in the previous and current chapters suggest that the stability hypothesis is on the right track: the predictions that it makes have now been confirmed for two different constructions, for two types of unstable adjectives, and in the case of the bare predicates for three different languages.

Everything is now in place for the final step in my research: to apply my method and hypothesis to a third weakly referential construction – bare singular nouns – again in several languages, and this time testing multiple adjectives with a stable interpretation as well as multiple adjectives with an unstable interpretation. In the next two chapters I will introduce the type of bare singular nouns that I focus on, and I will examine the conceptual restrictions and the way they interact with the lexical semantics of various types of adjectives in more detail. In chapter 6 I will present the bare noun questionnaires.

CHAPTER 4

Pseudo-incorporation of bare nouns as complements of HAVE-expressions

4.1 Introduction

In the previous two chapters I set up my method of using adjectival modification to probe the conceptual restrictions on weakly referential constructions. In chapter 2 I tested the stability hypothesis on weak definites in Dutch, comparing kind-level to evaluative modification. In chapter 3 I did the same for bare predicates, this time comparing kind-level modification to stage-level modification, adding a cross-linguistic aspect by running the same questionnaire in three different languages. The results were all in line with the stability hypothesis, suggesting that it is accurate cross-linguistically and holds universally for weakly referential constructions, despite the differences between the various constructions.

However, in order to really confirm the stability hypothesis, an additional step is necessary. As I noted at the end of the previous chapter, although in both the weak definite and the bare predicate studies the results were in line with the stability hypothesis, so far I only tested one type of adjectives with a stable interpretation: kind-level adjectives. This leaves some room for alternative explanations of the data. For instance, the data are also in line with a ‘kind-level modification vs. any other type of modification’ hypothesis. Looking at more different types of adjectives, and in particular adding additional stable adjectives, will enable me to test the stability hypothesis more carefully. To this end I now turn to bare singular nouns. As I’ve mentioned in the previous chapters, there’s a practical reason for using bare singulars to test a wider range

of adjectives on: the nouns that occur in this construction refer to concrete objects, which are easier to modify in various ways than the locations or social roles that weak definite and bare predicate nouns tend to refer to.

Before I go on, I should point out that there are several types of bare nouns. In fact, some bare nouns look a lot like weak definites, in the sense that they share characteristics such as sloppy identity in VP-ellipsis sentences, and meaning enrichment (see Carlson and Sussman, 2005; Aguilar Guevara, 2014, p. 24–25). This is the type that also occurs in English: *go to church*, *go to school*, *go to bed*, *be in prison* (see Stvan, 1998; de Swart and Zwarts, 2009 for some discussion). Expressions such as these occur in weakly referential constructions in many languages, but languages differ as to whether they use a weak definite construction or a bare noun construction. Compare the English bare noun in (113a) and the Dutch weak definite in (113b). Both sentences allow a sloppy identity reading in which Anna and Anqi each went to different churches, and in both sentences *went to church* you very easily get the enriched meaning that Anna and Anqi not just went to some church to hang out, but that they went there to attend mass.

- (113) a. Anna went to church and Anqi did too.
 b. Anna is naar de kerk geweest en Anqi ook.
 Anna is.3SG to the church be.PRT and Anqi too
 ‘Anna went to church and Anqi did too.’

In the rest of my dissertation I will leave this type of bare nouns aside. I will focus on the class of bare nouns that occur in pseudo-incorporation constructions (from now on I will refer to these bare nouns as *BNs*). Such constructions occur in a wide range of languages, including Hindi (Dayal, 2011), Danish (Asudeh and Mikkelsen, 2000), Niuean (Massam, 2001), Hungarian (Farkas and de Swart, 2003), Norwegian (Borthen, 2003), Catalan and Spanish (Espinal and McNally, 2011), Greek (Lazaridou-Chatzigoga and Alexandropoulou, 2013; Alexandropoulou, 2013), Brazilian Portuguese (Cyrino and Espinal, 2014), Romanian (Dobrovie-Sorin et al., 2006). For reasons that I will explain in section 4.2, within this class I will restrict myself to the subclass of BNs that has first been identified explicitly by Borthen (2003): BNs in the complement position of so-called HAVE-expressions, like *have*, *wear*, *use*, *buy*. An example would be the Norwegian sentence in (114), where *motor* occurs without a determiner, in the object position of the verb *har* (‘has’).

- (114) Denne bilen har stor motor.
 this car.DEF has big motor
 ‘This car has a big motor.’

BNs in this position occur in a subset of the languages mentioned above: in Norwegian (Borthen, 2003), in Catalan and Spanish (Espinal and McNally, 2011), in Greek (Lazaridou-Chatzigoga and Alexandropoulou, 2013; Alexandropoulou, 2013), in Brazilian Portuguese (Cyrino and Espinal, 2014), in Romanian (Dobrovie-Sorin et al., 2006). The nouns that occur as this type of BNs

are less restricted than those that occur in weak definites and bare predicates, and they are easier to modify, as they include concrete objects such as for instance pieces of clothing. This is in fact the main practical reason why I tested a wider range of adjectives on BNs than on weak definites or bare predicates.

We've seen in the previous two chapters that both weak definites and bare predicates are subject to some conceptual restrictions. In both constructions these restrictions have to do with the function (in a frame) or the social role the construction refers to and the extent to which this function or role is conceptually established. A similar restriction seems to hold for BNs, based on the fact that the literature is full of comments like the following:

“the resulting predicate must denote an action that is ‘institutionalized’ [...] the denotation of the incorporated verb phrase must be an action or event which is conventionally associated with a certain structure or set of activities.”

(Asudeh and Mikkelsen, 2000, p.5-6, on Danish BNs)

“A *conventional situation type* is a property, state, or activity that occurs frequently or standardly in a given contextual frame (e.g. in the macro social frame) and has particular importance or relevance in this frame as a recurring property-, state-, or activity type.”

(Borthen, 2003, p. 153-154, on Norwegian BNs)

“[Hindi pseudo-incorporation] appears to be restricted to those [_V NumP V] combinations in which the property denoted by the NumP can be considered, in some sense, a proto-typical theme for the activity denoted by V”

(Dayal, 2011, p.164, on Hindi BNs - *NumP* here refers to the BN)

What these descriptions have in common is that they all involve V+BN combinations that denote states or activities which are somehow established by convention as being culturally relevant.¹ As a generalization, we can say that something like cultural stability of a concept is required for it to be expressed by a V+BN construction, just as was the case for weak definites and bare predicates.

In my dissertation I aim to investigate conceptual restrictions from a linguistic point of view, so my primary research question is if such restrictions have a linguistic correlate. My hypothesis is that they do, and that we can see this by using modification as tool. In the previous chapters I have argued that the requirement of conceptual stability that holds for weakly referential constructions is carried over to the modification constraints that hold for them, and that by looking at the lexical semantics of the various types of adjectives that can or cannot modify these constructions we can get a clearer picture

¹Most of these examples come from discussions of BNs in languages which don't have the restriction to HAVE-verbs. In chapter 5 I will explore the differences between various sorts of BNs when it comes to conceptual restrictions in more detail.

of the nature of conceptual restrictions, from a linguistic perspective. More concretely, I formulated the stability hypothesis:

(115) **The stability hypothesis**

The more stable the interpretation of an adjective (across situations and speakers), the more acceptable it will be in a weakly referential construction.

In chapters 2 and 3 I already identified stage-level and evaluative adjectives as adjectives with a relatively unstable interpretation, as they are variable across situations and speakers/judges respectively. One of the diagnostics for the stage-level vs. individual-level contrast is the acceptability of frequency adverbials like *sometimes*. These are fine with stage-level properties like *hungry*, but weird with individual-level properties like *Mexican*:

- (116) a. Ana is sometimes hungry.
b. # Ana is sometimes Mexican.

Another type of adjectives which are unstable in some sense is the class of evaluative adjectives (Bierwisch, 1989; Bylinina, 2013), such as *beautiful* or *stupid*. The interpretation of these adjectives depends on whose opinion they express. I can truthfully utter this sentences about a particular song, while my friend might be lying if she uttered the same statement about the same song.

- (117) This song is beautiful.

Whereas stage-level adjectives lack stability over time, evaluative adjectives thus lack stability over judges/speakers.

I also identified kind-level adjectives as adjectives with a very stable interpretation. They are stable over time, as can be seen from the incompatibility of the kind-level adjective *Mexican* with a frequency adverbial in (116b), and stable over judges: the sentence in (118) is true no matter who says it.

- (118) Eefje is Dutch.

Color adjectives are another type of adjectives with a relatively stable interpretation. They are stable over time:

- (119) # This plate is sometimes red.

Unlike kind-level adjectives, color adjectives do involve some subjectivity in the sense that they're gradable (Kennedy and McNally, 2010). Their lexical semantics therefore involves a standard of comparison, and different people may choose a different standard. Note though that this is a different source of subjectivity than the judge dependency that is involved with evaluative adjectives. In fact, evaluative adjectives involve both sources of subjectivity. See chapter 5 for a detailed discussion of the lexical semantics of the four types of adjectives I introduced here.

The stability hypothesis reformulated for BNs is my primary hypothesis:

- (120) **Hypothesis 1** The more stable the interpretation of an adjective (across situations and speakers), the more acceptable it will be as a BN modifier.

Stage-level and evaluative adjectives are therefore predicted to be less acceptable as BN modifiers than color adjectives, which in turn are predicted to be less acceptable than kind-level adjectives. In the next chapter I will work out this hypothesis in more detail.

BNs as complements of HAVE-expressions occur in quite a wide range of languages. There is a clear cross-linguistic overlap in the sense that such constructions tend to get similar pseudo-incorporation analyses. Yet, as Borik and Gehrke (2015) note, when you look closer at the properties of these HAVE+BN constructions in various languages you will find cross-linguistic differences in how languages do pseudo-incorporation exactly. For instance, in section 4.2 we will see that Greek and Brazilian Portuguese differ with respect to the discourse referentiality of their BNs: Brazilian Portuguese BNs are not referential at all, whereas Greek BNs allow at least some discourse transparency. My second research question then is: if languages differ in this aspect, do they also differ in BN modification restrictions? And if they do, are these differences correlated? Since HAVE+BN constructions across languages seem to share the same underlying mechanism (pseudo-incorporation), you would expect this to result in similar modification restrictions. However, it is very well possible that languages differ in the extent to which they apply such restrictions. My working hypothesis is the following:

- (121) **Hypothesis 2** The more strictly a language adheres to other pseudo-incorporation properties, the more strict it will be about BN modification constraints.

In section 4.3 I will work this out in more detail.

Let me now turn to my last research question. In her discussion of BNs as complements of HAVE-verbs in Norwegian, Borthen (2003) points out a parallel between the verbs *ha* ('have') and *mangle* ('not have') and the prepositions *med* ('with') and *uten* ('without'): all of these can take BN complements.

- (122) a. Denne bilen har stor motor.
 this car.DEF has big motor
 'This car has a big motor.'
- b. Dette er en bil med stor motor.
 this is a car with big motor
 'This is a car with a big motor.'
- (123) a. Jeg fikk et brev som manglet frimerke.
 I got a letter that lacked stamp
 'I got a letter that didn't have a stamp.'

- b. Jeg fikk et brev uten frimerke.
 I got a letter without stamp
 ‘I got a letter without a stamp.’

She concludes that not only verbs, but also some prepositions can introduce a HAVE-relation and that if they do, they can take BN complements. The idea that there might be a parallel between the class of HAVE-verbs and *with* has remained relatively understudied, and there is not much cross-linguistic data on *with*+BN constructions (though see for instance Castroviejo et al., 2015 for an account of Spanish *sin* (‘without’)+BNs). As a working hypothesis I adopt the following:

- (124) **Hypothesis 3** If *with* pseudo-incorporates BNs in a similar way as HAVE-verbs do, then there should be no difference in modification restrictions between these two constructions.

In order to collect the data that are required to test the three hypotheses I outlined above, I ran a questionnaire to collect native speaker acceptability judgments of sentences containing HAVE+BN and *with*+BN constructions in various modification conditions. In chapter 6 I will present the details and results of this questionnaire. The rest of the current chapter I will use to develop my hypotheses in more detail, working towards the implementation of my questionnaire. First, in the next section I will give some background information on the phenomenon of pseudo-incorporation and its properties. In section 4.3 I will go on to give a more detailed overview of HAVE+BN constructions, first presenting the initial observations of Borthen on HAVE+BN constructions in Norwegian, then giving an overview of the data on and analyses of BNs in Catalan, Greek, and Brazilian Portuguese, the three languages I ran questionnaires in. In section 4.4 I discuss the parallel between BNs in the complement position of HAVE and BNs in the complement position of *with* in more detail.

In a sense this chapter lays the groundwork for the next chapter, in which I will turn to what is my main focus in this part of my dissertation: the conceptual restrictions on bare nouns. In chapter 5 I will first delve into the notion of and the literature on conceptual restrictions on bare nouns, and then I will look at the four types of adjectives I tested and discuss how their lexical semantics tie in with the conceptual restrictions. Together, chapters 4 and 5 form the build up towards chapter 6, in which I will present the questionnaires I ran and the statistical analysis of the results. Chapter 7 provides a discussion of what the results mean for my hypotheses.

4.2 Pseudo-incorporation

4.2.1 Introduction

In this section I’ll give a brief introduction of the notion of pseudo-incorporation. Noun incorporation in broad terms is the phenomenon of an argument becom-

ing part of the verb in some sense. Noun incorporation in a strict sense is the syntactic incorporation of a head noun into a verb (Mithun, 1984; Baker, 1988; van Geenhoven, 1998; Chung and Ladusaw, 2004). The often cited West-Greenlandic example in (125) shows the contrast between an unincorporated construction (125a) and one that involves noun incorporation (125b) (van Geenhoven, 1998):

- (125) a. Angunguu-p aalisagaq neri-v-a-a.
 Angunguaq-ERG fish.ABS eat-IND-[+TR]-3SG.3SG
 ‘Angunguaq ate the/a particular fish.’
 b. Arnajaraq eqalut-tur-p-u-q
 Arnajaraq.ABS salmon-eat-IND-[-TR]-3SG
 ‘Arnarajaq ate salmon.’

In (125a) the construction involves a standard transitive verb construction, with ergative case on the subject, absolutive case on the object, and object agreement on the verb. In the incorporation construction in (125b) the noun has become part of the verb, which has become intransitive. The subject has absolutive case, and there is no object agreement on the verb anymore.

The term pseudo-incorporation is used for constructions that are semantically similar to noun incorporation, but in which the incorporated element has more syntactic freedom than in noun incorporation constructions. In pseudo-incorporation not only nouns but also NPs can be incorporated (Massam, 2001; Dayal, 2011; Borik and Gehrke, 2015).

The HAVE+BN constructions that I’m interested in are cases of pseudo-incorporation. Evidence for this is the fact that BNs in these constructions can be modified by at least some types of adjectives, as the example from Espinal and McNally (2011) in (126) shows.

- (126) Per a aquest espectacle necessitareu faldilla llarga / escocesa /
 for to this event need-FUT skirt long / scottish /
 de quadres.
 plaid
 ‘For this event you will need a long skirt / a kilt / a plaid skirt.’

This means that the incorporated element is at least an NP. In the rest of this section I will discuss the semantic properties that are associated with pseudo-incorporation (although note that many of these are shared with noun incorporation).

4.2.2 Universal properties of pseudo-incorporation

First of all, if a language has a pseudo-incorporation construction, it will also have a full-fledged indefinite counterpart in which the argument occurs as a regular syntactic argument of the verb. I illustrate with examples from Hungarian ((Farkas and de Swart, 2003)):

- (127) a. Mari olvas egy verset.
 Mari read a poem.ACC
 ‘Mari is reading a poem.’
 b. Mari verset olvas.
 Mari poem.ACC read
 ‘Mari is reading a poem/poems.’

Hungarian has both a regular indefinite (127a) and a pseudo-incorporated BN (127b). Evidence for the pseudo-incorporated status of the BN in (127b) is that it occurs preverbally, rather than in standard argumental post-verbal position.

Pseudo-incorporation does not change the truth conditions of the sentence: in (127), if there is a poem that Mary is reading, both sentences are true. Pseudo-incorporated structures are generally interpreted as existential indefinite and non-specific.

Another pseudo-incorporation property which is shared across languages is that pseudo-incorporated nominals, unlike full-fledged indefinites, get obligatory narrow scope when there are other scope bearing elements in the sentence. An example from Hungarian is (128), again from Farkas and de Swart:

- (128) Mari nem olvas verset.
 Mari not read poem.ACC
 ‘Mari is not reading a poem/poems.’

The only possible interpretation of this sentence is that Mari didn’t read any poems, evidence that only a narrow scope interpretation is available.

4.2.3 Cross-linguistically variable properties of pseudo-incorporation

In other properties of pseudo-incorporation there is variation across languages. One such property is the referentiality or discourse transparency of the pseudo-incorporated noun. One of the tests that can be used as a diagnostic for this property is whether or not the BN can be modified by a non-restrictive relative clause. If it can, that is evidence that the BN is discourse referential (Potts, 2005).

Greek is a language which allows non-restrictive relative clause modification of BNs, as Alexandropoulou (2013) shows:

- (129) **Preceding context:**

I kiria vlazaki ekisghise oti ton perasmemo ianuario eghine
 the Ms. Vlazaki explained that the past January took.place
 sostiki anaskafi se simio tu dhromu pros to
 lifesaving excavation in point the.GEN street.GEN towards the

elikodhromio tis ghavdu i opia dhen ehi
 heliport the.GEN Gavdou.GEN the which not has
 oloklirothi
 been.completed

‘Ms. Vlazaki explained that last January there has been a lifesaving excavation at a point on the road to Gavdos’ heliport which has not been completed yet.’

apo ta prota stihia, fenete oti prokrite ya aghriki_i
 form the first evidence seems that has.to.do.with for cottage
pu ihe patitiri, to opio sozete se poli kali
 that had.3SG grape.stomper the which is.saved in very good
katastasi, ke i arheologi tin_i hronologhum to
 condition and the archeologists it.CL.ACC.FEM.SG date the
 150 p.h.
 150 B.C.

‘The first evidence shows that it is a cottage that had a grape stomper, which is preserved in a very good condition, and archeologists date it to 150 B.C.’

Succeeding context:

Otan oloklirothi i anaskafi tha ghini akrivis hronologhisi.
 when is.completed the excavation will happen precise dating

‘As soon as the excavation is completed, a precise date will be assigned to it (i.e. to the excavation).’

The fact that the BN *patitiri* (‘grape stomper’) is modified by a non-restricted relative clause *to opio sozete se poli kali katastasi* (‘which is preserved in a very good condition’) indicates that it is discourse referential at least to some degree.

In Catalan ((130a), from Espinal and McNally, 2011) and Brazilian Portuguese (130b), on the other hand, non-restrictive relative clauses are not allowed to modified BNs:

- (130) a. *Per fi hem trobat **pis**, **que** començarem a
 For final have.1SG found apartment that begin.FUT.1PL to
 reformar molt aviat.
 renovate very soon
- b. *Finalmente achamos **apartamento**, **que** a propósito
 finally find.1PL.PST apartment that to purpose
 vamos começar a renovar logo.
 go.1PL begin to renovate soon

‘Finally we found an apartment, which we will begin to renovate soon.’

There is evidence that even within languages discourse referentiality is a gradient rather than a binary property. In (175), the Greek BN *fusta* cannot be picked up by a personal pronoun (Lazaridou-Chatzigoga, 2011), which indicates that the BN isn’t referential.

- (131) Simera forai fusta_i. *Tis_i tin ekana dhoro
 today is.wearing/wears skirt to.her.CL the.ACC made present
 persi.
 last.year
 ‘She is wearing a skirt today. I gave it to her as a present last year.’

The conflicting results of the non-restrictive relative clause test and the personal pronoun test could mean that one of these tests is faulty. However, there are more data that suggest that discourse referentiality is not black-and-white. Additional evidence comes from Hungarian. In this language morphologically singular BNs are not discourse referential in the sense that they can’t be referred back to by an overt pronoun (132b). However, apart from overt pronouns Hungarian also has covert pronouns, and Farkas and de Swart report that some of their informants accept sentences like (132c), in which the morphologically singular BN is referred back to by a covert pronoun. This leads them to conclude that BNs are somewhere in between fully discourse referential and not referential at all.

- (132) a. János_i beteget_j vizsgált a rendelőben.
 J. patient.ACC_j examine.PAST the office.in
 ‘Janos patient-examined in the office.’
 b. ?? PRO_i Túl súlyosnak találta őt_j és beutaltatta
 PRO_i too severe.DAT find.PAST he.ACC_j and intern.CAUSE.PAST
 PRO_j a kórházba.
 PRO_j the hospital.in
 ‘He found him too sick and sent him to hospital.’
 c. PRO_i Túl súlyosnak találta **pro**_j és beutaltatta PRO_j
 PRO_i too severe.DAT find.PAST PRO_j and intern.CAUSE.PAST PRO_j
 a kórházba.
 the hospital.in
 ‘He found him too sick and sent him to hospital.’

Moreover, in some languages, such as Catalan and Spanish, BNs aren’t usually referential, but they can still sometimes be referred back to by personal pronouns. Espinal and McNally (2011) argue that in those cases the BN still doesn’t introduce a proper discourse referent, but the hearer accommodates one in the common ground. A similar observation has been made for Greek (Lazaridou-Chatzigoga, 2011).

In sum, the data indicate that not only are there cross-linguistic differences with respect to the discourse referentiality of pseudo-incorporated BNs, but even within languages this is a gradient property.

Another incorporation property that appears to be variable across languages is number neutrality. For Hungarian Farkas and de Swart show that regular singular DPs are incompatible with a predicate that comes with a non-atomicity entailment with respect to its object (133a), whereas incorporated nominals such as in (133b) can be used felicitously as the argument of such predicates. This indicates that the morphologically singular BN in (133b) is compatible with a plural reading, unlike its regular indefinite counterpart.

- (133) a. # Mari gyűjt egy bélyeget.
 Mari collect a stamp.ACC
 b. Mari bélyeget gyűjt.
 Mari stamp.ACC collect
 ‘Mari stamp collects.’
 ‘Mari is collecting stamps.’

(134) shows that morphologically singular BNs can also occur as the complement of a predicate that comes with an atomicity entailment (based on world knowledge):

- (134) Feri feleséget keres.
 Feri wife.ACC seek
 ‘Feri is looking for a wife.’

However, for Hindi Dayal (2011) argues that it’s not the incorporated BN that is number neutral, but that number neutrality arises as a result of aspectual factors.

- (135) a. anu-ne tiin ghanTe meN kitaab paRhii
 Anu-ERG 3 hours in book read-PFV
 ‘Anu read a book in three hours’ = exactly one book [Accomplishment]
 b. anu-ne tiin ghanTe tak kitaab paRhii
 Anu-ERG 3 hours for book read-PFV
 ‘Anu read a book for three hours’ = one or more books [Activity]

In (135a) the predicate has an accomplishment reading, and the BN *kitaab* (‘book’) is interpreted as strictly singular (a plural reading is not possible). In (135b), on the other hand, the predicate is an activity and both a singular and a plural interpretation of the BN are possible.

In Greek number neutrality doesn’t seem to be dependent on aspect like in Hindi, but Alexandropoulou (2013) shows that different number neutrality tests yield contradicting results. In (136) the BN can only get a singular interpretation, so based on this example you would conclude that Greek BNs are not number neutral.

- (136) Eho molivi.
 have.1SG pencil
 ‘I have a pencil.’ (not ‘I have pencils’)

Yet a different type of test, with a more elaborate context, yields the opposite result. The dialogue in (137a) shows that the BN *molivi* can be referred back to with both a singular and a plural expression, indicating number neutrality. In contrast, the singular indefinite *ena molivi* in (137b) is only compatible with a singular continuation, and the bare plural *molivya* in (137c) only with a plural continuation.

- (137) a. **A:** Pooo! dhen eho feri molivi! **B:** Eho eggho molivi
 damn not have.1SG brought pencil have.1SG I pencil
 na su dhoso; ena faber kastel. / ena faber kastel ki ena
 to you.CL give.1SG one Faber Castell / one Faber Castell and one
 mihaniko. (Ti protimas?)
 mechanical what prefer.2SG
A: ‘Damn! I haven’t brought any pencil! **B:** I got pencils to give
 you. One Faber-Castell. / One Faber-Castell and one mechanical
 pencil. What do you prefer?’
- b. **A:** Pooo! dhen eho feri molivi! **B:** Eho eggho ena
 damn not have.1SG brought pencil have.1SG I a
 molivi na su dhoso; ena faber kastel. / #ena faber
 pencil to you.CL give.1SG one Faber Castell / one Faber
 kastel ki ena mihaniko. (Ti protimas?)
 Castell and one mechanical what prefer.2SG
A: ‘Damn! I haven’t brought any pencil! **B:** I have a pencil to give
 you. One Faber-Castell. / #One Faber-Castell and one mechanical
 pencil. What do you prefer?’
- c. **A:** Pooo! dhen eho feri molivi! **B:** Eho eggho
 damn not have.1SG brought pencil have.1SG I
 molivya na su dhoso; #ena faber kastel. / ena faber
 pencils to you.CL give.1SG one Faber Castell / one Faber
 kastel ki ena mihaniko. (Ti protimas?)
 Castell and one mechanical what prefer.2SG
A: ‘Damn! I haven’t brought any pencil! **B:** I got pencils to give
 you. #One Faber-Castell. / One Faber-Castell and one mechanical
 pencil. What do you prefer?’

This leads Alexandropoulou to conclude that the number neutrality data in Greek are not as stable as those in for instance Hungarian. Just like we saw with discourse referentiality, the BNs number neutrality data do not only vary across languages, but in Greek they even differ depending on which number neutrality diagnostic you use. The same BN is only compatible with a singular reading in (136), whereas in (137) it can get both a singular and a plural interpretation.

As Alexandropoulou (2013) notes, a possible explanation for this is to assume, like van Geenhoven (1998) does for West-Greenlandic, that the number of the BN is fixed by the subsequent expression referring back to it. If this is a plural, the BN gets a plural reading, if it's a singular, the BN gets a singular reading. Another possible interpretation of these data Alexandropoulou suggests is that BN number neutrality data are sensitive to context. The sentence in (136) consists of a HAVE-verb+BN construction and nothing else, whereas in (137) a context is set up. Number neutrality data being sensitive to context wouldn't be surprising, as other aspects of incorporation seem to be context dependent as well. For instance, in Catalan and Norwegian the restrictions on which nouns can be incorporated depend on the context, as we'll see in chapter 5.

Whenever context plays a role, especially in cases such as in (136) vs. (137) where this role seems to be so big that context can completely turn around the judgment, we have to be cautious about making very black-and-white claims. The impact of context indicates that the judgments might not be so clear cut to begin with. See Keller (2000) for a similar claim that context sensitivity and gradient (rather than binary) grammaticality are related. If context plays such a big role in determining whether or not a BN is number neutral, this might very well mean that its number neutrality is not a binary but a gradient property.

4.2.4 Intermediate summary

Let me sum up the discussion so far. I discussed several characteristics of pseudo-incorporation that are shared cross-linguistically:

- (138)
1. having a full-fledged indefinite counterpart
 2. getting an indefinite, non-specific interpretation
 3. getting obligatory narrow scope

There are a couple of properties that seem to be common of pseudo-incorporation constructions, but not universal:

- (139)
1. reduced discourse referentiality
 2. number neutrality

Of course, the properties in (138) and (139) are related. If a pseudo-incorporated BN is not discourse referential, because it has an $\langle e, t \rangle$ denotation rather than an $\langle e \rangle$ denotation, it will not get a specific interpretation, nor will it be able to get wide scope. It also makes sense that a language will have a full-fledged indefinite alternative which could get wide scope. A property will also be more likely to be number neutral than an entity. The question then is why the properties in (138) seem to be less universal or more gradient than the ones in (139) (compare Borik and Gehrke's (2015) notion of *degrees of bareness*). The only way to answer this question is to study these properties in more detail

and, especially for the properties in (138), to collect more fine-grained data. Doing this for the properties in (139) would be beyond the scope of my dissertation, although I do provide some cross-linguistic data and comparison on number neutrality and discourse referentiality of BNs in section 4.3. Through the questionnaires that I will discuss in chapter 6, I did collect a large and cross-linguistic dataset on the property that is the main focus of my dissertation: the conceptual restrictions on pseudo-incorporation constructions. I will discuss this property in the next section.

4.2.5 Conceptual restrictions

The property of conceptual restrictions seems to fit somewhere in between the properties discussed in sections 4.2.2 and 4.2.3. It's a universal property in the sense that it comes back in every pseudo-incorporating language, but it is not exactly universal in the sense that it does so in different ways for different languages.

In some languages, such as Hindi, pseudo-incorporation is limited to a relatively small set of verb-noun pairs. As Dayal notes, pseudo-incorporation in Hindi is not fully productive and has a tendency towards idiomatic meaning. Furthermore, the conceptual constraints on Hindi pseudo-incorporation constructions seem to be purely based on cultural knowledge:

“it appears to be restricted to those [_V NumP V] combinations in which the property denoted by the NumP can be considered, in some sense, a proto-typical theme for the activity denoted by V”
(Dayal, 2011, p.164)

A language with a similarly culturally based conceptual restriction is Danish:

“the resulting predicate must denote an action that is ‘institutionalized’ [...] the denotation of the incorporated verb phrase must be an action or event which is conventionally associated with a certain structure or set of activities.” (Asudeh and Mikkelsen, 2000, p.5-6)

As I already touched upon in section 4.1 there's also a group of languages in which pseudo-incorporation is restricted in the verbal domain to so-called HAVE-predicates. Languages with pseudo-incorporation of this type are Norwegian (Borthen, 2003), Catalan and Spanish (Espinal and McNally, 2011), Greek (Lazaridou-Chatzigoga and Alexandropoulou, 2013; Alexandropoulou, 2013), Brazilian Portuguese (Cyrino and Espinal, 2014), and Romanian (Dobrovie-Sorin et al., 2006). Within the limits of this restriction to HAVE, these languages show quite a lot of productivity in verb-noun pairs. This is not to say that there are no restrictions on verb-noun combinations at all, but they appear to be more open to contextual manipulation. For instance, in Norwegian, according to Borthen, there is the constraint that the HAVE-relation has to be focused on relative to the rest of the context. In Catalan and Spanish, Espinal and

McNally argue that the HAVE-predicate+BN needs to be characterizing of the external subject in the local context. As an example they give (140):

- (140) # En Joan té joguina.
 DET Joan has toy
 ‘Joan has a toy.’

They note that out of the blue this sentence would be infelicitous, but in the right context, such as the following, it would be acceptable:

“Imagine that a nursery school teacher is organizing an activity for which each child in the group must have a toy. Just as the activity is about to start, the teacher checks to see which children have toys and which do not. In such a situation, (140) could be uttered as a confirmation that the child in question is ready to participate in the activity” [p. 102].

What these restrictions in languages with HAVE+BN constructions have in common is that they’re related to the local context of the discourse, rather than the global cultural context which is relevant for the Hindi conceptual restriction. Whereas the conceptual restriction in Hindi seems to have no ties to linguistics, the fact that discourse context plays an important role in Norwegian and Catalan conceptual restrictions shows that this is a phenomenon with its roots in pragmatics. From a linguistic point of view, that makes the conceptual restrictions in HAVE+BN languages more interesting than the conceptual restriction in Hindi.

This difference between languages like Hindi and HAVE+BN languages like Norwegian and Catalan seems to carry over to modification constraints, although data on modification of pseudo-incorporated BNs are sparse. Usually one or two examples are presented when authors want to show that the pseudo-incorporated nominal in the language they discuss is not an N but must be an NP. For instance, Asudeh and Mikkelsen give the following example for Danish:

- (141) Min nabo købte nyt hus sidste år.
 my neighbour bought new house last year

They note that “adjectival modification is only allowed insofar as it does not interfere with the pragmatic restriction on the institutionalized interpretation of the SNI [syntactic noun incorporation] construction” [p.4]. A similar observation for Hindi comes from Dayal (2011), who gives the examples in (142).

- (142) a. anu sirf puraanii kitaab becegii
 Anu only old book sell.FUT
 ‘Anu will only sell old books.’
 b. anu apne beTe ke-liye bahut sundar / paRhii-likhii laRkii
 Anu self’s son for very beautiful educated girl
 DhuunDh rahii hai
 search PROG be.PRS

‘Anu is looking for a very beautiful / educated girl for her son.’

She goes on to comment that “of course, there are certain types of modification and conjunction that are not acceptable in incorporation. For example, (142a) cannot have a modifier like *bhaarii* heavy. This is because modification must preserve proto-typicality, and while *old books* can enter into a prototypical relation with *sell*, *heavy books* cannot” [p.137]. Thus, in the languages with conceptual constraints on the pseudo-incorporation construction that are based on cultural knowledge, such as Danish and Hindi, there appear to be no modification constraints other than that modification has to be in line with the conceptual requirement that holds for the construction as a whole. That is, for these languages the conceptual restriction is applied at a global cultural level, and modification constraints seem to operate on that same non-linguistic level.

For the languages with a verbal restriction to HAVE, such as Catalan and Greek, it is not so clear what kind of modification constraints apply and whether or not these are culturally or linguistically driven. According to Espinal and McNally (2011) the general conceptual restriction on pseudo-incorporation constructions in Catalan is that the HAVE-predicate+BN needs to be characterizing of the external subject in the local context. Espinal (2010) discusses BN modification constraints in Catalan, but these do not seem to be related to the general characterizingness constraint. Rather, Espinal argues that only kind-level modification is acceptable, based on her claim that BNs in those languages denote properties of kinds. As an illustration, she gives (143a), with acceptable adjectives modifying the bare noun *faldilla* (‘skirt’), and (143b) with adjectives that are unacceptable (for details about her analysis and argumentation, see section 4.3.2).

- (143) a. Per a aquest espectacle necessitareu faldilla llarga / escocesa /
 for to this event need-FUT skirt long / scottish /
 de quadres.
 plaid
 ‘For this event you will need a long skirt / a kilt / a plaid skirt.’
- b. *Necessiten faldilla feta a Singapur / neta.
 need skirt made in Singapore / clean

In short, in HAVE-verb+BN languages the exact nature of restrictedness in pseudo-incorporation constructions is not clear. The fact that in HAVE+BN languages the conceptual requirement seems to be more context dependent than culturally based makes these languages the logical choice for studying the exact nature of the conceptual requirement from a linguistic perspective. Modification can be used as a tool, as by modifying the denotation of BNs in various ways we can get a better idea of where the limits of acceptability lie. The fact that pseudo-incorporation in HAVE+BN languages is relatively productive is an additional benefit of studying these languages, since this means that it’s easier to get a large enough dataset for experimental manipulation. For these reasons I

focused on HAVE+BN languages in the questionnaires I ran to collect BN modification data. For practical reasons within the class of HAVE+BN languages I limited myself to Catalan, Greek, and Brazilian Portuguese. In the next section I will discuss pseudo-incorporation in these three languages in more detail. In chapter 5 I will get back to the conceptual restrictions on pseudo-incorporation and how modification can be used to shed light on them.

4.3 The languages

In this section I will present the phenomenon of pseudo-incorporation and the main analyses that exist so far in the literature in the three languages I ran questionnaires in: Catalan, Greek and Brazilian Portuguese.

Before I turn to these three languages I will first discuss Borthen's (2003) observations on Norwegian BNs, as she was the first to note the relevance of the lexical class of HAVE-verbs in the BN literature, and her observations provide a good starting point for some of the discussion later on.

4.3.1 Norwegian

My focus is on BNs as complements of HAVE-predicates. The first to posit these predicates as a lexical class in relation to BNs was Borthen (2003). In her dissertation on Norwegian BNs she distinguishes four different constructions in which they occur, one of which is as arguments of HAVE-predicates.² These are predicates that introduce what Borthen calls a *profiled* HAVE-relation, which she defines as “an asymmetrical coexistence relation between two arguments, called *the possessor* and *the possessed*, where the possessor is *superior* to the possessed rather than the other way around” (p. 170). Apart from possession verbs like *ha* (‘have’), this class includes usage verbs like *ta/ha på(seg)* (‘wear (REFL)’), transfer of possession verbs like *gi* (‘give’), *kjøpe (seg)* (‘buy (REFL)’), and intensional verbs like *trengje* (‘need’) and *ønske seg* (‘want REFL’). Some examples:

- (144) a. Ola ønsker seg kopp med bilde av Mikke Mus.
 Ola wants REFL cup with picture of Mickey Mouse
 ‘Ola wants a cup with a picture of Mickey Mouse.’
 b. Han hadde rød ytterfrakk.
 he had red coat
 ‘He had a red coat.’

²The other three constructions are (i) the ‘conventional situation type’ construction (reminiscent of the Danish and Hindi style BN pseudo-incorporation involving typicality constraints rooted in the global cultural context), (ii) the ‘comparison of types’ construction, and (iii) the ‘covert infinitival clause’ construction. I will have some more to say about the ‘conventional situation type’ construction in chapter 5. The remaining two constructions I will ignore.

- c. Vi trenger nytt telt.
we need new tent
'We need a new tent.'
- d. Vi kan tilby billig bil med soltak til alle som deltar.
we can offer cheap car with sunroof to everyone who participates
'We can offer a cheap car with a sun roof to everyone who participates.'

Apart from HAVE-predicates, BNs in Norwegian are also licensed in existential constructions (145) and creation verbs (146).

- (145) Det er sykkel i garasjen.
there is bike in garage.DEF
'There is a bike in the garage.'
- (146) Han strikker genser.
he knits sweater
'He is knitting a sweater.'

There are three aspects of the constructions in (144) that deserve some more discussion. Firstly, the examples above show that not only verbs, but also the preposition *med* ('with') licenses BNs in these constructions ((150a) and (150d)). In addition, see the additional minimal pairs that she gives to reinforce this point below (repeated from (122) and (123)):

- (147) a. Denne bilen har stor motor.
this car.DEF has big motor
'This car has a big motor.'
- b. Dette er en bil med stor motor.
this is a car with big motor
'This is a car with a big motor.'
- (148) a. Jeg fikk et brev som manglet frimerke.
I got a letter that lacked stamp
'I got a letter that didn't have a stamp.'
- b. Jeg fikk et brev uten frimerke.
I got a letter without stamp
'I got a letter without a stamp.'

Borthen doesn't elaborate on this parallel between HAVE-verbs and *with*, but I will get back to this observation in section 4.4.

The second point of interest is that with respect to the HAVE-relation, Borthen adds that this in itself is not yet enough to license a BN: the HAVE-relation "has to be focused on, or *profiled*" (p. 168). This basically means that the HAVE-relation introduced by the predicate should be focused on relative to any other relations it introduces. This notion of profiling is very much context dependent. Borthen illustrates this with the following example:

- (149) a. Kari fikk kopp.
 Kari got cup
 ‘Kari got a cup.’
 b. ??/* Kari tok kopp.
 Kari took cup
 ‘Kari took a cup.’

(149a) is fine out of the blue, while (149b) isn’t. Even as a description of a situation in which Kari stole a cup it is not acceptable. Yet according to Borthen it can be made perfectly acceptable in the following scenario:

[T]he speaker is at a conference, and the conference participants have been allowed to take one of a set of conference souvenirs home, i.e. either a cup, a pen, or an umbrella. The cups, the pens, and the umbrellas are all the same and are placed on a table from which the participants can pick their desired type of souvenir. After she has picked a souvenir, someone asks the speaker what type of souvenir she took, and she answers with with (3b): *Jeg tok kopp*. In that context, (3b) is perfectly well-formed. One reason for this is that a type-emphasizing reading of the nominal object is made particularly likely because of the mention of the three types of things the conference participants were allowed to choose among. This shows that it is not the particular token that the speaker took, but the type of thing she took, that is relevant. Another important reason why (3b) becomes acceptable in the given context is that the have-relation is profiled; clearly, focus is more towards the final state of possession (*What type of object did she end up possessing?*) than towards the manner of achievement in the given context. [p.168-169]

The last point of interest is that it is clear from the examples in (144) (repeated below) that BNs as complements of HAVE-predicates in Norwegian can take various types of modifiers.

- (150) a. Ola ønsker seg kopp med bilde av Mikke Mus.
 Ola wants REFL cup with picture of Mickey Mouse
 ‘Ola wants a cup with a picture of Mickey Mouse.’
 b. Han hadde rød ytterfrakk.
 he had red coat
 ‘He had a red coat.’
 c. Vi trenger nytt telt.
 we need new tent
 ‘We need a new tent.’
 d. Vi kan tilby billig bil med soltak til alle som deltar.
 we can offer cheap car with sunroof to everyone who participates
 ‘We can offer a cheap car with a sun roof to everyone who partici-
 pates.’

Borthen doesn't say much about modification, apart from the observation (p. 175) that modification is relatively free (and that in general the descriptive content of the BN in this construction is not very restricted).

To sum up, Borthen was the first to discuss two important insights: (i) there seems to be a particular class of verbs (and the preposition *with*) which takes BN complements, and (ii) in this case the so-called HAVE-relation is somehow focused on in the discourse. In the next section I'll turn to the analysis of similar HAVE-verb+BN constructions in Catalan and Spanish of Espinal and McNally (2011), who were the first to formalize an incorporation semantics for these constructions.

4.3.2 Catalan & Spanish

Espinal and McNally (2011) discuss data that show that Catalan and Spanish BNs exhibit properties that have cross-linguistically been associated with pseudo-incorporation (see for instance Farkas and de Swart, 2003; Carlson, 2006). I will start with the universal properties of pseudo-incorporation I identified in section 4.2.4³

Firstly, BNs in Catalan and Spanish also have a regular indefinite counterpart:

- (151) a. Té apartament.
 have.3SG apartment
 ‘(S)he has an apartment.’ (I.e. (S)he is an apartment owner.)
 b. Té un apartament.
 have.3SG an apartment
 ‘(S)he has an apartment.’

Second, they get an indefinite, unspecific reading, as is evidenced from the fact that (151a) is translated with *(S)he is an apartment owner*.

Third, they have obligatory narrow scope when there are other scope bearing elements in the sentence, as is evidenced by the contrast in (152). In (152a) the only possible interpretation is the one in which the speaker is not looking for any apartments at all. If a singular indefinite is used, on the other hand, the wide scope interpretation in which the speaker is not looking for a particular apartment is also available (152b).

- (152) a. No busco pis.
 not look.for.1SG apartment
 ‘I'm not looking for an(y) apartment.’
 b. No busco un pis.
 not look.for.1SG an apartment

³All examples in this section are taken from Espinal and McNally (2011), unless otherwise indicated.

‘I’m not looking for an(y) apartment.’ / ‘There is an apartment I’m not looking for.’

Now let’s turn to the properties of number neutrality and discourse referentiality, which are more variable cross-linguistically.

Catalan and Spanish BNs appear to be number neutral (although recall that number neutrality data may be variable or gradient). (153) indicates that Catalan BNs (153a), unlike singular indefinites (153b) and bare plurals (153c), are number neutral: BNs are compatible both with a singular and a plural reading, whereas singular indefinites are only compatible with a singular reading, and bare plurals only allow a plural reading.

- (153) a. Busco pis. Un a Barcelona. / Un a Barcelona i
 look.for.1SG apartment. one in Barcelona / one in Barcelona and
 un a Girona.
 one in Girona.
 ‘I’m looking for an apartment. One in Barcelona. / One in Barcelona
 and one in Girona.’
- b. Busco un pis. Un a Barcelona. / #Un a Barcelona
 look.for.1SG an apartment. one in Barcelona / one in Barcelona
 i un a Girona.
 and one in Girona.
 ‘I’m looking for an apartment. One in Barcelona.’
- c. Busco pisos. #Un a Barcelona. / Un a Barcelona
 look.for.1SG apartments. one in Barcelona / one in Barcelona
 i un a Girona.
 and one in Girona.
 ‘I’m looking for apartments. One in Barcelona and one in Girona.’
- (154) a. Tinc compte bancari. A La Caixa.
 have.1SG account banking at La Caixa
 ‘I have a bank account. At La Caixa.’
- b. #Tinc compte bancari. Un a La Caixa i l’altre
 have.1SG account banking One at La Caixa and the.other
 al Santander.
 at.the Santander
 ‘I have a bank account. One at La Caixa and one at Santander.’
- (155) a. Veig una noia que porta anell. De diamants.
 see.1SG a girl who wear.3SG ring of diamonds
 ‘I see a girl who’s wearing a ring. A diamond one.’
- b. #Veig una noia que porta anell. Un de diamants i
 see.1SG a girl who wear.3SG ring one of diamonds and
 un d’or.
 one of.gold

‘I see a girl who’s wearing a ring. A diamond one and a gold one.’

- (156) a. Porta anell?
wear.3SG ring
‘Is s/he wearing a ring?’
- b. Sí que porta anell; en porta dos: un de diamants
yes that wear.3SG ring PART wear.3SG two one of diamonds
i un d’or.
and one of.gold
‘Yes, s/he’s wearing ring; s/he’s wearing two: a diamond one and a gold one.’

The other property that doesn’t appear to be universal is discourse referentiality. Espinal and McNally present several pieces of data that show that Catalan BNs are not discourse referential to individual entities. First they present the contrast in (157), which shows that unlike the indefinite *una faldilla* in (157a), the BN *faldilla* in (157b) cannot be referred back to by the personal pronoun *la*. Instead, the partitive pronoun *en*, which can only pick up a common noun denotation (that is, a property denotation), must be used (158).

- (157) a. Avui porta **una faldilla. La** hi vam
today wear.3SG a skirt it.ACC her.DAT PAST.1PL
regalar l’any passat.
give.present the.year last
‘Today she is wearing a skirt. We gave it to her as a present last year.’
- b. Avui porta **faldilla. #La** hi vam regalar
today wear.3SG skirt it.ACC her.DAT PAST.1PL give.present
l’any passat.
the.year last
‘Today she is wearing a skirt. We gave it to her as a present last year.’
- (158) Avui porta **faldilla. Li’n** vam regalar una
today wear.3SG skirt her.DAT.PART PAST.1PL give.present one
l’any passat.
the.year last
‘Today she is wearing a skirt. We gave her one as a present last year.’

As another piece of evidence, Espinal and McNally show that Catalan BNs cannot occur as subjects of secondary predicates, a position they argue requires a discourse referent:

- (159) a. Tinc cotxe (*a punt).
have car at point

- b. Tinc el cotxe a punt.
 have the car at point
 ‘I have the car ready.’

The last piece of evidence they present has to do with non-restrictive relative clauses, which as has been noted by Potts (2005) are only licensed by individual entities. Again, unlike indefinites, BNs do not license such clauses:

- (160) a. Per fi hem trobat **un pis**, **que** començarem a
 For final have.1SG found an apartment that begin.FUT.1PL to
 reformar molt aviat.
 renovate very soon
 ‘At last we have found an apartment, which we’ll begin to renovate
 very soon.’
- b. *Per fi hem trobat **pis**, **que** començarem a
 For final have.1SG found apartment that begin.FUT.1PL to
 reformar molt aviat.
 renovate very soon

The data in (157)-(160) all indicate that Catalan BNs are not discourse referential. However, Espinal and McNally also give the following examples, in which a personal pronoun appears to pick up a BN antecedent.

- (161) a. Per la festa es va posar **faldilla**. Se l’havia
 to the party CL PAST.3SG put.on skirt CL it.ACC.had
 comprat la tarda anterior.
 bought the afternoon before
 ‘She put on a skirt for the party. She had bought it the day before
 in the afternoon.’
- b. Ja tinc **pis**. **El** vaig comprar ahir.
 already have apartment it.ACC PAST.1SG buy yesterday
 ‘I already have an apartment. I bought it yesterday.’

They argue that these are cases of discourse referent accommodation. This may be so, but these examples do show that discourse anaphora data aren’t always so easy to interpret, and that the secondary predication and non-restrictive relative clause tests are more trustworthy. Based on those two tests we can conclude with Espinal and McNally that Catalan and Spanish BNs are not discourse referential.

The last property I’ll look at is that of the conceptual restrictions on the pseudo-incorporating predicate, the pseudo-incorporated BN, and the construction as a whole. In terms of restrictions on the predicate, Catalan and Spanish are similar to Norwegian: the set of verbs that license BNs includes verbs of possession *tenir/tener* (‘have’), usage verbs *portar/llevar* (‘carry’), transfer of possession verbs *comprar* (‘buy’), and intensional verbs *buscar* (‘look for’).

Additionally, the existential construction *hi ha/hay* also licenses BNs in these languages. A difference with Norwegian is that Catalan and Spanish creation verbs don't license BNs.

In section 4.2 I already briefly discussed what Espinal and McNally have to say about the restriction on pseudo-incorporation constructions as a whole. They argue that the HAVE-predicate+BN construction needs to be characterizing of the external subject in the local context. In their words:

the BN is licensed only if, in the specific context of use, the verb phrase denotes a CHARACTERIZING PROPERTY of the external argument [...] this property is not necessarily a prototypical, stereotypical or institutionalized property: an examination of the general cultural context is not sufficient to determine which exact combinations of V+Nare acceptable, as would be expected if the property had to be stereotypical or institutionalized. [...] what we mean for a property to be characterizing is that it is relevant in the context to distinguish between whether or not an individual has the property in question. [p. 101]

I will refer to as the *characterizing property requirement*. The example they give as an illustration of this requirement is (4.3.2):

- (162) # En Joan té juguina.
 DET Joan has toy
 'Joan has a toy.'

Out of the blue this sentence is infelicitous, but it would be acceptable in a context that makes it clear that it's relevant whether or not the subject has a toy:

“Imagine that a nursery school teacher is organizing an activity for which each child in the group must have a toy. Just as the activity is about to start, the teacher checks to see which children have toys and which do not. In such a situation, (4.3.2) could be uttered as a confirmation that the child in question is ready to participate in the activity” [p. 102].

It appears that Catalan and Spanish BNs are similar to the class of BNs as complements of HAVE-predicates in Norwegian in the sense that on top of the restriction to HAVE-predicates, there is an additional pragmatic constraint. In both Catalan/Spanish and Norwegian this constraint is context sensitive (see chapter 5 for discussion).

Finally, although Espinal and McNally don't present it as a pseudo-incorporation property, there appear to be modification constraints for BNs in Catalan and Spanish. They refer to Espinal (2010), who discusses some modification data as part of her argument that BNs don't denote singular individual entities.

Instead, she argues, BNs in Catalan and Spanish denote properties, on the level of N. They lack Number and DP and are thus number neutral. According to her they denote properties of kinds rather than properties of object-level individuals:

$$(163) \quad \llbracket N \rrbracket = \lambda P \lambda x^k [P(x^k)]$$

On the basis of (163), Espinal predicts that Catalan and Spanish BNs can only take modifiers that result in a subtype of the BN that is modified. I take this to mean that only kind-level modifiers are acceptable. In her own words:

“although BNs can be modified by Adjectives and PPs, these modifiers are subject to some restrictions. Semantically, BNs can only combine with classifying expressions that denote the (sub)type of entity which the N plus modifier can be predicated from. Thus, in the following examples all the modifiers have the common property that they do not apply to the set of individual entities that have the property contributed by the noun, but instead modify kinds of individuals, the classes denoted intersectively by the BN plus adjective or PP” (p. 988).

As examples of acceptable BN modification she gives the sentences in (164).

- (164) a. Per a aquest espectacle necessitareu faldilla llarga / escocesa /
 for to this event need.FUT skirt long / Scottish /
 de quadres.
 plaid
 ‘For this event you will need a long skirt/ a kilt / a plaid skirt.’
- b. Té parella estable / formal.
 has partner stable / formal
 ‘(S)he has a long-term partner.’
- c. A escola portàvem bata blava de ratlles.
 at school wore smock blue striped
 ‘At school we wore a blue striped smock.’

She goes on to show some unacceptable modification examples (165), arguing that the reason for their unacceptability is that they involve qualitative or descriptive adjectives, which modify individual entities rather than kind-level ones.

- (165) a. *Necessiten faldilla feta a Singapur / neta.
 need skirt made in Singapore / clean
- b. *Té parella alta / malalta.
 has partner tall / ill
- c. *A escola portàvem bata tacada.
 at school wore smock stained

The kind-level modification only constraint that Espinal argues for hinges on her claim that Catalan and Spanish BNs denote properties of kinds rather than of individuals (see (163)). However, as we will see below, Espinal and McNally (2011) are not explicit about what type of properties they denote, just that they are of type $\langle e, t \rangle$, nor do they say anything about restrictions on HAVE-verb+BN combinations in terms of kinds. There is only the *characterizing property requirement*. How this relates exactly to Espinal’s kind-level modification only constraint is an open question.

Based on the scope, number neutrality, and discourse referentiality data they’ve presented, Espinal and McNally argue that Catalan and Spanish BNs are instances of pseudo-incorporation. The analysis they propose is based on Dayal’s (2011) pseudo-incorporation analysis of Hindi BNs. They argue, just like Dayal does for Hindi BNs, that Catalan and Spanish BNs are modifiers of the verb rather than actual semantic arguments. That is, that they denote properties, unspecified for number. Assigning them a property denotation accounts for the narrow scope only data and the lack of discourse referentiality (and the fact that only the partitive pronoun *en* can refer back to a BN). The fact that these properties are not specified for number would account for the number neutrality data. Espinal and McNally formalize their proposal in terms of a lexical rule that only applies to HAVE-predicates, with a twofold function. Firstly, it suppresses the theme argument of the verb. The input of this rule says that the situation denoted by the verb (e) depends on the existence of an event involving a HAVE-relation (e') in some world w , with y as the havee (the theme argument). In the output the theme argument y is gone. There is still the entailment, from the lexical semantics of the verb, that it involves two participants. The participant corresponding to the suppressed theme argument is now referred to as $\theta(e)$. The result is that the verb no longer has an active theme argument – instead, the descriptive content of the BN is now expressed through predicate modification.

- (166) a. **Input**
 $\lambda y \lambda e [V(e) \wedge \theta(e)=y \wedge \exists w [C(w)][\exists e' [\mathbf{depend}(e, e', w) \wedge \mathbf{have}(e') \wedge \mathbf{havee}(e') = y]]]$
- b. **Output**
 $\lambda e [V(e) \wedge \exists w [C(w)][\exists e' [\mathbf{depend}(e, e', w) \wedge \mathbf{have}(e') \wedge \mathbf{havee}(e') = \theta(e)]]]$

The second part of the lexical rule is what they call *a condition on the use of the output of the rule*. This is the *characterizing property requirement* we’ve already seen in the discussion of restrictedness of the pseudo-incorporation construction above.

As the final part of their analysis, Espinal and McNally propose the following composition rule for combining the V (i.e. the output of the lexical rule given above) with a BN. This is necessary because the V, with its theme role suppressed, doesn’t have an argument slot anymore for the BN and so regular function application doesn’t work.

- (167) If $\llbracket V \rrbracket = \lambda e[\mathbf{V}(e)]$ and θ is an implicit role function defined for V , and if $\llbracket N \rrbracket = \mathbf{N}$, a property, then $\llbracket_V[VN] \rrbracket = \lambda e[\mathbf{V}(e) \wedge \mathbf{N}(\theta(e))]$.

This rule is restricted to verbs that don't select for an internal argument but for which a participant role (in addition to the one which will be contributed by the subject argument) is entailed as part of their lexical semantics. A noun in the complement position of such a verb is taken to denote a property and functions as a verb modifier.

Summing up, Espinal and McNally (2011) formalized a pseudo-incorporation account of Catalan and Spanish BNs, building on Borthen's (2003) observation that the class of HAVE-predicates is relevant for BNs. I will take their pseudo-incorporation semantics as a point of departure for the account of BN modification that I will present in chapter 5. In a sense nothing crucially hinges on this choice, since their account is underspecified for modification constraints. Of course, languages differ in the exact way they incorporate BNs, and the pseudo-incorporation semantics needs to be tailored to the specific needs of each language. A case in point is Greek, to which I'll turn in the next section, which has HAVE-verb+BN constructions that seem to be more liberal than their Catalan and Spanish counterparts. As we will see, this requires a modification of Espinal and McNally's semantics.

4.3.3 Greek

Just like in Catalan and Spanish, BNs in Greek have a full-fledged indefinite counterpart, and there is no difference in truth-conditions between the two. Both (168a) and (168b) are true if there exists a car that the speaker owns.

- (168) a. Eho aftokinito.
 have.1SG car
 'I have a car'
 b. Eho ena aftokinito.
 have.1SG a car
 'I have a car.'

BNs get an indefinite interpretation, as the translation of (169) shows (example from Alexandropoulou 2013).

- (169) Aghorasa firmato kostumi.
 bought.1SG branded suit
 'I bought a branded suit.'

Greek BNs also have the pseudo-incorporation property of obligatory narrow scope, as Alexandropoulou (2013) shows in (170).

- (170) a. Dhen aghorasa firmato kostumi.
 not bought.1SG branded suit
 'I did not buy a(ny) branded suit.'
 (only $\neg > \exists$)

- b. Dhen aghorasa ena firmato kostumi.
 not bought.1SG a branded suit
 ‘I did not buy a branded suit.’
 ($\neg > \exists$ or $\exists > \neg$)

As would be expected, Greek BNs show all three universal pseudo-incorporation properties. When we get to the more cross-linguistically variable properties of number neutrality and discourse referentiality, the data get more interesting. Firstly, the data on number neutrality are not so clear, as I’ve already touched upon in section 4.2. According to Alexopoulou and Folli (2010) Greek BNs are not number neutral, as they are only compatible with a singular reading in (171):

- (171) psahno aftokinito; # ena mikro gia tin poli ki ena
 look.for.1SG car one small for the city and one van
 fortighaki ya ekdromes
 for trips
 ‘I’m looking for a car. # A small one for the city and a van for trips.’

Alexandropoulou (2013) gives a similar example in which the BN *molivi* (‘pencil’) can only get a singular interpretation:

- (172) Eho molivi.
 have.1SG pencil
 ‘I have a pencil’ (not ‘I have pencils’)

However, the same BN is compatible with both a singular and a plural reading in a different number neutrality test. The example in (173a), repeated from (137), shows that the BN *molivi* can be referred back to with both a singular and a plural expression, indicating that it’s number neutral. In contrast, the singular indefinite *ena molivi* in (173b) is only compatible with a singular continuation, and the bare plural *molivya* in (173c) only with a plural continuation.

- (173) a. **A:** Pooo! dhen eho feri molivi! **B:** Eho egho molivi
 damn not have.1SG brought pencil have.1SG I pencil
 na su dhoso; ena faber kastel. / ena faber kastel ki ena
 to you.CL give.1SG one Faber Castell / one Faber Castell and one
 mihaniko. (Ti protimas?)
 mechanical what prefer.2SG
A: ‘Damn! I haven’t brought any pencil! **B:** I got pencils to give
 you. One Faber-Castell. / One Faber-Castell and one mechanical
 pencil. What do you prefer?’
 b. **A:** Pooo! dhen eho feri molivi! **B:** Eho egho ena
 damn not have.1SG brought pencil have.1SG I a

molivi na su dhoso; ena faber kastel. / #ena faber
 pencil to you.CL give.1SG one Faber Castell / one Faber
 kastel ki ena mihaniko. (Ti protimas?)
 Castell and one mechanical what prefer.2SG
A: ‘Damn! I haven’t brought any pencil! **B:** I have a pencil to give
 you. One Faber-Castell. / #One Faber-Castell and one mechanical
 pencil. What do you prefer?’

- c. **A:** Pooo! dhen eho feri molivi! **B:** Eho eggho
 damn not have.1SG brought pencil have.1SG I
 molivya na su dhoso; #ena faber kastel. / ena faber
 pencils to you.CL give.1SG one Faber Castell / one Faber
 kastel ki ena mihaniko. (Ti protimas?)
 Castell and one mechanical what prefer.2SG
A: ‘Damn! I haven’t brought any pencil! **B:** I got pencils to give
 you. #One Faber-Castell. / One Faber-Castell and one mechanical
 pencil. What do you prefer?’

Another example (Stavroula Alexandropoulou, p.c.) corroborates the data in (173):

- (174) Eho trapeziko loghariasmo, enan stin Eurobank ki
 have.1SG bank account, one.ACC at.the.ACC Eurobank and
 enan stin Alpha Bank.
 one.ACC at.the.ACC Alpha Bank
 ‘I have a bank account, one at Eurobank and one at Alpha Bank.’

As I’ve discussed in section 4.2, following Alexandropoulou (2013), there are two possible explanations for the conflicting results these two number neutrality tests give us. It could be that the expression which refers back to the BN in fact fixes the BN’s number. This is what van Geenhoven (1998) suggests happens in West-Greenlandic. It could also be that number neutrality data are sensitive to context.

Now I’ll turn to the referentiality data. In (175) Lazaridou-Chatzigoga (2011) gives the Greek equivalent to Espinal and McNally’s (2011) Catalan example (157), showing that the Greek BN *fusta* cannot be picked up by a personal pronoun in this sentence either.

- (175) Simera forai fusta_i. *Tis_i tin ekana dhoro
 today is.wearing/wears skirt to.her.CL the.ACC made present
 persi.
 last.year
 ‘She is wearing a skirt today. I gave it to her as a present last year.’

She also gives the following examples, which resemble Espinal & McNally’s (161), and suggests that other factors such as verb tense and adverbial modification play a role in the acceptability of the personal pronoun here. She also agrees with them though that accommodation might be at play.

- (176) a. Foruse pukamiso_i htes. To_i ihe aghorasi
 was.wearing.3SG shirt yesterday it.CL had.3SG bought
 sti varkeloni.
 in.the Barcelona
 ‘Yesterday he had a shirt on. He had bought it in Barcelona.’
- b. Meta apo enamisi mina vrikame spiti_i sto Hackney.
 after of one.and.a.half month found.1PL house in.the Hackney
 (pro_i) Ine arketa meghalo_i ke ehi iperohi thea!
 is enough big and has wonderful view
 ‘After one month and a half we found a house in Hackney. It is big
 enough and has a wonderful view!’

Since both Espinal and McNally and Lazaridou-Chatzigoga note that accommodation might be a factor in this kind of examples, I will disregard this diagnostic for the most part. More dependable perhaps are the secondary predication and non-restrictive relative clause diagnostics.

Alexandropoulou gives the following examples of Greek BNs that are acceptable as subjects of secondary predication. In this way Greek differs from Catalan and Spanish.

- (177) a. [...] dhyatheti ipologhisti katalilo ya naftilia [...]
 has computer suitable for sailing
 ‘it has a computer (that is) suitable for sailing’
- b. eho pedhi arosto.
 have.1SG child ill
 ‘I have a kid (who is) sick.’

The acceptability of these examples would suggest that Greek BNs are in fact argumental, of type <e>. However, in the example below *ipologhistis* (‘computer’) appears as the subject of a secondary predicate in a larger predicative construction, which on the contrary indicates an <e,t> type denotation.

- (178) a. Aftos ine ipologhistis katalilos ya naftilia.
 this is computer suitable for sailing
 ‘This is a computer (which is) suitable for sailing.’

In sum, the secondary predication data Alexandropoulou presents are inconclusive.

The non-restrictive relative clause test seems to give more clear results. Alexandropoulou gives the following example of a Greek BN, *patitiri* (‘grape stomper’), which is modified by a non-restricted relative clause *to opio sozete se poli kali katastasi* (‘which is preserved in a very good condition’).

- (179) **Preceding context:**

I kiria vlazaki ekisghise oti ton perasmeno ianuario eghine
 the Ms. Vlazaki explained that the past January took.place
 sostiki anaskafi se simio tu dhromu pros to
 lifesaving excavation in point the.GEN street.GEN towards the
 elikodhromio tis ghavdu i opia dhen ehi
 heliport the.GEN Gavdou.GEN the which not has
 oloklirothi
 been.completed

‘Ms. Vlazaki explained that last January there has been a lifesaving excavation at a point on the road to Gavdos’ heliport which has not been completed yet.’

apo ta prota stihia, fenete oti prokite ya aghrikia_i
 form the first evidence seems that has.to.do.with for cottage
pu ihe patitiri, to opio sozete se poli kali
 that had.3SG grape.stomper the which is.saved in very good
katastasi, ke i arheologi tin_i hronologhum to
 condition and the archeologists it.CL.ACC.FEM.SG date the
 150 p.h.
 150 B.C.

‘The first evidence shows that it is a cottage that had a grape stomper, which is preserved in a very good condition, and archeologists date it to 150 B.C.’

Succeeding context:

Otan oloklirothi i anaskafi tha ghini akrivis hronologhisi.
 when is.completed the excavation will happen precise dating

‘As soon as the excavation is completed, a precise date will be assigned to it (i.e. to the excavation).’

The fact that the BN can be modified by a non-restrictive relative clause is evidence for a <e> denotation of the BN.

I’ll conclude the discussion of the Greek discourse referentiality data with some data on doubling. Alexandropoulou shows that Greek BNs permit doubling (180). Doubling refers to the phenomenon of the incorporated BN being doubled by a full DP, in which case the BN apparently didn’t saturate the object argument of the verb, which suggest that the BN doesn’t have argumental status but functions as a property/a predicate modifier.

- (180) O kathighitis su ehi thio (ton ipurgho tis
 the teacher of.yours.CL has uncle the minister the.GEN
 pedhias).
 education.GEN
 ‘Your teacher has as an uncle the minister of education.’ or ‘Your teacher
 uncle-has the minister of education.’

Finally, I’ll turn to the data on the conceptual restrictions on Greek pseudo-incorporation constructions, again looking at verbal restrictions, restrictions on the construction as a whole, and modification restrictions. In terms of verbal restrictions, Greek is like Norwegian: it allows BNs as complements of possession verbs like *eho* (‘have’), usage verbs like *forao* (‘wear’), transfer of possession verbs *aghorazo* (‘buy’), and intensional verbs like *psahno* (‘look for’). In addition, both the existential construction *iparhi* (‘exists’) and creation/consumption verbs such as *ghrafo* (‘write’)/*kapnizo* (‘smoke’) license BNs in Greek (Alexandropoulou, 2013).

There are no data on any additional restrictions on the pseudo-incorporated construction as a whole, like Catalan has in the *characterizing property requirement*. Whether or not similar restrictions hold for Greek therefore remains an open question.

We don’t know much about modification restrictions in Greek: none of the authors who have worked on Greek BNs so far say anything explicit about modification restrictions. There are some data points, though, which suggest that modification is relatively free compared to modification of Catalan and Spanish BNs. Alexandropoulou (2013) gives examples of Greek BNs that are modified by kind-level adjectives (181), dimensional adjectives (182), and evaluative adjectives (183):

- (181) [...] foraye palestiniako madili
 was.wearing.3SG Palestinian bandana
 ‘s/he was wearing a Palestinian bandana’
 (adapted from the Hellenic National Corpus)
- (182) ehi psilo gomeno
 has tall boyfriend
 ‘s/he has a tall boyfriend’
 (adapted from Alexopoulou and Folli, 2010)
- (183) Ehtise oreo spiti.
 built.3SG nice house
 ‘S/he built a nice house.’
 (from Sioupi, 1999, as cited in Marinis, 2003)

Note that (182) is the counterpart of the Catalan sentence in (165b) (repeated for convenience), which Espinal (2010) gives as an example of unacceptable BN modification.

- (184) *Té parella alta / malalta.
has partner tall / ill

The data in (181)-(183) suggest that an analysis of Greek BNs must differ from that of Catalan and Spanish BNs in a way that reflects the difference in modification restrictions.

To summarize, the referentiality picture for Greek is a bit more complex than that of Catalan, in which all the diagnostics point towards a non-referential $\langle e,t \rangle$ type denotation. The secondary predication data in Greek are inconclusive, the non-restrictive relative clause data indicate an $\langle e \rangle$ type denotation, whereas the doubling data point towards an $\langle e,t \rangle$ denotation. Since apart from the number neutrality data Greek BNs have all the universal properties of pseudo-incorporation, Alexandropoulou (2013) concludes that overall a pseudo-incorporation analysis seems the best way to go, and that there is more evidence for a property denotation analysis of Greek BNs of type $\langle e,t \rangle$ than for an argumental analysis. Therefore an analysis along the lines of Espinal and McNally would be applicable, although she notes that future research is necessary to clear up the number neutrality and argumenthood data. She adopts a modified version of Espinal and McNally's semantics, that can also deal with the fact that in Greek BNs can be doubled by a full DP. This means that the semantics needs to contain a thematic argument that the DP can satisfy. Alexandropoulou's version therefore does not involve suppression of the theme argument of the pseudo-incorporating verb. Instead, the BN is treated as a modifier of the verb (similar to what Espinal and McNally do in their composition rule in (167), which is now part of the lexical rule), with the theme argument being left intact for the DP:

- (185) a. **Input**
 $\lambda y \lambda e [V(e) \wedge \theta(e)=y \wedge \exists w [C(w)][\exists e' [\mathbf{depend}(e, e', w) \wedge \mathbf{have}(e') \wedge \mathbf{havee}(e') = y]]]$
- b. **Output**
 $\lambda P \lambda y \lambda e [V(e) \wedge \mathbf{P}(\theta(e))=y \wedge \exists w [C(w)][\exists e' [\mathbf{depend}(e, e', w) \wedge \mathbf{have}(e') \wedge \mathbf{havee}(e') = \theta(e)]]]$

In (185) the input is exactly the same as in Espinal and McNally's (2011) version. In the output the verb combines with a property P (that would be the BN), which acts as a predicate modifier. The theme argument slot is left intact, unlike in Espinal and McNally's (2011) version, which can then be filled by the doubling DP (y).

4.3.4 Brazilian Portuguese

The analysis of Brazilian Portuguese BNs is complicated by the fact that this language allows BNs in regular argument position as well (Schmitt and Munn, 1999; Müller, 2002; Munn and Schmitt, 2005; Pires de Oliveira and Rothstein,

2011).⁴ BNs can occur in subject position of generic sentences (186b), and in object position of a wide range of verbs that includes but is not limited to the class of HAVE-verbs (Cyrino and Espinal, 2014). Apart from HAVE-verbs (187), verbs like *cantar* ('sing') (188) and *limpar* ('clean') (189) also allow BNs in their object position.

- (186) a. Crianças lêem revistinhas.
 children read.3PL comic.books
 'Children read comic books.'
 b. Criança lê revistinha.
 child read.3SG comic.book
 'Children read comic books.'
 (from Munn and Schmitt, 2005)

- (187) Maria teve carro.
 Maria had car
 'Maria had a car.'
 (from Cyrino and Espinal, 2014)

- (188) João cantava modinha.
 João sang popular.song
 'João sang popular songs'
 (from Cyrino and Espinal, 2014)

- (189) João limpava banheiro.
 João cleaned bathroom
 'João cleaned bathrooms.'
 (from Cyrino and Espinal, 2014)

Moreover, as can already be seen in for example (189), number marking on the nouns seems to be eroding, so a form like *banheiro* in (189) can be interpreted as a singular or a plural. A similar example is (190).

- (190) Eu vi criança na sala. E ela estava / elas estavam ouvindo.
 I saw child in.the room and she was / they were listening
 'I saw a child/children in the room. And she was/they were listening.'
 (from Munn and Schmitt, 2005)

Of course this is reminiscent of number neutrality, though Cyrino and Espinal (2014) also give the examples in (191), which illustrate that there can be a lack of number agreement between the article and the subject noun (191a) and between the subject noun and the verb (191b) as well. This shows that we're dealing with a more widespread phenomenon of erosion of number marking.

⁴Unless otherwise indicated, the examples and judgments in this section are from several native speakers of Brazilian Portuguese I consulted: Luana de Conto, Val Rammé, Ana Lúcia Pessotto.

- (191) a. Os brasileiro é trabalhador.
 the.PL Brazilian is hardworking.SG
 ‘Brazilians are hardworking.’
 b. Os brasileiro são trabalhadores.
 the.PL Brazilian are hardworking.PL
 ‘Brazilians are hardworking.’

What this comes down to is that if a language allows BNs in argumental positions, then it’s hard to tell whether its BNs in object position of HAVE-verbs are cases of pseudo-incorporation or whether they are regular arguments. In Catalan/Spanish and Greek we didn’t have this problem, since in those languages regular arguments tend not to be bare. For Brazilian Portuguese this means that it’s harder to use the standard pseudo-incorporation properties as tests to see whether BNs in the complement position of HAVE-verbs are cases of pseudo-incorporation. Even if there exists a separate class of pseudo-incorporated BNs, BNs in such positions will always be ambiguous between pseudo-incorporated BNs and regular argumental BNs. For instance, if it turns out that Brazilian Portuguese BNs do allow a wide scope reading, this is evidence that an argumental reading exists, but we can’t take it as evidence against a pseudo-incorporation reading. It might merely be the result of the two readings co-existing. Having said this, in what follows I’ll discuss each of the pseudo-incorporation properties from section 4.2 in turn, to the extent that the data are available. I will do this both for BNs as complements of HAVE-verbs and for BNs as complements of other verbs, to see if the former are a special class in Brazilian Portuguese as well.

I’ll start with the three universal pseudo-incorporation properties. The first of these is the availability of a full-fledged indefinite counterpart. The examples in (192) show that the indefinite counterparts to (186)-(189) are acceptable as well. Note that this holds for both the HAVE-verb *ter* (‘to have’) and for other verbs like *ler* (‘to read’), *cantar* (‘to sing’), and *limpar* (‘clean’).

- (192) a. Ela tá lendo uma revistinha.
 she is reading a comic.book
 ‘She is reading a comic book.’
 b. Maria teve um carro.
 Maria had.3SG a car
 ‘Maria had a car.’
 c. João cantava uma modinha.
 João sang.3SG a popular.song
 ‘João sang a popular song.’
 d. João limpava um banheiro.
 João cleaned.3SG a bathroom
 ‘João cleaned a bathroom.’

Second, do BNs in Brazilian Portuguese always get an indefinite, unspecific reading? The answer seems to be yes:

- (193) a. A menina tem bola.
 the girl has.3SG ball
 ‘The girl has a ball.’ (Not: ‘The girl has the ball’, nor: ‘There is a specific ball the girl has.’)
- b. O cachorro comeu meia.
 the dog ate.3SG sock
 ‘The dog ate a sock.’ (Not: ‘The dog ate the sock’, nor: ‘There is a specific sock the dog ate.’)
- c. O garçon quebrou copo.
 the waiter broke.3SG glass
 ‘The waiter broke a glass.’ (Not: ‘The waiter broke the glass’, nor: ‘There is a specific glass the waiter broke.’)

This seems to hold for verb classes across the board: for verbs of possession ((193a)), for consumption verbs ((193b)), and for causative transitive verbs like *quebrar* (‘to break’) ((193c)).

Third, do Brazilian Portuguese BNs always get a narrow scope reading? Again, the answer is yes, and again, it seems to hold across verb classes, for verbs of possession ((194a)), verbs like *read* ((194b)), and consumption verbs ((194c)).

- (194) a. O menino não tem figurinha de futebol.
 the boy NEG has.3SG figure of football
 ‘The boy doesn’t have any football cards.’ (Not: ‘There is a football card the boy doesn’t have.’)
- b. O aluno não leu livro.
 the student NEG read.3SG book
 ‘The student didn’t read any books.’ (Not: ‘There is a book the student didn’t read.’)
- c. O menino não comeu prato.
 the boy NEG ate.3SG dish
 ‘The boy didn’t eat any dishes.’ (Not: ‘There is a dish the boy didn’t eat.’)

In sum, Brazilian Portuguese BNs show all three universal pseudo-incorporation properties. It differs from Catalan and Greek in the sense that this pseudo-incorporation-like behaviour doesn’t seem to be restricted to the class of HAVE-verbs. Now let’s look at the more variable pseudo-incorporation properties of number neutrality and reduced discourse referentiality.

As to the first, Schmitt and Munn (1999), Müller (2002) and Cyrino and Espinal (2014) all claim that Brazilian Portuguese BNs are number neutral. Pires de Oliveira and Rothstein (2011) argue that strictly speaking BNs are

not number neutral, but rather pattern with mass nouns in denoting kinds and being derived from the root noun, which does not include semantic atoms. The example in (195), from Cyrino and Espinal (2014) shows that BNs as complements of verbs other than HAVE-verbs can get a number neutral interpretation: *banheiro* ('bathroom') can be referred back to by either a singular or a plural pronoun.

- (195) Eu limpei banheiro ontem. Deixei ele / eles bem
 I cleaned.1SG bathroom yesterday left.1SG it / them well
 brilhante(s).
 bright(.PL
 'I cleaned the bathroom/the bathrooms yesterday. I left it/them completely spotless.'

(196), the equivalent of the Catalan and Greek examples in (154) and (174) respectively, shows that the same holds for BNs as complements of HAVE-verbs: *conta* can be picked up either by a singular or a plural continuation.

- (196) a. Eu tenho conta. No Banco do Brasil.
 I have.1SG account at.the Banco do Brasil
 'I have a bank account. At Banco do Brasil.'
 b. Eu tenho conta. Uma no Banco do Brasil e uma
 I have.1SG account. One at.the Banco do Brasil and one
 no Citibank.
 at.the Citibank
 'I have a bank account. One at Banco do Brasil and one at Citibank.'

As to discourse referentiality, I will start with the data of the non-restrictive relative clause test. In this test Brazilian Portuguese seems to be like Catalan and unlike Greek in that it doesn't allow modification of the BN by a non-restrictive relative clause:

- (197) a. Finalmente achamos um apartamento, que a propósito
 finally find.1PL.PST an apartment that to purpose
 vamos começar a renovar logo.
 go.1PL begin to renovate soon
 'Finally we found an apartment, which we will begin to renovate soon.'
 b. * Finalmente achamos apartamento, que a propósito
 finally find.1PL.PST apartment that to purpose
 vamos começar a renovar logo.
 go.1PL begin to renovate soon
 'Finally we found an apartment, which we will begin to renovate soon.'

- (198) a. Primeiro, ele quebrou um vaso, que por sinal ele tinha
 first he broke.3SG a vase which through sign he had.3SG
 herdado do vô dele.
 inherited of.the grandpa of.his
 ‘First, he broke a vase, which he had inherited from his grandpa by
 the way.’
- b. *Primeiro, ele quebrou vaso, que por sinal ele tinha
 first he broke.3SG vase which through sign he had.3SG
 herdado do vô dele.
 inherited of.the grandpa of.his
 ‘First, he broke a vase, which he had inherited from his grandpa
 by the way.’

Again, this holds for BNs as complements of HAVE-verbs (197), and as complements of causative transitives like *quebrar* (‘break’) (198). This indicates that Brazilian Portuguese BNs are of type <e,t>.

Finally, the secondary predication test. Brazilian Portuguese is similar to Catalan in that BNs as subjects of secondary predicates are not very acceptable (200a). For Brazilian Portuguese this is not restricted just to BNs as complements of HAVE-verbs.

- (199) a. ?Ela tem carro pronto pra sair.
 she has.3SG car ready for leave
 ‘She has a car ready to go.’
- b. Ela tem um carro pronto pra sair.
 she has.3SG a car ready for leave
 ‘She has a car ready to go.’
- (200) a. ?Eu vi carro pronto pra sair.
 I saw.1SG car ready for leave
 ‘I saw a car ready to go.’
- b. Eu vi um carro pronto pra sair.
 I saw.1SG a car ready for leave
 ‘I saw a car ready to go.’

After having looked at Brazilian Portuguese BNs in terms of all these pseudo-incorporation properties, the following picture emerges. BNs in Brazilian Portuguese have all three of the cross-linguistically universal properties of pseudo-incorporation: an indefinite counterpart, an indefinite, non-specific interpretation, and obligatory narrow scope. Brazilian Portuguese BNs are also number neutral. With respect to discourse referentiality Brazilian Portuguese patterns with Catalan and is unlike Greek: BNs can’t be modified by non-restrictive relative clauses, nor can they occur in secondary predication. Both of these facts are evidence for an <e,t> type denotation.

Finally, let's look at the conceptual restrictions on Brazilian Portuguese BNs. Like I did for Catalan and Greek, I will look at verbal restrictions, restrictions on the pseudo-incorporated construction as a whole, and at modification restrictions. As to the verbal restrictions, Cyrino and Espinal argue that Brazilian Portuguese pseudo-incorporation is limited just like Catalan and Greek to the complement position of HAVE-predicates. As, we've seen, other predicates in Brazilian Portuguese also allow BNs, but those Cyrino and Espinal treat as full DPs, with argumental status and a null determiner. Their diagnostic for distinguishing between property type BNs in the complement of HAVE and argumental BNs elsewhere is the acceptability of third person pronouns referring back to the BN. They argue that property type BNs can only be referred back to by null pronouns, as they are not referential, whereas argumental BNs can be referred back to both by null pronouns and by personal pronouns. Cyrino and Espinal give examples in (201) to illustrate the contrast. What they say is that in (201a), the BN *maça* is number neutral, since the meaning conveyed by the predicate *ter maçã* ('have apple') is that "a characteristic property of the external argument in an appropriate context of use is to be an apple-haver, independently of the fact that this external argument may have one or more than one apple". In this case using a personal pronoun is unacceptable, only a null pronoun is allowed. In (201b), they argue, the BN doesn't get a number neutral interpretation but is in fact a fully referential DP, so it can be picked up by personal pronouns. As additional evidence for this interpretation they give (201c), in which the BN is the subject of a secondary predicate *na cesta* ('in the basket'). In order to occur in that position the BN must be a full DP, and we see that an anaphoric relation between the BN and a personal pronoun is permitted.

- (201) a. O João tem maçã. Comprou \emptyset / # ela / # elas ontem.
 the João has apple bought \emptyset it them yesterday
 'João has an apple (João is an apple-haver). He bought apples yesterday.'
- b. O João tem maçã. Comprou \emptyset / ela / elas ontem.
 the João has apple bought \emptyset it them yesterday
 'João has an apple/apples. He bought it/them yesterday.'
- c. O João tem maçã na cesta. Comprou \emptyset / ela / elas
 the João has apple in.the basket bought \emptyset it them
 ontem.
 yesterday
 'João has the apple/an apple/the apples/apples. He bought it/them yesterday.'

Cyrino and Espinal then apply this diagnostic to BNs in the complement position of several other verb classes: DO-unergatives (202a), unaccusatives (202b), and causative transitives (202c).

- (202) a. O João correu *maratona* este ano, e depois criticou \emptyset /
 the João ran marathon this year and then criticized \emptyset
 ela / elas.
 it them
 ‘João ran the marathon/marathons this year, but then he criticized
 it/them.’
- b. Vai chegar *parente* em casa e o João vai cumprimentar \emptyset /
 go arrive relative at home and the João go greet \emptyset
 ele / eles.
 it them
 ‘A relative/relatives is/are going to arrive at home, and João is
 going to greet him/them.’
- c. O João vai quebrar *copo* se colocar \emptyset / ele / eles no chão.
 the João go break glass if put \emptyset it them in.the floor
 ‘João is going to break a glass/glasses if he puts it/them on the
 floor.’

In all these sentences the BN can be referred back to by personal pronouns, unlike the number neutral interpretation of the BN in complement position of the HAVE-predicate in (201a). Based on this Cyrino and Espinal conclude that only HAVE-verbs take property type BNs. Interestingly, this conclusion seems to contrast with the fact that in the pseudo-incorporation tests I presented earlier in this section, I found no difference whatsoever between BNs in complement position of HAVE-verbs and BNs in complement position of other types of verbs: in both positions BNs behaved like typical pseudo-incorporated nouns. Future research will have to shed more light on whether or not Brazilian Portuguese BNs are subject to verbal restrictions.

With respect to conceptual restrictions on the pseudo-incorporation as a whole, not much has been said in the literature. Cyrino and Espinal seem to assume a characterizing property constraint, similar to the one Espinal and McNally (2011) propose for Catalan BNs, but they don’t develop this point in detail, so more research is needed on this matter. Not much has been said about modification restrictions either. As far as I’m aware Cyrino and Espinal are the only ones who mention modification. They seem to assume an approach similar to that of Espinal (2010) on modification of Catalan BNs: a BN like *vestido* (‘dress’), in a property type interpretation, only takes kind-level modification (‘classifying’, in their terminology) such as *de festa* (‘party’). Qualifying modification such as *novo* (‘new’) is not compatible with a property type interpretation.

- (203) a. Maria usa vestido *de festa* só quando as amigas compram
 Maria uses dress of party only when the.PL friends buy
 \emptyset / # ele de presenta para ela.
 \emptyset it of present for her
 ‘Maria wears a party dress, only when her friends buy one for her.’

- b. Maria usa vestido *novo só* quando as amigas compram
 Maria uses dress new only when the.PL friends buy
 \emptyset / ele de presenta para ela.
 \emptyset it of present for her
 ‘Maria wears a new dress, only when her friends buy one for her.’

In their words:

“Since *de festa* is not a modifier that makes it explicit we are talking about some specific dress, the subsequent discourse only allows a null object; third person pronouns are awkward when referring to property-type nominals. The BN is a bare NP and no reference is made to a specific individual token entity by means of such expression. Hence, the pronoun is disallowed to refer back to the BN in [(203a)]. In [(203b)], by contrast, the BN is modified by an adjective that denotes a property of token individual entities. This is demonstrated by the fact that the subsequent discourse allows the pronoun *ele* ‘it’ to refer to individual entities. The null object is allowed in either context, as expected.”

As they only mention this in passing, as additional support for the use of personal pronouns as a diagnostic for property denoting vs. full DP BNs, more data are necessary before we can really conclude anything about modification constraints on Brazilian Portuguese BNs.

Summing up, the data show that BNs in Brazilian Portuguese are very similar to those in Catalan. In both languages they show all three universal pseudo-incorporation properties (an indefinite counterpart, a non-specific reading, and obligatory narrow scope), and in addition in both languages they are number neutral and not discourse referential. The main difference we have seen so far is that whereas in Catalan this is strictly limited to BNs in the complement position of the class of HAVE-verbs, in Brazilian Portuguese it’s not so clear that there are any verbal restrictions.

4.3.5 Interim conclusions

I will end this discussion of the properties of BNs as complements of HAVE-verbs in the languages I’m looking at by summarizing my conclusions so far.

It is clear that there are differences between languages with respect to the properties of pseudo-incorporation I discussed in section 4.2, as summarized in table 4.1. The first three properties (having a full-fledged indefinite counterpart, getting a non-specific interpretation, and getting obligatory narrow scope) are the ones that are universal. Catalan, Greek, and Brazilian Portuguese all have these properties, although Brazilian Portuguese is the odd one out by also allowing BNs in argument position.

	Catalan	Greek	Brazilian Portuguese
full-fledged counterpart	✓	✓	✓/ ??
non-specific interpretation	✓	✓	✓
obligatory narrow scope	✓	✓	✓
number neutrality	✓	??	✓
reduced discourse referentiality	✓	??	✓
restrictedness on:			
verbs	✓	✓	??
construction as a whole	✓	no data	no data
modification	✓	??	no data

Table 4.1: Overview of pseudo-incorporation properties of BNs as complements of HAVE-verbs per language. ?? indicates that the data are inconclusive, *no data* indicates that no data or not enough data are available.

The properties of being number neutral and of having reduced discourse referentiality are common of pseudo-incorporation constructions, but not universal. The last property (conceptual restrictions on the pseudo-incorporating predicate, of the pseudo-incorporated noun or of the pseudo-incorporation construction as a whole, including modification restrictions) holds universally in the sense that it looks like every pseudo-incorporating language has this property, but languages differ in the exact nature of the conceptual restrictions. A case in point would be the cross-linguistic differences in the restrictions on pseudo-incorporating verbs we've seen so far: Catalan is very much restricted to only HAVE-verbs, Greek is a bit more liberal in that it also allows creation and consumption verbs, and Brazilian Portuguese might not have any restrictions on verbs at all. As to restrictions on the construction as a whole and on modification, a comparison of the three languages is not possible at this point, for lack of data in Greek and Brazilian Portuguese. The questionnaires that I will present in the next chapter will be a means to get such modification data. In the discussion of the questionnaire data I will get back to this point.

As a simple way of representing these cross-linguistic differences I propose a pseudo-incorporation scale, ranging from languages that conservatively adhere to the pseudo-incorporation properties as discussed in section 4.2 to languages that are more liberal. For the languages I discussed in the previous sections, such a scale would look like this:

(204) [strict] **Catalan** < **Brazilian Portuguese** < **Greek** [liberal]

I consider Greek a more liberal pseudo-incorporation language than Catalan and Brazilian Portuguese, since the Greek number neutrality data are not completely conclusive, and Greek BNs appear to have argumental tendencies, at least when it comes to the non-restrictive relative clause test. Brazilian Portuguese is placed higher than Catalan mainly because it seems to be less re-

stricted in the verbal domain.

4.4 The constructions

4.4.1 Introduction

So far, I have exclusively dealt with BNs in the object position of HAVE-verbs. However, I already briefly mentioned that Borthen (2003) noted that the Norwegian prepositions *med* ‘with’ and *uten* ‘without’ both allow for BN complements too, similar to HAVE-verbs in Norwegian, such as *ha* ‘to have’ and *mangle* ‘to not have’. She argues that these prepositions are very similar in meaning to HAVE-verbs, in that both constructions introduce a HAVE-relation.

- (205) a. Dette er en bil med stor motor.
 this is a car with big motor
 ‘This is a car with big motor.’
- b. Denne bilen har stor motor.
 this car.DEFSUFF has big motor
 ‘This car has a big motor.’
 (adapted from Borthen, 2003)

If Borthen is correct in that there is a semantic parallel between HAVE-verbs and *with(out)*, you would expect to see this in other languages as well. This prediction seems to be borne out, as it turns out that in all three of the languages I’m looking at *with(out)* can take BN complements as well:

- (206) A la plaça hi ha un cantant amb guitarra. **Catalan**
 at the square there is a singer with guitar
 ‘At the square there’s a singer with guitar.’
- (207) Hthes stin platia idha enan musiko me trombete. **Greek**
 yesterday at.the square saw.1SG a musician with trumpet
 ‘Yesterday at the square I saw a musician with a trumpet.’
- (208) Na praça tem um cantor com guitarra. **Brazilian Port.**
 on.the square is.3SG a singer with guitar
 ‘At the square there’s a singer with a guitar.’

Now the question is whether the fact that HAVE+BN constructions and *with(out)*+BN constructions look alike means that they share a similar semantics. Before I turn to this, though, it’s important to be precise about which use of *with(out)* the parallel with HAVE is hypothesized, since *with(out)* has many different uses.

4.4.2 Senses of *with(out)*

Kiss and Roch (2014) list several subsenses of German *mit* ('with') and *ohne* ('without'): CONDITIONAL, MODAL, PARTICIPATION, PRESENCE (see Kiss et al. 2014 for an exhaustive list). I'll give their definitions and examples for each of these in turn.

CONDITIONAL *with(out)* is used "when considering the (negative) condition or the prerequisite for another situation to happen". An example Kiss and Roch give is (209). The *without* clause expresses the antecedent of a conditional relation.

- (209) Denn **ohne** Transplantation wären vermutlich alle Personen
because **without** transplantation would.be presumably all persons
gestorben.
died
'Because presumably all persons would have died **without** a transplan-
tation.'

The use of MODAL (instrumental) *with(out)* "indicates that a device, a tool, or means is (not) used for a certain purpose":

- (210) Er öffnete die Tür **ohne** Schlüssel.
he opened the door **without** key
'He opened the door **without** a key.'

In this example the *without* clause modifies the verb *öffnete* ('opened'). PARTICIPATION (comitative) *with(out)* also modifies verbs. The difference with MODAL is that the latter expresses a direct use of something towards some objective, whereas in PARTICIPATION the relation that is expressed is something more like accompaniment. In the words of Kiss and Roch, PARTICIPATION is used to express "that two entities (animate or inanimate) are (not) being together, (not) being involved, or (not) acting together in an activity. The most general meaning is '(not) having or carrying something' ". An example is (211).

- (211) Bei der Kollision zog sich der **ohne** Helm fahrende
in the collision sustained REFL the **without** helmet driving
Mofalenker schwere Kopfverletzungen zu.
motorcyclist severe head.injuries SEPREF
'The motorcyclist who drove **without** a helmet sustained severe injuries
to the head in the collision.'

PRESENCE is used to indicate "the presence or absence of a thing, an attribute, or a property".

- (212) Das gleiche gilt für Gillette's zweite Leistung, die auf das Jahr
 the same holds for Gillette's second achievement the to the year
 1895 zurückgehende Erfindung eines Rasierapparates **mit**
 1895 dating.back invention a razor **with**
 auswechselbarer Klinge.
 replaceable blade
 'The same holds for Gillette's second achievement, the invention of a
 razor **with** a replaceable blade that dates back to the year 1895.

This sentence looks very much like Borthen's example in (205a) and the examples in (206)-(208). Of all the senses listed above, PRESENCE is the only one in which the *with(out)* clause modifies a noun. That is exactly what we need if we're looking for a *with*+BN construction parallel to HAVE+BN pseudo-incorporation constructions. HAVE denotes a relation between a haver and a havee, both of which would be nouns, so a *with(out)* parallel would have to have a BN complement (parallel to the havee), and would have to modify a noun (parallel to the haver).

The idea that it is the PRESENCE sense of *with(out)* that involves pseudo-incorporation of BNs just like HAVE does is corroborated by findings of Kiss and Roch. They did an extensive German corpus study on *mit* and *ohne* in the four subsenses mentioned above, looking at the influence of a variety of factors on the presence or absence of a determiner in the complement of these prepositions. Although the examples in (209)-(212) show that *with(out)* can take BN complements in each of these senses, Kiss and Roch's results show that in fact the CONDITIONAL, MODAL, and PARTICIPATION senses are more likely to take non-bare complements than PRESENCE. For *without* this contrast is a matter of PRESENCE having a higher ratio of bare vs. non-bare complements than the other three senses, although all four senses prefer bare complements. For *with* the contrast is more pronounced in that PRESENCE still prefers bare complements, but the other three senses prefer non-bare complements. In a French corpus study, Le Bruyn (2014) similarly finds that if *avec* ('with') occurs with a bare complement, it is almost always in the PRESENCE sense. I therefore assume that when we talk about *with(out)* as a parallel to pseudo-incorporating HAVE, we're actually only talking about PRESENCE *with(out)*.

Note that although so far I haven't distinguished between *with* and *without*, there is in fact some discussion as to whether these two prepositions should get a unified semantic analysis (Kiss and Roch and Le Bruyn have opposing views on this). Because of time constraints I had to limit myself in the questionnaires I used to collect data (see chapter 6) to one of the prepositions. I chose to focus on *with*, since the analysis of *without* is further complicated by the fact that it involves negation. In what follows I therefore leave *without* aside.

4.4.3 A pseudo-incorporation analysis of *with*

de Swart (2012) assumes a parallel between HAVE+BNs and *with*+BNs, and

extends Espinal and McNally's (2011) pseudo-incorporation analysis of Catalan/Spanish HAVE+BN combinations to *with*. I give her semantics in a slightly reformulated version:

- (213) a. **Input**
 $\lambda y \lambda P \lambda x [P(x) \wedge \exists e [\text{PRESENCE}(e) \wedge \text{Ext}(e) = x \wedge \text{Int}(e) = y \wedge \exists w [C(w)] [\exists e' [\text{Depend}(e, e', w) \wedge \text{Have}(e') \wedge \text{Havee}(e') = y]]]]]$
- b. **Output**
 $\lambda P \lambda x [P(x) \wedge \exists e [\text{PRESENCE}(e) \wedge \text{Ext}(e) = x \wedge \exists w [C(w)] [\exists e' \text{Depend}(e, e', w) \wedge \text{Have}(e') \wedge \text{Havee}(e') = \text{Int}(e)]]]$
- (214) If $\llbracket with \rrbracket = \lambda e [\text{PRESENCE}(e)]$ and θ is an implicit role function defined for PRESENCE, and if $\llbracket N \rrbracket = N$, a property, then $\llbracket [with N] \rrbracket = \lambda e [\text{PRESENCE}(e) \wedge N(\theta(e))]$.

In order to be really certain that this parallel analysis of the two constructions is on the right track, it would be useful to see how *with* behaves in terms of the pseudo-incorporation properties from section 4.2. More specifically, since there are cross-linguistic differences for at least some of these properties, we'd need a comparison of HAVE and *with* per language.

Catalan

Just like in the HAVE-verb construction, Catalan has an indefinite counterpart to the bare version in (206) in (215):

- (215) A la plaça hi ha un cantant amb una guitarra.
 at the square there is a singer with a guitar
 'At the square there's a singer with a guitar.'

The *with* construction doesn't allow very well for scope testing, so this property is hard to compare across constructions. The translation of (206) shows that the BN gets an unspecific, indefinite reading, though.

Number neutrality also seems to work the same in the *with* construction as in the HAVE construction: the BN *medalla* ('medal') can be picked up both by a singular and by a plural in the continuation, but only given the right context. For instance, if you're sorting out the swimmers in the Netherlands depending on whether they have won at least one medal (Toni Bassaganyas, p.c.).

- (216) a. És un nedador amb medalla... una d'or als Jocs
 is.3SG a swimmer with medal one of.gold at.the games
 Olímpics.
 olympic
 'He's a swimmer with a medal... a gold one at the Olympics.'
- b. És un nedador amb medalla. Una d'or als Jocs
 is.3SG a swimmer with medal one of.gold at.the games
 Olímpics i una de plata a la copa del món.
 olympic and one of silver at the cup of.the world

‘He’s a swimmer with a medal. A gold one at the Olympics and a silver one at the world cup.’

Finally, somewhat surprisingly the BN in the complement position of *with* is acceptable even when modified by a non-restrictive relative clause in (217b). However, there appears to be some sort of garden path effect where the first, preferred interpretation is that the relative clause modifies the indefinite *un cantant* (‘a singer’), rather than the BN *guitarra* (‘a guitar’) (Toni Bassaganyas, p.c.).

- (217) a. A la plaça hi ha un cantant amb una guitarra, que per cert sembla ben bé la que té la Maria.
 at the square there is a singer with a guitar that for certain look.3SG well good it that has.3SG the Maria
 ‘At the square there’s a singer with a guitar, which by the way looks just like the one Maria has.’
- b. A la plaça hi ha un cantant amb guitarra, que per cert sembla ben bé la que té la Maria.
 at the square there is a singer with guitar that for certain look.3SG well good it that has.3SG the Maria
 ‘At the square there’s a singer with a guitar, which by the way looks just like the one Maria has.’

In summary, it appears that BNs in the complement position of *with* behave similarly to BNs in the complement position of HAVE in the various pseudo-incorporation diagnostics, with the possible exception of the non-restrictive relative clause test.

Greek

In Greek as well, the BN in (207) has an indefinite counterpart in (218):⁵

- (218) Hthes stin platia idha enan musiko me mia trombeta.
 yesterday at.the square saw.1SG a musician with a trumpet
 ‘Yesterday at the square I saw a musician with a trumpet.’

Just like its Catalan counterpart, the BN in (207) gets an indefinite, non-specific interpretation.

In the right context, Greek BNs in the complement position of *with* can get a number neutral interpretation:

- (219) I Maria ine ena kalo paradhigma: (dhulevi para poles ores
 the Maria is.3SG a good example works.3SG very many hours
 ke) ine mia sklira erghazomeni mitera ke sizighos me pedhi.
 and is.3SG a hard working mother and wife with kid
 Ehi mia eksahroni kori ke enan trihrono bobira.
 has.3SG a 6-year-old daughter and a 3-year-old toddler

⁵Judgments in this section are from Stavroula Alexandropoulou, p.c.

‘Maria is a good example: (she works many hours and) she is a hard working mother and wife with kids. She has a six year old daughter and a three year old toddler.’

Finally, just like their counterparts in the complement position of HAVE, Greek BNs in the complement position of *with* can be modified by a non-restrictive relative clause, indicating that they are discourse referential:

- (220) Hthes stin platia idha enan musiko me trombeta, i
 yesterday at.the square saw.1SG a musician with trumpet the
 ipia itan ke ble.
 which was.3SG and blue
 ‘Yesterday at the square I saw a musician with a trumpet, which was even blue.’

In sum, in Greek BNs behave exactly the same in the pseudo-incorporation diagnostics, no matter whether they appear in the complement position of HAVE or of *with*.

Brazilian Portuguese

Finally, let’s look at Brazilian Portuguese.⁶ First of all, (208) has a full-fledged indefinite counterpart in (221):

- (221) Na praça tem um cantor com uma guitarra.
 on.the square is.3SG a singer with a guitar
 ‘At the square there’s a singer with a guitar.’

Moreover, the BN in (208) gets an indefinite, non-specific interpretation.

BNs in the complement position of *with* are number neutral as well:

- (222) Lá tem uma mulher com criança. Uma de 7 anos e outra
 there have.3SG a woman with child one of 7 years and other
 de 14.
 of 14
 ‘There is a woman with children. One of 7 years old and one of 14 years old.’

And finally, just like their counterparts in the complement position of HAVE, BNs in the complement position of *with* can’t be modified by a non-restrictive relative clause, indicating that they aren’t discourse referential:

- (223) a. Ali na praça tem um cantor com uma guitarra, que
 there on.the square is.3SG a singer with a guitar which
 por sinal é igual àquela que a Maria tem.
 through signal is equal to.that that the Maria has.3SG
 ‘At the square there’s a singer with a guitar, which by the way looks just like the one Maria has.’

⁶Judgments in this section are from Luana de Conto, p.c.

- b. *Ali na praça tem um cantor com guitarra, que
 there on.the square is.3SG a singer with guitar which
 por sinal é igual àquela que a Maria tem.
 through signal is equal to.that that the Maria has.3SG
 ‘At the square there’s a singer with a guitar, which by the way
 looks just like the one Maria has.’

Brazilian Portuguese BNs behave exactly the same in the complement position of *with* and the complement position of HAVE.

Summing up the cross-linguistic picture, in Greek and Brazilian Portuguese there was no difference whatsoever between BNs in the complement position of HAVE and in the complement position of *with*. In Catalan there was almost no difference with the possible exception of the non-restrictive relative clause test: BNs in the complement position of HAVE seem to not allow modification by non-restrictive relative clauses at all, whereas this seemed to be acceptable for the *with*+BN construction in (217b). However, my informant noted that that might be due to accommodation of a discourse referent. More data are necessary to confirm this. For now I will set that issue aside, and conclude that the data of the pseudo-incorporation diagnostics show that there is indeed a parallel between HAVE+BN constructions and *with*+BN constructions.

4.5 Conclusions

In this chapter I introduced the three research questions I want to answer in the part of my dissertation on BNs. My main research question concerns the nature of the conceptual restrictions on pseudo-incorporated BNs. I proposed that there are two main types of conceptual restrictions we see in the pseudo-incorporation literature. There are languages like Hindi and Danish, in which pseudo-incorporation is limited to a rather fixed class of culturally relevant concepts, and languages like Norwegian and Catalan, in which pseudo-incorporation is limited in the verbal domain to the class of HAVE-predicates but otherwise relatively productive, with restrictions based on contextual rather than cultural relevance. I chose to focus on this latter class of languages, as the productivity of pseudo-incorporation in these languages makes studying the conceptual restrictions easier.

With the stability hypothesis I assume that there is an interaction between language and world knowledge, which is reflected in and can therefore be captured by modification. In the next chapter I will present a more detailed discussion of conceptual restrictions and how they relate to the notion of stability, working out my hypothesis in more detail. I will also explain the role modification plays in testing conceptual restrictions experimentally. In the current chapter I laid the groundwork for this discussion. It contained an introduction of the notion of pseudo-incorporation in section 4.2, and a detailed discussion of my two other research questions, derived from the main question. The first of these

questions addresses modification constraints from a cross-linguistic perspective. I limited my research to the HAVE+BN type of pseudo-incorporation, in Catalan, Greek and Brazilian Portuguese. As I showed in section 4.3, even within these languages there are differences in how they do pseudo-incorporation – more specifically, they differ in how strict they are regarding the properties of number neutrality and reduced discourse referentiality of the BN. For instance, reduced discourse referentiality seems to be more pervasive for Catalan BNs than for those in Greek. In order to capture these cross-linguistic differences I introduced the idea of a pseudo-incorporation ‘strictness’ scale, on which the three languages I focus on are ordered as follows:

(224) [strict] **Catalan** < **Brazilian Portuguese** < **Greek** [liberal]

Such a scale raises the question whether a language’s position on it will be reflected by the modification data. For instance, will BN modification constraints in Catalan be stricter than those in Greek? My working hypothesis is that this is indeed the case:

(225) **Hypothesis 2** The more strictly a language adheres to other pseudo-incorporation properties, the more strict it will be about BN modification constraints.

The other research question I discussed in detail in this chapter looks at modification constraints from a cross-constructional point of view. This has to do with the parallel that has been suggested in the literature between HAVE+BN constructions and *with*+BN constructions.

In section 4.4 I argued that such a parallel holds between HAVE and the PRESENCE sense of *with*, more specifically. I furthermore showed that when it comes to the various pseudo-incorporation properties, the two constructions behave the same or very similar in each of the three languages I’m looking at. This is evidence in favor of a parallel analysis of HAVE and *with*. Given such a parallel, we would expect that the conceptual restrictions that apply to BNs in the complement position of PRESENCE *with* are the same as for BNs in the complement position of HAVE-verbs. This means that we would expect no differences between these two constructions in terms of modification patterns. Thus, Hypothesis 3, modified slightly:

Hypothesis 3 (revised) PRESENCE *with* pseudo-incorporates BNs in a similar way as HAVE does, and thus there will be no difference in modification restrictions between these two constructions.

After having a closer look at conceptual restrictions and modification in the next chapter, I will present the questionnaires I ran to collect modification data. In chapter 7 I will discuss what my data mean for the hypotheses I discuss in this chapter and the next.

CHAPTER 5

Bare nouns: conceptual restrictions and modification

5.1 Introduction

In the previous chapter I introduced my main research question and two derived research questions. My main research question pertains to the linguistic translation of the conceptual restrictions on BN pseudo-incorporation to modification restrictions. The derived research questions approach this issue from a cross-linguistic and a cross-constructional perspective. I discussed these derived questions in detail in chapter 4, leaving a more in depth discussion of the matter of conceptual restrictions and how these relate to modification to the current chapter. More concretely, what I will do in this chapter is first to have a closer look in section 5.2 at the various ways conceptual restrictions apply to pseudo-incorporation constructions. I will argue that although there are two main routes conceptual restrictions take, at the heart of both of them lies the notion of *stability*. The question then is whether we can find a linguistic correlate or reflection of this notion. This requires manipulation of the concepts denoted by pseudo-incorporation constructions. An obvious tool for this is modification. In order for this method to work, though, it's necessary to first show that there are no independent semantic reasons why some adjectives might be acceptable as BN modifiers and others aren't. That is, I need to show that the lexical semantics of the four types of adjectives I included in my questionnaires does not clash with the semantics of the pseudo-incorporation construction. This I will do in section 5.3. In section 5.4 I will conclude by summarizing my research questions and the hypotheses I developed in this and the previous chapter.

5.2 A closer look at conceptual restrictions

As I already noted in chapter 4, there are two different types of pseudo-incorporation constructions. I will call these the conventionality construction (term adapted from Borthen, 2003) and the HAVE construction. The conventionality construction occurs for instance in Hindi, Danish, Norwegian, and Greek. It isn't subject to any verbal restrictions, but there is a general conceptual requirement that the construction expresses a concept that involves *prototypicality* (Dayal, 2011, on Hindi), is *institutionalized* (Asudeh and Mikkelsen, 2000 on Danish, Lazaridou-Chatzigoga, 2011 on Greek), is *conventional* (Borthen, 2003, on Norwegian). As a result of this restriction the conventionality construction is relatively unproductive.

The HAVE construction appears in for instance Catalan, Greek, Norwegian, Brazilian Portuguese. As the name implies, this construction is limited in the verbal domain to the class of HAVE-verbs. On top of this verbal restriction there tends to be a restriction to verb-noun combinations that denote a concept which is relevant in the local discourse context. For Catalan Espinal and McNally (2011) formulate this in terms of a *characterizing predicate* requirement: the pseudo-incorporation construction needs to denote a property that is relevant to characterize the subject in the local context. As an illustration they give (226).

- (226) # En Joan té juguina.
 DET Joan has toy
 'Joan has a toy.'

This sentence would be unacceptable out of the blue, but felicitous in a context like the following:

“Imagine that a nursery school teacher is organizing an activity for which each child in the group must have a toy. Just as the activity is about to start, the teacher checks to see which children have toys and which do not. In such a situation, (226) could be uttered as a confirmation that the child in question is ready to participate in the activity” [p. 102].

In Norwegian there is a similar contextual restriction which Borthen (2003) calls a *profiled HAVE-relation* requirement: the construction needs to be such that the HAVE relation is focused on relative to any other relations introduced by the predicate. She gives the sentence in (227), which is infelicitous out of the blue, but acceptable when uttered in the context below.

- (227) ??/* Kari tok kopp.
 Kari took cup
 'Kari took a cup.'

“[T]he speaker is at a conference, and the conference participants have been allowed to take one of a set of conference souvenirs home, i.e. either a cup, a pen, or an umbrella. The cups, the pens, and the umbrellas are all the same and are placed on a table from which the participants can pick their desired type of souvenir. After she has picked a souvenir, someone asks the speaker what type of souvenir she took.” [p.168-169]

For Greek and Brazilian Portuguese not much has been said yet regarding conceptual restrictions, although Stavroula Alexandropoulou (p.c.) gives the following example – the equivalent of Espinal and McNally’s Catalan example – that suggests a similar restriction holds in Greek. Out of the blue the sentence in (228) is unacceptable, but in the context Espinal and McNally give for their example the sentence is perfectly fine.

- (228) # O Yanis ehi pehmidhi.
 the Yanis have.3SG toy
 ‘Yanis has a toy.’

Cyrino and Espinal (2014) mention in passing a similar restriction for Brazilian Portuguese, although they don’t give any examples.

Since this construction only requires well-establishedness or relevance of the concept expressed in the local discourse, rather than on the global cultural level, the HAVE construction seems to be more productive than the conventionality construction. Presumably, it’s easier to establish relevance on the discourse level than on the cultural level, if only because the discourse has only a few participants and a culture typically has more. Another factor is that a discourse is very temporary but a culture moves slowly. This makes establishing a concept in the discourse an ad-hoc act, whereas establishing a concept at the cultural level takes more time. As I already touched upon in the previous chapter, a purely practical reason for me to focus on the HAVE construction is that it’s relatively productive and therefore easier to manipulate experimentally. The more productive the construction is, the more flexibility I have in constructing optimal test items. Moreover, the culture dependence of the conventionality construction smells like idiomacity, which makes this construction a less than ideal candidate for studying what conceptual restrictions mean on a linguistic level. We are more likely to find linguistic correlates of conceptual restrictions in a construction that is more productive.

Because of the difference in verbal restrictions and the difference in productivity between the conventionality type and the HAVE type, I treat them as two different constructions. Some languages have only one type: Hindi only has the conventionality type, Catalan only has the HAVE type. Other languages have both, such as Norwegian and Greek. I would argue, though, that despite the differences between the two constructions, the underlying mechanism is the same: at the core of both lies the notion of stability. Both constructions come with a conceptual requirement, and in both constructions this requirement has

to do with the relevance or well-establishedness of the concept that is expressed. The difference between the constructions is a matter of how much support is necessary for the concept to be sufficiently well-established: whether the concept needs to be culturally anchored or whether relevance in the discourse is enough.

This last part may sound contradictory, as context dependence and conceptual establishment or stability don't seem to go hand in hand. Isn't the whole point of context dependency that as long as the context permits, the concept that is expressed doesn't really need to be established? The notion of conceptual well-establishedness dates back to Carlson, who gives the contrast in (229) (which he attributes to Partee), and concludes that singular definite generics are restricted to kinds that are somehow 'well-established'.

- (229) a. The coke bottle has a long neck.
 b. # The green bottle has a long neck.

However, it's important to realize that even conceptual establishment in this traditional sense is sensitive to context, as Dayal (2004) argues. (230) contains examples of two generic sentences with singular definites, which would not count as well-established out of the blue, but which are perfectly acceptable in the context Dayal provides:

- (230) a. The green bottle has a long neck.
 Context: The factory produces two kinds of bottles, a green one for medicinal purposes and a clear one for cosmetics. The green bottle has a long neck. The clear bottle...
 b. The airport is a busy place.
 Context: Of all the places I am forced to spend time waiting during my numerous commutes, the airport is my least favorite. At least from the train station, it is possible to go out into the town.

In chapter 2 I discussed work by Klein (2011), who shows that novel weak definite concepts can easily be established given the right context, and in chapter 3 I provided examples for bare predicates showing that the same holds for bare predicates.

The fact that the influence of context on conceptual establishment is a wide-spread phenomenon leads me to the conclusion that cultural establishment and contextual establishment are in fact two sides of the same coin. Or perhaps more accurately: contextual establishment is an ad-hoc version of cultural establishment. Crucially, even in the case of contextual establishment the relevancy of the property denoted by the BN construction usually has to do with a division of the world into kinds or classes of things or people. For instance, in Espinal and McNally's (2011) example in (226), a division is made between children who are ready for the game and those who aren't. This is just a more temporary parallel to Carlson's example of dividing bottles into classes.

However, the picture is a bit more complex. Pseudo-incorporation of the HAVE type is relatively undemanding in terms of how much support is required for the concept. Yet within this construction there is again a divide between constructions that need contextual support and constructions that are fine out of the blue. (226) is an example of the former, (231) is an example of the latter (Espinal and McNally, 2011).

- (231) Té apartement.
 have.3SG apartment
 ‘(S)he has an apartment.’

Similarly, in Norwegian (227) requires context to be acceptable, whereas (232) is acceptable out of the blue (Borthen, 2003).

- (232) Kari fikk kopp.
 Kari got cup
 ‘Kari got a cup.’

This raises the question how exactly the HAVE type pseudo-incorporation examples in (231) and (232) differ from typicality type pseudo-incorporation examples like Dayal (2011) gives for Hindi in (233).

- (233) a. baccaa-khilaanaa
 child-looking.after
 b. ghaas-kaaTnaa
 grass-cut

All of these examples express concepts that are apparently sufficiently well-established in a cultural way that they don’t need any additional contextual support. One way to interpret this is that all pseudo-incorporating languages allow concepts that are culturally well-established to be pseudo-incorporated, while only a subset of those also allows concepts to be established in the local context of the discourse. This subset seems to overlap with the subset of languages that do pseudo-incorporation of the HAVE type. It’s not clear what exactly the link is between HAVE and contextual support, but perhaps it has something to do with the relative lightness of HAVE-verbs. In my questionnaires I only looked at HAVE+BN constructions that were acceptable out of the blue. It would be very interesting for future research to look at pseudo-incorporation constructions with HAVE that need contextual support, to find out more about what exactly is required from the context. In addition, it would be interesting to do an experiment in typicality style languages like Hindi, similar to what Klein (2011) did for weak definites, to see if productivity of the pseudo-incorporation construction can be forced given the right context even in these languages.

Summing up, I have explained why I focus on BNs in HAVE type pseudo-incorporation constructions, and I’ve argued that the notion of stability lies at the core of the conceptual restrictions that hold for these constructions. In order

to test this hypothesis, the next step is to look at modification restrictions. As I argued in the introduction to this chapter, modification is an obvious linguistic tool to examine conceptual restrictions. Let me illustrate what I mean. Say we want to know more about the conceptual restrictions on Catalan pseudo-incorporation. We can start by looking at which nouns can occur as pseudo-incorporation objects of a particular HAVE verb in this language, such as *tenir* ('to have'). Then we find for example that *apartament* works just like that, but *joguina* needs contextual support. This is informative to some extent, especially if done on a large scale. We could make hypotheses about how apartment having is different from toy having, explaining the contrast we found. Yet this is not a very systematic or controlled method, so drawing conclusions from data like these is not so easy. Moreover, it doesn't seem to be a very linguistically driven method. It would be much more informative if we could look at different 'shades' (for lack of a better word) of the same verb-BN combination, especially if the differences between these 'shades' are linguistic. For instance, Espinal (2010) gives the contrast between (234a) and (234b):

- (234) a. Té parella estable.
 have.3SG partner stable
 '(S)he has a long-term partner.'
- b. *Té parella malalta.
 have.3SG partner ill
 '(S)he has an ill partner.'

This tells us that the 'shade' of partner actually makes a difference for the conceptual restriction on Catalan pseudo-incorporation: TO HAVE A STABLE PARTNER is a concept that can be expressed using this construction, but TO HAVE AN ILL PARTNER is not. It so happens that *stable* is a kind-level adjective here, whereas *ill* is a stage-level adjective. If this contrast between kind-level and stage-level adjectives turns out to be systematic, we can interpret the conceptual restriction in terms of a linguistic contrast. In fact, the stability hypothesis, my main hypothesis throughout this dissertation, predicts that this will be the case. It relates the notion of stability that we find in the conceptual restrictions to the notion of stability in adjective interpretation.

- (235) **Hypothesis 1** The more stable the interpretation of an adjective (across situations and speakers), the more acceptable it will be as a BN modifier.

As I noted in the introduction to this chapter, this presupposes that there are no other reasons for why an adjective like *ill* can't occur in a pseudo-incorporation construction. Perhaps some adjectives simply have a lexical semantics that clashes with the semantics of the pseudo-incorporation construction. In the next section I will therefore examine the pseudo-incorporation semantics I assume and the lexical semantics of the four types of adjectives I used in my questionnaires, in order to show that they can combine without clashing in the compositional semantics.

5.3 A closer look at the pseudo-incorporation semantics and the adjectives

As I've shown in section 4.3, none of the pseudo-incorporation analyses I discussed there have anything explicit to say about modification restrictions. I'm adopting the pseudo-incorporation semantics Espinal and McNally (2011) propose for Catalan and Spanish. It may seem strange to adopt a semantics that was proposed for specific languages, since my purpose is cross-linguistic, and as we've seen in section 4.3, different languages require different semantics. For instance, in section 4.3.3 I discussed the adapted version of Espinal and McNally's semantics that Alexandropoulou (2013) proposes for the Greek data). However, the point is that none of these cross-linguistic differences have any consequences for modification: the only thing that follows from each of these semantics is that modification has to be intersective.

5.3.1 The pseudo-incorporation semantics

For Catalan and Spanish, Espinal and McNally put their semantics as a lexical rule which is restricted to HAVE-predicates. What this rule does is basically to suppress the theme argument of the verb: in the input to the rule there is a HAVE-relation with y as its theme argument, the havee. In the output y is gone. Based on the lexical semantics of the HAVE-predicate there is still the entailment of two participants, one of which the havee, but this is no longer an active argument. It is now referred to as $\theta(e)$, and the descriptive content of the pseudo-incorporated BN is expressed through predicate modification.

- (236) a. **Input**
 $\lambda y \lambda e [V(e) \wedge \theta(e)=y \wedge \exists w [C(w)] [\exists e' [\mathbf{depend}(e, e', w) \wedge \mathbf{have}(e') \wedge \mathbf{havee}(e') = y]]]]$
- b. **Output**
 $\lambda e [V(e) \wedge \exists w [C(w)] [\exists e' [\mathbf{depend}(e, e', w) \wedge \mathbf{have}(e') \wedge \mathbf{havee}(e') = \theta(e)]]]]$

Espinal and McNally propose the following composition rule for combining the output of the lexical rule with a BN.

- (237) If $\llbracket V \rrbracket = \lambda e [V(e)]$ and θ is an implicit role function defined for V , and if $\llbracket N \rrbracket = \mathbf{N}$, a property, then $\llbracket {}_V[VN] \rrbracket = \lambda e [V(e) \wedge \mathbf{N}(\theta(e))]$.

In this rule N (i.e. the BN) denotes a property that functions as a modifier of the predicate V . Now, I assume that the same holds for the adjective A :

- (238) If $\llbracket V \rrbracket = \lambda e [V(e)]$ and θ is an implicit role function defined for V , and if $\llbracket N \rrbracket = \mathbf{N}$, a property, and if $\llbracket A \rrbracket = \mathbf{A}$, also a property, then $\llbracket {}_V[VNA] \rrbracket = \lambda e [V(e) \wedge \mathbf{N}(\theta(e)) \wedge \mathbf{A}(\theta(e))]$.

This means that the adjective modifies $\theta(e)$ (representing the suppressed theme argument) intersectively. In what follows I will show for each of the four adjective types I included in my questionnaire that they are intersective, and can therefore easily be plugged into Espinal and McNally's pseudo-incorporation semantics.

5.3.2 The semantics of kind-level adjectives

The adjectives I use in the kind-level condition of my questionnaire are all so-called relational adjectives. For this type of adjectives I adopt the semantics of McNally and Boleda (2004). They assume that all nouns have a kind argument which is instantiated by an object-level entity through the realization relation R Carlson (1977) (239a). They analyse relational adjectives as denoting properties of kinds (239b).

- (239) a. $\llbracket N \rrbracket = \lambda x_k \lambda y_o [R(y_o, x_k) \wedge N(x_k)]$
 b. $\llbracket A \rrbracket = \lambda x_k [A(x_k)]$

In this analysis there is a type clash between the adjective, which denotes a kind-level property, and the noun, which is realized by an object-level entity, so a special composition rule is necessary for them to combine:

- (240) If a noun N translates as $\lambda x_k \lambda y_o [R(y_o, x_k) \wedge N(x_k)]$ and an adjective phrase AP translates as $\lambda x_k [A(x_k)]$, then $[N AP]$ translates as $\lambda x_k \lambda y_o [R(y_o, x_k) \wedge N(x_k) \wedge A(x_k)]$

In this rule the relational adjective \mathbf{A} combines intersectively with the noun \mathbf{N} . The effect of the modifier, as McNally and Boleda say, is that the kind denoted by the noun is restricted to one of its subkinds.

The derivation of McNally and Boleda's example *arquitecte tècnic* ('technical architect', Catalan) is then as follows:

- (241) a. $\llbracket [architect] \rrbracket = \lambda x_k \lambda y_o [R(y_o, x_k) \wedge architect(x_k)]$
 b. $\llbracket [technical] \rrbracket = \lambda x_k [technical(x_k)]$
 c. $\llbracket [technical architect] \rrbracket = \lambda x_k \lambda y_o [R(y_o, x_k) \wedge architect(x_k) \wedge technical(x_k)]$

In McNally and Boleda's analysis the relational adjective is intersective, so if you modify a BN like Catalan *faldilla* ('skirt') with an adjective like *escocesa* ('Scottish') what would happen is simply that both the BN and the adjective intersectively modify the suppressed theme argument ($\theta(e)$) of the HAVE-predicate:

- (242) If $\llbracket [portar] \rrbracket = \lambda e [\mathbf{portar}(e)]$ and θ is an implicit role function defined for *portar*, and if $\llbracket [faldilla] \rrbracket = \mathbf{faldilla}$, a property, and if $\llbracket [escocesa] \rrbracket = \mathbf{escocesa}$, also a property, then $\llbracket [{}_V [portar faldilla escocesa]] \rrbracket = \lambda e [\mathbf{portar}(e) \wedge \mathbf{faldilla}(\theta(e)) \wedge \mathbf{escocesa}(\theta(e))]$.

In what follows I will show that the semantics of color, evaluative, and stage-level adjectives can be plugged into Espinal and McNally's pseudo-incorporation semantics in similar ways.

5.3.3 The semantics of color adjectives

As will become clear below, color modification can also be added intersectively to Espinal and McNally's pseudo-incorporation semantics. For color adjectives I adopt the semantics of Kennedy and McNally (2010). They distinguish two separate readings for color adjectives: gradable and non-gradable readings. Non-gradable color adjectives in their analysis are regular properties of type $\langle e,t \rangle$, and correspond to "the property of manifesting, at some point or other, color which is nonaccidentally correlated with some other relevant property of the object to which the color is ascribed". See (243) for examples, and (244) for the semantics that they propose for non-gradable color adjectives.

- (243) a. A green traffic light.
 b. Aquest vi és negre.
 this wine is black
 'This wine is red'.

$$(244) \quad T(\text{green}_A^{\text{nongr}}) = \lambda x.P_i(x) \wedge \text{cor}(P_i, \text{green})$$

What this formula says is that non-gradable *green* requires that the object it's predicated over have some classifying property (represented by a free variable P_i), and that this property is correlated with the color green. What Kennedy and McNally call the non-gradable reading of color adjectives is what I consider a kind-level reading. Since I used a separate condition of kind-level modification in my questionnaires I avoided color adjectives with a kind-level reading. Therefore, I will leave this reading aside and focus on the gradable reading of color adjectives.

Gradable color adjectives are analysed as gradable predicates of type $\langle e,d \rangle$, that is as functions from entities to degrees. The semantics of the positive form includes a null degree morpheme which introduces a relation to a contextually set standard of comparison. Within the gradable reading of color adjectives Kennedy and McNally further distinguish between two subinterpretations of the gradable reading: the color quantity reading, related to how much of the object manifests the color (245), and the color quality reading (246), related to the extent to which the object's color correspond to that color's prototype.

- (245) Pia painted the leaves part/half/completely green.

- (246) Your painting is coming along, though it still needs some work: all of the sky is blue, but it isn't blue enough, and the clouds are too white. Try modifying your pigment mixtures.

The semantics Kennedy and McNally give for the quantity and the quality readings are given in (247a) and (247b) respectively.

- (247) a. $T(\text{green}_A^{\text{quant}}) = \lambda x. \mathbf{quant}(\mathbf{green})(x)$
 b. $T(\text{green}_A^{\text{qual}}) = \lambda x. \mathbf{qual}(\mathbf{green})(x)$

Color adjectives are treated as functions from objects to degrees, so of type $\langle e, d \rangle$. When combined with degree morphology, such as the positive form in (248), they turn into properties of individuals.

- (248) $T(\text{pos}) = \lambda g_{\langle e, d \rangle} \lambda x. g(x) \succ \mathbf{stnd}(g)$

The semantics of the positive form of the quality reading of *green* is then as follows:

- (249) $[[\text{pos green}_A^{\text{qual}}]] = \lambda x. \mathbf{qual}(\mathbf{green})(x) \succ \mathbf{stnd}(\mathbf{qual}(\mathbf{green}))$

The null degree morpheme *pos* introduces a relation between the greenness of an individual (x) and a contextually specified standard of comparison for greenness ($\mathbf{stnd}(g)$). Note that the standard of comparison is a source of subjectivity: different people may set the standard differently, resulting in different interpretations of the adjective. For a sentence like in (250) (leaving aside the non-gradable reading), we get the following semantics:

- (250) The leaves are green.
 a. $\mathbf{quant}(\mathbf{green})(\text{the leaves}) \succ \mathbf{stnd}(\mathbf{quant}(\mathbf{green}))$
 b. $\mathbf{qual}(\mathbf{green})(\text{the leaves}) \succ \mathbf{stnd}(\mathbf{qual}(\mathbf{green}))$

(250a) is true in case the quantity of the greenness of the leaves exceeds a (contextually set) standard of comparison, and similarly (250b) is true if the quality of the greenness of the leaves exceeds the standard of comparison. The difference between the quantity and the quality versions of the gradable reading doesn't matter for my purposes.

For ease of comparison, I reformulate these semantics in a way similar to McNally and Boleda's semantics for kind-level adjectives. In (251) I repeat their kind-level semantics for *Scottish skirt*, and in (252) I give the color semantics version for *green skirt*.

- (251) $[[\text{Scottish skirt}]] = \lambda x_k \lambda y_o [R(y_o, x_k) \wedge \text{skirt}(x_k) \wedge \text{Scottish}(x_k)]$

- (252) $[[\text{green skirt}]] = \lambda x_k \lambda y_o [R(y_o, x_k) \wedge \text{skirt}(x_k) \wedge \mathbf{qual}(\mathbf{green})(y_o) \succ \mathbf{stnd}(\mathbf{qual}(\mathbf{green}))]$

The difference between (251) and (252) is (i) that (252) includes a standard of comparison, and (ii) that in (251) both the noun *skirt* and the kind-level adjective *Scottish* are predicated of the kind-level argument x_k , whereas in (252) the color adjective is instead predicated of the object-level argument y_o . In (253) I illustrate how this works in Espinal and McNally's pseudo-incorporation semantics for *portar faldilla verda* ('to wear green skirt') in the quality reading.

- (253) If $\llbracket \textit{portar} \rrbracket = \lambda e[\mathbf{portar}(e)]$ and θ is an implicit role function defined for *portar*, and if $\llbracket \textit{faldilla} \rrbracket = \mathbf{faldilla}$, a property, and if $\llbracket \textit{verda} \rrbracket = \mathbf{verda}$, also a property, then $\llbracket_V[\textit{portar faldilla verda}] \rrbracket = \lambda e[\mathbf{portar}(e) \wedge \mathbf{faldilla}(\theta(e)) \wedge \mathbf{qual}(\mathbf{verda})(\theta(e)) \succ \mathbf{stnd}(\mathbf{qual}(\mathbf{verda}))]$.

As can be seen, the semantics of *verda* ('green') fits in easily into Espinal and McNally's semantics, just like the semantics of kind-level adjectives in the previous section.

5.3.4 The semantics of evaluative adjectives

In the class of individual-level predicates there is a subclass of predicates that involve subjectivity in some way. As Bylinina (2013) has shown, this class itself is still quite heterogeneous. She distinguishes between three constructions that exhibit subjectivity: predicates of personal taste (PPTs), the positive form of dimensional adjectives (POS-DAs) and evaluative adjectives (Bierwisch, 1989). Some examples of each:

PPTs: attractive, tasty, boring

POS-DAs: rich, thin, heavy, old, young, short

Evaluatives: beautiful, stupid, foolish

In Bylinina's analysis, evaluative adjectives and POS-DAs differ from PPTs in that in the latter construction there is an additional experiencer argument. Together with the dependency on a judge index of evaluation and the requirement that the experiencer argument and the judge index be set to the same value, this is the source of subjectivity of PPTs. Evaluative adjectives and POS-DAs do not have such an experiencer argument. In the case of POS-DAs, subjectivity stems from the fact that the standard of comparison may be calculated in different ways for different judges. Finally, in Bylinina's analysis evaluative adjectives differ from POS-DAs in that evaluative adjectives are multi-dimensional Sassoon (2012). For my purposes the differences between PPTs, POS-DAs and evaluative adjectives don't matter that much, since what's relevant for me is the judge dependency of these constructions. I chose to include evaluative adjectives in my questionnaire, but I would have similar predictions for the other two constructions.

The interpretation of multidimensional adjectives like evaluatives depends on multiple dimensions. An example is *healthy*, the interpretation of which depends on a person's blood pressure, blood sugar level and so on. Other examples would be *identical*, *normal*, *intelligent*, *happy*. Multidimensionality can be manifested overtly, for instance with clauses like *with respect to* or *except for*:

- (254) a. The boxes are identical with respect to size and weight.

- b. The boxes are identical except for their size.

Sassoon (2012) proposes a typology of three classes of multidimensional adjectives. Conjunctive adjectives lexically require the entity they are predicated of to fall under all of their dimensions, such as *healthy*. For disjunctive adjectives the entity only needs to fall under one of its dimensions, such as *sick*. Finally, there's a mixed group for which nothing is lexically specified and for which pragmatics determines how many dimensions count.

Bylinina suggests that evaluative adjectives belong to Sassoon's 'mixed class' of multidimensional predicates "in that the 'weight' and the salience of the dimensions is not lexically fixed or quantified over and thus is subject to contextual and intra-speaker variation that would have direct effect on the truth of these predicates applied to the subject individual" (Bylinina, 2013, p.73). Thus, in the case of evaluative adjectives, subjectivity is due to different judges assigning different weights to different dimensions of a particular evaluative predicate. The semantics Bylinina gives for evaluative adjectives is spelled out in (255).

- (255) a. $\llbracket \text{Maria is wearing a beautiful skirt} \rrbracket^{c,w,t,Sp}$
- b. $\exists s \exists x [\text{skirt}(x) \wedge \text{wear}(s, \text{Maria}, x) \wedge m_{x, \text{beauty}} \succ St_P \text{ at } t \text{ in } w]$
 with $\llbracket \text{beautiful} \rrbracket^{c,w,t,Sp}$ defined as
- $$\lambda x. \sqrt{\sum_Q [w_Q^j (m_{x,Q} \succ St_Q)]^2} \succ St_P$$

The formula in (255) looks particularly unreadable, but what it says is basically that there is a situation s in which Maria is wearing a skirt, and that the degree of beauty of that skirt exceeds the standard of comparison of the multidimensional predicate P at a particular time in a particular world, and where m is a measure function associated with *beautiful*, with beauty being defined in terms of how many dimensions Q of being beautiful apply to the skirt, whether or not the resulting overall beauty of the skirt exceeds the standard, and the weight w the judge/speaker j assigns to each of these dimensions (for a more elaborate explanation see Bylinina 2013, section 2.14). Crucially, different judges j could assign different weights to different dimensions: for judge A the quality of the fabric used might be more important to determine the beauty of a skirt than the way it's cut, for judge B it might be the other way around. This can result in different judges ordering objects differently on the scale of beauty.

I again reformulate these semantics to make them more easily comparable to the semantics for kind-level adjectives and color adjectives I gave in the previous sections:

$$(256) \quad \llbracket \textit{beautiful skirt} \rrbracket = \lambda x_k \lambda y_o [\text{R}(y_o, x_k) \wedge \textit{skirt}(x_k) \wedge \textit{beautiful}(y_o) \wedge m_{\theta(e), \textit{beauty}} \succ St_P]$$

with $\llbracket \textit{beautiful} \rrbracket^{c,w,t,Sp}$ defined as $\lambda x. \sqrt{\sum_Q [w_Q^j(m_{x,Q} \succ St_Q)]^2} \succ St_P$

The way these semantics combine with Espinal and McNally's pseudo-incorporation semantics is illustrated here for Catalan *portar faldilla bonica* ('to wear beautiful skirt'). The adjective *bonica* ('beautiful') intersectively modifies the suppressed theme argument ($\theta(e)$), with the degree of beauty exceeding the standard of comparison.

$$(257) \quad \text{If } \llbracket \textit{portar} \rrbracket = \lambda e[\mathbf{portar}(e)] \text{ and } \theta \text{ is an implicit role function defined for } \textit{portar}, \text{ and if } \llbracket \textit{faldilla} \rrbracket = \mathbf{faldilla}, \text{ a property, and if } \llbracket \textit{bonica} \rrbracket = \mathbf{bonica}, \text{ also a property, then } \llbracket \llbracket \textit{portar faldilla bonica} \rrbracket \rrbracket = \lambda e[\mathbf{portar}(e) \wedge \mathbf{faldilla}(\theta(e)) \wedge \mathbf{bonica}(\theta(e)) \wedge m_{\theta(e), \textit{beauty}} \succ St_P].$$

I conclude that the semantics of evaluative adjectives fit in easily with Espinal and McNally's semantics.

5.3.5 The semantics of stage-level adjectives

As I mentioned in chapter 2, it is a bit tricky to talk about the class of stage-level predicates as opposed to individual-level predicates. There's several contrasts between the two classes that have been discussed extensively in the literature: these have to do with (un)acceptability when modified by temporal or frequency adverbials, (un)acceptability when modified by locative adverbials, (un)acceptability in the complement position of perception verbs, (un)acceptability when modifying bare plurals in *there* sentences, (un)availability of an existential reading of bare plurals in the subject position of stage-level predicates, lifetime effects in past tense, and (un)acceptability as predicate adjuncts. Jäger (2001) has argued that instead of a single contrast between stage-level and individual-level predicates, the data actually show three separate contrasts. He formulates these contrasts in terms of binary features: [\pm admits weak/existential reading of indefinite subjects], [\pm occurs in the infinite complement of verbs of perception] and [\pm denotes a transitory property].

The details of this debate aren't relevant for my purposes. As we'll see in the next chapter, the diagnostic I use for selecting stage-level adjectives in my questionnaire is in fact the acceptability of frequency adverbials. The contrast between (258) and (259) indicates that *dirty* would be a good candidate, but *Scottish* wouldn't.

(258) Ana's skirt is sometimes dirty.

(259) # Ana's skirt is sometimes Scottish.

To put it in Jäger's terminology, I only concerned myself with the feature [\pm denotes a transitory property]. Kratzer (1995) derived this contrast by assuming that the semantics of stage-level predicates involves a Davidsonian event

variable, whereas individual-level predicates don't. Compare stage-level *tired* (260a) and individual-level *blond* (260b):

- (260) a. $\lambda x \lambda e \text{ tired}(x, e)$
 b. $\lambda x \text{ blond}(x)$

Chierchia (1995) took the neo-Davidsonian view that every predicate involves an event argument and derived the contrast by assuming that there are location dependent events and location independent events, and that only the latter are bound by a generic operator.

A more recent line of research sees these contrasts as a matter of pragmatics rather than semantics. McNally (1994) (see also Condoravdi, 1992) discusses predicative adjuncts and argues that the contrast between stage-level and individual-level properties can be explained if you assume that individual-level properties come with a default inference that they hold indefinitely over time. Maienborn (2004) explains the contrast between stage-level and individual-level predicates when they are modified by locative adverbials, illustrated in (261), along similar lines. She argues that the preference for temporary properties in constructions like these is the result of pragmatic strengthening, which she frames in terms of Blutner's (2000) bidirectional optimality theory. The optimal interpretation of sentences like (261a) is one in which the locative holds temporarily, and this temporariness is carried over to the main predicate. Our world knowledge tells us that being tired might well last equally long as being in a car, whereas being blond usually lasts longer, hence the contrast between (261a) and (261b).

- (261) a. Maria was tired in the car.
 b. # Maria was blond in the car.

This account has the advantage that contrasts such as that between (258) and (259) or the one in (261) are acceptability contrasts rather than grammaticality contrasts. This accounts for the fact that it is quite easy to shift an individual-level predicate to be stage-level and vice versa in the right context. Being blond can be a temporary property when you dye your hair, magic potions can be used so that being short or being tall are temporary properties and so on.

In one way or another, all the abovementioned analyses include a contrast in terms of temporariness: stage-level adjectives denote properties that are unstable over time, whereas individual-level denote temporally stable properties. The details of how this contrast is derived don't matter for my purposes, so for simplicity I adopt an analysis à la Maienborn. Since in her view the temporariness effect that appears with stage-level predicates is a purely pragmatic effect, the semantics stage-level adjectives get is relatively uncomplicated. In fact, a gradable stage-level adjective like *wet* would get a semantics that's very similar to Kennedy and McNally's (2010) the semantics for gradable color adjectives, involving a standard of comparison. No additional semantic machinery

is needed to deal with the temporariness of stage-level adjectives, as this is located in pragmatics.

$$(262) \quad \llbracket pos\ green \rrbracket = \lambda x. wet(x) \succ stnd(wet)$$

Again, reformulated along the lines of McNally and Boleda's (2004) semantics that I adopted for kind-level adjectives, this becomes:

$$(263) \quad \llbracket wet\ skirt \rrbracket = \lambda x_k \lambda y_o [R(y_o, x_k) \wedge skirt(x_k) \wedge wet(y_o) \succ stnd(wet)]$$

This semantics then combines intersectively with the semantics of Espinal and McNally, as shown below for Catalan *portar faldilla humida* ('to wear wet skirt'):

$$(264) \quad \text{If } \llbracket portar \rrbracket = \lambda e[\mathbf{portar}(e)] \text{ and } \theta \text{ is an implicit role function defined for } portar, \text{ and if } \llbracket faldilla \rrbracket = \mathbf{faldilla}, \text{ a property, and if } \llbracket humida \rrbracket = \mathbf{humida}, \text{ also a property, then } \llbracket_V portar\ faldilla\ humida \rrbracket = \lambda e[\mathbf{portar}(e) \wedge \mathbf{faldilla}(\theta(e)) \wedge (\mathbf{humida})(\theta(e)) \succ \mathbf{stnd}(\mathbf{humida})].$$

The semantics of stage-level adjectives is very similar to that of color adjectives, and, as expected, it doesn't cause any problems for the compositional rule of Espinal and McNally.

5.4 Discussion

In the previous four sections I showed that all four adjective types I used in my questionnaires are intersective, and fit into Espinal and McNally's (2011) pseudo-incorporation semantics without any semantic clashes. This means that any potential differences between the four adjectival modification conditions in my questionnaires are due to the way the lexical semantics of the adjectives interacts with the conceptual restrictions on pseudo-incorporation, rather than being due to any compositional semantics issues. I conclude that modification of pseudo-incorporation is acceptable as long as it is in line with the conceptual restrictions. At the core of these conceptual restrictions on pseudo-incorporation, I argued, lies the notion of stability.

Translating this to modification, I formulated the stability hypothesis: the more stable the interpretation of an adjective, the more acceptable it is as a BN modifier. After having examined the lexical semantics of kind-level, color, evaluative, and stage-level adjectives, it's now possible to make this hypothesis more specific. In section 5.3.4 we saw that the interpretation of evaluative adjectives depends on the judge whose opinion they reflect. Similarly, in 5.3.5 I showed that stage-level adjectives depend on the situation or time frame they are tied to for their interpretation. The interpretation of both types of adjectives is therefore not universally stable. In contrast, kind-level adjectives involve no such dependencies and have very stable interpretations. The lexical semantics of color adjectives doesn't involve the situation dependency that we see in

stage-level adjectives, and they don't involve a judge dependency as obviously as evaluative adjectives. Their gradable semantics involves a lesser extent of judge dependency, similar to dimension adjectives like *tall*. Just like dimension adjectives, color adjectives denote functions from objects to degrees ($\langle e,d \rangle$). The positive form of color adjectives comes about through the silent morpheme *pos*, which gives us properties of individuals. As we saw in section 5.3.3, *pos* introduces a relation between for instance the greenness of an object and a standard of comparison for greenness. This standard may be set differently by different people and is therefore a source of subjectivity.

Note that all gradable adjectives involve this type of subjectivity or dependency, including evaluative adjectives and gradable stage-level adjectives like *wet*. The difference between stage-level adjectives and color adjectives is obvious: greenness is simply not as transitory a property as wetness. The difference between color adjectives and evaluatives is that once the comparison class is fixed, the interpretation of color adjectives is also fixed, whereas the interpretation of evaluative adjectives is still judge dependent, as they are multidimensional and different judges might rank various dimensions differently. In other words, it's possible to objectively establish the greenness of, say, a particular skirt. Whether this skirt then counts as green depends on what we're comparing it to, and possibly also on how lenient we are in terms of how green is green enough to count. The interpretation of an evaluative like *beautiful* similarly depends on the comparison class we use and on where we put the cut-off point for beautiful skirts, but even once we've established all that, there is still room for individual variation as to what constitutes beauty in the first place. Unlike colors, which involve a limited set of objectively measurable dimensions (hue, saturation, brightness), beauty involves a wide range of dimensions that are not necessarily measurable (see Lasersohn, 2005, p. 655, for a similar observation).

Based on the above it's now possible to create a scale of adjectives based on how much their interpretation depends on outside factors such as situations and judges. The interpretation of kind-level adjectives is very much self-contained, so they are located at the most independent end of the scale. On the opposite side of the spectrum we find stage-level and evaluative adjectives. Color adjectives are located somewhere in between:

(265) [dependent] **stage-level/evaluative** < **color** < **kind-level** [independent]

It's now possible to provide a more precise formulation of the stability hypothesis for BNs:

Hypothesis 1 The more stable the interpretation of an adjective (across situations and speakers), the more acceptable it will be as a BN modifier. More specifically: kind-level adjectives are more acceptable than color adjectives, which in turn are more acceptable than stage-level and evaluative adjectives.

In the next chapter I will present the questionnaires I ran in order to test this hypothesis, and the two derived research questions pertaining to the cross-linguistic and cross-constuational perspectives, which I discussed in chapter 4.

CHAPTER 6

Bare nouns: data collection

6.1 Introduction

In the previous two chapters I worked out my three research questions, and I developed three working hypotheses, repeated here.

Hypothesis 1 The more stable the interpretation of an adjective (across situations and speakers), the more acceptable it will be as a BN modifier. More specifically: kind-level adjectives are more acceptable than color adjectives, which in turn are more acceptable than stage-level and evaluative adjectives.

Hypothesis 2 The more strictly a language adheres to other pseudo-incorporation properties, the more strict it will be about BN modification constraints.

Hypothesis 3 PRESENCE *with* pseudo-incorporates BNs in a similar way as HAVE does, and thus there will be no difference in modification restrictions between these two constructions.

In this chapter I present the details and results of the questionnaires I ran in order to collect the data necessary to test these hypotheses.

Before running the questionnaire, I did a corpus study together with Stavroula Alexandropoulou, looking for cases of modified BNs to see whether we could find any modification patterns in these data. In section 6.2 I will discuss the method and results of the corpus study, in section 6.3 I will turn to the questionnaire.

6.2 The corpus study

6.2.1 Introduction

Our reason to do a corpus study was just to get a quick first impression of the BN modification picture. The decision to do it in Greek was pretty straightforward. We didn't do it in Catalan or in Brazilian Portuguese because of a combination of time constraints, lack of corpora and lack of native fluency in these languages. I did a Dutch corpus study, even though Dutch only allows the *with*+BN construction, to get some data to supplement the Greek data.

6.2.2 Method

For Greek BNs the corpus study was conducted in the Hellenic National Corpus (over 47,000,000 words). For Dutch BNs the Corpus Gesproken Nederlands (9,000,000 words) and the Eindhovencorpus VU-versie (768,000 words) were used. For both Dutch and Greek we searched for combinations of *with* (Dutch: *met*; Greek: *me*) + a BN modified by an adjective. For Greek we also searched for modified BNs as complements of the HAVE-verbs *exo* ('to have'), *forao* ('to wear'), *kratao* ('to hold') and *hrisimopio* ('to use'). From the occurrences we found we removed cases in which the BN was a mass noun (266a), or an abstract noun (266b). We also removed cases in which the noun occurred under the scope of negation.¹

- (266) a. iemand met rood haar
 someone with red hair
 b. elektronen met hoge snelheid
 electrons with high velocity

Moreover, we only included cases in which the *with*/HAVE+BN construction modified an NP (267a), excluding cases where it modified a VP (267b).

- (267) a. Een berenmuts met oranje kokarde lag eveneens op tafel
 A bearskin.cap with orange cockade laid also on table
 'A bearskin cap with an orange cockade was also laying on the table.'
 b. [...] zei ze met volle mond.
 [...] said she with full mouth
 '[...] she said with her mouth full.'

6.2.3 Results

Firstly, modified BNs turned out to be rather scarce in these corpora: For Dutch *met* we only found 68 cases, for Greek *me* we found only 63, and for

¹See Alexandropoulou (2012) for additional details on the method used in the Hellenic National Corpus.

the Greek HAVE-verbs we found only 126 cases in total. Furthermore, in all three constructions (Dutch *met*, Greek *me* and Greek HAVE-verbs) a substantial number of hits involved cases in which the modifier was obligatory:

- (268) een engelsman met *(onverstaanbare) naam
 an Englishman with unintelligible name
 ‘an Englishman with an unintelligible name’
- (269) enas kauboi me *(anoito) onoma
 a cowboy with silly name
 ‘a cowboy with a silly name’
- (270) Hrisimopiite *(kenurya) velona ya kathe enesi.
 use new needle for each injection
 ‘Use a new needle for each injection.’

In cases like (268)-(270) modification appears to be obligatorily present for informativity reasons. That is, in all of these examples the modified BN denotes an analytic property (see also Müller et al., 2010) and the modifier is necessary to make the utterance informative. As the obligatoriness of the adjectives might overrule any modification constraints based on conceptual restrictions, I will ignore these cases in the rest of this study.

After cleaning up the data, we were left with only 24 cases of non-obligatory BN modification for Dutch *met*, 34 for Greek *me* and 82 for the Greek HAVE-verbs. In these remaining cases, we looked at the types of adjectives that modified the BNs.

The two most frequent types of adjectives were kind-level adjectives and color adjectives. 5 out of the 24 cases for Dutch *met* involved kind-level adjectives (271a), 19 out of 34 cases for Greek *me* (271b), and 37 out of 82 cases for the Greek HAVE-verbs (271c). Color adjectives occurred in 9 cases for Dutch (272a), in 8 cases for Greek *me* (272b), and in 5 cases for the Greek HAVE-verbs (272c).

- (271) a. Dan moet je een föhn met koude stand hebben.
 Then must you a hairdryer with cold setting have
 ‘Then you need a hairdryer with a cold setting.’
- b. [...] ipe enas alos adras me neiorkeziko kustumi.
 [...] said another man with New York suit
 ‘[...] said another man with a New York suit.’
- c. Ekini ihe iordhaniko dhyavatirio.
 She had Jordanian passport
 ‘She had a Jordanian passport.’
- (272) a. z’n bureaulamp met groene kap Dutch *met*
 his desk lamp with green shade
 ‘his desk lamp with a green shade’

6.3 The questionnaires

6.3.1 Introduction

The questionnaire consisted of relatively simple sentences containing BNs in the complement position of either a HAVE-verb or *with*.² Participants were asked to rate the acceptability of these sentences on a scale.

In order to test hypothesis 1, the BNs occurred in five different modification conditions. I used four different types of adjectives: stage-level adjectives, evaluative adjectives, color adjectives and kind-level adjectives. I also used a condition in which the BN occurred in unmodified form.

My second research question has to do with cross-linguistic differences in BN modification constraints, so I ran the same questionnaire in three of the languages that I discussed in the previous chapter: Catalan, Greek and Brazilian Portuguese.

Finally, my third research question is whether there's a parallel between the way HAVE-verbs take BN complements and the way the preposition *with* does. Therefore, I ran the same questionnaire in each of the three languages in two constructions: one half of the participants of each language got a version in which the BN was in the complement position of a HAVE-verb, the other half got a version that only differed in that the BN occurred in the complement position of *with* instead.

To sum up, I ran the questionnaire in three different languages, each in two constructions, resulting in a total of six different versions of the questionnaire.

6.3.2 Participants

219 native speakers of Catalan, 482 native speakers of Greek, and 200 native speakers of Brazilian Portuguese completed the questionnaire.

6.3.3 Method and materials

The design of this experiment was similar to the design of the bare predicate questionnaire from chapter 3. Items consisted of a short dialogue between a person A and a person B. A's sentence was always 'What do you see in the picture?', and B's contained the test item or filler in bold font. Test items always had the structure *a [N] with/who is wearing/carrying/holding [BN]*. That is, in all three languages I used one of these three verbs in the *have* construction. The test items were embedded in a carrier sentence which was always 'I see a...'. The reason for presenting the items in this little dialogue was that I wanted

²The design of the questionnaire I report in this chapter was joint work with Stavroula Alexandropoulou. She also ran the Greek version of the questionnaire. I thank Raquel Santiago Batista for her help with translating the Catalan version of the questionnaire. I thank Roberta Pires de Oliveira and Ana Elisa Costa Ferreira for translating and running the Brazilian Portuguese version of the questionnaire and for letting me report the data here.

to avoid participants interpreting the test items as headlines or captions of for instance paintings, which are environments in which articles are naturally dropped for unrelated reasons. An example of a Catalan test item in the *with* construction (274) is given below.

(274) A: Què veu en aquesta imatge?
‘What do you see in this picture?’

B: **Veig una noia amb faldilla.**
I.see a girl with skirt

Com d’acceptable et sembla l’oració de B?
‘How acceptable do you find B’s utterance?’
(inacceptable) 0 - 1 - 2 - 3 - 4 - 5 - 6 - 7 (acceptable)

A total of fifteen test items were used, each of which occurred in all five modification conditions: the unmodified condition (275a), the stage-level modification condition (275b), the evaluative modification condition (275c), the color modification condition (275d), and the kind-level modification condition (275e). Thus, in total I used seventy-five different test items. Items were kept constant as much as possible across the three languages.³ For a full list of the items that were used see appendix C.

- (275) a. Veig una noia amb faldilla.
I.see a girl with skirt
- b. Veig una noia amb faldilla humida.
I.see a girl with skirt wet
- c. Veig una noia amb faldilla elegant.
I.see a girl with skirt elegant
- d. Veig una noia amb faldilla lila.
I.see a girl with skirt lilac
- e. Veig una noia amb faldilla escocesa.
I.see a girl with skirt Scottish

Most of the kind-level adjectives I used are relational adjectives or ethnic adjectives (e.g. *military*, *Swiss*), which are attributed a kind-level semantics (McNally and Boleda, 2004; Arsenijević et al., 2010). Other adjectives I used in this condition were not kind-level per se (e.g. *leather*), but I made sure that all of the adjectives in this condition were locally kind-level - that is, that together with the noun with which they combined to form a BN they denoted a kind - by using the criterion that they should be acceptable as singular definite generics.

³As a consequence, two items in the Catalan and Brazilian Portuguese kind-level modification condition contained PP modifiers rather than adjectival modifiers, as *leather* in *leather pants* and *diamond* in *diamond ring* are PPs in these languages.

These judgments were based on my own intuitions. Thus, while *leather* might not always be kind-level, in the construction I used in the questionnaire, *leather pants*, it is:

- (276) To dhermatino pandeloni irthe sti modha ti dekaetia tu
 the leather pant came in fashion the decade of.the
 70.
 seventies
 ‘The leather pants came into fashion in the seventies.’⁴

For the choice of color adjectives the only restriction I applied was that the color adjective+BN combination should not denote a kind (using the singular definite generic diagnostic I also used to select kind-level adjectives). An example if a kind-denoting color adjective+BN combination would be *white tiger*:

- (277) I lefki tighris ine ena panemorfo endiposiako aghrio zoo.
 the white tiger is a gorgeous impressive wild animal
 ‘The white tiger is a gorgeous, impressive wilde animal.’

As to the evaluative adjectives in my items, I selected adjectives mentioned by Bierwisch (1989) and Bylinina (2013), such as *ugly*, *stupid*, or *brilliant*.

Finally, as discussed in the previous chapter, for the stage-level adjectives the diagnostic I used was whether potential stage-level adjectives were compatible with frequency adjectives. For instance, for the adjective *dirty*, I checked whether the following sentence was acceptable:

- (278) My hat is sometimes dirty.

The acceptability of this sentence indicates that we’re dealing with a stage-level adjective. Note the contrast with for instance a kind-level adjective like *Mexican*:

- (279) # My friend is sometimes Mexican.

Each questionnaire consisted of thirty items: fifteen test items (three per condition) and fifteen fillers. Items were ordered quasi-randomly, with no more than two adjacent items being of the condition. Furthermore, the lists began and ended with two fillers. Each list also occurred in reversed order, so a total of ten lists were used per questionnaire. Participants were randomly assigned to one of the lists.

The fillers were embedded in the same carrier sentence as the test items. However, instead of consisting of a HAVE-verb or *with* followed by a BN, they were of the form *a man/woman who is [bare predicate]*. The fillers both served as distractor items and as my lower and upper controls. I included two types of fillers: each list contained seven fillers that I expected to get very low acceptability ratings (bare predicates modified by a stage-level adjective 280) and

⁴Note that (unlike in English) Greek *padeloni* ‘pants’ is a singular noun.

eight fillers that I expected to get very high acceptability ratings (four of these were bare predicates modified by a kind-level adjective and four were unmodified bare predicates (281). These items were selected based on the results of the questionnaires testing the acceptability of bare predicates in Catalan, Greek, and Brazilian Portuguese (see chapter 3). For each language the seven lowest scoring stage-level modified bare predicates were selected, and the four highest scoring unmodified and kind-level modified bare predicates.

For the lower control items I selected the seven bare predicates modified by stage-level adjectives that got the lowest scores in the bare predicate questionnaires, for the upper control items I selected the four unmodified bare predicates and the four kind-level modified bare predicates that got the highest scores in the bare predicate questionnaires. I ran the bare predicate questionnaire for each language separately, and there were some differences between the languages with respect to which items scored the highest and the lowest. This means that I didn't use exactly the same fillers in each language in the BN questionnaires.

(280) Veig una dona que és professora suada.
 I.see a woman that is professor sweaty
 'I see a woman who is a sweaty professor.'

(281) a. Veig un home que és treballador social.
 I.see a man that is worker social
 'I see a man who is a social worker.'
 b. Veig una dona que és economista.
 I.see a woman that is economist
 'I see a man who is an economist.'

The reason why I decided to use bare predicates as my control items was that I wanted lower controls that would be unacceptable for similar reasons as the ones that would make BNs unacceptable. That is, I wanted lower controls that would get low scores due to unacceptability rather than ungrammaticality.

6.3.4 Procedure

Participants either filled in the questionnaire online or they filled in a pen-and-paper version. They were asked to judge the sentences on their acceptability as sentences of Catalan, Greek or Brazilian Portuguese respectively, to follow their intuitions and to not reconsider previous responses. The complete instructions in each language can be found in appendix C.

6.3.5 Predictions

Based on the stability hypothesis I predicted that the kind-level modification condition would get significantly higher acceptability scores than the color modification condition, which in turn would get significantly higher scores than the

stage-level and evaluative modification conditions. Based on hypothesis 2, in combination with the pseudo-incorporation scale I proposed in chapter 4, I predicted that the scores in all four modification conditions would be significantly higher for Greek than for Brazilian Portuguese, which in turn was predicted to get significantly higher scores than Catalan. Based on hypothesis 3, I predicted no significant differences between the *with* and the HAVE constructions.

6.3.6 Analysis

6.3.6.1 Preliminaries

I collapsed the data from all three languages into one dataset and analysed them using cumulative link mixed models (clmm).⁵ I compared the log Likelihood values of all possible models to see which model was the best fit. It turned out that M5, containing the dependent variable Score, and the fixed factors Condition, Language and Construction, and a three-way interaction between these factors, was the best fit. It also contained random intercepts for Subject and Item. See table 6.11 for details of the model comparisons. The first conclusion to be drawn from M5 is that there were significant main effects of Condition, Language and Construction, and a three-way interaction between these three.

The next thing I wanted to check is whether there was a significant difference between the unmodified upper controls (unmodified bare predicates) and the kind-level modified upper controls (kind-level modified bare predicates). I didn't expect a difference, and if this expectation was borne out it would allow me to collapse these two conditions into one upper control condition. To this end I split the data per version, that is, per language-construction combination. Since I tested three languages, each in two constructions, I had six versions. Then, for each version I compared a zero model without any fixed effects (M0) to a model with Condition as a fixed effect (M1). In each version, M1 was the better fit, which means that the effect of Condition on the dependent variable Score was significant (see table 6.12). Then, I looked at the M1 models for each version and compared the unmodified upper controls to the kind-level modified controls. In none of the six versions was the difference between these two conditions significant (see table 6.13), so I collapsed them into one upper control condition.

I will now go on to discuss the results with respect to the three research questions I formulated in the previous chapter. For ease of interpretation, I split the data into subsets accordingly. Figure 6.1 gives an overview of the mean scores per condition, by language and construction.

⁵To improve readability, I decided not to provide any statistical details such as χ^2 , β -estimates or p-values in the text of this chapter. Instead, I put all this information together in tables in the Appendix, and in the text I merely refer the reader to the relevant tables.

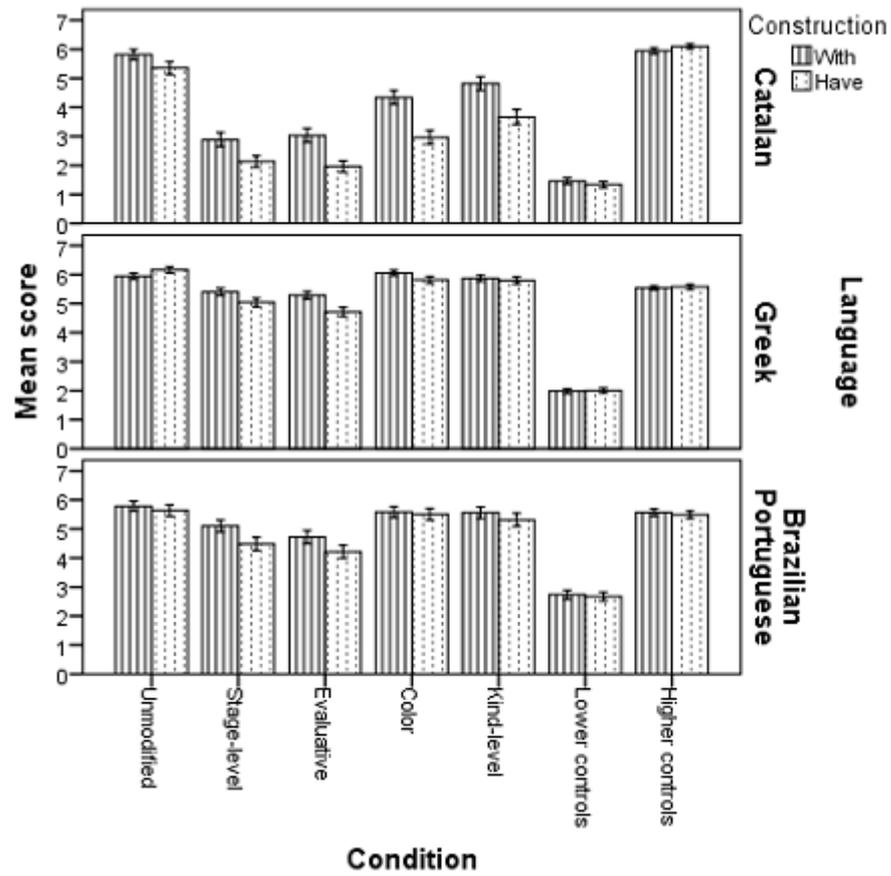


Figure 6.1: Overview of mean scores per condition, by language and construction.

6.3.6.2 Differences between adjectives

In the previous section I already showed that there was a significant effect of Condition for each of the six versions (see table 6.12). Therefore, for each version I looked at the model that included Condition as a fixed factor to see the differences between the different conditions. I'll discuss each version in turn. See tables 6.14-6.19 in the appendix for details.

Catalan *with* In the Catalan *with* version the lower controls got the lowest scores of all, scoring significantly lower than the stage-level and evaluative conditions, which didn't differ significantly from each other. They both scored significantly lower than the color and kind-level conditions, which also didn't differ significantly from each other.⁶ These two conditions scored significantly lower than the unmodified condition and the upper controls, which didn't differ significantly from each other. Summarized, the pattern for Catalan *with* looks as follows:

lower controls < stage-level/evaluative < color/kind-level < unmodified/upper controls

Catalan *have* The lower controls got the lowest scores of all conditions in the Catalan *have* version. They scored significantly lower than the stage-level and evaluative conditions⁷, which didn't differ significantly from each other, and which in turn scored significantly lower than the color condition. Color scored significantly lower than the kind-level condition, which scored significantly lower than the unmodified condition. Finally, the upper controls got the highest scores, significantly higher than the unmodified condition. The pattern for Catalan *have* looks like this:

lower controls < stage-level/evaluative < color < kind-level < unmodified < upper controls

Greek *with* The conditions in the Greek *with* version were less spread out than in the Catalan versions. Again, the lower controls got the lowest scores, significantly lower than those in the stage-level and the evaluative conditions and the upper level controls. These three conditions didn't differ significantly from each other, and all scored lower than the color, kind-level and unmodified conditions, which also didn't differ significantly from each other. In summary, the Greek *with* pattern looks like this:

⁶Note that the p-value for the difference between the color and kind-level conditions was p=.0554, so close to being significant.

⁷Note that the p-value for the difference between the lower controls and the evaluative condition was p=.0475, so only just significant.

lower controls < evaluative/stage-level/upper controls < color/kind-level/unmodified

Greek *have* The results in the Greek *have* condition look a bit different than those in the Greek *with* condition. The lower controls again got the lowest scores of all, significantly lower than the evaluative condition. This in turn scored significantly lower than the stage-level condition, which scored lower than the color and kind-level conditions and the upper controls. These three conditions didn't score significantly different from each other, and all three scored significantly lower than the unmodified condition. The Greek *have* pattern thus looks like this:

lower controls < evaluative < stage-level < color/kind-level/upper controls < unmodified

Brazilian Portuguese *with* and *have* The patterns of the Brazilian Portuguese *with* version and the *have* version are exactly the same. The lower controls again scored the lowest, significantly lower than the stage-level and evaluative conditions, which didn't differ significantly from each other and which both scored lower than the color, kind-level and unmodified conditions and the upper controls. These four conditions also didn't differ significantly from each other. In summary, the pattern looks like this:

lower controls < evaluative/stage-level < color/kind-level/unmodified/upper controls

Summary Although there are differences between the data patterns of the different versions, they also show a remarkable degree of overlap. In table 6.2 I give an overview of the pattern of the results per version. I summarize the most striking results here:

1. In all the versions the stage-level and evaluative conditions got the lowest scores of the five test conditions. In all but the Greek *have* version there was no difference between stage-level and evaluative.
2. There was no difference between the color and kind-level conditions, except in the Catalan *with* version, in which kind-level scored significantly higher than color.
3. Results 1 and 2 together mean that throughout the data there was a clear opposition between stage-level and evaluative modification on the one hand and color and kind-level modification on the other hand.
4. Overall, the test conditions scored within the bounds of the lower and upper controls. None of them scored as low as the lower controls and

they all scored less or equally high as the upper controls in the Catalan and Brazilian Portuguese versions. The exception to this is Greek: in the Greek *have* version the unmodified version scored higher than the upper controls, and in the Greek *with* version the color, kind-level and unmodified conditions all scored higher than the upper controls.

5. In three of the versions (both the Catalan versions and the Greek HAVE version) the unmodified condition got significantly higher scores than the other four modification conditions. In other words, in those three versions modification of any kind led to a significant decrease of acceptability. In the other three versions there was a negative effect of modification on acceptability in the stage-level and evaluative conditions, but not in the color and kind-level modification conditions.

		<	<	<	<	<
Cat. <i>with</i>	low	sta/eva	col/kin	unm/upp		
Cat. <i>have</i>	low	sta/eva	col	kin	unm	upp
Gr. <i>with</i>	low	sta/eva/upp	col/kin/unm			
Gr. <i>have</i>	low	eva	sta	col/kin/upp	unm	
Br.P. <i>with</i>	low	sta/eva	col/kin/unm/upp			
Br.P. <i>have</i>	low	sta/eva	col/kin/unm/upp			

Table 6.2: Overview of the patterns of the results per version. The conditions in each column got significantly lower scores than the conditions in the column to their right.

6.3.6.3 Differences between languages

In the previous section it could already be seen that the general pattern of differences between conditions was more or less the same across languages. In this section I will further look at how the three languages compare to each other in terms of the height of the acceptability ratings.

I split the data by construction, and within construction I split it by condition. Then, for each condition in each construction, I compared the null model without any fixed factors (M0) to a model with Language as fixed factor (M1). The model and comparison details can be found in tables 6.20 and 6.21. For each construction-condition combination M1 was the better model, indicating that Language was a significant factor. The only exception to this was the unmodified condition in the *with* construction. For each of the other condition-construction combinations I looked into the details of M1 to see the exact differences between languages. I report these below. See tables 6.22 and 6.23 for details.

With In the four test conditions apart from the unmodified condition, Catalan scored significantly lower than Brazilian Portuguese, which in turn scored

lower than Greek. For the lower controls the pattern was the same. For the upper controls Catalan scored significantly lower than Brazilian Portuguese and Greek, but these two languages didn't differ significantly from each other. I give an overview in table 6.3.

		<	<
Unmodified	no effect	no effect	no effect
Stage-level	Catalan	Braz. P.	Greek
Evaluative	Catalan	Braz. P.	Greek
Color	Catalan	Braz. P.	Greek
Kind-level	Catalan	Braz. P.	Greek
Lower controls	Catalan	Greek	Braz. P.
Upper controls	Greek/ Braz. P.	Catalan	

Table 6.3: Overview of the differences between languages per condition for *with*. The languages in each column got significantly lower scores than the languages in the column to their right.

Have The picture for *have* looks more or less the same as that for *with*. In the unmodified condition Catalan and Brazilian Portuguese didn't differ significantly from each other, and both scored significantly lower than Greek. In the other four test conditions Catalan scored significantly lower than Brazilian Portuguese, which in turn scored significantly lower than Greek. In the lower control condition Catalan scored significantly lower than Brazilian Portuguese and Greek, which didn't differ significantly from each other. In the upper control condition it was the other way around: Brazilian Portuguese and Greek again didn't differ from each other, and both scored significantly lower than Catalan. See table 6.4 for an overview.

		<	<
Unmodified	Catalan/Braz. P.	Greek	
Stage-level	Catalan	Braz. P.	Greek
Evaluative	Catalan	Braz. P.	Greek
Color	Catalan	Braz. P.	Greek
Kind-level	Catalan	Braz. P.	Greek
Lower controls	Catalan	Greek/Braz. P.	
Upper controls	Greek/Braz. P.	Catalan	

Table 6.4: Overview of the differences between languages per condition for *HAVE*. The languages in each column got significantly lower scores than the languages in the column to their right.

Summary In all four adjectival modification conditions Catalan got lower scores than Brazilian Portuguese, which in turn got lower scores than Greek. This held for both constructions. In the unmodified condition there was no

difference between any of the languages in the *with* construction, whereas in the HAVE construction Greek scored significantly higher than Catalan and Brazilian Portuguese, which didn't differ significantly from each other.

6.3.6.4 Differences between constructions

The results I discussed with respect to the first research question showed that the pattern of differences between modification conditions was more or less stable across conditions. Finally, in this section I will look at the relative height of the scores per condition in the two constructions, to see if both constructions scored equally high or whether they differed in that sense.

I split the data by language, and then in each language I checked for each condition separately whether there was an effect of Construction. I did this by comparing a null model with no fixed effects (M0) to a model with Construction as fixed effects (M1). If M1 fit the data better than M0, this indicates that the effect of Construction was significant. If that was the case, I also report the details of the model summary of M1. I report the results per language, starting with Catalan. See table 6.24 for the models compared, and tables 6.25-6.27 for details of the comparisons.

Catalan In the Catalan results the items in the *have* construction got significantly lower scores than those in the *with* construction in all the five test conditions. There was no effect of Construction in the lower and upper control conditions. This is as expected, since the exact same items were used across constructions in these two conditions. See table 6.5 for an overview.

		<
Unmodified	<i>have</i>	<i>with</i>
Stage-level	<i>have</i>	<i>with</i>
Evaluative	<i>have</i>	<i>with</i>
Color	<i>have</i>	<i>with</i>
Kind-level	<i>have</i>	<i>with</i>
Lower controls	no effect	no effect
Upper controls	no effect	no effect

Table 6.5: Overview of the differences between constructions per condition for Catalan. The constructions in each column got significantly lower scores than the constructions in the column to their right.

Greek In the Greek results the items in the unmodified condition of the *with* construction got significantly lower scores than those in the *have* construction. In the stage-level and evaluative conditions it was the other way around. There was no effect of Construction in the color and kind-level conditions. Just like in Catalan, there was also no effect of Construction for the two control conditions.

I give an overview in table 6.6.

		<
Unmodified	<i>with</i>	<i>have</i>
Stage-level	<i>have</i>	<i>with</i>
Evaluative	<i>have</i>	<i>with</i>
Color	no effect	no effect
Kind-level	no effect	no effect
Lower controls	no effect	no effect
Upper controls	no effect	no effect

Table 6.6: Overview of the differences between constructions per condition for Greek. The constructions in each column got significantly lower scores than the constructions in the column to their right.

Brazilian Portuguese The results for Brazilian Portuguese are very similar to Greek, the only difference being that for Brazilian Portuguese there was no effect of Construction in the unmodified condition either. That leaves only the stage-level and evaluative conditions, in which the items in the *have* constructions scored significantly lower than those in the *with* construction. As was the case for Greek, there was no effect of Construction in the color and kind-level conditions, nor in the lower or upper control conditions. This is summarized in table 6.7.

		<
Unmodified	no effect	no effect
Stage-level	<i>have</i>	<i>with</i>
Evaluative	<i>have</i>	<i>with</i>
Color	no effect	no effect
Kind-level	no effect	no effect
Lower controls	no effect	no effect
Upper controls	no effect	no effect

Table 6.7: Overview of the differences between constructions per condition for Brazilian Portuguese. The constructions in each column got significantly lower scores than the constructions in the column to their right.

Summary In all three languages, if there was an effect of Construction it was generally the items in the *with* construction that got significantly higher scores than the items in the *have* construction. The only exception to this is the unmodified condition in Greek, in which it was the items in the *have* construction that got significantly higher scores than those in the *with* construction. In none of the three languages was there an effect of Construction in the control

conditions. However, in Greek and Brazilian Portuguese the effect was also absent in the color and kind-level conditions, and in Brazilian Portuguese in the unmodified condition as well.

6.4 Summary of the main findings

In section 6.3.6.2 we saw that although there were slight differences between languages and constructions, overall the pattern of differences between conditions was remarkably stable. I found a clear opposition between the relatively low scoring stage-level and evaluative modification conditions on the one hand and the relatively high scoring color and kind-level modification conditions on the other hand.

In section 6.3.6.3 I found that in both the *with* and the HAVE construction, the pattern in the four adjectival modification conditions is stable: Catalan got lower scores than Brazilian Portuguese, which in turn got lower scores than Greek. In the *with* construction none of the languages differed significantly from the others in the unmodified condition, whereas in the unmodified condition of the HAVE construction Greek got the highest scores, while Catalan and Brazilian Portuguese didn't differ significantly from each other.

Finally, in section 6.3.6.4 I found that if there was a significant difference between the two constructions, it was almost always the *with* construction got higher scores than the HAVE construction. In Catalan this effect was consistent over all conditions, in Greek and Brazilian Portuguese it was only present in the stage-level and evaluative conditions. In the unmodified condition in Greek the effect was present but in the opposite direction: HAVE scored higher than *with*.

6.5 Discussion

My main objective in this part of my dissertation was to get a clearer picture of the conceptual restrictions that hold for BNs. Therefore, my main research question was whether there were differences between the different modification conditions I used. My other two research questions were derived from this: whether those differences between types of adjectives differed across languages, and whether they differed between the HAVE-verb construction and the *with* construction. In chapters 4 and 5 I developed hypotheses for each of these three research questions, repeated below:

Hypothesis 1 The more stable the interpretation of an adjective (across situations and speakers), the more acceptable it will be as a BN modifier. More specifically: kind-level adjectives are more acceptable than color adjectives, which in turn are more acceptable than stage-level and evaluative adjectives.

Hypothesis 2 The more strictly a language adheres to other pseudo-incorporation properties, the more strict it will be about BN modification constraints.

Hypothesis 3 PRESENCE *with* pseudo-incorporates BNs in a similar way as HAVE does, and thus there will be no difference in modification restrictions between these two constructions.

In this section I will discuss the results of the questionnaires I presented in chapter 6 in the light of these hypotheses. In section 6.5.1 I will focus on hypothesis 1, in section 6.5.2 I will turn to hypothesis 2, and in section 6.5.3 I will discuss the results for hypothesis 3.

6.5.1 Differences between adjectives

I showed in chapter 5 that any differences between adjective types in how acceptable they are as BN modifiers must be due to differences in the way the lexical semantics of the adjectives interact with the conceptual restrictions on BN constructions, rather than on the way they interact with the pseudo-incorporation semantics. This means that if adjectives differ from each other in how acceptable they are as BN modifiers, it's not because of any problems in the way the lexical semantics interact with the pseudo-incorporation semantics. In turn, this means that any such differences between adjectives must therefore be due to the way their lexical semantics interact with the conceptual restrictions on BN constructions.

I have argued that at the core of the conceptual restrictions on BNs lies the idea that the BN construction has to denote a property that is sufficiently established, either in the larger cultural context or in the more local context of the discourse. The main theme of my dissertation is the assumption that a linguistic correlate of this notion of establishment or stability can be found in modification. More specifically, I hypothesized that as the interpretation of kind-level adjectives is stable across time and people, kind-level modification of BNs is acceptable. The interpretation of color adjectives is a bit less stable, because of the subjectivity that is part of the gradable semantics of color adjectives. Since stability of the concept expressed is a vital part of the conceptual requirements on BNs, I predicted that color adjectives would be less acceptable as BN modifiers than kind-level adjectives. Stage-level adjectives and evaluative adjectives are even less stable in their interpretation, as they depend on times and judges respectively. Therefore, I predicted that these types of adjectives would be less acceptable than color and kind-level adjectives:

Hypothesis 1 The more stable the interpretation of an adjective (across situations and speakers), the more acceptable it will be as a BN modifier. More specifically: kind-level adjectives are more acceptable than color adjectives, which in turn are more acceptable than stage-level and evaluative adjectives.

From table 6.2 it's clear that these predictions were borne out for the most part. The only result that didn't match my predictions was that in most versions the color modification condition didn't differ significantly from the kind-level modification condition (the only version in which it did was the Catalan HAVE version). If the stability hypothesis is on the right track, we must conclude that the interpretation of color adjectives is equally stable as that of kind-level adjectives, even though the former, but not the latter, involves a gradable semantics. This calls for a re-examination of the relation between gradability and stability. In chapter 5 I argued that the interpretation of color adjectives involves some instability due to the standard of comparison, which is part of the degree semantics of color adjectives. This standard can be set differently for different people in different situations and is therefore a potential source of instability. However, there are reasons to believe that color adjectives involve less instability than other types of gradable adjectives. Hansen and Chemla (2015) provide experimental evidence that the inferences patterns of color adjectives are similar to those of absolute gradable adjectives like *visible* or *full*, and unlike relative gradable adjectives like *tall*. Relative adjectives involve a larger degree of vagueness than absolute adjectives, and their standard of comparison is context-dependent, whereas absolute adjectives come with a standard of comparison which is associated with a conventionally set maximum or minimum degree (Kennedy and McNally, 2005; Kennedy, 2007). Whether a person counts as tall depends on the context: I would be very tall for a five year old, and very short for a basketball player. For something to be visible, on the other hand, just a minimal degree of visibility is necessary, without this being required to exceed a contextually set standard. Similarly, for something to be full a maximal degree of filledness is required, independent of contextually set standards. When we observe this distinction between absolute and relative gradable adjectives, then, it's clear that the latter in their context dependency involve a greater amount of instability than the former. If color adjectives pattern with absolute adjectives, that would explain why in five out of six versions of my questionnaire the color modification condition didn't differ significantly from the kind-level modification condition, contrary to my initial predictions.⁸ More research into the nature of color adjectives is necessary to confirm this. In addition, adding a relative gradable modification condition to my questionnaire would allow us to test the prediction that color modification would get higher acceptability scores than relative gradable adjectives.

A final aspect of the results that deserves some discussion is that, as could be seen in tabel 6.2, in the Catalan data and also in the Greek HAVE data modification led to a significant decrease of acceptability compared to the unmodified version, even in the color and kind-level modification conditions. We've already seen that a similar effect occurred in the weak definite data in chapter 2 and in the Catalan and Dutch bare predicate data in chapter 3. This indicates

⁸I currently have no explanation for the difference between color and kind-level modification in the Catalan HAVE version.

that weakly referential constructions are sensitive to the narrowing down or specification of the denotation of the noun they contain. At first sight this is reminiscent of a finding in the literature on concept composition, which Jönsson and Hampton (2011) call the *modifier effect* (first discovered by Connolly et al., 2007). When one group of people was asked to judge how true it was that for instance ravens are black, and another group was asked to judge how true it was that young jungle ravens are black, the second group gave significantly lower ratings. This suggests that modification of a concept limits the extent to which properties are inherited within a given category. Strikingly, the negative effect of modification was smaller for typical modifiers (e.g. feathered ravens are black) than for atypical modifiers (e.g. jungle ravens are black). Typical modifiers in this case were defined as modifiers that denoted a property that was generally true of the class denoted by the noun: ravens are generally feathered, but do not generally live in the jungle. It's tempting to see a parallel here between typical modifiers and kind-level modification on the one hand, and between atypical modifiers and more variable modifiers like stage-level or evaluative modification on the other hand.

Jönsson and Hampton did a follow up on Connolly et al.'s (2007) study, which showed that the modifier effect was largely due to pragmatic reasoning. They gave participants both the unmodified and the (typically or atypically) modified version of an item and asked them which, if any, of them was more likely to be true. Afterwards, participants were asked to justify their decisions. In the case of typical modifiers the modifier effect was almost entirely due to pragmatic reasoning along the lines of Grice's maxim of quantity ('be as informative as you can'). (282) shows an example of one participant's justification for judging the typically modified statement as less true than the unmodified version.

(282) Flightless penguins live in cold climates.

"All penguins live in cold climates and all penguins are flightless so to make a distinction is arbitrary, just say penguins live in cold climates".

In the case of atypical modifiers, some additional types of justifications were given, for instance that the participant was uncertain about the properties of the modified noun (283), or that the modifier wasn't compatible with the attribute (284):

(283) Brazilian doves are white.

"Generally doves are white, Brazil could have black doves".

(284) Edible catfish have whiskers.

"Edible catfish probably do not have whiskers still attached, as they could not be eaten like this".

It could be that something similar is going on in my data. We've seen that the restrictions on weakly referential constructions have to do with the relevance or

	Catalan	Greek	Brazilian Portuguese
full-fledged counterpart	✓	✓	✓/ ??
non-specific interpretation	✓	✓	✓
obligatory narrow scope	✓	✓	✓
number neutrality	✓	??	✓
reduced discourse referentiality	✓	??	✓
restrictedness on:			
verbs	✓	✓	??
construction as a whole	✓	no data	no data
modification	✓	??	no data

Table 6.8: Overview of pseudo-incorporation properties of BNs as complements of HAVE-verbs per language. ?? indicates that the data are inconclusive, *no data* indicates that no data or not enough data are available.

establishedness of the concepts they express. When a concept is modified, the descriptive content of the modifier may add to or at least be in line with the relevance of the concept, or it may diminish or distract from it. However, it may be that when uttered out of the blue, with no context to support the relevance of a more specific concept, people prefer the more general, unmodified concept, similar to the reasoning exemplified in (282). This would explain why kind-level and color modification often resulted in decreased acceptability ratings compared to the unmodified condition. Stage-level and evaluative modification led to an even bigger decrease of acceptability because on top of the modifier effect they clash with the conceptual restrictions.⁹

6.5.2 Differences between languages

In this section I look at the results of the questionnaires I presented in chapter 6 in the light of my second research question, pertaining to the way in which BN modification restrictions work cross-linguistically. In chapter 4 I discussed the phenomenon of BN pseudo-incorporation in the three languages I looked at in my questionnaires: Catalan, Greek and Brazilian Portuguese. I discussed what are traditionally seen as the main characteristics of pseudo-incorporation – having a number neutral reading, having obligatory narrow scope, coming with restrictions on the verbs and nouns which can occur in these constructions, to name a few. The existing literature on pseudo-incorporation in these languages shows that Catalan pseudo-incorporation constructions exhibit all of these properties, whereas Greek and Brazilian Portuguese do not, or at least the Greek and especially the Brazilian Portuguese data are inconclusive. This is summarized in table 6.8, repeated here for convenience.

⁹The question remains why there was no modifier effect in the Brazilian Portuguese and Greek *with* data. I have no explanation for this.

As a way of representing these cross-linguistic differences on which pseudo-incorporation properties languages show, I proposed a pseudo-incorporation scale. This scale ranges from languages that are relatively strict about sticking to the main pseudo-incorporation properties to languages that are less strict.

(285) [strict] **Catalan** < **Brazilian Portuguese** < **Greek** [liberal]

My second hypothesis was based on this scale:

Hypothesis 2 The more strictly a language adheres to other pseudo-incorporation properties, the more strict it will be about BN modification constraints.

Even though the pattern of differences between modification conditions was very similar across languages, there were clear differences in the height of the three languages' scores. The results in the four adjectival modification conditions are completely in line with my hypothesis. The fact that in the *with* construction there was no difference between the languages confirms that the difference between the languages in the modification conditions really reflects a difference in modification strictness, rather than a cross-linguistic difference in BN acceptability in general. What's puzzling then are the results in the unmodified condition of the HAVE construction, where Greek got significantly higher scores than the other two languages. According to my hypothesis we'd expect neither of the three languages to differ from each other in the unmodified condition – like we saw in the *with* construction. Alternatively, we'd expect all three languages to differ from each other just like they did in the four modification conditions, which would indicate that the differences we observe are due to an overall cross-linguistic difference in BN acceptability. Some support for my hypothesis is that just by looking at figure 6.1 it's clear that in Catalan – in both the *with* and the HAVE constructions – the difference between the unmodified condition and the other four modification conditions is bigger than in Greek. This indicates that the penalty for modification is greater in Catalan than in Greek. However, this argument doesn't hold for Brazilian Portuguese. The penalty for modification seems to be more or less equal in Brazilian Portuguese and Greek. I have to conclude that I have no explanation for the results in unmodified HAVE.

On a sidenote, it's interesting that the three languages differed in the control conditions as well, even though very similar items were used in these conditions in all three languages. Catalan got more extreme scores than the other two languages: lower scores in the lower control condition and higher scores in the higher control condition. Brazilian Portuguese and Greek only differed significantly in the lower control condition in the *with* construction, Brazilian Portuguese scoring higher than Greek. Recall that the items I used in the control conditions were bare predicates, so I refer the reader to chapter 3 for more on modification of bare predicates cross-linguistically. Note though that the

items used in the BN questionnaire were a subset of those used in the questionnaire presented in chapter 3: the lowest scoring items of the bare predicate questionnaire were selected as lower controls for the BN questionnaire, and the highest scoring items were selected as upper controls. This means that the results of the control conditions of the BN questionnaire can't be compared directly to the results of chapter 3.

Summing up the main results, for the *with* construction the data are crystal clear, and although the results of the *HAVE* construction are not as easy to interpret, they still closely resemble the *with* results. In terms of a modification strictness scale, they would look like this:

(286) [strict] **Catalan** < **Brazilian Portuguese** < **Greek** [liberal]

This confirms my hypothesis – definitely for *with* and tentatively for *HAVE* – that the more strictly a language adheres to other pseudo-incorporation properties, the more strict it will be about modification constraints. In other words, the modification strictness scale mirrors the overall pseudo-incorporation scale.

Now, what we have here are two languages (Catalan and Greek) for which it's generally assumed that at least their *HAVE*+BN constructions involve pseudo-incorporation. In terms of BN modification acceptability they both show the same pattern, although at different heights. As I discussed in chapter 4, for Brazilian Portuguese the case for pseudo-incorporation is somewhat harder to make, since in this language bare nouns are allowed in argumental positions where pseudo-incorporation typically doesn't occur, such as in subject position. This suggests that for BNs in object position of for instance a *HAVE* verb an argumental analysis rather than a pseudo-incorporation analysis might be available. I showed, though, that Brazilian Portuguese *with*+BN and *HAVE*+BN constructions show all the universal and most of the variable properties of pseudo-incorporation. This is reason to believe that these constructions actually do involve pseudo-incorporation, similarly to their Catalan and Greek counterparts. My modification results now provide additional support for this claim. If Brazilian Portuguese BNs are argumental rather than pseudo-incorporated, we simply wouldn't expect any modification restrictions at all. The fact that there were modification restrictions shows that at least something is going on. Furthermore, the modification acceptability pattern in Brazilian Portuguese closely resembled the patterns of Catalan and Greek. This cross-linguistic similarity of the modification pattern indicates that the same type of modification restrictions are at play in these three languages, which in turn indicates that the same mechanism underlies these restrictions. For Catalan and Greek we know that this mechanism is pseudo-incorporation. Therefore, my results are support for a pseudo-incorporation analysis of *with*/*HAVE*+BN constructions in Brazilian Portuguese on a par with those in Catalan and Greek.

Put more generally, my data show that modification restrictions can be used as a diagnostic for whether we're dealing with pseudo-incorporation. Note though that when using this diagnostic it's important to look at the pattern

of differences between various modification conditions and the unmodified condition, as my results show that BN modification acceptability is not at all a black-and-white matter. For instance, if we only looked at the acceptability score of a Greek BN modified by a stage-level adjective, we might not suspect that this BN is incorporated, as the acceptability scores for Greek in the stage-level condition were rather high. Only when we compare the scores of stage-level modified items to those of items with other types of modification do we see the opposition between stage-level and evaluative modification vs. color and kind-level modification. That is, it's not the absolute acceptability of a single modified BN that is informative, but its relative acceptability compared to BNs with other types of modifiers.

At the same time, the fact that there were very clear differences between the languages in the height of the acceptability scores they got means that modification acceptability may be a window into different degrees of pseudo-incorporation. I framed the fact that Catalan scored significantly lower than Greek, with Brazilian Portuguese sitting in the middle, in terms of these languages' respective positions on a pseudo-incorporation scale.

The idea of a pseudo-incorporation scale captures the data, but it doesn't explain why for instance Catalan would be located at a more strict end than Greek. A possible explanation can be found in the work of Himmelmann (1998). As I will discuss in more detail in the next section, Himmelmann argues that the grammaticalization of determiners is generally slower in the complement position of adpositions than in direct object position of verbs. Taking this diachronic perspective one step further, it may also help us understand the differences between the three languages. The hypothesis would be that in Catalan the grammaticalization of the article is more advanced than in Greek, both in the object position of *with* and of HAVE. As a result in Catalan the use of a BN is more marked and subject to more restrictions than in Greek. In order to test this hypothesis, we'd need corpus data from both languages over the centuries to compare the evolution of the regular indefinite vs. the BN in these two languages. Some support for the idea that the article is more established in Catalan than in Greek might be the fact that Ancient Greek didn't have any indefinite articles yet, whereas Latin already had *unus*, the precursor of the Catalan indefinite *un* (see Pozas Loyo, 2010 for more on how Latin *unus* developed into the Romance indefinite article). Note that this approach can explain the difference between Catalan and Greek, but it doesn't seem so promising for Brazilian Portuguese, which seems to be set on a very different grammaticalization course, one of erosion of the nominal and verbal morphological system. As a result, the use of BNs is very common in Brazilian Portuguese – more so than in other Romance languages (see for instance Müller and Oliveira, 2004).

Let me end here with a short note on the exact nature of a pseudo-incorporation strictness scale, tying in with my discussion of the universal vs. the variable properties of pseudo-incorporation in chapter 4. Clearly, for languages' positions on the pseudo-incorporation scale I proposed the universal properties of pseudo-incorporation aren't relevant, as languages don't differ with respect

to those. Their positions are solely based on how they behave with respect to the variable properties of pseudo-incorporation: number neutrality, reduced discourse referentiality, and restrictedness. If we want to know how exactly the modification data are related to the other two properties, we'll need data on number neutrality and discourse referentiality that is similarly fine-grained as my modification data.

6.5.3 Differences between constructions

In this last section of the discussion I will discuss the results with respect to my third research question, which was whether the conceptual restriction works similarly in *with*+BN constructions and HAVE+BN constructions.

As I've discussed in detail in chapter 4, it has been hypothesized (Borthen, 2003) (see also de Swart, 2012; Le Bruyn, 2014) that BN pseudo-incorporation by HAVE-verbs has a parallel in BN pseudo-incorporation in the preposition *with*, more specifically, the subsense of *with* that has been dubbed PRESENCE (Müller et al., 2010), (Le Bruyn, 2014). Based on the assumption that the *with* construction and the HAVE construction pseudo-incorporate BNs in the same way, we'd expect the same conceptual restrictions to apply to *with* and HAVE. In more testable terms, this became the hypothesis that the pattern of differences between my five test conditions would be the same for both constructions, for each language:

Hypothesis 3 PRESENCE *with* pseudo-incorporates BNs in a similar way as HAVE does, and thus there will be no difference in modification restrictions between these two constructions.

First of all, I already showed in section 6.5.1 that both constructions showed roughly the same pattern of differences between the five test conditions. For Brazilian Portuguese the modification patterns were exactly the same for the two constructions. For Catalan and Greek there were slight differences between the *with* and HAVE versions, but all versions showed the significant difference between stage-level and evaluative modification vs. color and kind-level modification. This leads me to conclude that very similar conceptual constraints are at play in these two constructions. This, in turn, is support for the hypothesis that PRESENCE *with* and HAVE-verbs pseudo-incorporate BNs in the same way.

Even though the patterns of differences between conditions were very similar for *with* and HAVE, there were differences between the two constructions in terms of the height of their scores. Overall, if there was a significant difference between the two constructions it was generally the items in the *with* construction that got significantly higher scores than the items in the *have* construction. There were also conditions in which *with* and HAVE didn't differ significantly, though. For one, there was never an effect of Construction in the control conditions. This makes sense, as the exact same control items were used in both constructions. What is more striking is that whereas in Catalan the

effect of Construction is present in all five test conditions, this was not the case in the Greek and Brazilian Portuguese versions, where this effect only occurred in the stage-level and evaluative modification conditions. It may be that the absence of the effect of Construction in the higher scoring conditions (the color, kind-level, and unmodified conditions) was due to a ceiling effect in these two languages.

Before I turn to an explanation of the higher scores for *with* than for HAVE, something needs to be said about the mysterious case of the Greek unmodified condition, which was the only condition that got higher overall scores for HAVE than for *with*. Stavroula Alexandropoulou (p.c.) suggests that this has to do with informativity: when presented with an unmodified HAVE item (287a) and an unmodified *with* item (287b), the *with* item feels relatively underinformative, compared to the HAVE item.

- (287) a. Vlepo ena kopela pou forai fusta.
 I.see a girl who wears skirt
 ‘I see a girl who’s wearing a skirt.’
 b. Vlepo ena kopela me fusta.
 I.see a girl with skirt
 ‘I see a girl with a skirt.’

When adjectival modification comes into play, the adjective takes on the burden of informativity – or maybe a better way of putting it would be to say that with the adjective the informativity threshold is met – and the preference for HAVE over *with* disappears. This would explain why the unmodified condition is the only condition in which I found this effect. We found similar informativity effects in the corpus study I reported in section 6.2. See also the study by (van Miltenburg, 2011) on informativity effects on modification of bare PPs. van Miltenburg looked at all kinds of PPs, not just at *with*, and he didn’t limit his study to bare singular count nouns. His findings are nonetheless interesting: certain nouns are only acceptable as bare complements of PPs if they are modified.

- (288) a. *in mate
 in extent
 Int.: ‘to an extent’
 b. in grote mate
 in great extent
 ‘to a great extent’
 (289) a. *op wijze
 on way
 Int.: ‘in a way’
 b. op slinkse wijze
 on cunning way
 ‘in a cunning way’

As the examples in (288) and (289) indicate, the nouns for which this holds are relatively contentless. To say that someone does something in a way is not informative – it only gets interesting when you describe the way it's done. Similarly, getting back to the Greek examples in (287), wearing a skirt in itself perhaps is not so informative, in the sense that skirt-wearing is a common phenomenon. But in the HAVE case the phrase that modifies *ena kopela* ('a girl') at least includes a verb. That is, *with* only tells us that there is an PRESENCE relation between *the girl* and *skirt*, *wear* is more specific about the exact nature of that relation: it's a WEARING relation. Of course, this doesn't explain why the reversed effect of Construction wasn't found in the Catalan and Brazilian Portuguese data.

The fact that the unmodified condition is still more acceptable than for instance the stage-level modification condition indicates that the penalty for un informativity is much less than the penalty for not being compatible with the conceptual requirement, which I have shown causes the difference between the unmodified and stage-level modification conditions.

Let me now turn back to the significantly higher scores for *with* compared to HAVE. As I touched upon in the previous section, a possible explanation for this result can be found in (Himmelmann, 1998). He discusses the cross-linguistic phenomenon that article use in adpositional phrases is more limited than in other syntactic environments, such as subject and object position. Himmelmann only looks at cases in which a noun occurs without an article in adpositional phrases, but with an article in other syntactic environments. That is, he ignores cases in which a noun can be used without an article in any syntactic environment. To illustrate the difference he gives the following examples:

- (290) a. She came by bus.
 b. *She came by the bus.
 c. I take the bus.
 d. *I take bus.
 e. The bus is my favorite way to travel.
 f. *Bus is my favorite way to travel.
- (291) a. go to school
 b. quit school
 c. School starts again in September.

In the examples in (290) there is an opposition between article use in cases in which *bus* occurs in adpositional position (no article is allowed), and cases in which it occurs in object or subject position (the article is required). In the examples with *school* in (291) there is no such difference between the various syntactic positions in which *school* occurs. Himmelmann only discusses the *bus* type of cases, suggesting a diachronic explanation for this phenomenon: the grammaticalization of articles started in subject and object position, core

argument positions, and only later moved on to nouns in adpositions.¹⁰ Cross-linguistic differences with respect to the exact cases in which articles can be left out are then due to languages being at different stages of this grammaticalization process.

In order to test Himmelmann's grammaticalization hypothesis, quantitative data from historical corpora would be necessary, comparing the ratio of bare nouns in for instance object position and bare nouns in adpositions, and the development of that ratio over time. If Himmelmann is correct, then the greater acceptability of BNs in complement position of *with* compared to BNs in complement position of HAVE-verbs can be explained as follows: article use with nouns in adpositions such as *with* is relatively new, and therefore bareness of the noun is still relatively acceptable. Article use with nouns in object position is relatively established, and therefore bareness is relatively unacceptable.

A prediction that follows from Himmelmann's (1998) hypothesis is that there should also be languages in which article use in object position has reached complete grammaticalization, while article use with adpositions is still lagging behind. In other words, there should be languages which allow BNs in the complement position of *with*, but not in the complement position of HAVE. In fact, as we've already seen in section 6.2, Dutch is such a language: it doesn't allow BNs as complements of HAVE-verbs (292), but it does allow them in the complement position of *with* (293).

- (292) a. *Ik heb auto.
 I have car
 Int.: 'I have a car'.
 b. *Ik draag rok.
 I wear skirt
 Int.: 'I'm wearing a skirt.'
- (293) a. Daar staat een man met gitaar.
 There stands a man with guitar
 'There's a man with a guitar'.
 b. Daar loopt een vrouw met hoed.
 There walks a woman with hat
 'There walks a woman with a hat.'

If we assume that Dutch *met*+BN constructions are similar to their Brazilian Portuguese, Catalan and Greek counterparts, and therefore similar to pseudo-incorporated HAVE+BN constructions, we'd predict Dutch *met*+BN to show a similar modification pattern. As we've seen in section 6.2, and as noted by Zwarts (2009), there are cases of *met*+BN constructions with adjectival modification:

¹⁰Note that Himmelmann only looks at definite and specific articles, not at indefinites. In fact, he claims that his hypothesis doesn't hold for indefinites, as the languages he looked at didn't show any cases interaction between article use and syntactic construction. However, since he doesn't provide any data to back up this claim, I'll leave that as an open question.

- (294) a. terwijl een groepje leden van de oranjegarde, bibberend
 while a group-DIM members of the orange.guard shivering
 in het overhemdje **met oranje stropdas** in de regen luidkeels
 in the shirt-DIM with orange tie in the rain loudly
 juichte bij het uitstappen van alle koninklijke gasten
 cheered with the alighting of all royal guests
 ‘while a small group of members of the orange guard, shivering in
 the shirt **with an orange tie**, was loudly cheering in the rain for
 all the royal guests that were alighting’
- b. hij droeg een shirt **met open kraag** en donkerblauwe
 he wore a shirt with open collar and dark.blue
 spijkerbroek
 jeans
 ‘he wore a shirt **with the collar open** and dark blue jeans’

However, to my knowledge, that is the extent to which *met*+modified BNs have been mentioned in the literature. In order to test my prediction I therefore ran the same questionnaire as I used for the other languages for Dutch, except now only in the *with* construction. For the method that was used, see section 6.3.3, for the complete list of items that were used, see appendix C.3. 111 native speakers of Dutch completed the questionnaire.

6.5.3.1 Analysis

I analysed the data in the same way as the data from the other three languages. I started out again by comparing the null model M0 without any fixed effects to the model M1 with Condition as a fixed effect. In both models the dependent variable was Score, and the random component consisted of random intercepts for both Item and Subject. The log Likelihood of M1 was significantly closer to 0 than that of M0, indicating that M1 was a better fit of the data (see table 6.9). This means that the effect of Condition was significant. Next, I looked at the model summary of M1 to see if there was a difference between the unmodified upper controls and the kind-level modified upper controls. The unmodified upper controls got slightly higher scores overall than the kind-level modified ones, and this difference was significant (see table 6.10). Therefore, I didn’t collapse these two levels into one upper control condition. In this way the Dutch data differed from the Catalan, Greek and Brazilian Portuguese data.

Model	Fixed factor(s)	Random factors (intercept only)
M0	-	Subject, Item
M1	Condition	Subject, Item

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-5630.2			
M1	-5559.4	141.53	7	<.0001

Table 6.9: Overview of models and model comparison of the initial dataset.

β -estimate	Std. error	z-value	p-value
-0.6443	0.3230	1.995	=.0461

Table 6.10: Overview of comparison between unmodified upper controls and kind-level modified upper controls.

The next step was to look into the differences per condition within M1. See table 6.28 in the appendix for details. For an overview see figure 6.2.

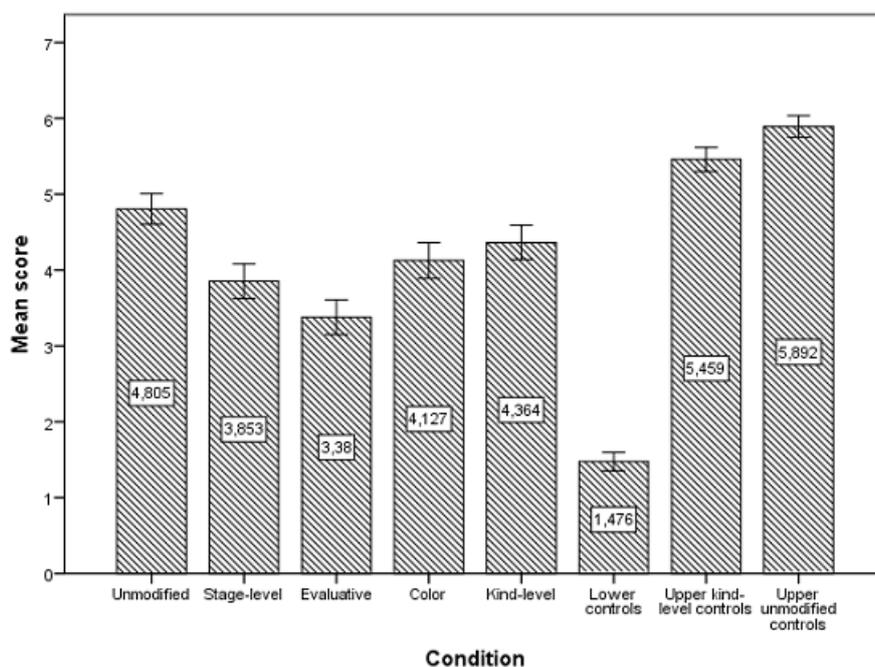


Figure 6.2: Overview of means scores per condition, Dutch *with*.

Unsurprisingly, it turned out that the lower control condition got the lowest scores of all. The evaluative condition got significantly higher scores, but it still scored significantly lower than the stage-level condition. There was no significant difference between the stage-level and the color conditions, although the stage-level condition scored significantly lower than the kind-level condition whereas there was no significant difference between the color condition and the kind-level condition. The kind-level condition scored significantly lower than the unmodified condition, which scored significantly lower again than the upper kind-level controls, which in turn scored significantly lower than the upper unmodified controls. In summary:

lower controls < evaluative < stage-level / (color) < (color) / kind-level < unmodified < upper kind-level controls < upper unmodified controls

The main differences between the Dutch modification pattern and those of the other three languages is the in-between status of the color modification condition, and the difference between the stage-level and the evaluative modification conditions. On the other hand, the fact that the stage-level and evaluative modification conditions still scored significantly lower than the kind-level mod-

ification condition is familiar from the other languages.

On a final note, I'd like to pick up on the discussion of Dutch adjectival inflection from chapter 3. In section 3.7 I discussed the fact that adjectives modifying bare predicates don't get inflected in Dutch, whereas they are inflected in Catalan, Brazilian Portuguese and Greek. In addition to this cross-linguistic variation regarding bare predicates, in Dutch we also see variation between constructions. Adjectives modifying bare predicates don't get inflected (295a), but adjectives modifying bare nouns do (295b).

- (295) a. Luana is elektrisch ingenieur.
 Luana is.3SG electrical.[-INFL] engineer
 'Luana is an electrical engineer'
- b. een vrouw met elektrische auto
 a woman with electrical.[+INFL] car
 'a woman with electric car'

If Dutch adjectival inflection is located in NumP, as I argued in chapter 3, that would mean that whereas bare predicates in Dutch are NPs, Dutch BNs are (at least) NumPs. Support for a NumP status of Dutch BNs is that they aren't number neutral, but rather get a strictly singular interpretation. In (296) the BN *ring* ('ring') can only be picked up by a singular continuation:

- (296) Ik zie een vrouw met ring. Een gouden trouwring. # Een
 I see.1SG a woman with ring a golden wedding.ring a
 gouden trouwring en eentje met een grote diamant.
 golden wedding.ring and one with a big diamond
 'I see a woman with a ring. A golden wedding ring.'

In contrast, the fact that Greek, Brazilian Portuguese and Catalan BNs get inflected doesn't necessarily mean that they are NumPs, as Greek and Romance inflection is located lower, in the NP.

6.6 Conclusion

In chapters 4 and 5 I developed hypothesis 1, the stability hypothesis applied to BNs, which predicted stage-level and evaluative modification of BNs to be less acceptable than color modification, which in turn would be less acceptable than kind-level modification. This was based on the assumption that the more stable the interpretation of an adjective is, the more it will be in line with the conceptual requirement on BNs, at the core of which lies the notion of stability.

The data from chapter 6 mostly corroborated this hypothesis: there was a systematic, cross-linguistic and cross-construction opposition between stage-level and evaluative modification, scoring relatively low, and color and kind-level modification, scoring relatively high. In all but the Catalan HAVE version, though, the color modification condition didn't differ significantly from the

kind-level modification condition. I suggested, based on experimental evidence from Hansen and Chemla (2015), that this may be because color adjectives are absolute adjectives, the semantics of which involves less instability than that of other gradable adjectives.

My second hypothesis was based on the pseudo-incorporation scale I proposed in chapter 5: my prediction was that the position of languages on this scale would be reflected in the modification data. My data clearly confirmed this hypothesis for the *with* construction. The data in the HAVE construction were harder to interpret, but they quite closely mirrored those in the *with* construction. Overall, Catalan got the lowest scores, followed by Brazilian Portuguese, followed by Greek. I suggested a diachronic explanation of the difference in acceptability scores between Catalan and Greek, based on work by Himmelmann (1998), but such an account doesn't work for Brazilian Portuguese.

Based on the fact that the pattern of the significant difference between stage-level and evaluative modification on the one hand and color and kind-level modification on the other hand was persistent across all three languages, I moreover concluded that modification restrictions can be used as a diagnostic for pseudo-incorporation.

My third hypothesis was based on suggestions in the literature (Borthen, 2003; de Swart, 2012) that HAVE+BN constructions have a parallel in *with*+BN constructions. My prediction was that if this is indeed the case, these two constructions shouldn't show any significant differences in terms of the pattern of differences between the five modification conditions. My results confirmed this prediction.

Looking more closely at the data, I found that overall the *with* versions got significantly higher scores than the HAVE-versions. In Catalan this was the case in all five test conditions, in Greek and Brazilian Portuguese this effect of Construction occurred only in some of them. The difference in the height of the acceptability scores between *with* and HAVE can be explained by a diachronic account along the lines of Himmelmann (1998). In the Greek unmodified condition the effect of Construction was reversed, HAVE scoring higher than *with*. I suggested an explanation for this in terms of informativity.

Finally, based on my results and the diachronic interpretation à la Himmelmann I proposed, I predicted that there should be languages that do pseudo-incorporation of BNs as complements of *with*, even if they don't allow BNs as complements of HAVE-verbs. One such language would be Dutch, so in order to test this prediction I ran the BN modification questionnaire in this language as well. The results showed a pattern of modification restrictions that was similar to the patterns of Catalan, Greek and Brazilian Portuguese: Dutch also shows that stage-level and evaluative modification are clearly less acceptable than kind-level modification. This is in line with a pseudo-incorporation analysis of Dutch BNs in this construction.

6.7 Appendix 1: Statistics

6.7.1 Preliminaries

Model	Fixed factor(s)	Random factors (intercept only)
M0	-	Subject, Item
M1	Condition	Subject, Item
M2	Condition+Language	Subject, Item
M3	Condition+Language+Construction	Subject, Item
M4	Condition*Language+Construction	Subject, Item
M5	Condition*Language*Construction	Subject, Item

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-43939			
M1	-43834	210.25	7	<.0001
M1	-43834			
M2	-43770	127.99	2	<.0001
M2	-43770			
M3	-43765	10.594	1	=.0011
M3	-43765			
M4	-42655	2219.9	14	<.0001
M4	-42655			
M5	-42520	268.93	23	<.0001

Table 6.11: Overview of models and model comparisons of the initial dataset.

Model	Fixed factor(s)	Random factors (intercept only)
M0	-	Subject, Item
M1	Condition	Subject, Item

Comparison between	Log likelihood	χ^2	Df	p-value
Catalan <i>with</i>				
M0	-5356.1			
M1	-5286.9	138.42	7	<.0001
Catalan <i>have</i>				
M0	-5130.5			
M1	-5060.2	140.57	7	<.0001
Greek <i>with</i>				
M0	-11446			
M1	-11364	165.34	7	<.0001
Greek <i>have</i>				
M0	-10764			
M1	-10681	165.55	7	<.0001
Brazilian Portuguese <i>with</i>				
M0	-4943.2			
M1	-4895.5	95.352	7	<.0001
Brazilian Portuguese <i>have</i>				
M0	-5089.6			
M1	-5042.1	94.997	7	<.0001

Table 6.12: Overview of models and model comparisons to see if Condition was significant for each version.

Version	β -estimate	Std. error	z-value	p-value
Catalan <i>with</i>	-0.2984	0.4907	0.608	=.5431
Catalan <i>have</i>	-0.3535	0.5983	0.591	=.555
Greek <i>with</i>	-0.4219	0.3217	1.312	=.1897
Greek <i>have</i>	-0.3575	0.3456	1.034	=.3010
Brazilian Portuguese <i>with</i>	-0.6078	0.3923	1.549	=.1213
Brazilian Portuguese <i>have</i>	-0.6968	0.4309	1.617	=.1058

Table 6.13: Overview of comparison between unmodified upper controls and kind-level modified upper controls per version.

6.7.2 Comparisons between modification conditions

Comparison		β -estimate	Std. error	z-value	p-value
Unmodified	Stage-level	-3.1805	0.2896	-10.984	<.0001
Unmodified	Evaluative	-3.0371	0.2895	-10.491	<.0001
Unmodified	Color	-1.7447	0.2866	-6.087	<.0001
Unmodified	Kind-level	-1.2036	0.2870	-4.193	<.0001
Unmodified	Lower controls	-4.7087	0.3404	-13.831	<.0001
Unmodified	Upper controls	0.1663	0.3201	0.520	=.603
Stage-level	Evaluative	0.1434	0.2803	0.512	=.609
Stage-level	Color	1.4358	0.2817	5.097	<.0001
Stage-level	Kind-level	1.9769	0.2838	6.967	<.0001
Stage-level	Lower controls	-1.5282	0.3289	-4.646	<.0001
Stage-level	Upper controls	3.3470	0.3205	10.443	<.0001
Evaluative	Color	1.2924	0.2818	4.587	<.0001
Evaluative	Kind-level	1.8335	0.2838	6.461	<.0001
Evaluative	Lower controls	-1.6715	0.3294	-5.075	<.0001
Evaluative	Upper controls	3.2035	0.3204	9.998	<.0001
Color	Kind-level	0.5411	0.2824	1.916	=.0554
Color	Lower controls	-2.9640	0.3322	-8.923	<.0001
Color	Upper controls	1.9111	0.3179	6.012	<.0001
Kind-level	Lower controls	-3.5050	0.3344	-10.482	<.0001
Kind-level	Upper controls	1.3700	0.3183	4.304	<.0001
Lower controls	Upper controls	4.8751	0.3671	13.280	<.0001

Table 6.14: Overview of comparisons between conditions, Catalan *with*.

Comparison		β -estimate	Std. error	z-value	p-value
Unmodified	Stage-level	-3.8022	0.3427	-11.094	<.0001
Unmodified	Evaluative	-4.0210	0.3439	-11.693	<.0001
Unmodified	Color	-2.9318	0.3412	-8.593	<.0001
Unmodified	Kind-level	-2.1867	0.3400	-6.431	<.0001
Unmodified	Lower controls	-4.8066	0.4080	-11.780	<.0001
Unmodified	Upper controls	0.8420	0.3852	2.186	=.0288
Stage-level	Evaluative	-0.2187	0.3316	-0.660	=.5095
Stage-level	Color	0.8704	0.3327	2.616	=.0089
Stage-level	Kind-level	1.6155	0.3342	4.835	<.0001
Stage-level	Lower controls	-1.0045	0.3962	-2.535	=.0112
Stage-level	Upper controls	4.6442	0.3889	11.941	<.0001
Evaluative	Color	1.0891	0.3334	3.267	=.0011
Evaluative	Kind-level	1.8342	0.3350	5.475	<.0001
Evaluative	Lower controls	-0.7858	0.3965	-1.982	=.0475
Evaluative	Upper controls	4.8630	0.3900	12.470	<.0001
Color	Kind-level	0.7451	0.3343	2.229	=.0258
Color	Lower controls	-1.8748	0.3981	-4.709	<.0001
Color	Upper controls	3.7739	0.3872	9.746	<.0001
Kind-level	Lower controls	-2.6199	0.3998	-6.553	<.0001
Kind-level	Upper controls	3.0288	0.3857	7.852	<.0001
Lower controls	Upper controls	5.6487	0.4478	12.613	<.0001

Table 6.15: Overview of comparisons between conditions, Catalan HAVE.

Comparison		β -estimate	Std. error	z-value	p-value
Unmodified	Stage-level	-0.7566	0.1919	-3.943	<.0001
Unmodified	Evaluative	-0.9557	0.1915	-4.990	<.0001
Unmodified	Color	0.0789	0.1930	0.409	=.6826
Unmodified	Kind-level	-0.1399	0.1927	-0.726	=.4677
Unmodified	Lower controls	-4.5035	0.2272	-19.826	<.0001
Unmodified	Upper controls	-0.6212	0.2131	-2.915	=.0036
Stage-level	Evaluative	-0.1991	0.1897	-1.050	=.2939
Stage-level	Color	0.8356	0.1916	4.361	<.0001
Stage-level	Kind-level	0.6168	0.1912	3.226	=.0013
Stage-level	Lower controls	-3.7468	0.2246	-16.685	<.0001
Stage-level	Upper controls	0.1355	0.2116	0.640	=.5220
Evaluative	Color	1.0347	0.1912	5.411	<.0001
Evaluative	Kind-level	0.8158	0.1908	4.276	<.0001
Evaluative	Lower controls	-3.5477	0.2238	-15.852	<.0001
Evaluative	Upper controls	0.3346	0.2112	1.584	=.113
Color	Kind-level	-0.2189	0.1924	-1.138	=.255
Color	Lower controls	-4.5825	0.2270	-20.185	<.0001
Color	Upper controls	-0.7001	0.2128	-3.290	=.001
Kind-level	Lower controls	-4.3636	0.2263	-19.278	<.0001
Kind-level	Upper controls	-0.4812	0.2125	-2.265	=.0235
Lower controls	Upper controls	3.8823	0.2432	15.96	<.0001

Table 6.16: Overview of comparisons between conditions, Greek *with*.

Comparison		β -estimate	Std. error	z-value	p-value
Unmodified	Stage-level	-1.6663	0.2052	-8.122	<.0001
Unmodified	Evaluative	-2.0897	0.2050	-10.195	<.0001
Unmodified	Color	-0.6240	0.2059	-3.031	=.0024
Unmodified	Kind-level	-0.6792	0.2054	-3.306	=.0009
Unmodified	Lower controls	-4.9734	0.2435	-20.425	<.0001
Unmodified	Upper controls	-0.9711	0.2285	-4.249	<.0001
Stage-level	Evaluative	-0.4234	0.2001	-2.116	=.0343
Stage-level	Color	1.0423	0.2024	5.150	<.0001
Stage-level	Kind-level	0.9871	0.2019	4.889	<.0001
Stage-level	Lower controls	-3.3071	0.2375	-13.926	<.0001
Stage-level	Upper controls	0.6952	0.2251	3.089	=.0020
Evaluative	Color	1.4658	0.2020	7.256	<.0001
Evaluative	Kind-level	1.4106	0.2016	6.998	<.0001
Evaluative	Lower controls	-2.8836	0.2362	-12.208	<.0001
Evaluative	Upper controls	1.1187	0.2247	4.979	<.0001
Color	Kind-level	-0.0552	0.2030	-0.272	=.7858
Color	Lower controls	-4.3494	0.2404	-18.094	<.0001
Color	Upper controls	-0.3471	0.2262	-1.534	=.1249
Kind-level	Lower controls	-4.2943	0.2400	-17.892	<.0001
Kind-level	Upper controls	-0.2920	0.2258	-1.293	=.1960

Table 6.17: Overview of comparisons between conditions, Greek HAVE.

Comparison		β -estimate	Std. error	z-value	p-value
Unmodified	Stage-level	-0.8533	0.2480	-3.441	<.0001
Unmodified	Evaluative	-1.2689	0.2487	-5.102	<.0001
Unmodified	Color	-0.2364	0.2495	-0.947	=.3434
Unmodified	Kind-level	-0.1912	0.2506	-0.763	=.4454
Unmodified	Lower controls	-3.2965	0.2829	-11.654	<.0001
Unmodified	Upper controls	-0.1452	0.2681	-0.542	=.5880
Stage-level	Evaluative	-0.4156	0.2454	-1.694	=.0903
Stage-level	Color	0.6169	0.2471	2.496	=.0126
Stage-level	Kind-level	0.6621	0.2483	2.667	=.0077
Stage-level	Lower controls	-2.4431	0.2784	-8.775	<.0001
Stage-level	Upper controls	0.7080	0.2660	2.662	=.0078
Evaluative	Color	1.0325	0.2478	4.167	<.0001
Evaluative	Kind-level	1.0778	0.2490	4.329	<.0001
Evaluative	Lower controls	-2.0274	0.2776	-7.303	<.0001
Evaluative	Upper controls	1.1237	0.2666	4.215	<.0001
Color	Kind-level	0.0452	0.2499	0.181	=.8566
Color	Lower controls	-3.0600	0.2817	-10.862	<.0001
Color	Upper controls	0.0912	0.2675	0.341	=.7332
Kind-level	Lower controls	-3.1052	0.2828	-10.980	<.0001
Kind-level	Upper controls	0.0460	0.2685	0.171	=.8640
Lower controls	Upper controls	3.1511	0.2985	10.558	<.0001

Table 6.18: Overview of comparisons between conditions, Brazilian Portuguese *with*.

Comparison		β -estimate	Std. error	z-value	p-value
Unmodified	Stage-level	-1.4854	0.2706	-5.489	<.0001
Unmodified	Evaluative	-1.7837	0.2707	-6.588	<.0001
Unmodified	Color	-0.2468	0.2719	-0.907	=.364
Unmodified	Kind-level	-0.3761	0.2727	-1.379	=.168
Unmodified	Lower controls	-3.2562	0.3130	-10.403	<.0001
Unmodified	Upper controls	-0.1534	0.2929	-0.524	=.600
Stage-level	Evaluative	-0.2983	0.2654	-1.124	=.261
Stage-level	Color	1.2387	0.2689	4.607	<.0001
Stage-level	Kind-level	1.1093	0.2696	4.115	<.0001
Stage-level	Lower controls	-1.7708	0.3068	-5.772	<.0001
Stage-level	Upper controls	1.3320	0.2902	4.590	<.0001
Evaluative	Color	1.5370	0.2690	5.714	<.0001
Evaluative	Kind-level	1.4076	0.2696	5.220	<.0001
Evaluative	Lower controls	-1.4725	0.3059	-4.814	<.0001
Evaluative	Upper controls	1.6303	0.2903	5.617	<.0001
Color	Kind-level	-0.1293	0.2713	-0.477	=.634
Color	Lower controls	-3.0094	0.3113	-9.668	<.0001
Color	Upper controls	0.0933	0.2917	0.320	=.749
Kind-level	Lower controls	-2.8801	0.3117	-9.240	<.0001
Kind-level	Upper controls	0.2227	0.2924	0.762	=.446
Lower controls	Upper controls	3.1027	0.3298	9.407	<.0001

Table 6.19: Overview of comparisons between conditions, Brazilian Portuguese HAVE.

6.7.3 Comparisons between languages

Model	Fixed factor(s)	Random factors (intercept only)
M0	-	Subject, Item
M1	Language	Subject, Item

Table 6.20: Overview of models compared for each condition in each construction.

Comparison between	Log likelihood	χ^2	Df	p-value
<i>with unmodified</i>				
M0	-1896.0			
M1	-1894.6	2.8844	2	=.2364
<i>with stage-level</i>				
M0	-2453.4			
M1	-2367.9	171.07	2	<.0001
<i>with evaluative</i>				
M0	-2510.6			
M1	-2444.0	133.09	2	<.0001
<i>with color</i>				
M0	-2105.8			
M1	-2051.0	109.48	2	<.0001
<i>with kind-level</i>				
M0	-2136.1			
M1	-2114.9	42.35	2	<.0001
<i>with low controls</i>				
M0	-4996.3			
M1	-4983.7	25.282	2	<.0001
<i>with upper controls</i>				
M0	-4829.7			
M1	-4824.1	11.184	2	<.0001
<i>have unmodified</i>				
M0	-1805.1			
M1	-1788.9	32.276	2	<.0001
<i>have stage-level</i>				
M0	-2525.3			
M1	-2409.6	231.43	2	<.0001
<i>have evaluative</i>				

M0	-2518.2			
M1	-2421.1	194.31	2	<.0001
have color				
M0	-2169.9			
M1	-2066.0	207.77	2	<.0001
have kind-level				
M0	-2226.4			
M1	-2162.0	128.84	2	<.0001
have low controls				
M0	-4748.8			
M1	-4736.2	24.531	2	<.0001
have upper controls				
M0	-4779.0			
M1	-4770.0	17.887	2	=.0001

Table 6.21: Overview of model comparisons for each condition in each construction.

Comparison		β -estimate	Std. error	z-value	p-value
Unmodified					
Catalan	Greek	no effect	no effect	no effect	no effect
Catalan	Braz. P.	no effect	no effect	no effect	no effect
Greek	Braz. P.	no effect	no effect	no effect	no effect
Stage-level					
Catalan	Greek	3.1361	0.2407	13.029	<.0001
Catalan	Braz. P.	2.6260	0.2774	9.465	<.0001
Greek	Braz. P.	-0.5101	0.2306	-2.212	=.027
Evaluative					
Catalan	Greek	2.7993	0.2424	11.547	<.0001
Catalan	Braz. P.	1.9822	0.2790	7.105	<.0001
Greek	Braz. P.	-0.8171	0.2368	-3.45	=.0006
Color					
Catalan	Greek	2.4827	0.2401	10.340	<.0001
Catalan	Braz. P.	1.6326	0.2754	5.928	<.0001
Greek	Braz. P.	-0.8502	0.2383	-3.567	=.0004
Kind-level					
Catalan	Greek	1.4261	0.2208	6.459	<.0001
Catalan	Braz. P.	0.9269	0.2605	3.558	=.0004
Greek	Braz. P.	-0.4992	0.2257	-2.212	=.027
Lower controls					
Catalan	Greek	0.9326	0.2962	3.149	=.0016
Catalan	Braz. P.	1.8905	0.3730	5.069	<.0001
Greek	Braz. P.	0.9579	0.3224	2.971	=.0030
Upper controls					
Catalan	Greek	-1.0098	0.3019	-3.345	=.0008
Catalan	Braz. P.	-0.7258	0.3681	-1.972	=.0487
Greek	Braz. P.	0.2840	0.3136	0.906	=.3651

Table 6.22: Overview of comparisons between languages per condition, *with*.

Comparison		β -estimate	Std. error	z-value	p-value
Unmodified					
Catalan	Greek	1.2802	0.2498	5.124	<.0001
Catalan	Braz. P.	0.2647	0.2879	0.919	=.358
Greek	Braz. P.	-1.0155	0.2551	-3.981	<.0001
Stage-level					
Catalan	Greek	3.4140	0.2241	15.23	<.0001
Catalan	Braz. P.	2.6066	0.2487	10.48	<.0001
Greek	Braz. P.	-0.8074	0.2058	-3.923	<.0001
Evaluative					
Catalan	Greek	3.5088	0.2519	13.932	<.0001
Catalan	Braz. P.	2.7786	0.2841	9.779	<.0001
Greek	Braz. P.	-0.7302	0.2342	-3.118	=.0018
Color					
Catalan	Greek	4.0539	0.2882	14.07	<.0001
Catalan	Braz. P.	3.3896	0.3231	10.49	<.0001
Greek	Braz. P.	-0.6643	0.2689	-2.47	=.0135
Kind-level					
Catalan	Greek	2.5679	0.2282	11.255	<.0001
Catalan	Braz. P.	1.9515	0.2611	7.473	<.0001
Greek	Braz. P.	-0.6164	0.2234	-2.759	=.0058
Lower controls					
Catalan	Greek	1.2509	0.3061	4.087	<.0001
Catalan	Braz. P.	1.7867	0.3867	4.620	<.0001
Greek	Braz. P.	0.5358	0.3367	1.591	=.112
Upper controls					
Catalan	Greek	-1.0468	0.2656	-3.941	<.0001
Catalan	Braz. P.	-1.1321	0.3207	-3.530	=.0004
Greek	Braz. P.	-0.0853	0.2738	-0.312	=.755

Table 6.23: Overview of comparisons between languages per condition, HAVE.

6.7.4 Comparisons between constructions

Model	Fixed factor(s)	Random factors (intercept only)
M0	-	Subject, Item
M1	Construction	Subject, Item

Table 6.24: Overview of models compared for each condition in each language.

Catalan unmodified				
Comparison between	Log likelihood	χ^2	Df	p-value
M0	-954.04			
M1	-951.75	4.5782	1	=.0324
Model summary M1 (<i>with</i> vs. <i>have</i>)	β -0.5793	Std. error 0.2703	z-value -2.143	p-value =.0321
Catalan stage-level				
Comparison between	Log likelihood	χ^2	Df	p-value
M0	-1179.5			
M1	-1174.9	9.0944	1	=.0026
Model summary M1 (<i>with</i> vs. <i>have</i>)	β -1.1086	Std. error 0.3674	z-value -3.018	p-value =.0026
Catalan evaluative				
Comparison between	Log likelihood	χ^2	Df	p-value
M0	-1182.2			
M1	-1172.9	18.779	1	<.0001
Model summary M1 (<i>with</i> vs. <i>have</i>)	β -1.5427	Std. error 0.3548	z-value -4.348	p-value <.0001
Catalan color				

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-1274.2			
M1	-1254.8	38.835	1	<.0001
Model summary M1 (<i>with</i> vs. <i>have</i>)	β -1.6825	Std. error 0.2702	z-value -6.227	p-value <.0001

Catalan kind-level

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-1239.8			
M1	-1225.6	28.514	1	<.0001
Model summary M1 (<i>with</i> vs. <i>have</i>)	β -1.3892	Std. error 0.2613	z-value -5.317	p-value <.0001

Catalan lower controls

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-2007.0			
M1	-2006.6	0.7353	1	=.3912

Catalan upper controls

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-1890.6			
M1	-1890.4	0.4166	1	=.5186

Table 6.25: Overview of model comparisons and model summaries to see if Construction was significant for each condition in Catalan.

Greek unmodified

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-1799.6			
M1	-1796.8	5.5996	1	=.0180

Model summary M1 (<i>with vs. have</i>)	β 0.5002	Std. error 0.2119	z-value 2.361	p-value .0182
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Greek stage-level

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-2455.3			
M1	-2449.9	10.864	1	=.0010

Model summary M1 (<i>with vs. have</i>)	β -0.5314	Std. error 0.1615	z-value -3.29	p-value =.001
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Greek evaluative

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-2505.4			
M1	-2495.7	19.453	1	<.0001

Model summary M1 (<i>with vs. have</i>)	β -0.8207	Std. error 0.1862	z-value -4.409	p-value <.0001
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Greek color

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-1882.3			
M1	-1880.6	3.4934	1	=.0616

Greek kind-level

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-2023.1			
M1	-2022.5	1.1573	1	=.282

Greek lower controls

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-5128.8			
M1	-5128.8	0.0027	1	=.9585

Greek upper controls

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-5380.7			
M1	-5380.7	0.119	1	=.7301

Table 6.26: Overview of model comparisons and model summaries to see if Construction was significant for each condition in Greek.

Braz. P. unmodified

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-893.78			
M1	-893.56	0.4347	1	=.5097

Braz. P. stage-level

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-1093.2			
M1	-1086.5	13.419	1	=.0002
Model summary M1 (<i>with</i> vs. <i>have</i>)	β -0.8492	Std. error 0.2328	z-value -3.648	p-value =.0003

Braz. P. evaluative

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-1143.5			
M1	-1139.9	7.1316	1	=.0076
Model summary M1 (<i>with</i> vs. <i>have</i>)	β -0.6418	Std. error 0.2399	z-value -2.675	p-value =.0075

Braz. P. color

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-944.72			

M1	-944.62	0.2053	1	=.6505
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Braz. P. kind-level

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-974.80			
M1	-974.11	1.3797	1	=.2401

Braz. P. lower controls

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-2505.4			
M1	-2505.4	0.1076	1	=.7429

Braz. P. upper controls

Comparison between	Log likelihood	χ^2	Df	p-value
M0	-2228.2			
M1	-2228.0	0.3776	1	=.5389

Table 6.27: Overview of model comparisons and model summaries to see if Construction was significant for each condition in Brazilian Portuguese.

6.7.5 Results for Dutch *with*

Comparison		β -estimate	Std. error	z-value	p-value
Unmodified	Stage-level	-0.9493	0.2043	-4.646	<.0001
Unmodified	Evaluative	-1.4087	0.2052	-6.865	<.0001
Unmodified	Color	-0.6675	0.2050	-3.257	=.0011
Unmodified	Kind-level	-0.4306	0.2045	-2.105	=.0353
Unmodified	Lower controls	-3.5494	0.2322	-15.288	<.0001
Unmodified	Upper k-level controls	0.8856	0.2695	3.286	=.0010
Unmodified	Upper unmod controls	1.5299	0.2728	5.608	<.0001
Stage-level	Evaluative	-0.4594	0.2034	-2.259	=.0239
Stage-level	Color	0.2817	0.2039	1.381	=.1672
Stage-level	Kind-level	0.5187	0.2039	2.544	=.0110
Stage-level	Lower controls	-2.6001	0.2286	-11.376	<.0001
Stage-level	Upper k-level controls	1.8348	0.2702	6.790	<.0001
Stage-level	Upper unmod controls	2.4792	0.2740	9.047	<.0001
Evaluative	Color	0.7411	0.2044	3.625	=.0003
Evaluative	Kind-level	0.9781	0.2046	4.780	<.0001
Evaluative	Lower controls	-2.1407	0.2274	-9.416	<.0001
Evaluative	Upper k-level controls	2.2943	0.2713	8.457	<.0001
Evaluative	Upper unmod controls	2.9386	0.2753	10.674	<.0001
Color	Kind-level	0.2370	0.2047	1.158	=.2469
Color	Lower controls	-2.8818	0.2300	-12.532	<.0001
Color	Upper k-level controls	1.5532	0.2705	5.743	<.0001
Color	Upper unmod controls	2.1975	0.2741	8.016	<.0001
Kind-level	Lower controls	-3.1188	0.2308	-13.513	<.0001
Kind-level	Upper k-level controls	1.3162	0.2699	4.876	<.0001
Kind-level	Upper unmod controls	1.9605	0.2735	7.168	<.0001
Lower controls	Upper k-level controls	4.4350	0.2934	15.114	<.0001
Lower controls	Upper unmod controls	5.0793	0.2979	17.053	<.0001
Upper k-level controls	Upper unmod controls	0.6443	0.3230	1.995	=.0461

Table 6.28: Overview of comparisons between conditions, Dutch *with*.

CHAPTER 7

Conclusion

7.1 Results of this dissertation

In this dissertation I investigated the conceptual restrictions on weakly referential constructions such as weak definites, bare predicates and bare nouns. I used adjectival modification as a tool to bring together the linguistic and conceptual aspects of these restrictions. Conceptual in the sense that I used adjectival modification to systematically alter the denotation of nouns, linguistic in the sense that I hypothesized that the conceptual requirements would be linked in the lexical semantics of the various types of adjectives I used. The reasoning behind this hypothesis was that based on observations that can be found all over the literature, *conceptual stability* is a core property of weakly referential constructions – that is, they refer to things, roles, functions, properties that are perceived as conceptually stable. The notion of stability also emerges when you look at the lexical semantics of certain types of adjectives. For instance, the interpretation of stage-level adjectives is situation dependent. Similarly, the interpretation of evaluative adjectives depends on whose opinion is expressed: these adjectives are judge dependent. The interpretation of kind-level adjectives, on the other hand, doesn't involve any such dependencies. The lexical semantics of color adjectives involves some dependency but is relatively stable compared to that of stage-level and evaluative adjectives. Linking to notions of conceptual stability and semantic stability, I formulated the stability hypothesis:

(297) **The stability hypothesis**

The more stable the interpretation of an adjective is, the more accept-

able it will be in a weakly referential construction.

In chapters 2 and 3 I made a start on testing this hypothesis for weak definites and bare predicates respectively. In chapter 2 I collected native speaker acceptability judgments for Dutch weak and regular definites in the unmodified (298a), evaluative modification (298b), and kind-level modification (298c) conditions. In particular, I tested the acceptability of sloppy readings in VP ellipsis sentences, as this reading is generally available for weak definites. The idea is that if participants didn't accept the sloppy reading of a modified weak definite, this means that the modification wasn't in line with the restrictions on weak definiteness and therefore the weak definite reading was blocked. The assumption is that sloppy reading acceptability equals modification acceptability in weak definites.

- (298) a. Daan ging naar de supermarkt en Eefje ook.
'Daan went to the supermarket and Eefje did too'
- b. Daan ging naar de rare supermarkt en Eefje ook.
'Daan went to the strange supermarket and Eefje did too'
- c. Daan ging naar de aziatische supermarkt en Eefje ook.
'Daan went to the Asian supermarket and Eefje did too'

The stability hypothesis applied to weak definites led me to the following predictions:

(299) **The stability hypothesis (weak definites)**

The more stable the interpretation of an adjective, the more acceptable it will be as a weak definite modifier. More specifically: kind-level adjectives are more acceptable than evaluative adjectives.

The results showed that for the weak definites kind-level modification was significantly more acceptable than evaluative modification, whereas for the regular definites the kind-level modification condition scored equally low as the evaluative modification condition. These findings confirmed my predictions and are in line with the stability hypothesis.

In chapter 3 I expanded my methodology, and tested the stability hypothesis for bare predicates. I used a similar questionnaire as in chapter 2, but this time I ran the same questionnaire in Dutch, Catalan, Greek and Brazilian Portuguese in order to test whether the stability hypothesis holds cross-linguistically. The conditions I tested were the unmodified (300a), stage-level modification (300b) and kind-level modification (300c) conditions.

- (300) a. Ik zie een vrouw die econoom is. Dutch
I see.1SG a woman that economist is.3SG
'I see a woman who is an economist.'
- b. Ik zie een vrouw die geïrriteerd accountant is.
I see.1SG a woman that annoyed accountant is.3SG
'I see a woman who is an irritated accountant.'

- c. Ik zie een vrouw die financieel directeur is.
 I see.1SG a woman that financial manager is.3SG
 ‘I see a woman who is a CFO.’

I applied the stability hypothesis to bare predicates as follows:

(301) **The stability hypothesis (bare predicates)**

The more stable the interpretation of an adjective, the more acceptable it will be as a bare predicate modifier. More specifically: kind-level adjectives are more acceptable than stage-level adjectives.

I found that in all three languages the stage-level modification condition scored significantly lower than the kind-level modification condition. Again, this confirmed my predictions and is in line with the stability hypothesis. Moreover, it confirmed the cross-linguistic validity of my hypothesis.

Taking a little detour, at the end of chapter 3 I discussed the inflection patterns of adjectives modifying bare predicates in Catalan, Greek, Brazilian Portuguese and Dutch. I argued that as Dutch adjectival inflection is sensitive to (in)definiteness, it’s located in NumP, whereas in the other languages it’s located at the NP level. As bare predicates are assumed to be NPs, the lack of inflection of Dutch adjectives follows. Related to this, I discussed the literature on the location of the various adjectival projections. It has been proposed that only the projections of kind-level adjectives merge below NumP – other adjectives merge above NumP (Beauserooy and Knittel, 2012; de Swart et al., 2005). This ties in with the idea that the Carlsonian realization relation R (Carlson, 1977), which takes kinds and returns their object-level instantiations, is located in NumP. A consequence of this assumption would be that only kind-level adjectives can modify bare predicates. I then discussed some data that challenge this prediction.

Chapters 4 through 6 contained a large scale version of a similar questionnaire for pseudo-incorporated bare nouns. In order to test the stability hypothesis more thoroughly, this time I tested four rather than two modification conditions. In addition to the unmodified condition (302a), I tested stage-level (302b, evaluative (302c), color (302d), and kind-level modification (302e).

- (302) a. Veig una noia amb faldilla. Catalan
 I.see a girl with skirt
 b. Veig una noia amb faldilla humida.
 I.see a girl with skirt wet
 c. Veig una noia amb faldilla elegant.
 I.see a girl with skirt elegant
 d. Veig una noia amb faldilla lila.
 I.see a girl with skirt lilac
 e. Veig una noia amb faldilla escocesa.
 I.see a girl with skirt Scottish

The primary hypothesis I tested in these chapters was the stability hypothesis applied to bare nouns:

(303) **Hypothesis 1**

The more stable the interpretation of an adjective is (across situations and speakers), the more acceptable it will be as a BN modifier. More specifically: kind-level adjectives are more acceptable than color adjectives, which in turn are more acceptable than stage-level and evaluative adjectives.

In chapter 4 I introduced the notion of pseudo-incorporation and the HAVE+BN and *with*+BN constructions. I then discussed the properties of these constructions in several languages. I showed that some pseudo-incorporation properties are shared cross-linguistically, but languages differ with respect to the properties of number neutrality, reduced discourse referentiality and restrictedness. Based on this I proposed a pseudo-incorporation strictness scale, on which languages are located according to how strictly they adhere to these properties:

(304) [strict] **Catalan** < **Brazilian Portuguese** < **Greek** [liberal]

Based on this I formulated a second hypothesis:

(305) **Hypothesis 2**

The more strictly a language adheres to other pseudo-incorporation properties, the more strict it will be about BN modification constraints.

In order to test this hypothesis, I ran the questionnaire in Catalan, Greek and Brazilian Portuguese.

Finally, I showed that in each of the three languages, the HAVE+BN and the *with*+BN constructions behaved the same in terms of which pseudo-incorporation properties they showed. This led to a third hypothesis:

(306) **Hypothesis 3**

PRESENCE *with* pseudo-incorporates BNs in a similar way as HAVE does, and thus there will be no difference in modification restrictions between these two constructions.

In order to test this third hypothesis I ran separate questionnaires for these two constructions in each language.

In chapter 5 I discussed the conceptual restrictions on pseudo-incorporated BNs in more detail. I argued that there are two types of pseudo-incorporated BNs: what I've called the conventionality construction, and what I've called the HAVE construction. The former is relatively unproductive, and is subject to conceptual restrictions that are culture based. The latter comes with a verbal restriction to HAVE verbs, as the name implies. Within the limits of that restriction, though, it's relatively productive. Its conceptual requirement seems to be more context than culture based. I argued that despite the difference in

culture vs. context basedness, at the core of the conceptual restrictions on both constructions lies the familiar notion of stability. For practical reasons I limited the rest of my research to the HAVE construction. I ended the chapter with a discussion of the lexical semantics of the four types of adjectives I tested, showing that semantically they are perfectly compatible with the pseudo-incorporation semantics proposed by Espinal and McNally (2011). This means that any differences between modification conditions I find in the questionnaires I ran must be due to the conceptual requirements on pseudo-incorporated bare nouns.

I presented the bare noun questionnaires and the analysis of the results in chapter 6. First of all, across all three languages and both constructions, the results showed a clear opposition between bare nouns modified by stage-level and evaluative adjectives getting relatively low acceptability scores, and bare nouns modified by color and kind-level adjectives getting relatively high acceptability scores. This again is in line with the stability hypothesis. Somewhat surprising, though, was the fact that color scored as high as kind-level modification in all but the Catalan HAVE version. Since color adjectives are gradable and their lexical semantics therefore contains a source of subjectivity in the standard of comparison, I had predicted that the color modification condition would score lower than the kind-level modification condition. After considering this result, and a study by Hansen and Chemla (2015) which provides experimental evidence that color adjectives behave like absolute adjectives in terms of the inferences patterns they show, I suggested that I should have made a distinction between absolute and relative gradable adjectives, and that only the latter involve the subjectivity associated with gradability.

Further analysis of the results showed that although the pattern of the differences between modification conditions was the same for all three languages, the height of the languages' scores differed. Catalan got significantly lower acceptability scores than Brazilian Portuguese, which in turn got significantly lower scores than Greek. This distribution of the languages matched the pseudo-incorporation scale I proposed in chapter 4 and thus confirmed hypothesis 2. I suggested a diachronic explanation of the difference between Catalan and Greek along the lines of Himmelmann (1998). The position of Brazilian Portuguese in between these two languages has to be explained in a different way. I have to leave this for future research. My modification data do constitute support for a pseudo-incorporation analysis of Brazilian Portuguese HAVE+BN and *with*+BN constructions: the Brazilian Portuguese data show similar modification patterns as the data of the other two languages, indicating that they are subject to the same modification restrictions. This would be unexpected if Brazilian Portuguese BN as complements of HAVE and *with* were regular arguments rather than pseudo-incorporated elements. A pseudo-incorporation analysis of these constructions in Brazilian Portuguese is in line with Cyrino and Espinal (2014). Interestingly, though, BNs as complements of other verbs than HAVE verbs behaved exactly the same as their HAVE complement counterparts with respect to the other pseudo-incorporation diagnostics such as number neutrality and discourse referentiality tests. More research is necessary

to determine the status of BNs as complements of non-HAVE verbs in Brazilian Portuguese.

I then turned to the results with respect to hypothesis 3. Again, in all three languages the pattern of the differences between modification conditions was very similar, confirming hypothesis 3. Further analysis of the results showed that *with* got significantly higher scores than HAVE, very consistently in Catalan, though not in all modification conditions in Greek and Brazilian Portuguese. The diachronic explanation à la Himmelmann applies here as well: Himmelmann notes that the grammaticalisation of articles first started in core argument positions like subject and object position, and got to nouns in adpositions only later. By extension, this predicts that diachronically speaking bare nouns as complements of *with* remain grammatical for longer than bare nouns as complements of HAVE verbs. This in turn predicts that there should be languages which are at the point that the HAVE+BN constructions are completely ungrammatical, whereas *with*+BN constructions are still fine. Dutch is such a language with only *with*+BN. I then ran the modification questionnaire in this language, which resulted in more or less the same pattern as in the other three languages, although it was less neat.

In sum, the results of my work in this dissertation shows that the stability hypothesis has been confirmed. The intuition that constructions such as weak definites, bare predicates, and pseudo-incorporated bare singular nouns require the concepts they denote to be stable in some sense is not new in the literature. However, the research I presented here provides the first structural empirical evidence that supports this intuition. Using modification as a tool, I showed that something as intangible as conceptual requirements can still be traced back to semantics, showing a link between linguistics and the conceptual level. My results show the value of approaching such an abstract topic through experimental research.

We've seen throughout this dissertation that the acceptability of modification of weakly referential constructions is gradient – not just within languages, but also across languages. This gradience is a reflection of the hierarchies of lexical semantic stability and pseudo-incorporation strictness I have posited. Another reason to expect gradient results, as I argued in the introduction to this dissertation, was that conceptual restrictions are tied to world knowledge, and from the literature it was clear that acceptability judgments tied to world knowledge are relatively fluid.

One can imagine a theoretical worry about the setup of my work: the focus of the stability hypothesis was on modified weakly referential constructions, so what do my results actually say about unmodified constructions? Rather than as a flaw of my design I see this issue as a consequence of the conceptual nature of the restrictions I have investigated. I've been looking at context sensitive restrictions that have to do with stability, and the lexical category of adjectives is the grammatical device that languages tend to use for encoding context sensitivity (such as comparative or superlative constructions Morzycki, 2014). Of course, this is not to say that other categories such as nouns and verbs never

involve context sensitivity, nor that all languages even use adjectives. It is just to say that as a general tendency, adjectives are the category in which context sensitivity is most pervasive. Having all of this in mind, it makes sense that it is exactly in the context of adjectives that conceptual restrictions can be grasped linguistically.

7.2 Suggestions for future research

Let me end this dissertation by pointing out several directions for future research. One of the things I would suggest is a more detailed study of number neutrality of pseudo-incorporated BNs in for instance Greek. As I discussed in chapter 4 (see also Alexandropoulou, 2013), Greek number neutrality judgements are dependent on which diagnostic is used and depend on the context that's given in the test. The fact that the number neutrality of BNs in this language is not convincingly proven was part of the reason I located Greek on the liberal end of the pseudo-incorporation strictness scale that I proposed in chapter 4. In order to confirm this, a more systematical study of Greek number neutrality is necessary. Some suggestions: an eye-tracking study could be done to see whether a plural continuation to a BN causes reading delays or regressions compared to a singular continuation. Alternatively, an acceptability judgement questionnaire could be run. Participants could be shown sentences like *eho molivi* ('I have pencil) in several conditions: one in which the speaker has one pencil, one in which the speaker has a plurality of pencils, and completely grammatical and ungrammatical baselines. If the plurality condition gets higher acceptability scores than the ungrammatical baseline, that would be evidence for number neutrality.

Another aspect that requires more study is the status of Brazilian Portuguese HAVE+BN constructions compared to other verb+BN constructions in that language. In chapter 4 I showed that the two constructions behave similarly with respect to the pseudo-incorporation diagnostics, although in a discourse anaphora test Cyrino and Espinal (2014) do find a difference between HAVE+BN and other verbs+BN constructions. More systematic data are necessary in order to determine whether HAVE+BN constructions deserve a separate analysis or not.

The role of context in the conceptual requirements of weakly referential constructions also deserves more systematical attention. We've seen that the right context can render an otherwise unacceptable construction perfectly fine. This holds for weak definites, bare predicates and bare nouns. This in itself is not very surprising, as the acceptability of such constructions depends on conceptual restrictions – on world knowledge, in other words, and world knowledge is relatively flexible. However, the influence of context raises interesting questions about the relation between morpho-syntactic constraints and context/conceptual requirements. A case in point is the inflection behavior of adjectives modifying Dutch bare predicates, which I discussed at the end of

chapter 3. In general Dutch bare predicates only combine with uninflected adjectives, usually kind-level adjectives, and this follows straightforwardly from the assumption that Dutch adjective inflection is located in NumP, whereas Dutch bare predicates are only NPs. When the right context makes a stage-level adjective acceptable, though, it has to be inflected. Interestingly, in the particular context that I suggested in chapter 3, the interpretation of the stage-level adjective seems to have been shifted to the level of kinds, yet it retains its stage-level structure in the sense that it's inflected. More research is necessary in order to understand exactly how context and world knowledge influence morpho-syntactic structure in these cases.

Finally, over the last years there's been a lot of research on the lexical semantics of different types of adjectives, especially in the domain of gradable adjectives. It's likely that more fine-grained distinctions can be made than the ones I have employed in my questionnaires. To give but one example, in a recent paper Liao et al. (2016) argue that aesthetic adjectives (a category which seems to overlap with the category of evaluative adjectives to a large extent) are partly relative and partly absolute, in that they come with standards that are related to comparison classes, but these don't seem to be context dependent. How would such adjectives compare to adjectives that are fully relative but which don't involve the judge-dependency that is part of the semantics of aesthetic and evaluative adjectives, such as dimensional adjectives like *tall*, with respect to the adjectival hierarchy of lexical semantic stability that I have proposed? New insights such as Liao et al.'s may result in a very intricate pattern of stability differences between adjective types, which raises the question to which extent this will be reflected in the conceptual restrictions I have studied.

APPENDIX A

Items and instructions of the weak definite questionnaire

A.1 Instructions

Hieronder staan 42 zinnen. Bij elke zin wordt steeds een interpretatie gegeven. Lees iedere zin + interpretatie steeds goed door, en beoordeel daarna hoe goed mogelijk je die interpretatie voor de zin vindt. Dit geef je aan op een schaal van 0 (totaal onmogelijk als interpretatie) tot 7 (heel goed mogelijk als interpretatie).

NB: Er zijn geen goede of foute antwoorden (het is geen test van je grammaticakennis), ik ben gewoon geïnteresseerd in jouw mening als moedertaalspreker van het Nederlands. Denk dus niet te lang na over je antwoorden, maar volg je eerste ingeving. Kom ook niet terug op eerder gegeven antwoorden.

Mocht je opmerkingen over de vragenlijst of over specifieke zinnen hebben, dan kun je die kwijt aan het eind (of bij de zin waar het om gaat).

A.2 Evaluative modified weak definites

1. Esther ging naar de grappige tandarts en David ook.
Interpretatie: Ze gingen allebei naar een verschillende tandarts.
2. Rob ging naar de vreemde sauna en Kim ook.
Interpretatie: Ze gingen allebei naar een verschillende sauna.
3. Lies ging naar de opvallende bioscoop en Sophie ook.
Interpretatie: Ze gingen allebei naar een verschillende bioscoop.

4. Siri ging naar de gezellige snackbar en Pim ook.
Interpretatie: Ze gingen allebei naar een verschillende snackbar.
5. Roos ging naar het leuke bejaardentehuis en Jeroen ook.
Interpretatie: Ze gingen allebei naar een verschillend bejaardentehuis.
6. Linda ging naar het bijzondere bos en Els ook.
Interpretatie: Ze gingen allebei naar een verschillend bos.
7. Frank ging naar de indrukwekkende rechtbank en Anne ook.
Interpretatie: Ze gingen allebei naar een verschillende rechtbank.
8. Julia ging naar de sjieke bank en Adriaan ook.
Interpretatie: Ze gingen allebei naar een verschillende bank.
9. Leo ging naar de mooie apotheek en Tom ook.
Interpretatie: Ze gingen allebei naar een verschillende apotheek.
10. Jan ging naar het lelijke ziekenhuis en Marie ook.
Interpretatie: Ze gingen allebei naar een verschillend ziekenhuis.
11. Daan ging naar de rare supermarkt en Eefje ook.
Interpretatie: Ze gingen allebei naar een verschillende supermarkt.
12. Hans ging naar het prachtige museum en Bea ook.
Interpretatie: Ze gingen allebei naar een verschillend museum.

A.3 Kind-level modified weak definites

1. Esther ging naar de cosmetische tandarts en David ook.
Interpretatie: Ze gingen allebei naar een verschillende tandarts.
2. Rob ging naar de Finse sauna en Kim ook.
Interpretatie: Ze gingen allebei naar een verschillende sauna.
3. Lies ging naar de alternatieve bioscoop en Sophie ook.
Interpretatie: Ze gingen allebei naar een verschillende bioscoop.
4. Siri ging naar de Turkse snackbar en Pim ook.
Interpretatie: Ze gingen allebei naar een verschillende snackbar.
5. Roos ging naar het protestantse bejaardentehuis en Jeroen ook.
Interpretatie: Ze gingen allebei naar een verschillend bejaardentehuis.
6. Linda ging naar het tropische bos en Els ook.
Interpretatie: Ze gingen allebei naar een verschillend bos.
7. Frank ging naar de provinciale rechtbank en Anne ook.
Interpretatie: Ze gingen allebei naar een verschillende rechtbank.

8. Julia ging naar de commerciële bank en Adriaan ook.
Interpretatie: Ze gingen allebei naar een verschillende bank.
9. Leo ging naar de openbare apotheek en Tom ook.
Interpretatie: Ze gingen allebei naar een verschillende apotheek.
10. Jan ging naar het psychiatrische ziekenhuis en Marie ook.
Interpretatie: Ze gingen allebei naar een verschillend ziekenhuis.
11. Daan ging naar de aziatische supermarkt en Eefje ook.
Interpretatie: Ze gingen allebei naar een verschillende supermarkt.
12. Hans ging naar het archeologische museum en Bea ook.
Interpretatie: Ze gingen allebei naar een verschillend museum.

A.4 Unmodified weak definites

1. Esther ging naar de tandarts en David ook.
Interpretatie: Ze gingen allebei naar een verschillende tandarts.
2. Rob ging naar de sauna en Kim ook.
Interpretatie: Ze gingen allebei naar een verschillende sauna.
3. Lies ging naar de bioscoop en Sophie ook.
Interpretatie: Ze gingen allebei naar een verschillende bioscoop.
4. Siri ging naar de snackbar en Pim ook.
Interpretatie: Ze gingen allebei naar een verschillende snackbar.
5. Roos ging naar het bejaardentehuis en Jeroen ook.
Interpretatie: Ze gingen allebei naar een verschillend bejaardentehuis.
6. Linda ging naar het bos en Els ook.
Interpretatie: Ze gingen allebei naar een verschillend bos.
7. Frank ging naar de rechtbank en Anne ook.
Interpretatie: Ze gingen allebei naar een verschillende rechtbank.
8. Julia ging naar de bank en Adriaan ook.
Interpretatie: Ze gingen allebei naar een verschillende bank.
9. Leo ging naar de apotheek en Tom ook.
Interpretatie: Ze gingen allebei naar een verschillende apotheek.
10. Jan ging naar het ziekenhuis en Marie ook.
Interpretatie: Ze gingen allebei naar een verschillend ziekenhuis.
11. Daan ging naar de supermarkt en Eefje ook.
Interpretatie: Ze gingen allebei naar een verschillende supermarkt.

12. Hans ging naar het museum en Bea ook.
Interpretatie: Ze gingen allebei naar een verschillend museum.

A.5 Evaluative modified regular definites

1. Femke ging naar het grappige concert en Inge ook.
Interpretatie: Ze gingen allebei naar een verschillend concert.
2. Laura ging naar de vreemde school en Ruben ook.
Interpretatie: Ze gingen allebei naar een verschillende school.
3. Luuk ging naar het opvallende kasteel en Jaap ook.
Interpretatie: Ze gingen allebei naar een verschillend kasteel.
4. Floor ging naar de gezellige bowlingbaan en Sam ook.
Interpretatie: Ze gingen allebei naar een verschillende bowlingbaan.
5. Joost ging naar het leuke voetbalveld en Maaïke ook.
Interpretatie: Ze gingen allebei naar een verschillend voetbalveld.
6. Renske ging naar het bijzondere klooster en Olaf ook.
Interpretatie: Ze gingen allebei naar een verschillend klooster.
7. Anne-Marie ging naar het indrukwekkende monument en Sebastiaan ook.
Interpretatie: Ze gingen allebei naar een verschillend monument.
8. Robert ging naar het sjieke hotel en Liesbeth ook.
Interpretatie: Ze gingen allebei naar een verschillend hotel.
9. Monique ging naar het mooie meer en Roel ook.
Interpretatie: Ze gingen allebei naar een verschillend meer.
10. Ruud ging naar de lelijke showroom en Imke ook.
Interpretatie: Ze gingen allebei naar een verschillende showroom.
11. Harrie ging naar de rare boerderij en Ben ook.
Interpretatie: Ze gingen allebei naar een verschillende boerderij.
12. Stan ging naar het prachtige landgoed en Joran ook.
Interpretatie: Ze gingen allebei naar een verschillend landgoed.

A.6 Kind-level modified regular definites

1. Femke ging naar het klassieke concert en Inge ook.
Interpretatie: Ze gingen allebei naar een verschillend concert.
2. Laura ging naar de katholieke school en Ruben ook.
Interpretatie: Ze allebei naar een verschillende school.

3. Luuk ging naar het middeleeuwse kasteel en Jaap ook.
Interpretatie: Ze gingen allebei naar een verschillend kasteel.
4. Floor ging naar de Amerikaanse bowlingbaan en Sam ook.
Interpretatie: Ze allebei naar een verschillende bowlingbaan.
5. Joost ging naar het gemeentelijke voetbalveld en Maaïke ook.
Interpretatie: Ze gingen allebei naar een verschillend voetbalveld.
6. Renske ging naar het Benedictijner klooster en Olaf ook.
Interpretatie: Ze allebei naar een verschillend klooster.
7. Anne-Marie ging naar het 17de-eeuwse monument en Sebastiaan ook.
Interpretatie: Ze gingen allebei naar een verschillend monument.
8. Robert ging naar het all-inclusive hotel en Liesbeth ook.
Interpretatie: Ze gingen allebei naar een verschillend hotel.
9. Monique ging naar het kunstmatige meer en Roel ook.
Interpretatie: Ze gingen allebei naar een verschillend meer.
10. Ruud ging naar de Italiaanse showroom en Imke ook.
Interpretatie: Ze gingen allebei naar een verschillende showroom.
11. Harrie ging naar de biologische boerderij en Ben ook.
Interpretatie: Ze allebei naar een verschillende boerderij.
12. Stan ging naar het 18de-eeuwse landgoed en Joran ook.
Interpretatie: Ze allebei naar een verschillend landgoed.

A.7 Unmodified regular definites

1. Femke ging naar het concert en Inge ook.
Interpretatie: Ze gingen allebei naar een verschillend concert.
2. Laura ging naar de school en Ruben ook.
Interpretatie: Ze gingen allebei naar een verschillende school.
3. Luuk ging naar het kasteel en Jaap ook.
Interpretatie: Ze gingen allebei naar een verschillend kasteel.
4. Floor ging naar de bowlingbaan en Sam ook.
Interpretatie: Ze gingen allebei naar een verschillende bowlingbaan.
5. Joost ging naar het voetbalveld en Maaïke ook.
Interpretatie: Ze gingen allebei naar een verschillend voetbalveld.
6. Renske ging naar het klooster en Olaf ook.
Interpretatie: Ze gingen allebei naar een verschillend klooster.

7. Anne-Marie ging naar het monument en Sebastiaan ook.
Interpretatie: Ze gingen allebei naar een verschillend monument.
8. Robert ging naar het hotel en Liesbeth ook.
Interpretatie: Ze gingen allebei naar een verschillend hotel.
9. Monique ging naar het meer en Roel ook.
Interpretatie: Ze gingen allebei naar een verschillend meer.
10. Ruud ging naar de showroom en Imke ook.
Interpretatie: Ze gingen allebei naar een verschillende showroom.
11. Harrie ging naar de boerderij en Ben ook.
Interpretatie: Ze gingen allebei naar een verschillende boerderij.
12. Stan ging naar het landgoed en Joran ook.
Interpretatie: Ze gingen allebei naar een verschillend landgoed.

A.8 Lower controls

1. Marja ging naar Amsterdam en Saskia ook.
Interpretatie: Ze gingen allebei naar een verschillende stad.
2. Loes ging naar Spanje en Erik ook.
Interpretatie: Ze gingen allebei naar een verschillend land.
3. Joep ging naar Texel en Willemijn ook.
Interpretatie: Ze gingen allebei naar een verschillend eiland.
4. Michiel ging naar Drenthe en Evelien ook.
Interpretatie: Ze gingen allebei naar een verschillende provincie.
5. Bart ging naar Parijs en Elise ook.
Interpretatie: Ze gingen allebei naar een verschillende hoofdstad.
6. Rianne ging naar Rianne ging naar Pinkpop 2013 en Lotte ook.
Interpretatie: Ze gingen allebei naar een verschillend festival.

A.9 Upper controls

1. Thijs ging naar McDonald's en Sanne ook.
Interpretatie: Ze gingen allebei naar een verschillende McDonald's.
2. Deborah ging naar Starbucks en Manon ook.
Interpretatie: Ze gingen allebei naar een verschillende Starbucks.
3. Barbara ging naar vanHaren en Louise ook.
Interpretatie: Ze gingen allebei naar een verschillende vanHaren.

4. Bram ging naar Hans Anders en Sara ook.
Interpretatie: Ze gingen allebei naar een verschillende Hans Anders.
5. Peter ging naar Ikea en Floris ook.
Interpretatie: Ze gingen allebei naar een verschillende Ikea.
6. Emma ging naar Albert Heijn en Yvonne ook.
Interpretatie: Ze gingen allebei naar een verschillende Albert Heijn.
7. Timo ging naar zee en Ronald ook.
Interpretatie: Ze gingen allebei naar een verschillende zee.
8. Lucas ging naar muziekles en Kees ook.
Interpretatie: Ze gingen allebei naar een verschillende muziekles.
9. Isabel ging naar bed en Alex ook.
Interpretatie: Ze gingen allebei naar een verschillend bed.
10. Piet ging naar huis en Karin ook.
Interpretatie: Ze gingen allebei naar een verschillend huis.
11. Rachel ging naar kantoor en Freek ook.
Interpretatie: Ze gingen allebei naar een verschillend kantoor.
12. Bas ging naar volleybaltraining en Tuur ook.
Interpretatie: Ze gingen allebei naar een verschillende volleybaltraining.

APPENDIX B

Items and instructions of the bare predicate questionnaires

B.1 Catalan

B.1.1 Instructions

Aquest qüestionari conté 30 oracions. El context d'aquestes oracions és el següent: la persona B està mirant unes imatges que la persona A no pot veure. A pregunta a B què veu a les imatges, i B respon amb una oració. La teva tasca consisteix a indicar el grau d'acceptabilitat de les oracions de B, fent servir una escala de 0 (totalment inacceptable) a 7 (totalment acceptable). No es tracta de valorar com d'acceptables consideres aquestes oracions dins el context, sinó de valorar com d'acceptables et semblen com a oracions en català. No és un test per valorar el teu coneixement sobre la gramàtica, per tant, no hi ha respostes correctes o incorrectes – tan sols volem la teva opinió com a parlant nadiu de català. Així doncs, no et pensis massa les respostes, sinó més aviat segueix la teva intuïció.

Si tens algun comentari sobre el qüestionari o sobre algun assumpte en particular, pots escriure-ho al final del qüestionari.

B.1.2 Stage-level modified bare predicates

1. Veig una dona que és advocada malalta.
2. Veig un home que és pilot disponible.

3. Veig un home que és paleta afaitat.
4. Veig un home que és carter garratibada.
5. Veig una dona que és mestra afamada.
6. Veig una dona que és escriptora espantada.
7. Veig una dona que és dentista assedegada.
8. Veig un home que és mecànic descansat.
9. Veig una dona que és professora suada.
10. Veig un home que és músic furiós.
11. Veig una dona que és oculista sorpresa.
12. Veig un home que és lampista trist.
13. Veig una dona que és comptable molesta.
14. Veig un home que és electricista nerviós.

B.1.3 Kind-level modified bare predicates

1. Veig un home que és treballador social.
2. Veig una dona que és directora executiva.
3. Veig una dona que és parlamentària europea.
4. Veig una dona que és traductora titulada.
5. Veig una dona que és enginyera tècnica.
6. Veig una dona que és metgessa jubilada.
7. Veig un home que és terapeuta naturista.
8. Veig un home que és capellà catòlic.
9. Veig un home que és director financer.
10. Veig una dona que és teòloga cristiana.
11. Veig una dona que és emprenedora internacional.

B.1.4 Unmodified bare predicates

1. Veig un home que és perruquer.
2. Veig una dona que és sabatera.
3. Veig una dona que és economista.
4. Veig una dona que és psicòloga.
5. Veig una dona que és serventa.
6. Veig un home que és arqueòleg.
7. Veig un home que és cirurgià.
8. Veig un home que és soldat.

B.2 Dutch

B.2.1 Instructions

Hieronder vind je 30 zinnen. De context van de zinnen is dat persoon B naar plaatjes aan het kijken is, die persoon A niet kan zien. A vraagt wat B op de plaatjes ziet, en B geeft antwoord in 1 zin. Aan jou de vraag om steeds aan te geven hoe acceptabel je B's zinnen vindt. Dit doe je op een schaal van 0 (totaal onacceptabel) tot 7 (compleet acceptabel). Het gaat daarbij niet om hoe acceptabel je de zinnen vindt in deze specifieke context, maar gewoon om hoe acceptabel je ze vindt als Nederlandse zinnen. Het is geen test van je grammaticakennis – we willen gewoon jouw mening als moedertaalspreker van het Nederlands weten. Denk dus niet te lang na over je antwoorden, maar volg je eerste ingeving. Kom ook niet terug op eerder gegeven antwoorden.

Mocht je opmerkingen over de vragenlijst of over specifieke zinnen hebben, dan kun je die kwijt aan het eind.

B.2.2 Stage-level modified bare predicates

1. Ik zie een vrouw die ziek advocaat is.
2. Ik zie een man die verdrietig loodgieter is.
3. Ik zie een vrouw die geïrriteerd accountant is.
4. Ik zie een man die uitgerust monteur is.
5. Ik zie een vrouw die hongerig lerares is.
6. Ik zie een man die aangeschoten postbode is.
7. Ik zie een vrouw die dorstig tandarts is.

8. Ik zie een man die woedend musicus is.
9. Ik zie een vrouw die verbaasd opticien is.
10. Ik zie een man die beschikbaar piloot is.
11. Ik zie een vrouw die geschrokken schrijfster is.
12. Ik zie een man die zenuwachtig electricien is.
13. Ik zie een vrouw die bezweet hoogleraar is.
14. Ik zie een man die geschoren bouwvakker is.

B.2.3 Kind-level modified bare predicates

1. Ik zie een vrouw die technisch ingenieur is.
2. Ik zie een man die sociaal werker is.
3. Ik zie een vrouw die gepensioneerd dokter is.
4. Ik zie een man die voormalig secretaris is.
5. Ik zie een vrouw die europees parlementariër is.
6. Ik zie een man die katholiek priester is.
7. Ik zie een vrouw die internationaal ondernemer is.
8. Ik zie een man die financieel directeur is.
9. Ik zie een vrouw die christelijk theoloog is.
10. Ik zie een man die kunstzinnig therapeut is.
11. Ik zie een vrouw die artistiek leider is.
12. Ik zie een man die werkloos architect is.
13. Ik zie een vrouw die gediplomeerd vertaler is.

B.2.4 Unmodified bare predicates

1. Ik zie een man die soldaat is.
2. Ik zie een man die chirurg is.
3. Ik zie een man die archeoloog is.
4. Ik zie een man die kapper is.
5. Ik zie een vrouw die schoonmaakster is.

6. Ik zie een vrouw die econoom is.
7. Ik zie een vrouw die psycholoog is.
8. Ik zie een vrouw die schoenmaker is.

B.3 Greek

B.3.1 Instructions

Parakáto tha diaváseis 38 protáseis.¹ Oi protáseis apoteloún méros enós dialógou metaxý dýo atómon, A kai B. O dialógos lamvánei chóra stin exís perístasi: O B koitáei fotografíes tis opoías o A de vlépei. O A rotáei ton B ti vlépei stis fotografíes, kai o B apantáei me mia prótasi.

Aftó pou sou ziteítai na káneis éinai na dilóseis póso kalés í póso kakés sou faínontai oi protáseis tou V. Kán'to kyklónontas ton arithmó pou ekfrázei pio pistá tin ektímisi sou stin klímaka 0 (kakí) – 7 (kalí) pou sou dínetai.

Prosochí: Min kríneis to póso kalés/kakés sou faínontai oi protáseis os perigrafés mias eikónas, diladí, to an kai katá póso tha boróusan na anaparas-tathoún, allá axiológise póso kalés/kakés tis vrískeis os protáseis ton Ellinikón.

éche kata nou óti den krínoume tis gnóseis grammatikís sou kai óti den ypárchoun sostés í láthos apantáseis! Aplós, théloume na xéroume ti gnómi sou os fysikoú/-ís omilití/-trias ton Ellinikón. Opóte mi skéftesai polý tin apántisi sou, allá prospáthise na apodóseis tin próti sou entýposi.

B.3.2 Stage-level modified bare predicates

1. Vléro mia gynaíka i opoía éinai árrostri dikigóros.
2. Vléro énan ántro o opoíos éinai diathésimos pilótos.
3. Vléro énan ántro o opoíos éinai xyrisménos oikodómos.
4. Vléro énan ántro o opoíos éinai methysménos tachydromos.
5. Vléro mia gynaíka i opoía éinai peinasméni daskála.
6. Vléro mia gynaíka i opoía éinai sokarisméni syngraféas.
7. Vléro mia gynaíka i opoía éinai dipsasméni odontíatros.
8. Vléro énan ántro o opoíos éinai xekoúrastos michanikós.
9. Vléro mia gynaíka i opoía éinai idroméni kathigíttria.
10. Vléro énan ántro o opoíos éinai exorgisménos mousikós.

¹In the questionnaire the items occurred in Greek script. They were transcribed using Google Translate.

11. Vléro mia gynaíka i opoía éinai ékplikti optikós.
12. Vléro énan ántro o opoíos éinai lypiménos ydravlikós.
13. Vléro mia gynaíka i opoía éinai enochliméni logístria.
14. Vléro énan ántro o opoíos éinai anchoménos ilektrológos.

B.3.3 Kind-level modified bare predicates

1. Vléro énan ántro o opoíos éinai koinonikós leitourgós.
2. Vléro mia gynaíka i opoía éinai kallitechnikí diefthýntria.
3. Vléro mia gynaíka i opoía éinai michanológos michanikós.
4. Vléro mia gynaíka i opoía éinai syntaxiούchos giatrós.
5. Vléro énan ántro o opoíos éinai katholikós ieréas.
6. Vléro énan ántro o opoíos éinai oikonomikós diefthyntís.
7. Vléro énan ántro o opoíos éinai próin grammatéas.
8. Vléro énan ántro o opoíos éinai ánergos architéktonas.
9. Vléro énan ántro o opoíos éinai politikós epistímonas.
10. Vléro énan ántro o opoíos éinai theatrikós syngraféas.
11. Vléro énan ántro o opoíos éinai trapezikós ypállilos.
12. Vléro énan ántro o opoíos éinai diefthýnon sýmoulos.
13. Vléro énan ántro o opoíos éinai istorikós glossológos.
14. Vléro mia gynaíka i opoía éinai xéni dimosiográfos.
15. Vléro mia gynaíka i opoía éinai anaplrótria kathigíttria.
16. Vléro mia gynaíka i opoía éinai ypopsífia didáktor.

B.3.4 Unmodified bare predicates

1. Vléro énan ántro o opoíos éinai kommotís.
2. Vléro mia gynaíka i opoía éinai ypodimatopoiós.
3. Vléro mia gynaíka i opoía éinai oikonomológos.
4. Vléro mia gynaíka i opoía éinai psychológos.
5. Vléro mia gynaíka i opoía éinai katharístria.

6. Vlêpo énan ánta o opoíos éinai archaiológos.
7. Vlêpo énan ánta o opoíos éinai cheirourgós.
8. Vlêpo énan ánta o opoíos éinai stratiotikós.

B.4 Brazilian Portuguese

B.4.1 Instructions

Abaixo você encontra 12 sentenças. A pessoa B está procurando por algumas fotos que a pessoa A não consegue ver, portanto A pergunta o que B vê nas fotos e B responde com uma sentença. Sua tarefa é indicar o grau de aceitabilidade que você acha que as sentenças de B são numa escala de 0 (não-aceitável) a 7 (totalmente aceitável). Não é apenas o grau de aceitabilidade que você atribui a essas sentenças neste contexto específico, mas sim o grau de aceitabilidade dessas sentenças no Português brasileiro. Esse não é um teste do seu conhecimento em gramática, estamos apenas interessados em sua opinião como um falante nativo do Português brasileiro. Portanto não pense por muito tempo sobre suas respostas e não retorne para questões já respondidas, apenas siga sua intuição de falante.

Caso você tenha algum comentário sobre o questionário ou sobre alguma sentença em particular, você pode escrever no final da lista ou próximo a questão que lhe é relevante.

B.4.2 Stage-level modified bare predicates

1. Eu vejo uma mulher que é advogada doente.
2. Eu vejo uma mulher que é contadora irritada.
3. Eu vejo uma mulher que é professora com fome.
4. Eu vejo uma mulher que é dentista com sede.
5. Eu vejo uma mulher que é oftalmologista surpresa.
6. Eu vejo uma mulher que é escritora amedrontada.
7. Eu vejo uma mulher que é professora suada.
8. Eu vejo um homem que é pedreiro barbeado.
9. Eu vejo um homem que é encanador triste.
10. Eu vejo um homem que é mecânico descansado.
11. Eu vejo um homem que é carteiro embriagado.

12. Eu vejo um homem que é músico furioso.
13. Eu vejo um homem que é piloto disponível.
14. Eu vejo um homem que é electricista nervoso.

B.4.3 Kind-level modified bare predicates

1. Eu vejo uma mulher que é engenheira técnica.
2. Eu vejo uma mulher que é médica aposentada.
3. Eu vejo uma mulher que é deputada federal.
4. Eu vejo uma mulher que é empresária autônoma.
5. Eu vejo uma mulher que é teóloga cristã.
6. Eu vejo uma mulher que é diretora executiva.
7. Eu vejo uma mulher que é tradutora juramentada.
8. Eu vejo um homem que é assistente social.
9. Eu vejo um homem que é ex-secretário.
10. Eu vejo um homem que é ministro protestante.
11. Eu vejo um homem que é diretor financeiro.
12. Eu vejo um homem que é terapeuta ocupacional.
13. Eu vejo um homem que é arquiteto urbanista.

B.4.4 Unmodified bare predicates

1. Eu vejo uma mulher que é servente.
2. Eu vejo uma mulher que é economista.
3. Eu vejo uma mulher que é psicóloga.
4. Eu vejo um homem que é sapateiro.
5. Eu vejo um homem que é soldado.
6. Eu vejo um homem que é cirurgião.
7. Eu vejo um homem que é arqueólogo.
8. Eu vejo um homem que é cabeleireiro.

APPENDIX C

Items and instructions of the bare noun questionnaires

C.1 Catalan

C.1.1 Instructions

Aquest qüestionari conté 30 oracions. El context d'aquestes oracions és el següent: la persona B està mirant unes imatges que la persona A no pot veure. A pregunta a B què veu a les imatges, i B respon amb una oració. La teva tasca consisteix a indicar el grau d'acceptabilitat de les oracions de B, fent servir una escala de 0 (totalment inacceptable) a 7 (totalment acceptable). No es tracta de valorar com d'acceptables consideres aquestes oracions dins el context, sinó de valorar com d'acceptables et semblen com a oracions en català. No és un test per valorar el teu coneixement sobre la gramàtica, per tant, no hi ha respostes correctes o incorrectes –tan sols volem la teva opinió com a parlant nadiu de català. Així doncs, no et pensis massa les respostes, sinó més aviat segueix la teva intuïció.

Si tens algun comentari sobre el qüestionari o sobre algun assumpte en particular, pots escriure-ho al final del qüestionari.

C.1.2 Have

C.1.2.1 Unmodified bare nouns

1. Veig un manifestant que porta bufanda.
2. Veig un polític que porta armilla.

3. Veig un adolescent que porta màscara.
4. Veig una dona que porta rellotge.
5. Veig una estudiant que porta boina.
6. Veig una senyora que porta mocador.
7. Veig una noia que porta faldilla.
8. Veig un actor que porta túnica.
9. Veig un periodista que porta càmera.
10. Veig un viatger que porta barret.
11. Veig un guerrer que porta espasa.
12. Veig un home que porta anell.
13. Veig una actriu que porta ventall.
14. Veig un cantant que porta guitarra.
15. Veig una model que porta pantaló.

C.1.2.2 Stage-level modified bare nouns

1. Veig un manifestant que porta bufanda neta.
2. Veig un polític que porta armilla tacada.
3. Veig un adolescent que porta màscara esquerdada.
4. Veig una dona que porta rellotge trencat.
5. Veig una estudiant que porta boina polsosa.
6. Veig una senyora que porta mocador brut.
7. Veig una noia que porta faldilla humida.
8. Veig un actor que porta túnica enfangada.
9. Veig un periodista que porta càmera ronyosa.
10. Veig un viatger que porta barret fastigós.
11. Veig un guerrer que porta espasa esmolada.
12. Veig un home que porta anell abonyegat.
13. Veig una actriu que porta ventall esguerrat.
14. Veig un cantant que porta guitarra desafinada.
15. Veig una model que porta pantaló planxat.

C.1.2.3 Evaluative modified bare nouns

1. Veig un manifestant que porta bufanda original.
2. Veig un polític que porta armilla bonica.
3. Veig un adolescent que porta màscara lletja.
4. Veig una dona que porta rellotge ridícul.
5. Veig una estudiant que porta boina rara.
6. Veig una senyora que porta mocador modern.
7. Veig una noia que porta faldilla elegant.
8. Veig un actor que porta túnica impressionant.
9. Veig un periodista que porta càmera espectacular.
10. Veig un viatger que porta barret preciós.
11. Veig un guerrer que porta espasa extraordinària.
12. Veig un home que porta anell cridaner.
13. Veig una actriu que porta ventall bufó.
14. Veig un cantant que porta guitarra estranya.
15. Veig una model que porta pantaló ortera.

C.1.2.4 Color modified bare nouns

1. Veig un manifestant que porta bufanda violeta.
2. Veig un polític que porta armilla rosa.
3. Veig un adolescent que porta màscara groga.
4. Veig una dona que porta rellotge turquesa.
5. Veig una estudiant que porta boina beix.
6. Veig una senyora que porta mocador taronja.
7. Veig una noia que porta faldilla lila.
8. Veig un actor que porta túnica gris.
9. Veig un periodista que porta càmera marró.
10. Veig un viatger que porta barret blanc.

11. Veig un guerrer que porta espasa negra.
12. Veig un home que porta anell blau.
13. Veig una actriu que porta ventall porpre.
14. Veig un cantant que porta guitarra vermella.
15. Veig una model que porta pantaló verd.

C.1.2.5 Kind-level modified bare nouns

1. Veig un manifestant que porta bufanda palestí.
2. Veig un polític que porta armilla antibales.
3. Veig un adolescent que porta màscara veneciana.
4. Veig una dona que porta rellotge suís.
5. Veig una estudiant que porta boina militar.
6. Veig una senyora que porta mocador islàmic.
7. Veig una noia que porta faldilla escocesa.
8. Veig un actor que porta túnica reial.
9. Veig un periodista que porta càmera digital.
10. Veig un viatger que porta barret mexicà.
11. Veig un guerrer que porta espasa japonesa.
12. Veig un home que porta anell de diamants.
13. Veig una actriu que porta ventall xinès.
14. Veig un cantant que porta guitarra acústica.
15. Veig una model que porta pantaló de pell.

C.1.3 With

C.1.3.1 Unmodified bare nouns

1. Veig un manifestant amb bufanda.
2. Veig un polític amb armilla.
3. Veig un adolescent amb màscara.
4. Veig una dona amb rellotge.

5. Veig una estudiant amb boina.
6. Veig una senyora amb mocador.
7. Veig una noia amb faldilla.
8. Veig un actor amb túnica.
9. Veig un periodista amb càmera.
10. Veig un viatger amb barret.
11. Veig un guerrer amb espasa.
12. Veig un home amb anell.
13. Veig una actriu amb ventall.
14. Veig un cantant amb guitarra.
15. Veig una model amb pantaló.

C.1.3.2 Stage-level modified bare nouns

1. Veig un manifestant amb bufanda neta.
2. Veig un polític amb armilla tacada.
3. Veig un adolescent amb màscara esquerdada.
4. Veig una dona amb rellotge trencat.
5. Veig una estudiant amb boina polsosa.
6. Veig una senyora amb mocador brut.
7. Veig una noia amb faldilla humida.
8. Veig un actor amb túnica enfangada.
9. Veig un periodista amb càmera ronyosa.
10. Veig un viatger amb barret fastigós.
11. Veig un guerrer amb espasa esmolada.
12. Veig un home amb anell abonyegat.
13. Veig una actriu amb ventall esguerrat.
14. Veig un cantant amb guitarra desafinada.
15. Veig una model amb pantaló planxat.

C.1.3.3 Evaluative modified bare nouns

1. Veig un manifestant amb bufanda original.
2. Veig un polític amb armilla bonica.
3. Veig un adolescent amb màscara lletja.
4. Veig una dona amb rellotge ridícul.
5. Veig una estudiant amb boina rara.
6. Veig una senyora amb mocador modern.
7. Veig una noia amb faldilla elegant.
8. Veig un actor amb túnica impressionant.
9. Veig un periodista amb càmera espectacular.
10. Veig un viatger amb barret preciós.
11. Veig un guerrer amb espasa extraordinària.
12. Veig un home amb anell cridaner.
13. Veig una actriu amb ventall bufó.
14. Veig un cantant amb guitarra estranya.
15. Veig una model amb pantaló ortera.

C.1.3.4 Color modified bare nouns

1. Veig un manifestant amb bufanda violeta.
2. Veig un polític amb armilla rosa.
3. Veig un adolescent amb màscara groga.
4. Veig una dona amb rellotge turquesa.
5. Veig una estudiant amb boina beix.
6. Veig una senyora amb mocador taronja.
7. Veig una noia amb faldilla lila.
8. Veig un actor amb túnica gris.
9. Veig un periodista amb càmera marró.
10. Veig un viatger amb barret blanc.

11. Veig un guerrer amb espasa negra.
12. Veig un home amb anell blau.
13. Veig una actriu amb ventall porpre.
14. Veig un cantant amb guitarra vermella.
15. Veig una model amb pantaló verd.

C.1.3.5 Kind-level modified bare nouns

1. Veig un manifestant amb bufanda palestí.
2. Veig un polític amb armilla antibales.
3. Veig un adolescent amb màscara veneciana.
4. Veig una dona amb rellotge suís.
5. Veig una estudiant amb boina militar.
6. Veig una senyora amb mocador islàmic.
7. Veig una noia amb faldilla escocesa.
8. Veig un actor amb túnica reial.
9. Veig un periodista amb càmera digital.
10. Veig un viatger amb barret mexicà.
11. Veig un guerrer amb espasa japonesa.
12. Veig un home amb anell de diamants.
13. Veig una actriu amb ventall xinès.
14. Veig un cantant amb guitarra acústica.
15. Veig una model amb pantaló de pell.

C.1.4 Lower controls

1. Veig un home que és pilot disponible.
2. Veig una dona que és professora suada.
3. Veig un home que és mecànic descansat.
4. Veig una dona que és dentista assedegada.
5. Veig una dona que és oculista sorpresa.
6. Veig una dona que és comptable molesta.
7. Veig un home que és electricista nerviós.

C.1.5 Upper controls (kind-level modified)

1. Veig un home que és director financer.
2. Veig una dona que és parlamentària europea.
3. Veig un home que és terapeuta naturista.
4. Veig un home que és treballador social.

C.1.6 Upper controls (unmodified)

1. Veig un home que és soldat.
2. Veig un home que és cirurgià.
3. Veig una dona que és economista.
4. Veig una dona que és psicòloga.

C.2 Brazilian Portuguese

C.2.1 Instructions

Abaixo você encontra 30 sentenças. A pessoa B está procurando por algumas fotos que a pessoa A não consegue ver, portanto A pergunta o que B vê nas fotos e B responde com uma sentença. Sua tarefa é indicar o grau de aceitabilidade que você acha que as sentenças de B são numa escala de 0 (não-aceitável) a 7 (totalmente aceitável). Não é apenas o grau de aceitabilidade que você atribui a essas sentenças neste contexto específico, mas sim o grau de aceitabilidade dessas sentenças no Português brasileiro. Esse não é um teste do seu conhecimento em gramática, estamos apenas interessados em sua opinião como um falante nativo do Português brasileiro. Portanto não pense por muito tempo sobre suas respostas e não retorne para questões já respondidas, apenas siga sua intuição de falante.

Caso você tenha algum comentário sobre o questionário ou sobre alguma sentença em particular, você pode escrever no final da lista ou próximo a questão que lhe é relevante.

C.2.2 Have

C.2.2.1 Unmodified bare nouns

1. Eu vejo um manifestante que usa lenço.
2. Eu vejo um político que usa colete.
3. Eu vejo uma adolescente que usa máscara.

4. Eu vejo uma mulher que usa relógio.
5. Eu vejo uma estudante que usa boina.
6. Eu vejo uma senhora que usa véu.
7. Eu vejo uma garota que usa saia.
8. Eu vejo um ator que usa manto.
9. Eu vejo um jornalista que carrega câmera.
10. Eu vejo um viajante que usa chapéu.
11. Eu vejo um guerreiro que usa espada.
12. Eu vejo um homem que usa anel.
13. Eu vejo uma atriz que usa leque.
14. Eu vejo um cantor que carrega violão.
15. Eu vejo uma modelo que usa calça.

C.2.2.2 Stage-level modified bare nouns

1. Eu vejo um manifestante que usa lenço ensanguentado.
2. Eu vejo um político que usa colete manchado.
3. Eu vejo uma adolescente que usa máscara rachada.
4. Eu vejo uma mulher que usa relógio quebrado.
5. Eu vejo uma estudante que usa boina desbotada.
6. Eu vejo uma senhora que usa véu sujo.
7. Eu vejo uma garota que usa saia molhada.
8. Eu vejo um ator que usa manto encardido.
9. Eu vejo um jornalista que carrega câmera enferrujada.
10. Eu vejo um viajante que usa chapéu imundo.
11. Eu vejo um guerreiro que usa espada afiada.
12. Eu vejo um homem que usa anel amassado.
13. Eu vejo uma atriz que usa leque despedaçado.
14. Eu vejo um cantor que carrega violão desafinado.
15. Eu vejo uma modelo que usa calça bem passada.

C.2.2.3 Evaluative modified bare nouns

1. Eu vejo um manifestante que usa lenço engraçado.
2. Eu vejo um político que usa colete bacana.
3. Eu vejo uma adolescente que usa máscara feia.
4. Eu vejo uma mulher que usa relógio ridículo.
5. Eu vejo uma estudante que usa boina estranha.
6. Eu vejo uma senhora que usa véu moderno.
7. Eu vejo uma garota que usa saia elegante.
8. Eu vejo um ator que usa manto horrível.
9. Eu vejo um jornalista que carrega câmera espetacular.
10. Eu vejo um viajante que usa chapéu legal.
11. Eu vejo um guerreiro que carrega espada extraordinária.
12. Eu vejo um homem que usa anel chamativo.
13. Eu vejo uma atriz que carrega leque bonito.
14. Eu vejo um cantor que carrega violão estranho.
15. Eu vejo uma modelo que usa calça grosseira.

C.2.2.4 Color modified bare nouns

1. Eu vejo um manifestante que usa lenço violeta.
2. Eu vejo um político que usa colete rosa.
3. Eu vejo uma adolescente que usa máscara amarela.
4. Eu vejo uma mulher que usa relógio turquesa.
5. Eu vejo uma estudante que usa boina bege.
6. Eu vejo uma senhora que usa véu laranja.
7. Eu vejo uma garota que usa saia lilás.
8. Eu vejo um ator que usa manto cinza.
9. Eu vejo um jornalista que carrega câmera marron.
10. Eu vejo um viajante que usa chapéu branco.

11. Eu vejo um guerreiro que carrega espada preta.
12. Eu vejo um homem que usa anel azul.
13. Eu vejo uma atriz que carrega leque roxo.
14. Eu vejo um cantor que carrega violão vermelho.
15. Eu vejo uma modelo que usa calça verde.

C.2.2.5 Kind-level modified bare nouns

1. Eu vejo um manifestante que usa lenço palestino.
2. Eu vejo um político que usa colete anti-bala.
3. Eu vejo uma adolescente que usa máscara de carnaval.
4. Eu vejo uma mulher que usa relógio analógico.
5. Eu vejo uma estudante que usa boina militar.
6. Eu vejo uma senhora que usa véu islâmico.
7. Eu vejo uma garota que usa saia escocesa.
8. Eu vejo um ator que usa manto real.
9. Eu vejo um jornalista que carrega câmera digital.
10. Eu vejo um viajante que usa chapéu mexicano.
11. Eu vejo um guerreiro que carrega espada japonesa.
12. Eu vejo um homem que usa anel de diamante.
13. Eu vejo uma atriz que carrega leque chinês.
14. Eu vejo um cantor que carrega violão acústico.
15. Eu vejo uma modelo que usa calça de couro.

C.2.3 With

C.2.3.1 Unmodified bare nouns

1. Eu vejo um manifestante com lenço.
2. Eu vejo um político com colete.
3. Eu vejo uma adolescente com máscara.
4. Eu vejo uma mulher com relógio.

5. Eu vejo uma estudante com boina.
6. Eu vejo uma senhora com véu.
7. Eu vejo uma garota com saia.
8. Eu vejo um ator com manto.
9. Eu vejo um jornalista com câmera.
10. Eu vejo um viajanta com chapéu.
11. Eu vejo um guerreiro com espada.
12. Eu vejo um homem com anel.
13. Eu vejo uma atriz com leque.
14. Eu vejo um cantor com violão.
15. Eu vejo uma modelo com calça.

C.2.3.2 Stage-level modified bare nouns

1. Eu vejo um manifestante com lenço ensanguentado.
2. Eu vejo um político com colete manchado.
3. Eu vejo uma adolescente com máscara rachada.
4. Eu vejo uma mulher com relógio quebrado.
5. Eu vejo uma estudante com boina desbotada.
6. Eu vejo uma senhora com véu sujo.
7. Eu vejo uma garota com saia molhada.
8. Eu vejo um ator com manto encardido.
9. Eu vejo um jornalista com câmera enferrujada.
10. Eu vejo um viajanta com chapéu imundo.
11. Eu vejo um guerreiro com espada afiada.
12. Eu vejo um homem com anel amassado.
13. Eu vejo uma atriz com leque despedaçado.
14. Eu vejo um cantor com violão desafinado.
15. Eu vejo uma modelo com calça bem passada.

C.2.3.3 Evaluative modified bare nouns

1. Eu vejo um manifestante com lenço engraçado.
2. Eu vejo um político com colete bacana.
3. Eu vejo uma adolescente com máscara feia.
4. Eu vejo uma mulher com relógio ridículo.
5. Eu vejo uma estudante com boina estranha.
6. Eu vejo uma senhora com véu moderno.
7. Eu vejo uma garota com saia elegante.
8. Eu vejo um ator com manto horrível.
9. Eu vejo um jornalista com câmera espetacular.
10. Eu vejo um viajante com chapéu legal.
11. Eu vejo um guerreiro com espada extraordinária.
12. Eu vejo um homem com anel chamativo.
13. Eu vejo uma atriz com leque bonito.
14. Eu vejo um cantor com violão estranho.
15. Eu vejo uma modelo com calça grosseira.

C.2.3.4 Color modified bare nouns

1. Eu vejo um manifestante com lenço violeta.
2. Eu vejo um político com colete rosa.
3. Eu vejo uma adolescente com máscara amarela.
4. Eu vejo uma mulher com relógio turquesa.
5. Eu vejo uma estudante com boina bege.
6. Eu vejo uma senhora com véu laranja.
7. Eu vejo uma garota com saia lilás.
8. Eu vejo um ator com manto cinza.
9. Eu vejo um jornalista com câmera marron.
10. Eu vejo um viajante com chapéu branco.

11. Eu vejo um guerreiro com espada preta.
12. Eu vejo um homem com anel azul.
13. Eu vejo uma atriz com leque roxo.
14. Eu vejo um cantor com violão vermelho.
15. Eu vejo uma modelo com calça verde.

C.2.3.5 Kind-level modified bare nouns

1. Eu vejo um manifestante com lenço palestino.
2. Eu vejo um político com colete anti-bala.
3. Eu vejo uma adolescente com máscara de carnaval.
4. Eu vejo uma mulher com relógio analógico.
5. Eu vejo uma estudante com boina militar.
6. Eu vejo uma senhora com véu islâmico.
7. Eu vejo uma garota com saia escocesa.
8. Eu vejo um ator com manto real.
9. Eu vejo um jornalista com câmera digital.
10. Eu vejo um viajante com chapéu mexicano.
11. Eu vejo um guerreiro com espada japonesa.
12. Eu vejo um homem com anel de diamante.
13. Eu vejo uma atriz com leque chinês.
14. Eu vejo um cantor com violão acústico.
15. Eu vejo uma modelo com calça de couro.

C.2.4 Lower controls

1. Eu vejo uma mulher que é oftalmologista surpresa.
2. Eu vejo uma mulher que é professora suada.
3. Eu vejo um homem que é mecânico descansado.
4. Eu vejo um homem que é carteiro embriagado.
5. Eu vejo um homem que é músico furioso.
6. Eu vejo um homem que é piloto disponível.
7. Eu vejo um homem que é eletricitista nervoso.

C.2.5 Upper controls (kind-level modified)

1. Eu vejo uma mulher que é empresária autônoma.
2. Eu vejo um homem que é assistente social.
3. Eu vejo um homem que é ex-secretário.
4. Eu vejo um homem que é arquiteto urbanista.

C.2.6 Upper controls (unmodified)

1. Eu vejo uma mulher que é servente.
2. Eu vejo uma mulher que é psicóloga.
3. Eu vejo um homem que é sapateiro.
4. Eu vejo um homem que é soldado.

C.3 Dutch**C.3.1 Instructions**

Hieronder vind je 30 zinnen. De context van de zinnen is dat persoon B naar plaatjes aan het kijken is, die persoon A niet kan zien. A vraagt wat B op de plaatjes ziet, en B geeft antwoord in 1 zin. Aan jou de vraag om steeds aan te geven hoe acceptabel je B's zinnen vindt. Dit doe je op een schaal van 0 (totaal onacceptabel) tot 7 (compleet acceptabel). Het gaat daarbij niet om hoe acceptabel je de zinnen vindt in deze specifieke context, maar gewoon om hoe acceptabel je ze vindt als Nederlandse zinnen. Het is geen test van je grammaticakennis – we willen gewoon jouw mening als moedertaalspreker van het Nederlands weten. Denk dus niet te lang na over je antwoorden, maar volg je eerste ingeving. Kom ook niet terug op eerder gegeven antwoorden.

Mocht je opmerkingen over de vragenlijst of over specifieke zinnen hebben, dan kun je die kwijt aan het eind.

C.3.2 Unmodified bare nouns

1. Ik zie een kind met vlag.
2. Ik zie een politicus met vest.
3. Ik zie een tiener met masker.
4. Ik zie een vrouw met horloge.
5. Ik zie een studente met baret.

6. Ik zie een dame met hoofddoek.
7. Ik zie een meisje met rok.
8. Ik zie een acteur met mantel.
9. Ik zie een journalist met camera.
10. Ik zie een reiziger met hoed.
11. Ik zie een krijger met zwaard.
12. Ik zie een man met ring.
13. Ik zie een actrice met waaier.
14. Ik zie een zanger met gitaar.
15. Ik zie een model met broek.

C.3.3 Stage-level modified bare nouns

1. Ik zie een kind met brandende vlag.
2. Ik zie een politicus met vuil vest.
3. Ik zie een tiener met gebarsten masker.
4. Ik zie een vrouw met kapot horloge.
5. Ik zie een studente met stoffige baret.
6. Ik zie een dame met smerige hoofddoek.
7. Ik zie een meisje met natte rok.
8. Ik zie een acteur met pasgewassen mantel.
9. Ik zie een journalist met roestige camera.
10. Ik zie een reiziger met vieze hoed.
11. Ik zie een krijger met geslepen zwaard.
12. Ik zie een man met verbogen ring.
13. Ik zie een actrice met gescheurde waaier.
14. Ik zie een zanger met ongestemde gitaar.
15. Ik zie een model met gestreken broek.

C.3.4 Evaluative modified bare nouns

1. Ik zie een kind met grappige vlag.
2. Ik zie een politicus met leuk vest.
3. Ik zie een tiener met lelijk masker.
4. Ik zie een vrouw met belachelijk horloge.
5. Ik zie een studente met gekke baret.
6. Ik zie een dame met chique hoofddoek.
7. Ik zie een meisje met elegante rok.
8. Ik zie een acteur met indrukwekkende mantel.
9. Ik zie een journalist met geweldige camera.
10. Ik zie een reiziger met prachtige hoed.
11. Ik zie een krijger met opvallend zwaard.
12. Ik zie een man met smaakvolle ring.
13. Ik zie een actrice met mooie waaier.
14. Ik zie een zanger met vreemde gitaar.
15. Ik zie een model met lompe broek.

C.3.5 Color modified bare nouns

1. Ik zie een kind met violette vlag.
2. Ik zie een politicus met roze vest.
3. Ik zie een tiener met geel masker.
4. Ik zie een vrouw met turkoois horloge.
5. Ik zie een studente met beige baret.
6. Ik zie een dame met oranje hoofddoek.
7. Ik zie een meisje met lila rok.
8. Ik zie een acteur met grijze mantel.
9. Ik zie een journalist met bruine camera.
10. Ik zie een reiziger met witte hoed.

11. Ik zie een krijger met zwart zwaard.
12. Ik zie een man met blauwe ring.
13. Ik zie een actrice met paarse waaier.
14. Ik zie een zanger met rode gitaar.
15. Ik zie een model met groene broek.

C.3.6 Kind-level modified bare nouns

1. Ik zie een kind met militaire vlag.
2. Ik zie een politicus met kogelvrij vest.
3. Ik zie een tiener met Venetiaans masker.
4. Ik zie een vrouw met waterdicht horloge.
5. Ik zie een studente met Franse baret.
6. Ik zie een dame met islamitische hoofddoek.
7. Ik zie een meisje met Schotse rok.
8. Ik zie een acteur met koninklijke mantel.
9. Ik zie een journalist met digitale camera.
10. Ik zie een reiziger met Mexicaanse hoed.
11. Ik zie een krijger met Japans zwaard.
12. Ik zie een man met diamanten ring.
13. Ik zie een actrice met Chinese waaier.
14. Ik zie een zanger met akoestische gitaar.
15. Ik zie een model met leren broek.

C.3.7 Lower controls

1. Ik zie een man die zenuwachtig elektricien is.
2. Ik zie een man die verbaasd opticien is.
3. Ik zie een man die uitgerust monteur is.
4. Ik zie een vrouw die dorstig tandarts is.
5. Ik zie een vrouw die geschrokken schrijfster is.
6. Ik zie een vrouw die hongerig lerares is.
7. Ik zie een man die ziek advocaat is.

C.3.8 Upper controls (kind-level modified)

1. Ik zie een man die financieel directeur is.
2. Ik zie een vrouw die technisch ingenieur is.
3. Ik zie een man die gediplomeerd vertaler is.
4. Ik zie een man die artistiek leider is.

C.3.9 Upper controls (unmodified)

1. Ik zie een man die soldaat is.
2. Ik zie een vrouw die chirurg is.
3. Ik zie een man die archeoloog is.
4. Ik zie een vrouw die schoonmaakster is.

C.4 Greek

C.4.1 Instructions

Parakáto tha diaváseis 30 protáseis. Oi protáseis apoteloún méros enós dialógou metaxý dýo atómon, A kai B. O diálogos lamvánei chóra stin exís perístasi: O B koitáei fotografíes tis opoíes o A de vlépei. O A rotáei ton B ti vlépei stis fotografíes, kai o B apantáei me mia prótasi.

Aftó pou sou ziteítai na káneis éinai na dilóseis póso kalés í póso kakés sou faínontai oi protáseis tou B. Kán'to kyklónontas ton arithmó pou ekfrázei pio pistá tin ektímisi sou stin klímaka 0 (kakí) – 7 (kalí) pou sou dínetai.

Prosochí: Mìn kríneis to póso kalés/kakés sou faínontai oi protáseis os perigrafés mias eikónas, diladí, to an kai katá póso tha boróusan na anaparastathoún, allá axiológise póso kalés/kakés tis vrískeis os protáseis ton Ellinikón.

éche katá nou óti den krínoume tis gnóseis grammatikís sou kai óti den ypárchoun sostés í láthos apantéseis! Aplós, théloume na xéroume ti gnómi sou os fysikou/-ís omilití/-trias ton Ellinikón. Opóte mi skéftesai polý tin apántisi sou, allá prospáthise na apodóseis tin próti sou entýposi.

C.4.2 Have

C.4.2.1 Unmodified bare nouns

1. Vléro énan politikó pou foráei giléko.
2. Vléro éna paidí pou kratáei simaía.
3. Vléro énan nearó pou foráei máska.

4. Vléro mia mathítria pou foráei beré.
5. Vléro mia gynaíka pou foráei rolói.
6. Vléro mia kyría pou foráei mantíla.
7. Vléro énan ithopoió pou foráei mandýa.
8. Vléro mia kopéla pou foráei fosta.
9. Vléro éna dimosiográfo pou kratáei kámara.
10. Vléro énan polemistí pou kratáei spathí.
11. Vléro énan taxidióti pou foráei kapélo.
12. Vléro énan týpo pou foráei dachtylídi.
13. Vléro énan tragoudistí pou kratáei kithára.
14. Vléro mia ithopoió pou kratáei ventália.
15. Vléro éna montélo pou foráei pantelóni.

C.4.2.2 Stage-level modified bare nouns

1. Vléro mia gynaíka pou foráei chalasméno rolói.
2. Vléro mia kyría pou foráei lekiasméni mantíla.
3. Vléro mia mathítria pou foráei skonisméno beré.
4. Vléro mia kopéla pou foráei vregméni fosta.
5. Vléro éna dimosiográfo pou kratáei skouriasméni kámara.
6. Vléro énan ithopoió pou foráei freskoplyméno mandýa.
7. Vléro énan taxidióti pou foráei leroméno kapélo.
8. Vléro énan polemistí pou kratáei akonisméno spathí.
9. Vléro énan týpo pou foráei stravó dachtylídi.
10. Vléro mia ithopoió pou kratáei skisméni ventália.
11. Vléro éna montélo pou foráei sideroméno pantelóni.
12. Vléro énan tragoudistí pou kratáei xekordisti kithára.
13. Vléro éna paidí pou kratáei flegómeni simaía.
14. Vléro énan nearó pou foráei ragisméni máska.
15. Vléro énan politikó pou foráei vrómiko giléko.

C.4.2.3 Evaluative modified bare nouns

1. Vléro éna dimosiográfo pou kratáei katapliktikí kámara.
2. Vléro mia kopéla pou foráei finetsáti fosta.
3. Vléro énan ithopoió pou foráei epivlitikó mandýa.
4. Vléro énan týpo pou foráei kalógousto dachtylídi.
5. Vléro énan taxidióti pou foráei ómorfo kapélo.
6. Vléro énan polemistí pou kratáei entyposiakó spathí.
7. Vléro énan tragoudistí pou kratáei paráxeni kithára.
8. Vléro mia ithopoió pou kratáei charitoméni ventália.
9. Vléro éna montélo pou foráei ácharo pantelóni.
10. Vléro énan nearó pou foráei áschimi máska.
11. Vléro éna paidí pou kratáei asteía simaía.
12. Vléro énan politikó pou foráei oraío giléko.
13. Vléro mia kyría pou foráei kompsí mantíla.
14. Vléro mia gynaíka pou foráei geloío rolói.
15. Vléro mia mathítria pou foráei períergo beré.

C.4.2.4 Color modified bare nouns

1. Vléro énan polemistí pou kratáei mávro spathí.
2. Vléro énan týpo pou foráei ble dachtylídi.
3. Vléro énan taxidióti pou foráei áspro kapélo.
4. Vléro énan tragoudistí pou kratáei kókkini kithára.
5. Vléro éna montélo pou foráei prásino pantelóni.
6. Vléro mia ithopoió pou kratáei mov ventália.
7. Vléro énan politikó pou foráei roz giléko.
8. Vléro énan nearó pou foráei kítrini máska.
9. Vléro éna paidí pou kratáei violetí simaía.
10. Vléro mia mathítria pou foráei bez beré.

11. Vléro mia kyría pou foráei portokalí mantíla.
12. Vléro mia gynáika pou foráei tyrkouáz rolói.
13. Vléro éna dimosiográfo pou kratáei kafé kámera.
14. Vléro mia kopéla pou foráei lilá fosta.
15. Vléro énan ithopoió pou foráei nkri mandýa.

C.4.2.5 Kind-level modified bare nouns

1. Vléro mia ithopoió pou kratáei Kinéziki ventália
2. Vléro énan tragoudistí pou kratáei akoustikí kithára.
3. Vléro éna montélo pou foráei dermatino pantelóni.
4. Vléro énan nearó pou foráei Venetsiániki máska.
5. Vléro éna paidí pou kratáei stratiotikí simaía.
6. Vléro énan politikó pou foráei alexísfairo giléko.
7. Vléro mia mathítria pou foráei Gallikó beré.
8. Vléro mia kyría pou foráei Mousoulmanikí mantíla.
9. Vléro mia gynáika pou foráei adiávrocho rolói.
10. Vléro mia kopéla pou foráei Skotséziki fosta.
11. Vléro énan ithopoió pou foráei vasilikó mandýa.
12. Vléro éna dimosiográfo pou kratáei psifiakí kámera.
13. Vléro énan taxidióti pou foráei Mexikániko kapélo.
14. Vléro énan polemistí pou kratáei Giaponéziko spathí.
15. Vléro énan týpo pou foráei diamanténio dachtylídi.

C.4.3 With

C.4.3.1 Unmodified bare nouns

1. Vléro énan politikó me giléko.
2. Vléro éna paidí me simaía.
3. Vléro énan nearó me máska.
4. Vléro mia mathítria me beré.

5. Vléro mia gynaíka me rolói.
6. Vléro mia kyría me mantíla.
7. Vléro énan ithopoió me mandýa.
8. Vléro mia kopéla me fosta.
9. Vléro éna dimosiográfo me kámara.
10. Vléro énan polemistí me spathí.
11. Vléro énan taxidióti me kapélo.
12. Vléro énan týpo me dachtylídi.
13. Vléro énan tragoudistí me kithára.
14. Vléro mia ithopoió me ventália.
15. Vléro éna montélo me pantelóni.

C.4.3.2 Stage-level modified bare nouns

1. Vléro mia gynaíka me chalasméno rolói.
2. Vléro mia kyría me lekiasméni mantíla.
3. Vléro mia mathítria me skonisméno beré.
4. Vléro mia kopéla me vregméni fosta.
5. Vléro éna dimosiográfo me skouriasméni kámara.
6. Vléro énan ithopoió me freskoplyméno mandýa.
7. Vléro énan taxidióti me leroméno kapélo.
8. Vléro énan polemistí me akonisméno spathí.
9. Vléro énan týpo me stravó dachtylídi.
10. Vléro mia ithopoió me skisméni ventália.
11. Vléro éna montélo me sideroméno pantelóni.
12. Vléro énan tragoudistí me xekordisti kithára.
13. Vléro éna paidí me flegómeni simaía.
14. Vléro énan nearó me ragisméni máska.
15. Vléro énan politikó me vrómiko giléko.

C.4.3.3 Evaluative modified bare nouns

1. Vléro éna dimosiográfo me katapliktikí kámara.
2. Vléro mia kopéla me finetsáti fosta.
3. Vléro énan ithopoió me epivlitikó mandýa.
4. Vléro énan týpo me kalógousto dachtylídi.
5. Vléro énan taxidióti me ómorfo kapélo.
6. Vléro énan polemistí me entyposiakó spathí.
7. Vléro énan tragoudistí me paráxeni kithára.
8. Vléro mia ithopoió me charitoméni ventália.
9. Vléro éna montélo me ácharo pantelóni.
10. Vléro énan nearó me áschimi máska.
11. Vléro éna paidí me asteía simaía.
12. Vléro énan politikó me oraío giléko.
13. Vléro mia kyría me kompsí mantíla.
14. Vléro mia gynaika me geloío rolói.
15. Vléro mia mathítria me períergo beré.

C.4.3.4 Color modified bare nouns

1. Vléro énan polemistí me mávro spathí.
2. Vléro énan týpo me ble dachtylídi.
3. Vléro énan taxidióti me áspro kapélo.
4. Vléro énan tragoudistí me kókkini kithára.
5. Vléro éna montélo me prásino pantelóni.
6. Vléro mia ithopoió me mov ventália.
7. Vléro énan politikó me roz giléko.
8. Vléro énan nearó me kítrini máska.
9. Vléro éna paidí me violetí simaía.
10. Vléro mia mathítria me bez beré.

11. Vléro mia kyría me portokalí mantíla.
12. Vléro mia gynaíka me tyrkouáz rolói.
13. Vléro éna dimosiográfo me kafé kámara.
14. Vléro mia kopéla me lilá fosta.
15. Vléro énan ithopoió me nkri mandýa.

C.4.3.5 Kind-level modified bare nouns

1. Vléro mia ithopoió me Kinéziki ventália
2. Vléro énan tragoudistí me akoustikí kithára.
3. Vléro éna montélo me dermatino pantelóni.
4. Vléro énan nearó me Venetsiániki máska.
5. Vléro éna paidí me stratiotikí simaía.
6. Vléro énan politikó me alexísfairo giléko.
7. Vléro mia mathítria me Gallikó beré.
8. Vléro mia kyría me Mousoulmanikí mantíla.
9. Vléro mia gynaíka me adiávrocho rolói.
10. Vléro mia kopéla me Skotséziki fosta.
11. Vléro énan ithopoió me vasilikó mandýa.
12. Vléro éna dimosiográfo me psifiakí kámara.
13. Vléro énan taxidióti pou foráeime Mexikániko kapélo.
14. Vléro énan polemistí me Giaponéziko spathí.
15. Vléro énan týpo me diamanténio dachtylídi.

C.4.4 Lower controls

1. Vléro mia gynaíka pou éinai árrostri dikigóros.
2. Vléro énan ántro pou éinai dipsasménos odontíatros.
3. Vléro mia gynaíka pou éinai sokarisméni syngraféas.
4. Vléro mia gynaíka pou éinai idroméni kathigítria.
5. Vléro énan ántro pou éinai xekorastos michanikós.
6. Vléro mia gynaíka pou éinai ékplikti optikós.
7. Vléro énan ántro pou éinai diathésimos pilótos.

C.4.5 Upper controls (kind-level modified)

1. Vléro énan ánta pou éinai katholikós ieréas.
2. Vléro énan ánta pou éinai trapezikós ypállilos.
3. Vléro énan ánta pou éinai diefhýnon sýmoulos.
4. Vléro énan ánta pou éinai oikonomikós diefthyntís.

C.4.6 Upper controls (unmodified)

1. Vléro mia gynaíka pou éinai ypodimatopoiós.
2. Vléro mia gynaíka pou éinai archaiológos.
3. Vléro mia gynaíka pou éinai cheirourgós.
4. Vléro énan ánta pou éinai stratiotikós.

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Samenvatting in het Nederlands

Een belangrijke functie van naamwoordsgroepen in taal is om aan te geven over welke wezens of objecten een bepaalde uiting gaat: naamwoordsgroepen refereren. In veel talen waarin naamwoorden samengaan met een lidwoord komen naamwoordelijke constructies voor waarin het lidwoord ontbreekt of zich op een andere manier vreemd gedraagt. Eén van de overeenkomsten die dit soort constructies vertonen is dat ze niet refereren op de gebruikelijke manier, en deze worden daarom ook wel referentieel zwakke constructies genoemd. Definiete naamwoordsgroepen, bijvoorbeeld, worden normaliter gebruikt om te verwijzen naar een bekend of uniek object of wezen. In de context in (307a) is het gebruik van de definitief *het boek* in (307b) vreemd, omdat er geen uniek boek in de context is waarnaar verwezen wordt.

- (307) a. **Context:**
Piet heeft in zijn vakantie *Hyperion*, *Dune*, en *A Wizard of Earthsea* gelezen.
b. # Piet heeft in zijn vakantie het boek gelezen.

Er zijn echter definieten die in dit soort contexten volkomende acceptabel zijn, zoals *de krant* in (308b). Dit zijn de zogenaamde zwakke definieten.

- (308) a. **Context:**
Piet heeft 's avonds *The Guardian*, *De Volkskrant*, en *Le Monde* gelezen.
b. Piet heeft 's avonds de krant gelezen.

Een ander voorbeeld zijn de zogenaamde kale predikaten. Dit zijn constructies waarin een zelfstandig naamwoord predikatief gebruikt wordt zonder lidwoord. Naast het indefiniete predikaat *een kunstenaar* in (309) heeft het Nederlands, met een hoop andere talen, ook het kale predikaat *kunstenaar* in (310a).

- (309) Gaaike is een kunstenaar.

(310) a. Gaaike is kunstenaar.

Naast kale predikaten zijn er ook kale nomina, zelfstandige naamwoorden die in niet-predikatieve positie gebruikt worden zonder lidwoord. In het Catalaans, bijvoorbeeld, komen zowel indefiniete constructies zoals in (311a) en kale constructies zoals in (311b) voor.

(311) a. Té un apartament.
heeft een appartement
'Hij/zij heeft een appartement.'

b. Té apartament.
heeft appartement
'Hij/zij heeft een appartement. (Hij/zij is een appartementeigenaar)'

Wat zwakke definiëten, kale predikaten en kale nomina gemeen hebben, is dat ze onderhevig zijn aan bepaalde restricties met betrekking tot welke naamwoorden en combinaties van naamwoorden en werkwoorden erin kunnen voorkomen. In de literatuur over deze constructies wordt vaak de intuïtie aangehaald dat deze restricties te maken hebben met wereldkennis. Asudeh and Mikkelsen (2000) claimen bijvoorbeeld dat Deense predikaten alleen een kaal nomen als onderwerp kunnen hebben als het resulterende predikaat een zogenaamde 'geïstitutionaliseerde actie' uitdrukt. Over zwakke definiëten stelt Zwarts (2014) dat ze verwijzen naar entiteiten die een constante functie hebben binnen een bepaald frame. Deze restricties, die te maken hebben met de descriptieve content van de constructies, en die samenhangen met culturele of contextuele achtergrondkennis noem ik *conceptuele restricties*. Wat opvalt is dat termen als *conventies*, *instituties*, en *constante functies* steeds terugkomen in beschrijvingen van deze restricties. Deze drie begrippen hebben allemaal te maken met de notie van *stabiliteit*. In mijn dissertatie bestudeer ik deze conceptuele restricties vanuit een taalkundig perspectief, met behulp van adjectivale modificatie. Modificatie is een manier om de denotatie van een naamwoord verder te specificeren, en is daardoor een hulpmiddel om gedetailleerder naar concepten te kijken. Door systematisch onderzoek te doen naar de modificatierestricties op zwakke definiëten, kale predikaten en kale nomina kunnen we een beter beeld krijgen van de grenzen van de conceptuele restricties op deze constructies. Het bestuderen van de lexikale semantiek van de verschillende soorten adjectieven die wel of niet acceptabel zijn in dit soort constructies is bovendien een manier om zoiets niet-taalkundigs als op wereldkennis gebaseerde restricties toch taalkundig inzichtelijk te maken.

De hypothese die als een rode draad door dit boek loopt is dat de conceptuele restricties op referentieel zwakke constructies, die zoals gezegd te maken hebben met conventies en constante functies, een taalkundig correlaat hebben in de lexikaal-semantische (in)stabiliteit van de interpretatie van verschillende soorten adjectieven. Evaluatieve adjectieven zoals *mooi*, *stom*, enz.,

en zogenaamde stage-level adjectieven zoals *nat*, *vies*, zijn voor hun interpretatie afhankelijk van de spreker, respectievelijk de situatie. Ik kan iets mooi vinden, maar smaken verschillen per spreker. Mijn kleren kunnen nu nat zijn, maar voordat ik door de regen heb gefietst waren ze nog droog. Voor andere soorten adjectieven geldt dit niet. Zogenaamde kind-level adjectieven, zoals *elektrisch* of *Mexicaans* hebben een veel stabielere interpretatie, die niet afhankelijk is van zulke externe factoren: of een auto elektrisch is of niet verschilt niet per spreker, en ook niet per situatie (uitzonderingen daargelaten). Hetzelfde geldt voor kleuradjectieven zoals *rood*. Mijn hypothese is nu dat de gevoeligheid van referentieel zwakke constructies voor contextuele of culturele stabiliteit van de concepten waarnaar ze verwijzen, terug te zien is in de modificatierestricties die voor deze constructies gelden als een voorkeur voor adjectieven met een stabiele interpretatie. Dit heb ik de *stabiliteitshypothese* genoemd:

(312) **De stabiliteitshypothese**

Hoe stabielere de interpretatie van een adjectief is, des te acceptabeler het is in een referentieel zwakke constructie.

In hoofdstuk 2 heb ik deze hypothese getest op zwakke definiëten in het Nederlands. Door middel van de VP-ellipsistest heb ik de acceptabiliteit getest van ongemodificeerde zwakke en normale definiëten en van zwakke en normale definiëten gemodificeerd door evaluatieve en kind-level adjectieven. Op basis van de stabiliteitshypothese was de voorspelling dat voor de zwakke definiëten de evaluatieve adjectieven significant minder acceptabel zouden zijn dan de kind-level adjectieven, maar dat er voor de normale definiëten geen verschil zou zijn. Deze voorspelling kwam uit.

In hoofdstuk 3 heb ik me gericht op kale predikaten. Ik heb de acceptabiliteit getest van ongemodificeerde kale predikaten en van kale predikaten gemodificeerd door stage-level en kind-level adjectieven. Op basis van de stabiliteitshypothese was de voorspelling dat de stage-level adjectieven significant minder acceptabel zouden zijn dan de kind-level adjectieven. Door dit in het Catalaans, Grieks, Braziliaans Portugees en het Nederlands te testen, kon ook de cross-linguïstische validiteit van de stabiliteitshypothese getest worden. De resultaten lieten zien dat de voorspelling voor het Catalaans, Grieks en Nederlands inderdaad uitkwam. De Braziliaans Portugeese data konden niet worden meegenomen in de statistische analyse, maar leken hetzelfde patroon te laten zien als de andere talen. Net zoals de resultaten van de zwakke definiëten waren de resultaten van de kale predikaten dus in overeenstemming met de stabiliteitshypothese. Bovendien duiden de data erop dat mijn hypothese cross-linguïstisch valide is.

Aan het eind van hoofdstuk 3 heb ik aandacht besteed aan de inflectiepatronen van adjectieven in de vier talen die ik getest heb, in relatie tot de aanwezigheid van de NumP.

In hoofdstuk 4 tot en met 6 heb ik mijn onderzoeksopzet nog een stap verder uitgebouwd, door de acceptabiliteit van kale nomina te testen in vijf verschillende modificatiecondities: ongemodificeerd, en gemodificeerd door stage-level,

evaluatieve, kleur-, en kind-level adjectieven. Mijn belangrijkste hypothese in deze hoofdstukken was weer de stabiliteitshypothese. Deze heb ik getest in drie verschillende talen: het Catalaans, het Grieks, en het Braziliaans Portugees. Bovendien heb ik kale nomina in twee verschillende constructies getest: in objectpositie van pseudo-incorporerende HAVE-werkwoorden, en in objectpositie van *met*. In hoofdstuk 4 heb ik eerst wat achtergrond gegeven van pseudo-incorporatie, HAVE-werkwoorden, en de *met*+kaal-nomen-constructie. Daarna heb ik de eigenschappen van deze constructies in verschillende talen besproken, waarbij ik heb laten zien dat sommige kenmerken van pseudo-incorporatie in alle talen terugkomen, maar dat talen verschillen in hoe strikt ze zijn met betrekking tot *number neutrality*, referentialiteit, en restricties. Op basis daarvan heb ik een schaal van pseudo-incorporatiestriktheid geïntroduceerd:

(313) [strikt] **Catalaans** < **Braziliaans Portugees** < **Grieks** [vrij]

Op basis van deze schaal heb ik naast de stabiliteitshypothese voor kale nomina nog een tweede hypothese geformuleerd:

(314) **Hypothese 2**

Hoe strikter een taal is met betrekking tot andere pseudo-incorporatie-eigenschappen, des te strikter is hij met betrekking tot modificatierestricties op kale nomina.

Tot slot heb ik in hoofdstuk 4 laten zien dat kale nomina in objectpositie van pseudo-incorporerende HAVE-werkwoorden, en in objectpositie van *met* dezelfde pseudo-incorporatie-eigenschappen laten zien. Mijn derde hypothese is hierop gebaseerd:

(315) **Hypothese 3**

PRESENCE *met* pseudo-incorporeert kale nomina op dezelfde manier als HAVE-werkwoorden doen, en er is daarom geen verschil tussen deze twee constructies met betrekking tot modificatierestricties.

In hoofdstuk 5 heb ik de conceptuele restricties op gepseudo-incorporeerde kale nomina in meer detail besproken. Mijn belangrijkste stelling in dit hoofdstuk is dat er twee verschillende soorten gepseudo-incorporeerde kale nomina zijn, één met restricties die voornamelijk op de context gebaseerd zijn, en één met voornamelijk cultureel bepaalde restricties, maar dat aan beide soorten restricties een vereiste van *stabiliteit* ten grondslag ligt. Hoofdstuk 5 eindigt met een bespreking van de lexikale semantiek van de vier soorten adjectieven die ik getest heb, waarbij ik heb aangetoond dat deze goed samengaan met de semantiek van de pseudo-incorporatieconstructie zoals Espinal and McNally (2011) die voorgesteld hebben. Dit betekent dat als ik verschillen tussen de modificatiecondities vind, deze niet veroorzaakt kunnen zijn door compositioneel semantische problemen, maar dat ze herleid kunnen worden tot de conceptuele restricties op kale nomina.

In hoofdstuk 6 heb ik mijn onderzoek naar modificatiereducties op kale nomina besproken. Het belangrijkste resultaat was dat in beide constructies en in alle drie de talen die ik getest heb, er een duidelijk verschil was tussen de stage-level en evaluatieve modificatiecondities, die relatief lage acceptabiliteitscores kregen, en de kleur- en kind-level modificatiecondities, met relatief hoge acceptabiliteitscores. Dit resultaat bevestigt de stabiliteitshypothese.

Hoewel dit patroon in alle talen terugkwam, verschilden de drie talen wel in de hoogte van de acceptabiliteitscores die ik vond: het Catalaans had significant lagere scores dan het Braziliaans Portugees, dat op zijn beurt weer significant lagere scores had dan het Grieks. Dit komt overeen met de pseudo-incorporatiestriktheidschaal die ik in hoofdstuk 4 heb voorgesteld en bevestigde zo hypothese 2. Voor het verschil tussen het Catalaans en het Grieks heb ik een diachrone verklaring voorgesteld gebaseerd op Himmelmann (1998). Deze verklaring gaat echter niet op voor het Braziliaans Portugees. Wel vormen mijn data ondersteuning voor een pseudo-incorporatieanalyse van Braziliaans Portugees HAVE+kaal-nomenconstructies en *met*+kaal-nomenconstructies.

Hetzelfde zagen we met betrekking tot de HAVE- en *met*-constructies: in beide constructies vond ik hetzelfde patroon van verschillen tussen de modificatiecondities, maar *met* kreeg significant hogere acceptabiliteitscores dan HAVE. Dit was heel consistent in het Catalaans, wat minder in het Grieks en Braziliaans Portugees. De diachrone verklaring à la Himmelmann gaat hier ook op: de grammatikalisatie van lidwoorden is verder gevorderd voor naamwoordsgroepen in bijvoorbeeld subject- en objectpositie dan voor naamwoorden in objectpositie van adposities zoals *met*. Dit houdt in dat kale nomina in objectpositie van *met* diachroon gezien langer grammatikaal blijven dan kale nomina in objectpositie van HAVE-werkwoorden. Op basis hiervan is de verwachting dat er ook talen zijn waarin alleen kale nomina in objectpositie van *met* grammatikaal zijn. Het Nederlands is zo'n taal. Ik heb de modificatie restricties op *met*+kaal-nomenconstructies in het Nederlands getest, en de resultaten lieten min of meer hetzelfde patroon zien als ik in de andere drie talen heb gevonden.

De resultaten van mijn onderzoek bevestigen de stabiliteitshypothese. De intuïtie dat referentieel zwakke constructies zoals zwakke definiëten, kale predikaten en kale nomina vereisen dat de concepten waarnaar ze verwijzen een bepaalde stabiliteit in zich hebben is op zich niet nieuw. Mijn onderzoek vormt echter het eerste structurele empirische bewijs dat deze intuïtie ondersteunt. Door adjectivale modificatie als hulpmiddel te gebruiken, heb ik laten zien dat zoiets ongrijpbaars als conceptuele restricties terug zijn te leiden tot de (lexikale) semantiek.

Curriculum Vitae

Maartje Schulpen was born on March 23rd 1986 in Weert, The Netherlands. In 2006 she started her studies in linguistics at Leiden University. After finishing her bachelor in 2009 she moved to Utrecht University for a research master in linguistics. After obtaining her degree in 2011 she began working as a PhD student at UiL-OTS, Utrecht University. In 2013 she spent three months as a visiting researcher at Unversitat Pompeu Fabra, Barcelona.