

Emiel van Miltenburg

A semantics for scalar PAN-constructions



MA Thesis	Universiteit Utrecht
Supervisor	Rick Nouwen
Second reader	Bert Le Bruyn

Abstract

This thesis aims to provide a degree-based account of the scalar PAN-construction (Van Miltenburg & Zwarts 2013), illustrated in (1 a,b). Such constructions contain a Preposition, an Adjective, and a Noun (usually denoting some abstract property, like IMPORTANCE). The adjective says something about the degree to which this property holds. So in (1 a), the meeting has a high degree of importance, and this is indicated by the size-adjective *great* (and vice-versa for the size-adjective *small* in (1 b)). When the adjective is left out, as in (1 c), the property is usually judged to hold to a significant degree. For example, (1 c) seems to imply that the meeting has a greater-than-average level of importance. That is: it seems to imply that the meeting is important. But where does this ‘greater-than-average level of importance’ come from?

- (1) a. This meeting is [PP of great importance.]
b. This meeting is [PP of little importance.]
c. This meeting is [PP of importance.]

I argue that the scalar PAN-construction is interpreted through *degree semantics* (see e.g. Kennedy 2007 and the references therein), and that we can have a unified theory covering both the PAN-construction and expressions such as those in (2 a,b) that are discussed in Morzycki 2009.

- (2) a. John is a big idiot.
‘John’s idiocy is big’
b. Mary’s a big goat-cheese enthusiast
‘Mary is *very* enthusiastic about goat-cheese’

Morzycki’s account of (2 a,b) assumes a covert MEAS operator that is fairly task-specific so as to account for what he calls *the bigness generalization*. I.e. the fact that *John is an ADJ idiot* does only receives a degree reading when *idiot* is modified by a bigness-denoting adjective such as *big*, and fails to get this reading with adjectives like *small*, *little*, etc. I show that Morzycki’s (2009) theory cannot readily be extended to cover PAN-expressions, unless we assume a more general version of MEAS (behaving more like a grammatical operator), and posit that nouns like *idiot* are evaluative (cf. Constantinescu’s (2011) idea that such nouns just have an inherent bigness). This evaluativity in conjunction with what I will call the Modifier Domain Requirement can be used to account for the bigness generalization. With these elements in place, there can be a general semantics for gradable nouns.

Acknowledgements

Every thesis has a story behind it, and for this particular thesis that story starts in 2010 when Rick Nouwen supervised my first BA thesis, on vagueness and gradable adjectives. I fondly remember our meetings where he patiently listened to whatever naive ideas about noun-adjective compounds I came up with. Soon after that came my second BA thesis, on the PAN-construction, supervised by Joost Zwarts. He thought it would be a good topic for me since these constructions “might be related to scales and gradable adjectives.” He was, as we shall see, completely right.

After finishing up the thesis, Joost and I kept working on an account of the PAN-construction, ultimately leading us to present our findings at a *Weak Referentiality* meeting (Van Miltenburg & Zwarts 2013). It is unclear where Joost’s contribution ends and mine starts. No doubt his contributions are greater than my own. Our work became the foundation of this thesis, and a summary of some of the findings is given in chapter 1. All remaining errors are, of course, mine.

Looking back, I couldn’t have written this thesis without the help of so many people, to whom I am very thankful. First of all, Rick Nouwen, who has been a great supervisor and whose insightful comments made this a much, much better thesis than I ever could’ve written alone. I cannot even begin to describe the amount of support I felt from Joost Zwarts, who has been like a mentor to me, guiding our search for an explanation of the behavior of the PAN-construction, all the while being an example of humility. I’d also like to thank Bert Le Bruyn, who agreed to be the second reader of this thesis. The members of the *Weak Referentiality* project have provided many helpful suggestions and comments on Van Miltenburg & Zwarts 2013, which are gratefully acknowledged. I am also very lucky to have such wonderful classmates, friends and family around me. And one very special person who might be in the intersection of those sets. . .

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Introduction

The PAN-construction

1.1

This thesis is concerned with the semantics of *PAN-constructions*: a class of prepositional phrases that do contain an adjective and a singular noun, but that do not contain a determiner. There are examples aplenty; some of the most frequent ones in English are provided below.^{1,2}

- | | |
|---|----------------------|
| (1) Some PAN-constructions involving ‘at’ | f. at short notice |
| a. at high risk | g. at national level |
| b. at great length | h. at full speed |
| c. at low cost | i. at low tide |
| d. at close range | j. at great expense |
| e. at high speed | k. at full strength |

I will investigate the set of PAN-constructions in which the adjective can be left out (e.g. (1 a-d)), and establish what kind of semantics would adequately capture it.

Research up to now

1.2

The PAN-construction has been studied in Dutch by Van Miltenburg (2011) and subsequent unpublished work in collaboration with Joost Zwarts (van Miltenburg & Zwarts 2013). They discuss cases like (2) below, focusing on two questions: (i) why can the determiner be left out in this construction, and (ii) why is the adjective optional in (2 a), but mandatory in (2 b)?

- | | |
|-------------------------|------------------------|
| (2) a. op (hoog) niveau | b. op *(slinkse) wijze |
| at high level | on sneaky way |
| ‘at a high level’ | ‘in a sneaky way’ |

¹These examples (a.o.) were found in Davies’s (2013) *Corpus of global web-based English* (GloWbE).

²Where possible, I will use English examples for ease of presentation. Not all of these examples can be directly carried over to Dutch, but for all those cases the reader is assured that parallel cases exist.

We will only concern ourselves with the second question here.³ Van Miltenburg & Zwarts (2013) argue that the grammaticality of the PAN-construction can be explained by appealing to general principles. Specifically, language seems to be biased to avoid triviality (cf. Winter 2005 and others) and to be informative. They operationalize this bias by positing the (informal) principle given in (3).⁴

- (3) **Informativeness Principle:** A phrase α that is combined (as an argument or modifier) with a head β should make a semantic contribution, that is: the meaning of the combination of α and β should not be identical to the meaning of β alone.

This provides us with a way of explaining the oddness of the examples in (4): the noun *wijze* in (4 a) introduces some manner, but it is not specified what kind of manner is involved. Arguably, there is always some manner associated with any action, so without specifying any particular manner (as in 5 a), (4) amounts to saying *Bob is laughing*. This renders the PP utterly redundant. Similarly for (4 b), we can say that being an expert already presupposes some area of expertise, so without further specification of what that area might be (as in 5 b), the PP does not contribute any meaningful information.

- | | |
|--|---|
| (4) a. ?Bob lacht op (een) wijze.
Bob laughs on a way
'Bob is laughing in (a) way' | (5) a. ... op schalkse wijze
on roguish way
'in a roguish way' |
| b. ?Jan is een expert op (een) gebied.
Jan is an expert on an area
'Jan is an expert at (an) area' | b. ... op scheikundig gebied
on chemical area
'in the field of chemistry' |

Now consider the examples in (6) and (7). Modification is mandatory in the former, but not in the latter cases.

- | | |
|--|---|
| (6) a. van *(algemene) aard
of general nature
'of a general nature' | c. van *(antropologische) zijde
of anthropological side
'from the side of anthropology' |
| b. van *(Hugenootse) afkomst
of Huguenot descent
of Huguenot descent | d. in *(oostelijke) richting
in eastern direction
'in eastern direction' |

³Van Miltenburg & Zwarts (2013) consider modification requirements and bareness to be two separate phenomena that can be accounted for through independent factors. Thus no harm is done in discussing them separately or leaving one out.

⁴Sailer (2010) makes a similar move by positing his "principle of semantic discernability" to account for the ungrammaticality of cases like (i).

- (i) He died a *(gruesome) death.

- | | |
|---|--|
| e. in *(skandinavische) stijl
in scandinavian style
'in the scandinavian style' | f. op *(fiscaal) terrein
on fiscal terrain
'in the field of taxation' |
| (7) a. op (grote) afstand
on great distance
'at a great distance' | d. op (grote) hoogte
at great height
'at a great height' |
| b. van (nationaal) belang
of national importance
'of importance to the entire nation' | e. op (jongere) leeftijd
at younger age
'at a younger age' |
| c. van (historische) betekenis
of historical meaning
'of historical significance' | f. van (onschatbare) waarde
of inestimable value
'of an inestimable value' |

Van Miltenburg & Zwarts make two observations that we will look at in turn:

- i. "The examples in (6) involve nouns that refer to an unordered set of values (states, domains, styles, sides, directions), while most of the nouns in (7) involve an ordered set of values, a scale" (van Miltenburg & Zwarts 2013: 2) (ordered in terms of distance, importance, significance, height, age, value).

This observation provides a meaningful distinction between the two groups of nouns. The idea is that any difference in behavior between these two groups might be traced back to this difference in meaning. Let us call the examples in (7) *scalar* PAN-constructions and the examples in (6) *non-scalar* or *unordered* PAN-constructions.

- ii. "If the adjective is left out, the examples in (7) all seem refer to a high or contextually given degree on the relevant scale. For example, *van belang* refers to some significant level of importance [(cf. the English *of importance*)]" (van Miltenburg & Zwarts 2013: 2). No such interpretation is available for the items in (6).

Van Miltenburg & Zwarts (2013) take this observation to be a consequence of the Informativeness Principle stated above and the difference in representation between scalar and non-scalar nouns. We have already seen from examples like (4) that the literal information from the preposition and the noun by themselves is not enough to have any semantic contribution. Thus extra information must be added. There are two ways of doing so: (i) adding *explicit* information, i.e. putting in an adjective; and (ii) adding *implicit* information. This is what happens when there is no adjective in the cases in (7). As noted above, whatever implicit mechanism is at work seems to make use of the ordering associated with the nouns, and select a degree that is above some standard. This immediately gives us a reason why the adjectives cannot be left out in (6): the nouns in (6) do not correspond to any ordered set of values, which makes them incompatible with the implicit mechanism.

Fleshing out 'information addition'

1.3

We will focus on scalar PAN-constructions. Whenever the adjective is left out, the PP can typically be interpreted as referring to a 'high or significant degree' on the scale associated with the noun (cf. (8a)). Let us call this the *significance reading*. It is important to note that the significance reading is not always available. This is the case in (8b). What happens in this and other such cases is that the 'value' that gets filled in is somehow contextually salient: it is the 'right' degree, but not necessarily a high one. I will keep referring to this reading as the *contextual reading*.

- (8) a. Deze kwestie is **van belang**
 This issue is of importance
 'This issue is important to a significant degree'
- b. Na het dieet is Jan weer **op gewicht**
 After the diet is John again at weight
 'After the diet, John is at the right weight again'

Some PPs can have both readings, such as *op niveau*⁵:

- (9) a. Het team speelde een wedstrijd **op niveau**
 The team played a game at level
 'The team played a game at a high level.
- b. De kinderen lezen op niveau. [Context: a primary school newsletter]
 The children read at level.
 'The children read at the level suited for them'

The contextual reading does not seem to rely as much on a notion of significance; it just picks out some value (here: an appropriate level) from the context. This is exceptionally clear from examples like (10):

- (10) Zaag de planken op lengte [Context: instruction manual]
 Saw the boards at length
 'Cut the boards at the respective length each board needs to be'

Now the question arises: if we make some information (i.e. a manner, state, domain, style, side, or direction) really salient, could non-scalar PAN-constructions receive a contextual reading as well? Interestingly enough, the answer is no, as (11) illustrates.

⁵The full context with an example like (9b): "Kinderen krijgen gericht technisch leesonderwijs. **Goed lezen op niveau uit leuke en interessante boeken.** Estafette sluit aan op Veilig leren lezen van groep 3. Goed lezen (leestempo en leestehniek) en een brede woordenschat is een voorwaarde voor goed begrijpend lezen. Tijdens de informatieavond in september, ligt de methode ter inzage." (<http://www.rastholt.nl/index.htm.files/nieuwsbrief%20donderdag%204%20juli%202013.pdf>)

- (11) Marie was heel grappig, en Jan vertelde ook op ??(grappige) wijze
 Mary was very funny and John told-something also on funny way
 'Mary was very funny, and John's storytelling was too'

Goal

1.4

We have now seen some examples of the scalar PAN-construction, and the 'information addition' that occurs when the adjective is left out. The goal of this thesis is to see how the behavior of the scalar PAN-construction in Dutch could be formalized. In other words: to judge what kind of a semantics is suited for this construction. Given the discussion above, it seems that any semantics for the scalar PAN-construction should

- i. somehow make use of the notion of a scale, or at least appeal to the order that 'comes with' the noun, and
- ii. have a mechanism to ensure that the noun either holds to a high/significant degree, or to some degree that is contextually given whenever the adjective is left out

Gradable adjectives

1.4.1

The requirements listed above are not unique. Indeed, many of the traits we see with the PAN-construction have been discussed in the literature with respect to gradable adjectives such as *tall* or *important*. Kennedy (2007) notes two "core assumptions" made throughout the literature on gradable adjectives:

- (12) a. "Gradable adjectives map their argument onto abstract representations of measurement, or DEGREES." (Kennedy 2007: 4)
 b. "A set of degrees totally ordered with respect to some DIMENSION (height, cost, etc.) constitutes a SCALE." (id.)

And so we can say that *tall* is a predicate that holds of some entity to a certain degree on the tallness scale. (13) uses the comparative morpheme *-er* to express that John's degree of tallness exceeds that of Mary.

- (13) John is taller than Mary.

Sentences like (14) are interpreted in a context of utterance, so (14) may be true in Korea, but false in the Netherlands (where people are generally taller).

- (14) John is tall.

In other words, there is some implicit *contextual standard* with respect to which *tall* is evaluated. If John's degree of tallness is greater than that standard, the sentence is true. If not, the sentence is false. With this knowledge, we can ask ourselves what the difference is between the examples in (15).

- (15) a. John is important
b. John is a man of importance

Both examples make use of the IMPORTANCE scale, and moreover both expressions involve a degree of importance that exceeds some implicit standard. It then seems reasonable to suggest that (15 a) and (15 b) might have the same underlying semantics. But what would the denotation of (15 b) look like?

In this thesis I will see whether we can extend Morzycki's (2009) theory of gradable nouns to apply to scalar PAN-constructions. Morzycki's work takes degree semantics into the nominal domain, focusing on nouns like *idiot* in sentences like (16), where the size adjective seems to predicate over John's idiocy rather than his size.

- (16) John is a big idiot.

Should PAN-constructions behave differently than gradable nouns like *idiot*, then a simple extension of Morzycki's (2009) theory is not possible and we should backtrack to see what our other options are.

Why not a pragmatic approach?

1.4.2

Above I have chosen to take a semantic approach to cover the behavior of the PAN-construction, but it should be noted that this is not our only option. One might argue that the lack of a determiner in (17 a) is unusual, and thus signals that something special is going on (in other words, (17 a) is *marked*), resulting in an implicature (17 b).

- (17) a. John is a man of importance
b. John is a (very) important man

This reasoning then requires us to specify exactly how the implicature in (17 b) comes about. A candidate explanation would be that the noun *importance* is deemed relevant enough to be mentioned by the speaker. This would not be the case if John were only of average importance. So John's importance must be a remarkable property. Hence we can conclude that the speaker thinks John is a very important man.⁶

⁶There is one issue with this line of reasoning, namely that John's importance could also deviate from the standard in a *negative* way. That is, John could be utterly unimportant. This is also remarkable, yet nobody concludes this from (17 a). The issue could probably be solved, but that solution lies outside the

It is historically difficult to tease pragmatics apart from semantics (for an overview, see: Bezuidenhout 2006; Jaszczolt 2008), but there are reasons for us to prefer a semantic account in this case. For one, the PAN-construction fails to meet Grice's (1975) criteria for conversational implicatures because the 'implicature' from (17 a) to (17 b) is not cancellable; utterances like (18) are just strange.

(18) ?John is a man of importance, but he is not very important.

Moreover, the semantic approach is a way to make fully explicit what is going on. With Morzycki 2009, we seem to have the tools at hand to take this step forward. Should the pragmatic approach be preferable in the end, then at least we'll have properly mapped out the behavior of the PAN-construction.

Outline

1.5

In chapter 2, we'll take a closer look at the PAN-construction and its properties. Then, I will discuss Morzycki's (2009) theory and whether it can be extended and applied to PAN-constructions. As we will see, extending Morzycki's work is not straightforward which prompts us to look for alternatives. One such alternative is offered by Constantinescu (2011). In chapter 4 we will look at her criticism to Morzycki 2009 and look at her proposal to capture Morzycki's (2009) data and whether this proposal can be extended to cover the PAN-construction as well. As we will see, such an extension is not able to completely capture the PAN-construction. As a result, in chapter 5 we will return to degree semantics in order to formulate an account that covers all gradable nouns. Chapter 6 concludes.

A closer look some descriptive generalizations

Goal 2.1

The goal of this chapter is twofold: first, it aims to familiarize the reader with the PAN-construction by providing an overview of its properties. Second, it introduces some generalizations that will be crucial in later chapters.

Nouns 2.2

Van Miltenburg & Zwarts' theory builds on Van Miltenburg's (2011) examination of the Eindhovencorpus (EHC, Uit den Boogaard 1975; Van Grootheest 1992), a freely available but rather small (768 000 words) corpus of written Dutch. Their idea that scalarity is the deciding factor in leaving the adjective out makes a prediction for the much larger set of other corpora and everyday utterances:

- (1) **Prediction:** there should be 'scalar nouns' unattested in the Eindhovencorpus that show similar behavior.

As argued by van Miltenburg (2012), this is exactly what we see. A Google search reveals examples like those in (2).¹

- (2) Examples of PPs unattested in the EHC, but predicted to be available²
- a. [...] veilige werkplek **op hoogte**
safe workspace at height

¹However, there are still exceptions, e.g. (i-a,b) that do not permit the adjective to be left out:

- | | |
|--|---|
| (i) a. van *(korte) duur
of short duration
'short-lived' | b. in *(sterke) mate
in strong measure
'strongly' |
|--|---|

²From www.werkveiligophoogte.nl, www.defietstoerist.nl, <http://passie.horeca.nl> and [www.gratisopenhaardhout.nl](http://gratisopenhaardhout.nl), respectively.

- ‘safe workspace at some great/significant height’
- b. lucht bevat **op grote hoogte** minder zuurstof.
 air contains at great height/altitude less oxygen
 ‘the air contains less oxygen at high altitude’
- c. [...] kunt u de boomstammetjes goed **op lengte** zagen.
 can you the tree-trunks good at length saw
 ‘you can saw the tree trunks at the right length’
- d. [...] moeten de spieren sterk genoeg zijn en **op goede lengte** zijn.
 must the muscles strong enough be and on good length be
 ‘the muscles must be strong enough and have the right length’

This is all fine and well, but what does the class of ‘scalar nouns’ look like? Take a look at the examples in (3) below, and those in the previous chapter ((7) on page 9)

- (3) a. van invloed
 of influence
 ‘having a significant influence’
- b. op kracht³
 on force/strength
 ‘having a certain (contextually given) level of strength’
- c. met woede
 with anger
 ‘having a significant amount of anger’
- d. met enthousiasme
 with enthusiasm
 ‘having a significant amount of enthusiasm’

With these examples in mind, it seems like we are dealing with three different sets of nouns:

- De-adjectival nouns, like *lengte* ‘length’, *gewicht* ‘weight’, *hoogte* ‘height’, *snelheid* ‘speed’.
- Nouns representing a value (or set of values) in some dimension, like *afstand* ‘distance’, *betekenis* ‘significance’, *belang* ‘import/interest’ and the examples above in (3). These all have an adjectival counterpart (for the examples here: distant, significant, important).
- Nouns that represent a value (or set of values), but that do not necessarily come with a predetermined dimension. Examples are *waarde* ‘value’⁴ and *niveau* ‘level’.

What ties these together is that they all seem to refer to (instances of) properties.⁵ This will become relevant in chapter 4, where we will look more closely at the semantics of

³E.g. “...al heeft manager Harry Redknapp de belofte gekregen dat zijn selectie op kracht blijft.” (<http://www.vi.nl/nieuws/hiddink-krijgt-na-half-jaar-weer-beschikking-over-samba.htm>)

⁴Arguably, the noun *waarde* does not come with a predetermined dimension, but since this word is often used in the financial domain, it is strongly associated with a ‘monetary scale’, which is how its adjectival counterpart *waardeloos* ‘valuable’ gets its interpretation.

⁵There is one exception to this rule: *termijn* ‘term’. It is associated with the TIME dimension, and seems to refer to intervals rather than values. The data is consistent with the other PAN-cases:

property-denoting nouns. The reader is referred to Nicolas 2004, 2010 for more work on such nouns.

Adjectives

2.3

Having looked at the nouns, what can we now say about the adjectives in the scalar PAN-construction? Well, for one, as van Miltenburg (2011) observes with the examples in (4), usually the scalar PAN-construction admits gradable adjectives, whereas the nonscalar PAN-construction does not. We can clearly see this when the comparative morpheme *-er(e)* is applied to the adjectives in both classes. Whereas it is fine with the scalar PAN-construction (4), the result is ungrammatical for the non-scalar cases (5).

- | | | | |
|-----|---|-----|--|
| (4) | a. in gering-ere mate
in less-er measure
'to a lesser extent' | (5) | a. in culturel(*-er) opzicht
in cultural -COMP regard
'with regard to culture' |
| | b. in hogere mate
'to a greater extent' | | b. in economisch(*-er) opzicht
'... economy' |
| | c. in sterkere mate
'to a stronger extent' | | c. in financieel(*-er) opzicht
'... finance' |

In the following two chapters we will focus on modification by size adjectives (*great, small, big, little* etc), on the assumption that the analysis presented there can be carried over to the adjectives in (4). All of this is not to say that scalar PAN-constructions can't be modified by other types of adjectives. Van Miltenburg (2011) illustrates this with the examples in (6).

- | | | |
|-----|--|-----------------------|
| (6) | a. op cellulair niveau
at cellular level
'at the cellular level' | |
| | b. op gelijk niveau | ('equal') |
| | c. op interdisciplinair niveau | ('interdisciplinary') |
| | d. op tweedegraads niveau | ('second-degree') |
| | e. op diplomatiek niveau | ('diplomatic') |
| | f. op lokaal niveau | ('local') |
| | g. op plaatselijk niveau | ('local') |
-
- | | | |
|-----|---|--|
| (i) | a. op korte termijn
on short term
'within a shorter amount of time' | 'within a longer amount of time' |
| | b. op lange termijn
on long term | c. Op termijn
on term
'within a certain (longer) amount of time' |

- h. op gemeentelijk niveau ('municipal')
- i. op centraal niveau ('central')
- j. op europees niveau ('European')
- k. op wereldwijd niveau ('global')

What is interesting about these examples is that there does seem to be an ordering associated with the adjectives. (6 f-l) are clear examples of this. These all seem to be levels of governance that are inherently ranked. Curiously, these examples all contain adjectives that can only be used attributively, while adjectives denoting dimensions such as *hoog* 'high' can also be used predicatively:

- | | | |
|-----|--|--|
| (7) | a. ... op hoog niveau. | c. ... op gemeentelijk niveau. |
| | b. Het niveau is hoog.
lit. 'the level is high' | d. *Het niveau is gemeentelijk.
lit. 'the level is municipal' |

Prepositions

2.4

There is not a lot of variation in the preposition used in the scalar PAN-construction; mostly *van* 'from/of' and *op* 'on/in' seem to be used,⁶ though other prepositions are also attested, eg *met* 'with':

- | | | |
|-----|--|---|
| (8) | a. met grote moeite
with great effort
'with a lot of effort' | b. met moeite
with effort
'with a fair (or greater) amount of effort' |
|-----|--|---|

On the semantic side, it is unclear what the preposition actually contributes. For example, what does *of* do in (9)?

- (9) The issue is of importance.

This statement seems to be saying that there is some issue, and this issue is important. At least in this case, the preposition only seems to play a grammatical role. As such, we will largely ignore the semantics of the preposition in the discussion of how the interpretation of the scalar PAN-construction should be dealt with.

⁶Credits for this observation go to Ora Matushansky.

Morzycki's theory of gradable nouns

Outline

3.1

In this chapter I will take Morzycki's (2009) theory of gradable nouns and provide an overview of how it works. I will then argue that despite the initial attraction, an account of the scalar PAN-construction in terms of degrees does not seem to be a viable option.

The interpretation of gradable nouns

3.2

Morzycki (2009) discusses gradable nouns like *idiot*, or *stamp-collector*. In his words, these are nouns "for which a single criterion can be distinguished from the others as the most salient." Morzycki (2009: 13). For *idiot*, this would be idiocy. For *stamp-collector*, it is the occupation of collecting stamps.

Gradable nouns nouns can be modified by size adjectives like *big*, *enormous* or *huge*, as in (1 a-b). The attributive modification here allows for a 'degree-reading'. That is to say: a reading in which John is not enormous, but rather he is very idiotic, and Mary is not big, but rather she is very much into stamp-collecting. The degree reading is not available in (1 c-d), where only a 'physical size-reading' is available.

- | | |
|-----------------------------------|---------------------------------|
| (1) a. John is an enormous idiot. | c. That idiot is enormous. |
| b. Mary is a big stamp-collector. | d. That stamp-collector is big. |

The observation that availability of the the two readings seems to depend on whether the noun is attributively or predicatively modified is what Morzycki calls *the position generalization*.¹ He convincingly shows how this generalization holds up in various languages, like Spanish, Polish, and Hebrew.

After identifying the two different readings and making his position generalization, Morzycki turns to argue that the ambiguity between the two readings stems from the grammar (rather than being a result of the vagueness of the noun, or one of

¹In English and Dutch, the attributive position is prenominal.

the readings being metaphorical). His key argument in favor of grammatical ambiguity rests upon the observation that the examples in (2) are fine, while those in (3) are not.

- (2) a. Gladys isn't very big, but she's a very big stamp-collector.
 b. Harry isn't enormous, but he is an enormous idiot.
- (3) a. # That chair isn't very big, but it's a very big chair.
 b. # That building isn't enormous, but it's an enormous building.

As Morzycki notes: "there is no sense of contradiction in [(2)], unlike in [(3)], because two distinct readings are involved, and one can be negated without negating the other." Since the degree reading is available from the grammar, we can ask ourselves how this could be formalized. It is this question to which I will now turn.

A degree semantics for gradable nouns 3.3

Morzycki (2009) represents gradable nouns like *idiot* the same way Kennedy (2007) treats adjectives like *tall*: as $\langle e, d \rangle$ -type measure functions:

- (4) a. $\llbracket tall \rrbracket = \lambda x.id[x \text{ is } d\text{-tall}]$ b. $\llbracket idiot \rrbracket = \lambda x.id[x \text{ is } d\text{-idiotic}]$

Kennedy (2007) and others assume that gradable adjectives combine with an abstract or covert degree head POS, so that (5 a) has the structure in (5 b). Morzycki assumes that gradable nouns work exactly the same way, so that (6 a) also has a covert POS morpheme as in (6 b). The indefinite article *an* is not interpreted here.

- (5) a. John is tall. (6) a. John is an idiot.
 b. John is $[\text{POS}_{\langle ed, et \rangle} tall]$ b. John is an $[\text{POS}_{\langle ed, et \rangle} idiot]$

The POS morpheme combines with the gradable predicate G to yield a function that compares the degree to which the G holds of the subject to some contextually determined standard for G:

- (7) $\llbracket POS \rrbracket = \lambda g_{ed} \lambda x . g(x) \geq standard(g)$

The complete denotations for (5) and (6) are given in (8).

- (8) a. $tall(john) \geq standard(tall)$ b. $idiot(john) \geq standard(idiot)$

So far so good. Now we have a semantics for unmodified degree nouns. Next, we need a way to introduce size adjectives like *big* to get the degree reading for *big idiot*.

Morzycki's solution is to treat size adjectives as being similar to measure phrases like *six feet* and *five centimeters* in (9 a,b). These phrases are assumed to be licensed by another covert degree morpheme MEAS, as in (9 c,d).

- (9) a. six feet tall
 b. five centimeters wide
 c. [six feet [MEAS tall]]
 d. [five cm [MEAS wide]]

Morzycki's denotation of MEAS is given in (10). He assumes that the measure phrase itself is a $\langle d, t \rangle$ -type property. The *min*-function returns the minimum degree for which the measure phrase still holds true. What MEAS does is very similar to POS: where POS compares the degree to which the gradable predicate holds to a contextual standard for that predicate, MEAS compares the degree to which the gradable predicate holds to a lower bound set by the measure phrase.

$$(10) \quad \llbracket \text{MEAS} \rrbracket = \lambda g_{ed} \lambda m_{dt} \lambda x. g(x) \geq \min\{d : m(d)\}$$

An example sentence and its denotation are provided in (11). The denotation roughly translates as saying 'John's degree of tallness is greater than (or equal to) the minimal degree x for which *six-feet(x)* holds.'

$$(11) \quad \llbracket \text{John is six feet MEAS tall} \rrbracket = \text{tall}(\text{john}) \geq \min\{d : \text{six-feet}(d)\}$$

As mentioned above, Morzycki treats size adjectives as being similar to measure phrases. His reasoning is that the two behave exactly parallel to each other; both *six feet* in (11) and *big* in (12 a) seem to set a lower bound for the gradable predicate. Thus Morzycki argues in favor of a nominal counterpart for MEAS, which will give us structures like the one in (12 b).

- (12) a. John is a big idiot
 b. John is a [big [MEAS_N idiot]]

In fact, since MEAS_N (like the adjectival MEAS) needs the modifier to be a property rather than a measure function, the final structure ends up looking like (13).

$$(13) \quad \text{John is a [[POS big] [MEAS}_N \text{ idiot]]}$$

Now there are some differences between MEAS and MEAS_N, which are vital for Morzycki's enterprise. For the sake of comparison, both are printed below in (14), with the differing parts in **bold**.

$$(14) \quad \begin{array}{l} \text{a. } \llbracket \text{MEAS} \rrbracket = \lambda g_{ed} \lambda m_{dt} \lambda x. g(x) \geq \min\{d : m(d)\} \\ \text{b. } \llbracket \text{MEAS}_N \rrbracket = \lambda g_{ed} \lambda \mathbf{m}_{ot} \lambda x. \left[\begin{array}{l} g(x) \geq \min\{d : \mathbf{d} \in \mathbf{scale}(\mathbf{g}) \wedge m(d)\} \wedge \\ \mathbf{g}(x) \geq \mathbf{standard}(\mathbf{g}) \end{array} \right] \end{array}$$

The first two differences aren't that big. The modifier is generalized from one that takes degrees to one that takes degrees *or entities*, as size adjectives like *big* tend to be able to take both,² and the *scale* function is added so that degrees are evaluated with respect to particular scales (e.g. $big_{cardinality}$, $big_{degree-size}$) and to account for differences between those scales.

The important difference between MEAS and MEAS_N is the addition of $g(x) \geq standard(g)$, which is essentially an incorporation of POS (repeated below in (15)) into MEAS_N.

$$(15) \quad \llbracket POS \rrbracket = \lambda g_{ed} \lambda x . g(x) \geq standard(g)$$

Morzycki argues this change is necessary to account for the contrast between (16 a) and (16 b): while measure phrase modification does not require the truth of the gradable predicate, using a size adjective *does* require the gradable predicate to be true (or in Morzycki's terms: to hold absolutely). This is guaranteed by saying that the gradable predicate G should hold to a degree greater than the contextual standard for G.

- (16) a. John is five feet tall $\not\Rightarrow$ John is tall (measure phrase mod.)
 b. John is a huge idiot \Rightarrow John is an idiot (size adjective mod.)

In Morzycki's words, the denotation of MEAS_N "requires that *x* satisfy the gradable predicate to a degree that:

- is at least as great as the smallest that satisfies the size-adjective [...]
- is at least as great as the standard for the gradable predicate"

(Morzycki 2009: 23)

With both POS and MEAS_N in our toolkit, we now have a full semantics for the degree reading of (17 a): with the structure in (17 b) we get the denotation in (17 c).

- (17) a. John is a big idiot
 b. John is a [[POS big] [MEAS idiot]]
 c. $\llbracket (b) \rrbracket = \left[\begin{array}{l} idiot(john) \geq \min\{d : d \in scale(idiot) \wedge big(d)\} \wedge \\ idiot(john) \geq standard(idiot) \end{array} \right]$

The bigness generalization

3.4

Besides the position generalization discussed above, Morzycki (2009) makes another observation: "adjectives that predicate bigness systematically license degree readings. Adjectives that predicate smallness do not" Morzycki (2009: 7) He calls this *the bigness generalization*. An example is provided below in (18).

²This also means that POS has to be modified/generalized slightly to an $\langle od, ot \rangle$ type function (where it used to be $\langle ed, et \rangle$).

- (18) a. John is a big idiot (degree reading available)
 b. John is a small idiot (degree reading unavailable)

Morzycki is able to explain this generalization by taking a closer look at the denotation of *small idiot*, in particular the **bolded** part in (19) where the degree of idiocy of x is compared to the minimal degree d that makes *small*(d) true.

$$(19) \quad \lambda x. \left[\begin{array}{c} \mathbf{idiot}(x) \geq \mathbf{min}\{d : d \in \mathbf{scale(idiot)} \wedge \mathbf{small}(d) \geq \mathbf{standard(small)}\} \wedge \\ idiot(x) \geq standard(idiot) \end{array} \right]$$

As Morzycki points out, “there is a minimal degree on the on the idiocy scale: d_0 , corresponding to not idiotic at all” Morzycki (2009: 25). With this we can further reduce (19) to (20).

$$(20) \quad \lambda x. idiot(x) \geq d_0 \wedge idiot(x) \geq standard(idiot)$$

But the comparison of *idiot*(x) to d_0 is trivially true, as *any* degree of idiocy returned by *idiot*(x) will be greater or equal to the smallest degree possible. And so we can further reduce (20) to (21).

$$(21) \quad \lambda x. idiot(x) \geq standard(idiot)$$

But this is equivalent to $\llbracket POS(idiot) \rrbracket$, meaning we might as well have left the adjective out! Since the adjective does have an effect in the physical size-reading, that interpretation (‘John is a physically small idiot’) is preferred.

The scalar PAN-construction

3.5

How well can Morzycki’s analysis be carried over to the scalar PAN-domain? The analysis looks fairly straightforward for cases like (22 a): using POS to combine with the size adjective and MEAS to combine with the noun and the degree phrase (22 b), we get the denotation in (22 c). The preposition *of* only serves to introduce Deg_{NP} *great importance*, and isn’t interpreted otherwise.

- (22) a. of great importance
 b. of $[_{Deg_{NP}} [_{Deg_P} POS \text{ great}] [_{Deg_{N'}} MEAS \text{ importance}]]$
 c. $\llbracket (a) \rrbracket = \lambda x. \left[\begin{array}{c} importance(x) \geq \left[\begin{array}{c} \mathit{min}\{d : d \in \mathit{scale(importance)} \wedge \\ \mathit{great}(d) \geq \mathit{standard(great)}\} \end{array} \right] \wedge \\ importance(x) \geq \mathit{standard(importance)} \end{array} \right]$

Once the adjective is left out, we get the correct reading as well (again, with *of* left uninterpreted):

- (23) a. of POS importance
 b. $\llbracket (a) \rrbracket = \lambda x. importance(x) \geq standard(importance)$

This is probably the main argument in favor of a degree analysis for the scalar PAN-construction: we instantly have an elegant formal way of making explicit how the bare noun G comes to refer to some significant degree of G-ness, without positing any new semantic mechanism ourselves. However, there are two issues:

- i. There does not seem to be an equivalent to the bigness generalization in this paradigm. As (24) illustrates, adjectives that predicate smallness are also allowed and seem to yield degree readings.
- ii. Morzycki's denotation of $MEAS_N$ demands that, whatever the modifier, if the gradable noun is used in a degree phrase, it should hold to a degree greater than the standard. But (24) is a case where the exact opposite is true: *little importance* refers to a degree *lower* than the standard of importance.

- (24) of $\left\{ \begin{array}{l} \text{little} \\ \text{small} \\ \text{tiny} \end{array} \right\}$ importance 'having a low degree of importance; unimportant'

These issues cannot easily be solved. For example, for the latter issue to be solved, it seems that $g(x) \geq standard(g)$ should be removed from the denotation of $MEAS_N$. But that means that we cannot account for the fact that *big idiot* entails *idiot* anymore. Similarly, it is unclear how we can solve the former issue while still accounting for the bigness generalization.

Similar cases

3.6

As Morzycki (2009: 9) notes, there is another set of expressions that does not fit with his theory either. Recall the position generalization, which says that the degree reading of size adjectives only occurs in the attributive position (like *big* in (25 a)), and not in the predicative position (25 b,c).³

- (25) a. a big idiot (degree reading available)
 b. That idiot is big (only physical size reading)
 c. an idiot bigger than anyone I know (id.)

Some nouns, like *problem*, seem to get a very similar reading for *big* (26 a), but that reading is also available when the adjective is in a predicative position (26 b).

³Examples from Morzycki 2009, partially modified by Constantinescu (2011: 167).

- (26) a. \llbracket is a big problem \rrbracket \approx \llbracket is very problematic \rrbracket
 b. the problem is big (reading similar to (a))

Other examples (based on those in Morzycki 2009: 9) are given in (27).

- (27) a. He made an enormous mistake The snowstorm is huge
 The mistake is enormous c. It's a big catastrophe
 b. There is a huge snowstorm The catastrophe is big

And similar to the PAN-construction, the bigness generalization also does not hold for the nouns involved (example modified from Morzycki 2009: 10):

- (28) a. $\left\{ \begin{array}{c} \text{small} \\ \text{tiny} \\ \text{minuscule} \\ \text{microscopic} \\ \text{minute} \end{array} \right\} \left\{ \begin{array}{c} \text{mistake} \\ \text{problem} \end{array} \right\}$

As Morzycki (2009) observes, this behavior patterns with regular size readings, rather than with degree readings. Looking more closely, he argues that in fact, nouns like *problem* have a subtly different interpretation. I.e. their interpretation is the result of a different semantic process. Morzycki separates four different uses of size adjectives, corresponding to four different readings (we will ignore (iv) in the following):

- i. The physical size reading, e.g. *big nose*, where *big* refers to the physical size of the nose.
- ii. The degree reading, e.g. *big idiot*, where *big* is used to pick out a (high) degree of idiocy.
- iii. The abstract size reading, e.g. *big catastrophe*, where *big* is used to “make reference to size along a possibly abstract dimension —one that may correlate with some intuitive sense of extremeness or severity.” (Morzycki 2009: 9).
- iv. The significance reading, e.g. *big political figure*, where *big* “has a non-size flavor” (Morzycki 2009: 10), but rather appeals to some notion of significance (regardless of the noun).

Morzycki argues that the examples discussed above receive an abstract size reading, rather than a degree reading. Constantinescu (2011: 171-2) adds another set of examples (30) that seem to get a similar interpretation.

- (29) a. John's enormous sorrow is ... b. Mary's great generosity is ...
 His sorrow is enormous Her generosity is great
 \approx John is very sorry \approx Mary is very generous

Constantinescu (2011) further characterizes the class of nouns that receive an abstract size reading. She says these are all [–HUMAN] nouns “which [describe] an (abstract) object via a property (e.g. *failure, mess, problem* etc.) or [name] a property (e.g. *sorrow, generosity* etc.),” while the nouns Morzycki argues get a degree reading are all [+HUMAN] (Constantinescu 2011: 172). Given that the nouns that occur in the scalar PAN-construction are all [–HUMAN] and denote instances of properties, just like Constantinescu’s examples in (29), it seems odd to treat them as being similar to Morzycki’s (2009) degree nouns. Rather, it seems more reasonable to treat scalar PAN-constructions the same as all the other [–HUMAN] nouns.

PAN and the position generalization

3.7

How does the PAN-construction relate to the position generalization? In the above we have focused on the bigness generalization, but before wrapping up we should take a look at this question as well. Whereas with the bigness generalization we could swap bigness-predicating adjectives with smallness-predicating adjectives and see what happens, it is not really possible to just replace attributive modification with predicative modification while keeping rest of the phrase intact. The result is strange, if not ungrammatical:

- (30) a. a man of great importance
 b. ?a man of importance that is great

However, if we just focus on the nouns occurring in PAN-constructions, it is clear we can create examples with them that are completely parallel to Constantinescu’s (2011) examples in (29). The readings for all items in (31 a) are all roughly the same as those of their counterparts in (31 b).

- (31) a. de/het grote $\left\{ \begin{array}{l} \text{afstand ‘distance’} \\ \text{belang ‘importance’} \\ \text{betekenis ‘significance’} \\ \text{hoogte ‘height’} \\ \text{waarde ‘value’} \end{array} \right\}$ the great
- b. de/het $\left\{ \begin{array}{l} \text{afstand} \\ \text{belang} \\ \text{betekenis} \\ \text{hoogte} \\ \text{waarde} \end{array} \right\}$ the is groot is great

What this means is that, for all intents and purposes, the semantics of all property-related [–HUMAN] nouns should have a similar semantics.

The general picture

3.8

Let us now summarize to see where we stand. Morzycki (2009) offers a semantics for cases like (32), where the size adjective *big* does not refer to John's physical size, but rather to the extent to which John is idiotic. (32 a) is analyzed using the covert degree morphemes POS and MEAS, as in (32 b,c). POS sets a standard of comparison for the gradable predicate, by which its argument is evaluated, whereas MEAS is used to introduce a measure that should hold for the argument of the gradable noun *idiot*.

- (32) a. John is a big idiot.
 b. John is an [POS idiot]
 c. John is a [[POS big] [MEAS idiot]]

This semantics can be carried over to the scalar PAN-domain. Its strength is that it can readily account for cases like (33 a), by analyzing those as in (33 b).

- (33) a. ... is of importance
 'is (very) important'
 b. is of POS importance
 'holds a degree of importance greater than some contextual standard'

However, when we look closer, it seems difficult to extend Morzycki's (2009) theory to completely cover the behavior of the scalar PAN-construction as it sometimes shows opposite behavior to Morzycki's gradable nouns. Moreover, there is another class of nouns, identified by Morzycki, that behaves more similarly to the PAN-construction. These nouns are excluded from an analysis in terms of degrees, but rather are analyzed as receiving an abstract size reading. When we look more closely, as Constantinescu (2011) does, it becomes clear that there are really two classes of nouns relevant here: [+HUMAN] nouns that according to Morzycki receive a degree reading, and [-HUMAN] nouns (denoting properties or abstract objects via a property) that receive an abstract size reading. Since the nouns occurring in the PAN-construction fall into the second class, it seems better (or at least more consistent) to treat them similarly, and to forgo an extension of Morzycki's (2009) analysis to capture the PAN-construction.

Is an analysis in terms of degrees still possible? 3.9

A good question to ask is whether an analysis in terms of degrees is still possible for the PAN-construction. The answer is probably yes, but it would need to rely on different mechanisms to account for the bigness generalization and the position generalization, since Morzycki's *idiot*-like nouns and PAN-nouns behave differently with

respect to these. If both would share the same degree semantics, then the origin of both generalizations should lie elsewhere.

As we will see in the next chapter, Constantinescu (2011) suggests that the bigness generalization is the result of a process of lexicalization; *idiot* just *means* 'having a great or greater than average degree of idiocy.' This denotation is incompatible with adjectives expressing smallness, and hence we get a situation where nouns like *idiot* can only be modified by adjectives predicating bigness. Constantinescu's idea is perfectly compatible with a degree analysis. Morzycki's explanation of the position generalization is also challenged by Constantinescu (2011). As a form of theoretical hygiene, she does not rely on any notion of degrees unless she is forced to. In her analysis, the effects that fall under the umbrella of the position generalization are the result of restrictions that come with a non-intersective analysis of size modification.

In sum, if Constantinescu's theory holds up, an analysis in terms of degrees is still possible, but it would be greatly reduced compared to Morzycki's (2009) analysis. We will now turn to discuss Constantinescu's work in more detail in the next chapter.

Constantinescu's alternative view

Outline

4.1

Constantinescu (2011) doesn't just try to find a semantics for the cases that Morzycki (2009) deems to have abstract size readings. Rather, she aims to show that we can do without degrees, and that in fact what we considered to be degree readings are also cases of abstract size readings. In her words: "size adjectives are always size adjectives" (Constantinescu 2011: 182) In this chapter, I will sketch out Constantinescu's approach, and see what is still needed in order to account for the scalar PAN-construction.

The bigness generalization: a lexical phenomenon 4.2

Recall the bigness generalization, which states that degree readings are only licensed by size adjectives that predicate bigness. For example, *big idiot* can be used to refer to people with a high degree of idiocy, but *small idiot* cannot be used to refer to people with a low degree of idiocy. Morzycki (2009) accounts for this through his denotation of $MEAS_N$, which in effect turns smallness predicates into trivial additions to the DP. Since there is an alternative interpretation available for those predicates (the physical size reading) in which they *do* have a semantic effect, this is the interpretation they always take.

Problems with Morzycki's account

4.2.1

Constantinescu (2011) observes that there is a double dissociation between Morzycki's (2009) set of degree nouns (as identified by the position generalization, mostly denoting [+HUMAN] individuals that are characterized by some property), and the set of nouns that fall under the bigness generalization:

- It is not the case that the bigness generalization only holds for Morzycki's (2009) nouns, and

- neither is it the case that the bigness generalization holds for all of those nouns.

And so Morzycki's (2009) account is too narrow and too general at the same time. Let us look at the examples Constantinescu (2011) uses.

Where Morzycki's (2009) account is too narrow

If the bigness generalization is really the result of $MEAS_N$, we would not expect it to hold in other situations. This expectation is not borne out. In (1), due to Constantinescu (2011: 180, formatting mine), we have nouns that do not follow the position generalization. Morzycki (2009) would analyze these as receiving an abstract size reading.

- (1) a. Son **courage** était **grand** (French)
 His courage was big
 b. The **mess** they left behind was **huge**. (English)

Yet the bigness generalization *does* seem to hold for these items, as (2) shows. Since we cannot make use of Morzycki's (2009) degree semantics, we are left without an explanation of these facts.

- (2) a. un {grand/*petit} courage (French)
 a big/small courage
 b. a {huge/*small} mess (English)

Where Morzycki's (2009) account is too general

Similarly, since the bigness generalization is a direct result of $MEAS_N$, we would expect all items that share this semantics to fall under the bigness generalization. The examples in (3) show that this is not the case:

- (3) a. un {grand/petit} mangeur (French)
 a big/small eater
 b. a {big/small} stamp-collector (English)

And so it seems clear that we need an alternative way to account for the fact that some nouns only allow size adjectives that predicate bigness, and disallow adjectives that predicate smallness.

A new solution

4.2.2

Constantinescu (2011: 181) notes that nouns that obey the bigness generalization always seem to have a "high degree, or standard-related" meaning, and as such always

entail their positive form. Examples of this are given in (4).

- (4) a. He's a bigger idiot than his brother. \Rightarrow He is an idiot. (Comparative)
 b. How much of an idiot is he? \Rightarrow He is an idiot. (Interrogative)

Given this observation, Constantinescu (2011, 2013) appeals to the general principle in (5) to argue that since *idiot* always seems to carry a high/significant degree of idiocy, this should be part of its lexical meaning (rather than being delegated to the syntax, as in Morzycki's (2009) account).

- (5) "If a meaning is entailed in all the uses of an item, then it is part of its lexical meaning (cf. Rappaport-Hovav 2008, Rappaport-Hovav & Levin 2010)" (Constantinescu 2011: 181)

Constantinescu (2013) describes how this accounts for the bigness generalization: if part of the lexical meaning of *idiot* includes bigness, then "this 'integrated' meaning will conflict with *small*, which will thus be ruled out" (Constantinescu 2013: 190).

The position generalization and the 'degree reading' 4.3

In the previous chapter, we saw how Morzycki's (2009) idea of analyzing expressions like *big idiot* as degree constructions was founded largely on what he called *the position generalization*. To repeat: examples like (6a) have two readings: one in which John is physically big, and one in which John displays a high degree of idiocy. The latter reading, called *the degree reading*, is only available with attributive/prenominal size adjectives (as in (6a)). It is unavailable when size adjectives are used postnominally (6b).

- (6) a. John is a big idiot.
 b. That idiot is big.

The position generalization is immediately explained once the degree reading is analyzed in terms of degree semantics (7), as this analysis requires the modification to happen within the DP. Since *big* is outside the DP in (6b), it cannot have a degree reading.

- (7) John is [DP a [DegNP [DegP POS big] [DegN' MEAS idiot]]]

We have also seen that there are apparent counterexamples to the position generalization, like (8). Morzycki (2009) argues that such examples may *look* like they have a degree reading, but actually they receive an 'abstract size reading.'

(8) The problem is big.

‘It is very problematic’

Opposing Morzycki’s (2009) theory, Constantinescu (2011) argues that the position generalization does not offer any conclusive support in favor of analyzing the degree reading as being the result of any underlying degree semantics. Moreover, she also doubts the basis for the distinction between the abstract size reading and the degree reading in attributive position. Let us discuss the issues Constantinescu raises in turn.

Doubting the distinction between the readings

4.3.1

As is familiar by now, Morzycki (2009) argues that (9) has an abstract size reading, rather than a degree reading.

(9) The problem is big.

Constantinescu (2011: 171-3) retorts by asking: how could we ever tell? For all we know, it might still be the case that “when used as an attributive modifier of [nouns like *mistake*, *snowstorm* etc.], a size adjective like *big* is ambiguous between an abstract size adjective (which can also be used predicatively) and a degree modifier within DegNP (which is restricted to the attributive use).” (Constantinescu 2011: 172-3) The pivotal argument against this ambiguity seems to be based on the examples in (10) (due to Morzycki 2009: 10):

- (10) a. #That mistake wasn’t enormous, but it was an enormous mistake.
 b. #That snowstorm wasn’t huge, but it was a huge snowstorm.
 c. #That catastrophe wasn’t big, but it was a big catastrophe.
 d. #That problem wasn’t huge, but it was a huge problem.

Unlike sentences like (11), it is impossible to give both size adjectives different readings such that any contradiction can be avoided.

(11) John isn’t very big_{phys}, but he’s a very big_{deg} idiot.

Thus, it may be argued that there are no two separate readings available for the size adjectives in (10 a-d). I.e. there is only an abstract size reading, and nouns like those in (10 a-d) are always of type $\langle e, t \rangle$. However, Constantinescu’s (2011) point is that the abstract size reading and the degree reading are just too close to each other. Here are both readings for *huge problem*:

- (12) a. $\llbracket \text{huge problem} \rrbracket_{\text{degree}} \approx \text{‘very problematic.’}$
 b. $\llbracket \text{huge problem} \rrbracket_{\text{abstractsize}} \approx \text{‘problem that is very severe.’}^1$

¹Morzycki (2009: 9) does not formalize the abstract size reading (ASR), which keeps the distinction

Constantinescu argues that it might as well be the fact that these readings are so close to each other (or even overlap), that causes the contradictions in (10). Having concluded this, she raises two points:

- i. The only difference underlying the contrast between (10) and (11) seems to be that the former involves nouns with abstract size while the latter involves a noun with concrete size. We can then ask ourselves “is this enough to warrant [the assigning of] different semantic types (i.e. $\langle e, t \rangle$ vs. $\langle e, d \rangle$)?” (Constantinescu 2011: 173) That is to say: there seems to be little reason to make a strong distinction between nouns like *idiot* and nouns like *problem*, and furthermore:
- ii. With the abstract size reading and the degree reading being so similar, maybe “the analysis proposed for the predicative cases [i.e. size readings] could be extended to all cases” (Constantinescu 2011: 173).

The position generalization, generalized

4.3.2

Recall that, following the position generalization, (13 b) only has one reading whereas (13 a) has two. This, again, is attributed to the fact that the degree reading is only available through degree semantics, which requires that modification takes place within the DP.

- (13) a. John is a big idiot (degree reading + physical size reading)
 b. That idiot is big (only physical size reading)

Constantinescu argues that the same distributional pattern is also “generally found with non-intersective adjectives, independently of degree and gradability” Constantinescu (2011: 173). Take, for example, the contrast in (14).² When *dancer* is modified prenominally (14 a), there are two possible readings. Postnominal modification (as in (14 b)), on the other hand, only results in one reading.

- (14) a. Olga is a beautiful dancer (subject is beautiful + her dancing is beautiful)
 b. That dancer is beautiful (subject is beautiful)

Larson (1998) argues that *beautiful* in prenominal position has the option of modifying either the referential argument (i.e. the subject) of the noun, or the event argument of the noun. The former option results in the (intersective) subject-is-beautiful reading, while the latter results in the (non-intersective) dancing-is-beautiful reading.

between the ASR and the degree reading blurred at best. This reading is based on Morzycki saying that the ASR are size readings “that make reference to size along a possibly abstract dimension—one that may correlate with some intuitive sense of extremeness or severity” (p9).

²Example originally due to Larson (1998)

The remarkable similarity between (13) and (14), Constantinescu says, “suggests that size adjectives should be considered within the broader context of non-intersective modification, and that an alternative account which makes use of mechanisms that are independently needed should be taken more seriously” (Constantinescu 2011: 173). In other words, we should strive towards a theory in which the degree reading is just another instance of non-intersective modification. We will discuss Constantinescu’s (2011; 2013) proposal (which closely resembles Larson’s (1998) account) below.

Constantinescu’s alternative proposal 4.4

As noted at the beginning of this chapter, Constantinescu (2011, 2013) aims for an analysis where “size adjectives are always size adjectives.” In her alternative proposal, the degree reading is reanalysed as a special case of the abstract size reading. To see how this works, Constantinescu (2013) takes two classes of nouns and shows how they differ.

Type A nouns are nouns like *idiot*, *fool*, *stamp-collector*. These “denote individuals characterised by an abstract property” (Constantinescu 2011: 184).

Type B nouns are nouns like *idiocy*, *courage*, *generosity*. These denote properties.

Constantinescu (2013: 190) argues that size adjectives measure the size of instances of properties (which are referred to as *tropes*, following Moltmann 2004, 2005). Two of her examples serve to illustrate this with type B nouns. In (15), there is a contrast in grammaticality. Constantinescu (2013) argues that this is due to the fact that size adjectives only apply to object-level entities; in (15 a), *generosity* refers to a kind of tropes, while in (15 b) it refers to a particular instance of generosity (namely the generosity that Mary displayed).

- (15) a. #Generosity is enormous (kind of tropes)
 b. Mary’s generosity was enormous (trope)

Constantinescu (2013) shows that this explanation also holds up in French, where a singular indefinite article (*un* in (16 b)) has to be inserted when an abstract mass noun (*courage*) is modified by a size adjective (*grand*). This is not necessary when size modification is absent (16 a).

- (16) a. Il a du courage
 He has PART courage
 ‘He has courage’
 b. Il a montré un/ *du grand courage
 He has shown a/ PART big courage

‘He showed great courage’

Two properties of tropes are important to Constantinescu’s (2013) enterprise:

- i. **Dependency:** tropes “depend on another individual in which they are located, e.g. *Mary’s generosity*” (Constantinescu 2013: 191). To capture this, Moltmann (2004, 2005) and others have analyzed property-denoting nouns as two-place predicates, or relations between tropes and individuals. For example, Nicolas (2004) analyses *Julie’s wisdom* as *the x* [*wisdom(x, j)*].³
- ii. Tropes have **abstract size**. Take an example like (15b). This statement could be translated to *enormous*(*ix*[*generosity(x, m)*]).⁴ This “would be intuitively understood in terms of the degree to which the property holds” (Constantinescu 2013: 191). Note that this is just a paraphrase, and that Constantinescu still aims for a degree-less approach.

For type A nouns, like *idiot*, Constantinescu proposes “that they denote sets of individuals in which a property like idiocy is instantiated, and that, on the relevant reading, size adjectives target this instance (or trope) inside the meaning of the noun” (Constantinescu 2013: 191). In Constantinescu 2013, she suggests an analysis similar to the one in Larson 1998. Where the adjective in *beautiful dancer* targets the event argument, the size adjective in *huge idiot* targets the property argument. We can see this in (17). The noun *idiot* takes two arguments: an individual entity, and an instance of a property. When it is modified by *huge*, we get the denotation in (17b) where the adjective predicates over a trope.^{5, 6}

- (17) a. $\llbracket \textit{idiot} \rrbracket = \lambda x_e. \lambda p_e. \textit{idiot}(p, x) = \{ \langle \textit{mary}, p_1 \rangle, \langle \textit{john}, p_2 \rangle, \dots \}$
 b. $\llbracket \textit{huge idiot} \rrbracket = \lambda x. \lambda p. \textit{idiot}(p, x) \wedge \textit{huge}(p)$

³It should be noted that Constantinescu (2013) is not consistent in her notation. She uses both *generosity(p, x)* and *idiot(x, p)*, where x is an individual and p is a property. I will stick to Nicolas’s (2004) notation of putting the property first, and the individual second. Nothing crucial hinges on this.

⁴‘Translation’ mine.

⁵Here the question arises how the denotations in (17) could be used in a regular sentence, e.g. *John is a huge idiot*. Constantinescu does not discuss this explicitly, but does mention that Larson (1998) proposes “that the event argument can be bound by a (generic) quantifier at the end of the derivation” (Constantinescu 2011: 187). It seems that a similar move –allowing properties to be bound by a quantifier at the end of the derivation– would work for her proposal as well.

⁶See Constantinescu 2011: 186–191 for a discussion of alternative ways to establish a non-intersective semantics. In short, she notes that there are three options: (i) systematically assign different types to intersective and non-intersective adjectives (and making adjectives that can be used both ways ambiguous between the two), (ii) extend the argument structure of the noun (the current path we are taking), and (iii) extend the *internal* (lexical) structure of the noun, so that adjectives can modify parts of the noun.

Accounting for the position generalization

So how do we account for the position generalization? Constantinescu (2013: 192) has a simple solution: just as *beautiful* in (18) can only obtain a non-intersective interpretation in the prenominal position, the abstract size reading for *huge* is similarly restricted. In other words: there exists a strong parallel between (the modification of) gradable nouns and traditional cases of non-intersective modification.

- (18) a. Olga is a beautiful dancer (both interpretations)
 b. That dancer is beautiful (only intersective interpretation)

For the cases that are not in agreement with the position generalization, such as *generosity* in (19), as well as other type B nouns, Constantinescu (2011) argues that those nouns simply lack the restrictions that type A nouns have.

- (19) Mary's generosity is enormous.

Constantinescu (2013) says that this is completely parallel with other cases of typically intersective adjectives. Take the adjective *alleged*. Normally it only occurs in prenominal position, and so we can use it to set up the contrast in (20).

- (20) a. He is an alleged communist.
 b. *That communist is alleged.

But, as Higginbotham (1985) points out, the contrast evaporates once we use the right argument for *alleged* in predicative position (21).

- (21) His communism is alleged.

And so, following the parallel, we can say that *Mary's generosity* is just of the right type for it to be modified by a postnominal adjective.

Constantinescu's proposal in sum

4.5

To summarize Constantinescu's (2011; 2013) proposal: nouns like *idiot* are defined in terms of tropes. These nouns can be intersectively modified by size adjectives, but only if two conditions are met: (i) the adjective is in prenominal position, and (ii) the adjective does not conflict with any lexical meaning that is integrated with the noun (cf. Constantinescu's solution for the bigness generalization: 'bigness' is part of the lexical meaning of many of these nouns and yields a contradiction with size adjectives predicating smallness). Other nouns denoting sets of tropes generally do not conflict with either bigness or smallness-denoting size adjectives, and so do not fall under the

bigness generalization. They are of the right type to be modified even by postnominal size adjectives.

The scalar PAN-construction

4.6

Now how does this translate to our domain of PAN-constructions? First of all, do we manage to avoid the issues with Morzycki's (2009) account? As a matter of fact: we do:

- i. Recall that the PAN-construction also works with adjectives predicating smallness. This is not possible in Morzycki's (2009) account if we treat nouns like *importance* the same as *idiot*. But since Constantinescu captures the bigness generalization in a lexical way (as described above), we can simply say that nouns like *importance* do not share the same inherent bigness, but are otherwise alike in their interpretation.
- ii. The other issue with Morzycki's (2009) account is that the degree of X-ness, for any gradable noun X, should always exceed some contextual standard. But examples like *of little importance* seem to denote a degree of importance *below* the standard (*X is of little importance* seems to imply/convey that *X is unimportant*⁷, which can only be the case if the importance of X is below the standard). This conflict simply does not arise in Constantinescu's theory, as there just isn't any standard to take into account.

In general, it seems that Constantinescu's proposal holds up fairly well for the PAN-cases in which the noun is modified. One possible way of formalizing such a case is given below in (22).

$$(22) \quad \llbracket \text{of great importance} \rrbracket = \lambda x \lambda p [importance(p, x) \wedge great(p)]$$

However, what about cases like (23), where the noun *isn't* modified? This example, as noted before, seems to have an interpretation roughly equal to 'very important.' Where does this high(er than average) degree come from?

(23) of importance

We are in a bind. It seems tempting to add this high degree to the lexical content of *importance*, as this would ensure the correct reading in all bare cases. However, this would also mean that *importance* should follow the bigness generalization, which it definitely does not. Recall that the bare cases are exactly where a degree-approach would excel, yet in Constantinescu's approach it is unclear how to deal with them.

⁷We first mentioned this example on page 24.

So on the one hand it seems reasonable to treat nouns like *importance* as properties (when they are modified), but on the other (when they are bare) it is more natural to treat them as adjectives. We should conclude that while Constantinescu's approach is initially an attractive alternative to Morzycki's (2009) theory, extending her proposal to cover the PAN-construction isn't altogether straightforward. In the next chapter we will go back to the degree approach and show how we can make it work for all the PAN-cases.

Back to degree semantics

Goal of this chapter

5.1

In this chapter I will propose a novel implementation of the idea behind Morzycki 2009 that overcomes the issues observed in chapter 3, and takes to heart the points made by Constantinescu (2011, 2013). My proposal still fits under the umbrella of degree semantics, but features a different denotation MEAS from the one Morzycki 2009. I argue that MEAS should be as semantically neutral as possible, and function solely as a grammatical operator. I propose that nouns like *idiot* are evaluative, and that the bigness generalization arises from a rule that I call the Modifier Domain Requirement, in interaction with the evaluativity of nouns like *idiot*. To show that these are the right instruments to capture the PAN-construction, the proposed semantics will be demonstrated with some examples.

Recapitulating Morzycki's (2009) approach

5.2

As discussed in chapter 3, Morzycki (2009) argues in favor of an approach in which sentences containing gradable nouns are treated as in (1). The covert degree morpheme POS in (1 a) provides a standard to which John's degree of idiocy is compared. MEAS uses the measure phrase (*POS big*) to provide such a standard.

- (1) a. $\llbracket \text{John is an idiot} \rrbracket = \text{John} [\text{POS idiot}]$
 b. $\llbracket \text{John is a big idiot} \rrbracket = \text{John} [[\text{POS big}] [\text{MEAS idiot}]]$

While I do not see much wrong with Morzycki's use of the POS-morpheme, the contents of MEAS are much more debatable. Let us look at its denotation again.

$$(2) \llbracket \text{MEAS}_N \rrbracket = \lambda g_{ed} \lambda m_{ot} \lambda x. \left[\begin{array}{l} g(x) \geq \min\{d : d \in \text{scale}(g) \wedge m(d)\} \wedge \\ g(x) \geq \text{standard}(g) \end{array} \right]$$

I will address two issues with this denotation. One concerns Morzycki's addition of the standard, and the other is his 'making explicit' of the *min*-operator. These are

discussed below in turn.

i. The need for a standard

As noted before, Morzycki's (2009) most important addition to MEAS is to put in an explicit comparison of $g(x)$ with the standard for g so as to account for the entailment in (3).

(3) John is a big idiot \Rightarrow John is an idiot

This is a somewhat surprising move, as intuitively it seems that the entailment should be guaranteed by the semantics of *big*: with any set of degrees, if, with respect to that set, *big* holds of some degree d , then it should definitely be the case that d exceeds the standard for that same set.

ii. Handling smallness-denoting adjectives

As discussed in chapter 3, according to Morzycki (2009) the use of smallness-denoting adjectives in measure phrases is completely vacuous. E.g. (4) is equivalent to (5) (on the degree reading of *small*).

(4) $\llbracket \text{John is an idiot} \rrbracket = \text{idiot}(j) \geq \text{standard}(\text{idiot})$

(5) $\llbracket \text{John is a small idiot} \rrbracket = \left[\begin{array}{l} \text{idiot}(j) \geq \min\{d : d \in \text{scale}(\text{idiot}) \wedge \text{small}(d)\} \wedge \\ \text{idiot}(j) \geq \text{standard}(\text{idiot}) \end{array} \right]$

The reason we get this result is because (6 a) is equivalent to d_0 : the minimum degree on the idiocy scale. This makes (6 b) trivially satisfied and thus meaningless.

(6) a. $\min\{d : d \in \text{scale}(\text{idiot}) \wedge \text{small}(d)\}$
 b. $\text{idiot}(j) \geq \min\{d : d \in \text{scale}(\text{idiot}) \wedge \text{small}(d)\}$

Since there is another interpretation for *small* that is meaningful, namely the abstract size reading, smallness-denoting adjectives will always be interpreted with this reading. Thus Morzycki accounts for the bigness generalization.

Crucial to this story is the use of *min* in the denotation of MEAS_N . This use stems from the 'at least'-semantics that measure phrases have. That is, an expression like *six feet tall* is true of a person p if p is at least six feet tall. Similarly, for $[\text{POS huge}]$ to be true of some entity, that entity must have a degree of bigness that is at least as big as the standard for *huge*. And so for both *six feet tall* and $[\text{POS huge}]$ it is necessary to look at the lower bound to assess whether the predicate holds true. This is why for

these predicates the two basic denotations of MEAS in (7) are equivalent. $MEAS_2$ just makes the ‘at least’-component explicit (Morzycki 2009: 19).

- (7) a. $\llbracket MEAS_1 \rrbracket = \lambda g_{\langle e,d \rangle} \lambda m_{\langle d,t \rangle} \lambda x.m(g(x))$
 b. $\llbracket MEAS_2 \rrbracket = \lambda g_{\langle e,d \rangle} \lambda m_{\langle d,t \rangle} \lambda x.min\{d : m(d)\} \leq g(x)$

The picture changes when we try to include smallness-denoting predicates. Observe figure 5.1. This figure shows the idiocy scale, and how the predicates *big*, *small* and *idiot* relate to this scale.

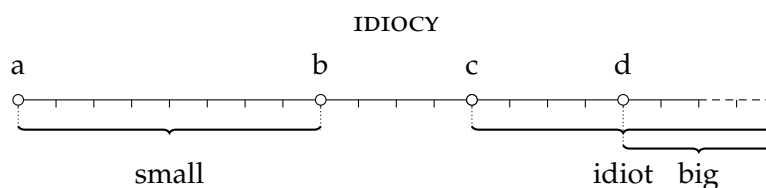


Figure 5.1: The idiocy scale and the coverage of *big*, *small* and *idiot* of this scale. The letters indicate important cutoff points: (a) d_0 , the lowest degree on the scale as well as the lower bound for *small*. (b) the upper bound for *small*. (c) the lower bound for *idiot* (i.e. the contextual standard). (d) the lower bound for *big*.

The difference between *big* and *small* is that we need a lower bound (d) to evaluate the former (everything above point *d* counts as *BIG*), but an upper bound (b) to evaluate the latter (everything *below* point *b* counts as being *SMALL*). Keeping the scale constant, we might say that while *big* has an ‘at least’-semantics, *small* has an ‘at most’-semantics. From this point of view, it is obvious why using *min* with *small* yields a trivial result: it wrongly assumes that *small* has an ‘at least’-semantics! Moreover, this also means that for smallness-denoting adjectives we can *not* use $MEAS_1$ and $MEAS_2$ interchangeably, contra Morzycki’s (2009) assumptions.

Different MEAS, different issues

5.3

Once we recognize that ‘at least’ is not the right way to characterize all size adjectives, we can go back to look for a different denotation for MEAS. And we don’t have to look far to find one in (8 = 7 a).

- (8) $\llbracket MEAS_1 \rrbracket = \lambda g_{\langle e,d \rangle} \lambda m_{\langle d,t \rangle} \lambda x.m(g(x))$

With POS and $MEAS_1$ in our semantic toolbox, we can now account for PAN-expressions containing smallness-denoting adjectives. (9) provides an example of such a case.

$$(9) \quad \llbracket \text{of little importance} \rrbracket = \text{MEAS}_1(\text{importance})(\text{POS}(\text{little})) \\ = \lambda x. \text{little}(\text{importance}(x)) \geq \text{standard}(\text{little})$$

However, by changing MEAS, we no longer have a formal account of the bigness generalization. Here is the result of our semantics applied to *John is a small idiot* (which should *not* get a degree reading):

$$(10) \quad \llbracket \text{John is a small idiot} \rrbracket = \text{MEAS}_1(\text{idiot})(\text{POS}(\text{small}))(\text{John}) \\ = \text{small}(\text{idiot}(\text{John})) \geq \text{standard}(\text{small}) \\ \text{'John's degree of idiocy exceeds the standard for small; John's a little idiotic'}$$

Now if we are to provide a unified account of both PAN-expressions and *idiot*-like nouns, then this issue needs to be resolved.

Laying out the problem

5.4

Observe the examples in (11). The semantics for these expressions should allow modification of degree expressions by smallness-denoting adjectives except in situations like (11 a). How should we go about this?

- (11) a. John is a big/#_{deg} small idiot.
 b. This is an item of great/little importance.
 c. This is a big/small problem.

Figure 5.2 provides an illustration of the relevant scales in (11):

We might look at the scales in figure 5.2 for a solution, but there does not seem to be a direct cause for the grammatical behavior in (11 a-c). It might be suggested that the reason *small idiot* does not receive a degree reading is that SMALL and IDIOT do not overlap. But then the question becomes why *of little importance* is grammatical, as LITTLE and IMPORTANT don't overlap either.

Let us take a step back again and think about our options. Morzycki (2009) solves the bigness generalization for expressions like *idiot* and *goat cheese enthusiast* by tracing the generalization back to the measure phrase, while remaining agnostic about the semantics of *importance* and *problem* (as those do not receive degree readings). Our solution must differ from Morzycki's in that we are dealing with a broader paradigm, containing expressions that behave differently with respect to the bigness generalization. If we want to have a uniform semantics, then we cannot trace the problem back to MEAS. Rather, MEAS should be as semantically neutral as possible (i.e. purely grammatical/combinatorial with no further additions). Instead, we should look for

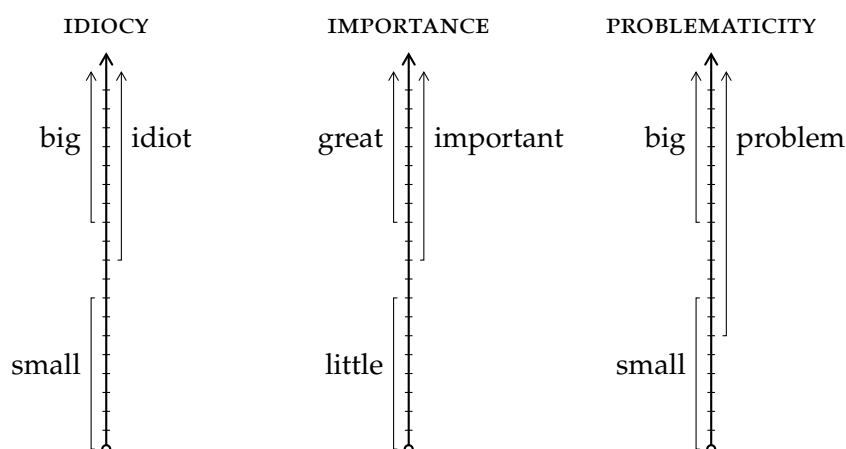


Figure 5.2: Three scales related to the examples in 11. Together with those examples, they illustrate the problem at hand: we want to have a unified account where a noun like *idiot* cannot be modified by smallness-denoting adjectives, but *importance* and *problem* can.

variation in the gradable predicates themselves. What sets *idiot* apart from *problem* and *importance*? We have seen one suggestion apropos of this question: Constantinescu's (2011) idea that 'bigness' is part of some nouns, like *idiot*, but not of others, like *problem*. Below, I will propose a similar answer: nouns like *idiot* are **evaluative**, while nouns like *problem* are not.

Evaluativity

5.5

What is evaluativity?

5.5.1

Before we go into more detail, it should be clarified what evaluativity is exactly. The term goes back to Neeleman et al. 2004, but the idea is already present in Seuren 1984. According to Rett (2007): "[a] construction is evaluative if it makes reference to a degree that exceeds a contextually specified standard" (Rett 2007: 1). We have seen this already with expressions like (12) containing the positive form.

$$(12) \quad \llbracket \text{John is tall} \rrbracket = \text{POS}(\text{tall})(\text{john}) = \text{tall}(\text{john}) \geq \text{standard}(\text{tall})$$

It should be noted that *tall* being evaluative here does not mean other expressions containing *tall* are evaluative as well, as Rett (2007: 1) illustrates with the examples in (13). These examples do involve *tall*, but they are *not* evaluative. I.e. Amy's tallness isn't

evaluated with respect to some contextually dependent standard, and both examples fail to entail that Amy is tall.

- (13) a. Amy is taller than Betty. (not evaluative)
 b. Amy is as tall as Betty. (not evaluative)

Just as evaluativity does not seem to be part of the meaning of specific adjectives, Rett (2007: 2) shows that evaluativity does not seem to be part of the meaning of specific constructions either. Observe Rett's examples in (14):

- (14) a. Amy is as tall as Betty. (not evaluative)
 b. Amy is as short as Betty. (evaluative)

Both constructions in (14) are equatives, but whether or not the expression is evaluative depends on the adjective that is used. Thus, we cannot say that there is a sharp dichotomy between constructions that are evaluative and constructions that aren't. And since earlier examples show that evaluativity isn't strictly tied to the adjective (i.e. adjectives can be evaluative in some cases, while being non-evaluative in other cases), it seems reasonable to propose that evaluativity is 'added on' by some semantic operation. In fact, this is exactly what POS does: in the absence of degree morphology, there is a covert morpheme that ensures the adjective is evaluated by some contextual standard. Rett (2007) proposes a more general degree modifier EVAL that is similar to POS, except that it is not bound by a complementary distribution with other degree morphology. Rather, Rett assumes that it is *always* possible to use EVAL. Whether or not we actually get an evaluative reading depends on multiple factors that go beyond the scope of this thesis.¹

This has been a short and fairly one-sided exposition of evaluativity, but this much should be clear: evaluativity, or the interpretation of degree expressions relative to a scale, has been discussed in the literature with respect to gradable adjectives. Current

¹A short example involves the items in (i a,b). Both expressions initially get an evaluative and a non-evaluative reading. Since the non-evaluative reading for both expressions is the same ($\text{HEIGHT}(\text{AMY})=\text{HEIGHT}(\text{BETTY})$), we might utter both (i a) and (i b) to convey the same proposition *p*. However, (i b) is marked due to the negative polarity of *short*. Due to a general principle to avoid marked expressions, the non-evaluative reading for (i b) is blocked, and only (i a) can be used to convey *p*. Since the non-evaluative reading for (i b) is blocked, only the evaluative reading remains. And so in all uses of (i b), it is implied that (ii b) is the case. Compare this with (i a). Since it can be used both evaluatively and non-evaluatively, we can never be sure whether (ii a) is the case.

- (i) a. Amy is as tall as Betty. (ii) a. Amy is tall.
 b. Amy is as short as Betty. b. Amy is short.

This is all possible because *as ... as ...* is a polar-variant construction. There is no competition between minimally different polar-invariant expressions (e.g. *Amy is shorter/taller than Betty*), and thus polar-invariant expressions are non-evaluative.

theories suggest that the standard is introduced outside the adjective, be it through POS or EVAL or something else.² Below, I will introduce the idea of having noun-internal evaluativity.

Evaluativity manifesting itself in the nominal domain 5.5.2

Let us return to the bigness generalization. We still want to explain why smallness-denoting adjectives do not work with nouns like *idiot*, but do work with other nouns, as shown in (15 = 11).

- (15) a. John is a big/#_{deg} small idiot.
 b. This is an item of great/little importance.
 c. This is a big/small problem.

The restrictions for adjectives modifying *idiot* have to come from somewhere, and so far we have seen two proposals:

- The restrictions are due to the semantics of MEAS.
- The restrictions are due to the semantics of *idiot* (which has an inherent bigness).

I propose that the restrictions are indeed due to the semantics of nouns *idiot*, but rather than positing an inherent bigness for these nouns, I claim that they are all *evaluative*.

In what follows, I will develop a semantics to implement this proposal. An obvious place to start is the noun: what do gradable nouns look like? I assume that the denotation of gradable nouns can consist of up to two parts: a measure function (16), which is obligatory, and, optionally, an evaluative predicate (17).

- (16) Measure function: $\mu_g(x) = \max(\lambda d.g(x, d))$ (17) Evaluative predicate: $g^*(x) = \exists d[d \geq s \wedge g(x, d)]$

This is illustrated in (18) with the denotations of *idiot* and *problem*. The former contains the evaluative predicate while the latter does not.

- (18) $\llbracket idiot \rrbracket = \lambda d \lambda x. [\mu_{idiot}(x) = d \quad \wedge \quad idiot^*(x) \quad]$
 $\llbracket problem \rrbracket = \lambda d \lambda x. [\mu_{problem}(x) = d \quad]$

Assuming these denotations, we need to find a different denotation for MEAS. For generality's sake, it would be good to keep it as close to (19 = 7 a) as possible.

²We might say that Morzycki (2009) proposes an evaluative MEAS-operator.

$$(19) \quad \llbracket MEAS_1 \rrbracket = \lambda g_{\langle e,d \rangle} \lambda m_{\langle d,t \rangle} \lambda x.m(g(x))$$

We only need to change MEAS a little so that there is no type mismatch. Observe MEAS₃ in (20). The key change is that the d (egree) variable is now bound by ι , so again the modifier m modifies a degree (in (19) it was the output of the measure function g , here it is part of the relation g).

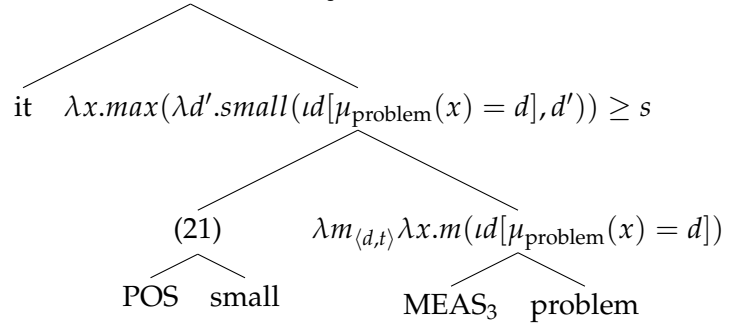
$$(20) \quad \llbracket MEAS_3 \rrbracket = \lambda g_{\langle d,\langle e,t \rangle \rangle} \lambda m_{\langle d,t \rangle} \lambda x.m(\iota d'[(\lambda d.g(d)(x))(d')])$$

The measure phrase itself remains the same as before: POS applied to some size-adjective, e.g. *small* (21). This function takes an object and determines its maximal smallness, i.e. the extent to which o is small. This maximal smallness is then compared to the contextual standard for *small*, returning True iff o is sufficiently small.

$$(21) \quad \llbracket POS(\textit{small}) \rrbracket = \lambda o.max(\lambda d.small(o,d)) \geq s$$

At this point we can derive the denotations of the items in (15). For example, the derivation of *It is a small problem* is given below in (22).

$$(22) \quad \llbracket \textit{It is a small problem} \rrbracket = max(\lambda d'.small(\iota d[\mu_{\textit{problem}}(it) = d], d')) \geq s$$



We can paraphrase the resulting denotation in (22) as (23 a), simplified as (23 b).

- (23) a. The maximal degree of smallness that the maximal degree of problematicity *it* holds holds exceeds the standard for *small*.
 b. The maximal degree of problematicity that *it* holds is small enough to count as being **SMALL**.

Note that for this analysis, it does not matter whether the size adjective in the measure phrase predicates bigness or smallness. This is because MEAS does not care about anything other than the type of the predicates that it handles. We just get a straightforward derivation that does not look at the differences between *big* and *small*. But then how do we account for the bigness generalization?

Big idiot versus $\#_{deg}$ small idiot

Let us start by deriving the denotation of *John is a small idiot*. First $MEAS_3$ is applied to *idiot* (24 a), after which it takes a measure phrase (in this case (21)), returning (24 b). The result is then applied to *john*, yielding (24 c).

$$(24) \quad \begin{aligned} \text{a. } \llbracket MEAS_3(idiot) \rrbracket &= \lambda m_{(d,t)} \lambda x.m(id[\mu_{idiot}(x) = d \wedge idiot^*(x)]) \\ \text{b. } \llbracket (24 \text{ a})((21)) \rrbracket &= \lambda x.max(\lambda d'.small(id[\mu_{idiot}(x) = d \wedge idiot^*(x)], d')) \geq s \\ \text{c. } \llbracket (24 \text{ b})(john) \rrbracket &= max(\lambda d'.small(id[\mu_{idiot}(john) = d \wedge idiot^*(john)], d')) \geq s \end{aligned}$$

The content of (24 c) is not easy to paraphrase in a single sentence, so let us break it down step by step. (24 c) asserts that:

- There is a (singleton) set of degrees for which it holds that:
 - The maximal degree of idiocy that John holds is d and
 - John is an idiot.
- Degree d 's maximal degree of smallness exceeds the contextual standard for *small*. In other words: d is small.

There are two possible outcomes for (24 c), depending on the valuation of the model in which it is interpreted: either (24 c) is FALSE, or it is UNDEFINED, depending on whether John's degree of idiocy exceeds the contextual standard for idiocy or not. To see this, let us look at both cases separately.

Case 1: John's degree of idiocy exceeds the standard.

If John's degree of idiocy exceeds the standard, then $idiot^*(john)$ will evaluate to TRUE. But John's maximal degree of idiocy being this high also means that it no longer counts as small, and thus (24 c) is false.

Case 2: John's degree of idiocy does not exceed the standard.

If John's degree of idiocy does not exceed the standard, then $idiot^*(john)$ will evaluate to FALSE. This means that the set $\{d : \mu_{idiot}(john) = d \wedge idiot^*(john)\}$ is empty, as there are no degrees for which it holds that $idiot^*(john)$. But that means that the iota operator in (24 c) cannot pick out any degree! This in turn means that $\llbracket small \rrbracket$ has nothing to evaluate, and so the truth-value of (24 c) cannot be evaluated.

Here is a potential problem for our theory: we know that (25) cannot get a degree reading, but up to now our theory has not ruled this out.

(25) $\#_{deg}$ John is a small idiot.

Up to now, all we can say is that (25) is either FALSE or UNDEFINED in the degree reading, but this alone does not make the degree reading ungrammatical for quite the same reason that contradictions aren't ungrammatical *per se* either. Then why is (25) ungrammatical in the degree reading? I believe we cannot solve this problem at sentence level. Rather, we should take a closer look at what happens when a noun like *idiot* is modified by a size adjective. I will argue below that the reason *small idiot* cannot receive a degree reading is that it is not *useful* to modify *idiot* with *small*. At the same time, it *is* useful to modify *idiot* with *big*, and so (26) is perfectly fine with the degree reading.

(26) John is a big idiot.

To see this, let us look at the denotation of (26), given in (27).

$$(27) \quad \llbracket (26) \rrbracket = \max(\lambda d'. \text{big}(\text{id}[\mu_{\text{idiot}}(\text{john}) = d \wedge \text{idiot}^*(\text{john})], d'), d') \geq s$$

(27) says that John's degree of idiocy counts as being BIG, but the evaluation of (27) crucially depends on the truth or falsity of $\text{idiot}^*(\text{john})$. We can identify three different outcomes, given below. The reader is asked to verify these.

- i. John's degree of idiocy exceeds the standard for *idiot*, but not for *big*. (FALSE)
- ii. John's degree of idiocy exceeds both standards. (TRUE)
- iii. John's degree of idiocy does not exceed the standard for *idiot*. (UNDEFINED)

Of particular note is the fact that when *big* is used instead of *small*, there is a situation in which (28) is true, whereas with *small* (28) can only be false or undefined.

(28) John is a SIZE-ADJECTIVE idiot.

To see what is happening here, we should look at the situations in which John's degree of idiocy exceeds the standard for *idiot*. Consider figure 5.3 (= fig. 5.1), showing *small*, *big* and *idiot* on the idiocy scale.

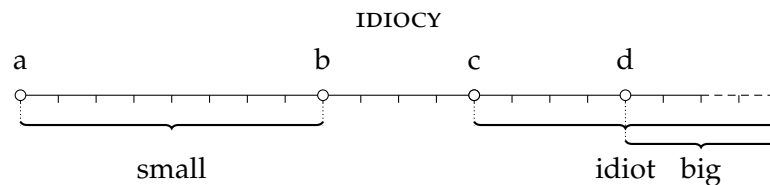


Figure 5.3: The idiocy scale and the coverage of *big*, *small* and *idiot* of this scale.

Whenever we use the noun *idiot* along with some individual *i*, we are making reference to some degree of idiocy d_i above point (c) that is associated with *i*. To be more specific about the order of magnitude of d_i , we can use a modifier. The modifier *big* tells us that d_i isn't just above point (c), it is also above point (d). Thus, *big* makes an informative contribution to the phrase. But what about *small*? We cannot use this modifier to be more specific about the order of magnitude of d_i . Rather *small* refers to a completely different domain of degrees that does not include d_i . Thus, the contribution of *small* to the phrase can hardly be considered helpful in narrowing down the order of magnitude of *i*'s idiocy. But then why should we use *small* at all in conjunction with nouns like *idiot*? It seems, then, that the reason *small idiot* cannot receive a degree reading is because using *small* with *idiot* in the degree reading is not a useful thing to do. This line of reasoning is similar to that of Van Miltenburg & Zwarts (2013), discussed in chapter 1, leading up to their proposal of a universal informativeness principle (3), reprinted below in (29).

- (29) **Informativeness Principle:** A phrase α that is combined (as an argument or modifier) with a head β should make a semantic contribution, that is: the meaning of the combination of α and β should not be identical to the meaning of β alone.

To re-iterate: Van Miltenburg & Zwarts (2013) propose the above principle to block trivial or uninformative PPs, such as (30), while allowing informative PPs like (31). This seems parallel to our current situation, where we have an adjectival modifier that is unhelpful and somehow barred by the grammar from receiving a degree reading after combining with *idiot*, while helpful (and informative) modifiers like *big* are allowed.

- | | |
|---|--|
| (30) *van aard
of nature
'of some nature' | (31) van algemene aard
of general nature
'of a general nature' |
|---|--|

The immediate difference, of course, is that while the addition of a PP like (30) is uninformative or meaningless, there *is* a meaning difference between (32 a) (without the adjective *small*) and (32 b) (with the adjective), as is reflected by their possible truth values.

- | | |
|--------------------------|------------------------|
| (32) a. John is an idiot | (may be TRUE or FALSE) |
| b. John is a small idiot | (is never TRUE) |

We might say that *small* does make some semantic contribution here, albeit a fairly unhelpful one. Thus the degree reading for *small idiot* is not ruled out by the Informativeness Principle, unless we extend the principle or posit a new rule, to specify more

precisely the kind of contribution a modifier should make. This is exactly what I will do below.³

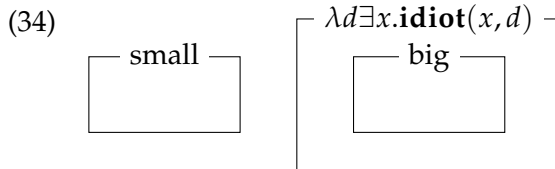
The Modifier Domain Requirement

5.6

I believe that there is no fundamental difference between extending the Informativeness Principle and positing a new rule (i.e. they are notational variants). However, for clarity's sake I will posit a new rule, so that the contribution of this work is clearly separated from previous work (though of course we should keep in mind that the Informativeness Principle and the new rule are closely related). I propose the following rule:

- (33) **Modifier Domain Requirement:** the domain of a phrase α that is combined as a modifier with a phrase β should overlap with the domain of β , so that α may restrict (but not conflict with) the domain under discussion.

We can illustrate this rule with the example of *big/#_{deg}small idiot*. The respective domains of *big*, *small* and *idiot* are given in (34). Since all degrees of idiocy that count as *big* are also above the standard for *idiot*, the set of degrees in the domain of *big* is a subset of the set of degrees in the domain of *idiot*. Thus, they overlap, unlike *small* and *idiot*. We can then say that *big* fulfills the Modifier Domain Requirement while *small* does not. Therefore *small* cannot be used in the degree reading.

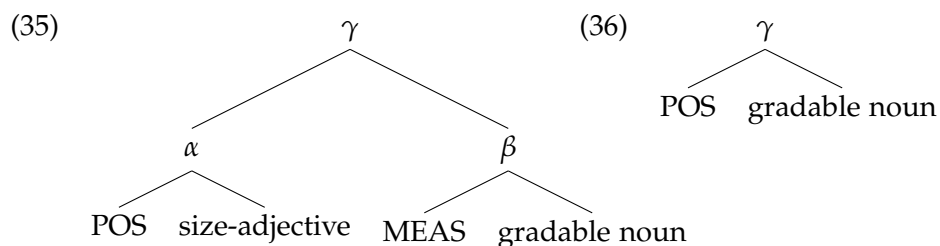


Evaluation with the PAN-construction

5.7

Now we have a general semantics for the gradable nouns discussed in this thesis. Phrases containing such nouns either look like (35) or (36). Whenever a gradable noun phrase γ would be the result of the combination of a modifier α and the gradable noun (together with MEAS) β , whether γ can be formed is subject to the Modifier Domain Requirement (MDR) (33).

³There is another option that I will not discuss here: maybe people simply prefer utterances that can conceivably be true to ones that can logically never be true. This preference could have led to the lexicalization of the bigness generalization, so that we ended up with a restriction on smallness-denoting modifiers in the lexical entry for *idiot*.



We have seen how our semantics works for Constantinescu's (2011) examples like *big problem*, and we have also seen how it treats Morzycki's (2009) example of *big idiot* vs. $\#_{\text{deg}}\textit{small idiot}$. As this chapter is drawing to a close, let us now look at the PAN-construction.

The PAN-construction is treated the same way as *big problem*. That is, *importance* is taken to be non-evaluative by itself. This means that it has no restrictions on the degrees it may take. Therefore, it is unhindered by the MDR and *importance* may occur with both bigness- and smallness-denoting size-adjectives.

$$\begin{aligned}
 (37) \quad \llbracket \text{of importance} \rrbracket &= \text{POS}(\text{importance}) \\
 &= \lambda o.\max(\lambda d.\textit{importance}(o, d)) \geq s
 \end{aligned}$$

$$\begin{aligned}
 (38) \quad \llbracket \text{of great importance} \rrbracket &= \text{MEAS}(\text{importance})(\text{POS}(\text{great})) \\
 &= \lambda x.\max(\lambda d'.\textit{great}(id[\mu_{\text{importance}}(x) = d], d')) \geq s
 \end{aligned}$$

With this semantics we have achieved what seemed very difficult at the end of chapter 3: reconciling all gradable nouns in one degree-based account.

Conclusion

Goal of this thesis 6.1

We set out to formulate a semantics to capture the interpretation of scalar scalar PAN-constructions (1), and the same constructions with the adjective left out (2).

- | | |
|--|--|
| <p>(1) Scalar PAN</p> <ul style="list-style-type: none"> a. It is of great significance. b. It is of great importance. | <p>(2) Scalar PAN without adjective</p> <ul style="list-style-type: none"> a. It is of significance. b. It is of importance. |
|--|--|

What is particularly interesting about these constructions, is that they seem to be *evaluative* when the adjective is left out. That is: the expressions in (2 a,b) seem to be interpreted with respect to some standard degree of SIGNIFICANCE and IMPORTANCE, respectively. This is very similar to work that has been done for gradable adjectives (see Kennedy 2007 and the references therein), and so the goal was set to try and formulate a semantics of gradable nouns, following earlier work by Morzycki (2009).

Results 6.2

In the last chapter, we proposed a novel semantics to deal with gradable nouns. But how did we get there? Let us recapitulate our journey below.

Extending Morzycki's (2009) work 6.2.1

Extending Morzycki's (2009) work turns out not to be a straightforward process. This is because his semantics is geared towards accounting for a generalization which the PAN-construction does not fall under. Specifically, Morzycki (2009) sets out to account for the *bigness generalization*: the observation that nominal predicates like *idiot*,

stamp-collector and *goat cheese-enthusiast* can only be modified by bigness-denoting size adjectives, and not by smallness-denoting adjectives under the degree reading (3).¹

- (3) a. John is a big idiot. (Can mean John's degree of idiocy is big)
 b. John is a small idiot. (Cannot mean John's degree of idiocy is small)

It is clear that the PAN-construction does not show similar behavior:

- (4) a. It is of great significance. (the degree of significance is great)
 b. It is of little significance. (the degree of significance is little)

Furthermore, recall that in Morzycki's (2009) (3 a,b) have the structure in (5). POS is a covert morpheme responsible for the evaluative interpretation of gradable predicates in the positive (unmarked) form. MEAS is another null morpheme responsible for the combination of gradable predicates, like *tall*, with measure phrases, like *six feet*. Morzycki's (2009) semantics also treats phrases like [POS great] as measure phrases.

- (5) a. John is a [POS big] [MEAS idiot].
 b. John is a [POS small] [MEAS idiot]. (Reading unavailable)

Extending this semantics to the PAN-construction, we get the structure in (6).

- (6) a. It is of [POS great] [MEAS significance]
 b. It is of [POS little] [MEAS significance] (Predicted unavailable)

Now, Morzycki (2009) accounts for the bigness generalization by putting a standard-related function inside the covert MEAS-morpheme. This move renders measure phrases containing smallness-denoting adjectives like (5b) useless, and thus the degree reading for (5b) is unavailable. However, it also wrongly predicts the degree reading for (6b) to be unavailable.

Since this prediction is so firmly ingrained in Morzycki's (2009) semantics, we decided to look for an alternative, which we found in Constantinescu's (2011) work.

Extending Constantinescu's (2011) work 6.2.2

Constantinescu (2011) takes a completely different approach than Morzycki (2009). Rather than have an account rooted in degree semantics, she argues that what seemed to be a degree reading is actually an *abstract size reading* in which the size adjective (e.g. *big*, *small*) holds of a *trope*: an instance of a property. As a result, her denotation for

¹Remember: the degree reading is opposed to the *size reading*, where *John is a big idiot* means that John is both physically big and an idiot.

John is a big idiot is completely different. Compare the result of Morzycki's semantics (7a) with that of Constantinescu's (7b).

(7) John is a big idiot

- a. $idiot(john) \geq \min\{d : d \in scale(idiot) \wedge big(d)\} \wedge idiot(john) \geq standard(idiot)$
- b. $\exists p[idiocy(p, john) \wedge big(p)]$

(7b) says that there is an instance of idiocy that belongs to John, and this instance is big. Constantinescu arrives at this denotation by suggesting that examples like (7) involve non-intersective modification, and size-adjectives like *big* only target the *property argument* of *idiot*. Her proposal is easily extended to cases like *of great importance*, for which a denotation is given in (8).

(8) $\llbracket \text{of great importance} \rrbracket = \lambda x \lambda p [importance(p, x) \wedge great(p)]$

Constantinescu (2011) explains the bigness generalization by saying that nouns like *idiot* have an inherent bigness. In other words: it is lexically specified that idiots are people with a high degree of idiocy. When *idiot* is modified by smallness-denoting adjectives like *small*, this smallness conflicts with the inherent bigness of *idiot*, and as such *small idiot* is ruled out in the abstract size reading.

The problem with Constantinescu's (2011) account is that it cannot readily account for the standard-related interpretation of examples like those in (9). I.e. the fact that (9a,b) seem to be interpreted as (10a,b).

- | | | | |
|-----|---------------------------|------|-----------------------|
| (9) | a. It is of importance. | (10) | a. It is important. |
| | b. It is of significance. | | b. It is significant. |

In order to account for this interpretation, it seems tempting to posit a 'high/significant degree'-meaning as part of the lexical meaning of *importance* and *significance*. However, this would predict that the examples in (11) are unacceptable, while they are, in fact, perfectly fine.

- (11) a. It is of little importance.
b. It is of little significance.

In sum: with Constantinescu's (2011) work, the result was the opposite of what we found after extending Morzycki's (2009) theory: we can easily extend the theory to cover PAN-constructions when the adjective is present, but there is no straightforward way to account for the same constructions with the adjective is left out. However, there is some light at the end of the tunnel: Constantinescu (2011) *did* show an alternative

way to explain the bigness generalization; we can add information regarding bigness to the lexical entry of *idiot*.

Returning to degree semantics

6.2.3

In the previous chapter we returned to a degree-semantic approach in order to provide a general account of gradable nouns. With an account in terms of degree semantics, it is easy to capture the meaning of unmodified nouns (12).²

- (12) a. $\llbracket \text{John is an idiot} \rrbracket = \text{idiot}(\text{John}) \geq \text{standard}(\text{idiot})$
 b. $\llbracket \text{It is a problem} \rrbracket = \text{problem}(\text{it}) \geq \text{standard}(\text{problem})$
 c. $\llbracket \text{It is of importance} \rrbracket = \text{importance}(\text{it}) \geq \text{standard}(\text{importance})$

When we tried to extend Morzycki's (2009) approach to cover the PAN-construction in chapter 3, it seemed difficult to simultaneously explain the bigness generalization for nouns like *idiot*, while allowing smallness-denoting adjectives to occur in PAN-constructions. As mentioned earlier in this chapter, Morzycki's (2009) account hinges on his denotation of MEAS (13 a), a null morpheme that allows gradable predicates to combine with a measure phrase. Morzycki's (2009) denotation incorporates a lot of evaluative material, and keeping this it prevents us from positing a truly general account of gradable nouns. I thus proposed a more semantically neutral denotation along the lines of (13 b). All (13 b) does is combine the predicate with a measure phrase in a very straightforward way. With some minor modifications to get the types right, the final denotation for MEAS looks like (13 c).

- (13) Three denotations of MEAS:
 a. $\lambda g \lambda m \lambda x. g(x) \geq \min\{d : d \in \text{scale}(g) \wedge m(d)\} \wedge g(x) \geq \text{standard}(g)$
 b. $\lambda g \lambda m \lambda x. m(g(x))$
 c. $\lambda g_{\langle d, \langle e, t \rangle \rangle} \lambda m_{\langle d, t \rangle} \lambda x. m(\text{id}'[(\lambda d. g(d)(x))(d')])$

To account for the bigness generalization, I suggested that there are two components that a gradable noun may have: a measure function (14), which is mandatory, and an evaluative component (15), which nouns like *idiot* do have but nouns like *significance* do not have.

²I make use of Kennedy's (2007) notation here, treating the gradable predicate as a measure function, type $\langle e, d \rangle$, and POS as $\lambda g \lambda m \lambda x. g(x) \geq \text{standard}(g)$. This is equivalent to the other notation I have been using, treating the gradable predicate as a *relation* with the type $\langle e, \langle d, t \rangle \rangle$, and POS being $\lambda g \lambda x. \max(\lambda d. g(x, d)) \geq \text{standard}(g)$. And since I argue that gradable nouns always have a measure function component, *max* can be replaced by *id*, as the output of the measure function is always a single degree. Also, following Morzycki (2009) we will use type *o* for *objects*, which are entities or degrees. The second argument of POS will be assigned this type, so that POS along with a size adjective can be used in the measure phrase to predicate over degrees.

- (14) Measure function: $\mu_g(x) = \max(\lambda d.g(x, d))$ (15) Evaluative predicate: $g^*(x) = \exists d[d \geq s \wedge g(x, d)]$

And so *idiot* looks like (16 a) while nouns like *importance* look like (16 b).

- (16) a. $\llbracket \textit{idiot} \rrbracket = \lambda d \lambda x. [\mu_{\textit{idiot}}(x) = d \wedge \textit{idiot}^*(x)]$
 b. $\llbracket \textit{importance} \rrbracket = \lambda d \lambda x. [\mu_{\textit{importance}}(x) = d]$

Note that the set $\lambda d. \exists x [\mu_{\textit{idiot}}(x) = d \wedge \textit{idiot}^*(x)]$ only contains degrees that exceed the standard of comparison for *idiot*. After all, for any d , it has to be true that $\textit{idiot}^*(x)$, which can only be true if there is a degree such that x holds that degree of idiocy, and d is above the standard. And since the *max*-operator only picks out the highest degree of idiocy that x holds, d has to exceed the standard. In other words, the domain of (16) on the scale of idiocy is restricted to those degrees that are above the standard for *idiot*. Now the reason that I propose why phrases like *small idiot* cannot receive a degree reading, is that smallness-denoting adjectives like *small* can never fulfill what I call the Modifier Domain Requirement (MDR):

- (17) **Modifier Domain Requirement:** the domain of a phrase α that is combined as a modifier with a phrase β should overlap with the domain of β , so that α may restrict (but not conflict with) the domain under discussion.

This is because smallness-denoting adjectives generally express below-average sizes. In other words, they only return TRUE for degrees below the standard. Thus, the domains of smallness-denoting adjectives and nouns like *idiot* are completely disjunct. In sum: the evaluative component together with the MDR prevent smallness-denoting adjectives to occur with nouns like *idiot*, and thus we can explain the bigness generalization.

In short

6.2.4

There are three ways to capture the meaning and behavior of the items in (18).

- i. According to Morzycki (2009), (18 a) is the only one that receives a degree reading. (18 b-d) only receive an *abstract size reading* (which he does not specify any further). (18 b) is a special case because it can be analyzed as having a degree reading, but this reading would be equivalent to (19 a), and so the abstract size reading is always preferred.
- ii. Constantinescu (2011) goes the other way, and suggests all items in (18) receive an abstract size reading, except for (18 b). The abstract size reading arises through intersective modification by the size-adjectives. In the case of (18 b),

however, *small* clashes with the ‘inherent bigness’ that Constantinescu assumes to be part of the lexical entry for *idiot*.

- iii. We proposed that all items in (18) can be analyzed in terms of degree semantics, but (18 b) is ruled out because *small* does not fulfill the MDR when it modifies *idiot*. The reason it cannot fulfill the MDR is that *idiot* is evaluative, and the standard of comparison for *idiot* lies outside the domain of *small*.

- | | | |
|------|---|--|
| (18) | a. John is a big idiot. | c. It is a big/small problem. |
| | b. # _{deg} John is a small idiot | d. It is of great/little significance. |

Now for the cases without modification: Morzycki (2009) analyzes (19 a) in terms of degree semantics, and as such (19 a) is (roughly) equivalent to (20 a). He makes no claims with regard to (19 b,c), but can easily extend his analysis to the cases in (19 b,c), rendering them equivalent to (20 b,c). Our proposed account does not differ significantly from Morzycki’s (2009) here, except for the fact that *idiot* is still evaluative. It is unclear what kind of analysis Constantinescu (2011) would propose, and how she would account for the fact that the interpretation of (19 c) seems equivalent to that of (20 c).

- | | | | |
|------|--------------------------|------|-----------------------|
| (19) | a. John is an idiot. | (20) | a. John is idiotic. |
| | b. It is a problem. | | b. It is problematic. |
| | c. It is of significance | | c. It is significant. |

The advantages of our semantics of gradable nouns³ are as follows:

- It covers the meaning and behavior of *all* gradable nouns, whereas Morzycki (2009) dismisses nouns like *problem* and *significance*.
- It is able to handle both modified and unmodified gradable nouns (as opposed to Constantinescu 2011).
- It keeps MEAS as general as possible, whereas Morzycki (2009) adds evaluative material that is otherwise unnecessary to deal with measure phrases.

Future work: the position generalization 6.3

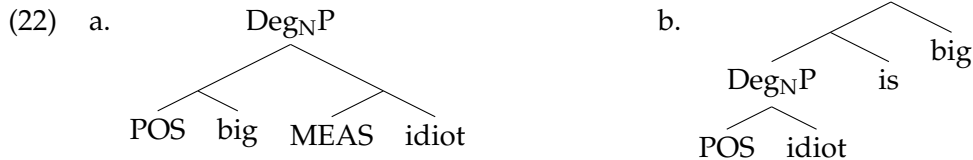
Accounting for the position generalization 6.3.1

One advantage of Morzycki’s (2009) work was its capacity to account for the *position generalization*: the observation that the degree reading is only available when the size adjective is in attributive position (21 a) and not in predicative position (21 b).

³By ‘gradable noun’ I mean any noun that can reasonably be characterized as being related to a scale.

- (21) a. That is a big idiot. b. That idiot is big.

Morzycki (2009) is able to explain this by saying that *big* in (21 b) falls outside the Deg_NP. Thus, *big* cannot touch the degree variable of *idiot*. (22) illustrates the difference between (21 a,b).



Constantinescu (2011) accounts for the position generalization in a different way. She likens the position generalization to the difference between (23 a) and (23 b), where *beautiful* in the predicative position cannot be interpreted as saying something about the dancing event (whereas it can in the attributive position). She argues that nouns like *idiot* are similarly restricted.

- (23) a. Olga is a beautiful dancer. (intersective & non-intersective interpretation)
 b. That dancer is beautiful (only intersective interpretation)

Our theory does not yet offer an account of the position generalization, and we should look for an external explanation of this observation. Should there be one, then I believe our theory to be superior to Morzycki's (2009), because of the observations made by Constantinescu (2011: 180), discussed on page 30 of this thesis. I will again discuss these observations below.

Constantinescu's observations

6.3.2

Constantinescu (2011: 180) observes that there are nouns for which the position generalization does not hold (24), but the bigness generalization does (25).

- (24) a. Son courage était grand (French)
 His courage was big
 b. The mess they left behind was **huge**. (English)
- (25) a. un {grand/*petit} courage (French)
 a big/small courage
 b. a {huge/*small} mess (English)

Simultaneously, there are nouns for which the position generalization *does* hold but the bigness generalization does not. This is the case for *mangeur* and *stamp-collector*. The sentences in (26) only have a reading in which the subject is physically big or

small (which means the position generalization holds), but in the attributive position both *big* and *small* can be used (27). Both yield a degree reading.

- (26) a. Ce mangeur est {grand/petit} (French)
 This eater is big/small
 b. That stamp-collector is {big/small}
- (27) a. un {grand/petit} mangeur (French)
 a big/small eater
 b. a {big/small} stamp-collector (English)

The data above give us a double dissociation between the position generalization and the bigness generalization. This is a problem for Morzycki (2009), because he seems to rely on the position generalization as a means to determine which nouns should get a degree reading and which ones shouldn't. If only the nouns that obey the position generalization are considered, then Morzycki has no way to account for the cases in (25). Since our proposal considers any degree noun eligible to receive a degree reading, we *can* in fact account for these cases: just treat them the same as *idiot*. Moreover, it is easy for us to account for the cases in (27): we can just say that *mangeur* and *stamp-collector* either aren't evaluative, or their standards of comparison fall within the range of *petit* and *small*, respectively.⁴ In any case, I hope to have shown that a degree-semantic account of the PAN-construction is worthy of consideration.

⁴Constantinescu is able to deal with the cases in (27) as well; she would argue that *mangeur* and *stamp-collector* do not have any inherent bigness.

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