Singular count pseudo-partitives[1]

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Abstract. Inversion-constructions, like *too tasty of a cake* and *a disaster of a conference*, have generally been treated separately from superficially similar-looking pseudo-partitives, like *three gallons of water*. I argue for an analysis that unifies the syntax and semantics of the two constructions through a proposal about the head *of* that appears in both. Both constructions involve the composition of two properties: one is contributed by the head noun; the other is contributed by the modifier, i.e., the measure-phrase in pseudo-partitives and the noun-phrase or degree-phrase in inversion-constructions. Moreover, while pseudo-partitives involve the composition of two properties of individuals, inversion-constructions involve the composition of two properties of states. A single semantic constraint—non-divisiveness of the property denoted by the modifier—is seen to play a role in both types of constructions, and, in particular, to predict both the monotonicity of modifiers in pseudo-partitives and the gradability of modifiers in inversion-constructions.

Keywords: degree-inversion, nominal-internal predicate-inversion, pseudo-partitives, partitives, modification, states, monotonicity

1. Introduction

Two particular constructions observed crosslinguistically are generally treated as separate phenomena. These are the pseudo-partitive (1), and the type of construction involving what appears to be inversion, or re-ordering, of some NP-modifier to a position before the article preceding the NP (2).

(1) a. three gallons of water
b. three pounds of cakes

(2) a. too tasty of a cake
b. a disaster of a conference

The two constructions exhibit superficial similarities that might suggest similar analyses. Both contain head nouns preceded by modifiers that restrict their denotations, and each has the noun and modifier straddling the word *of*. Indeed, that these aspects of each construction might be related is suggested by the similar syntax of inversion-constructions and partitives or pseudo-partitives

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crosslinguistically:[2]

(3) Dutch[3]

a. een etter van een jongen
a jerk of a boy

b. een doos van uw heerlijke koekjes
a box of your delicious cookies

(4) Hebrew[4]

a. yofi šel sefer
beauty of book
'a beauty of a book'

b. shvey kilo (šel) tapuxim
two kilo of apples

(5) Italian

a. il tuo cretino di fratello
the your cretin of brother
'your cretin of a brother'

b. una bottiglia di vino
a bottle of wine

(6) Spanish

a. esta maravilla de niño
this marvel of child
'this marvel of a child'

b. una botella de vino
a bottle of wine

(7) French

a. cet idiot de Jean
that idiot of Jean

b. une bouteille de vin
a bottle of wine

[2]Unless otherwise noted, the following examples are taken from Corver (1998), pp. 216-217.

[3](b) is taken from Girbau (2010), p. 62.

[4]Thanks to Itamar Francez for the Hebrew examples.

In this paper, I argue that these superficial similarities reflect deeper syntactic and semantic similarities between the two types of constructions. In particular, inversion-constructions like (2) are specific instances of the pseudo-partitive construction conventionally identified with examples like (1) (and as the title suggests, could therefore be regarded as 'singular count pseudo-partitives'). Below, I propose a semantics for the head *of* appearing between the modifier and head noun that I claim to be responsible for generating the two types of constructions. A consequence of a unified analysis of the two constructions is that expressions occupying the modifier position in both must receive similar analyses; I argue that both expressions denote properties: modifiers in pseudo-partitives (e.g., *three gallons*) denote properties of individuals, while modifiers in inversion-constructions (e.g., *too tasty*) denote properties of states.

In the following section, I present some background on the semantics of pseudo-partitives and propose an analysis of the composition of the head noun and measure phrase. In §3, I show how the analysis extends to inversion-constructions. §4 elaborates and verifies predictions of the analysis, and the last section concludes.

2. Pseudo-partitives and the monotonicity constraint

A well-known constraint on pseudo-partitives is that they must contain measure-phrases that are monotonic on the part-structure of the individual characterized by the following substance-noun (Schwarzschild, 2002, 2006). This "monotonicity" constraint is illustrated by the following contrast.

(8) a. sixty gallons of water
b. *sixty degrees Fahrenheit of water

A measure-phrase like *sixty degrees Fahrenheit* will violate the constraint as long as the individual characterized by the substance-noun—in this case, a portion of water—relates non-monotonically to the encoded measurement. Here, monotonicity is seen as a constraint on two relations: the inherent ordering on degrees provided by the meaning of the measure-phrase, and the "part-of" relation that holds among individuals in the domain of a mass noun like *water* (for discussion of the latter, see Link (1983)). In particular, the former relation must be monotonic on the latter, so that, as portions increase—i.e., as one moves from portions to larger ones properly containing them—so do degrees. Since this constraint is not satisfied for *sixty degrees Fahrenheit* (more water doesn't necessarily mean higher temperature), (8-b) is ruled out.

2.1. Encoding the constraint: Schwarzschild (2002)

One straightforward way of enforcing the monotonicity constraint on measure-phrases is to encode it directly into the semantics of pseudo-partitives, as Schwarzschild (2002) does. On Schwarzschild's analysis, the measure-phrase, which denotes the second-order property of degrees **mp** in (9), is augmented with a scale-function, which he calls 'μ', allowing it to combine with the substance noun following it and ensuring that it is monotonic. Schwarzschild calls the head responsible for this augmentation 'Mon':

(9) **MON** $\quad$ **mp** $\rightarrow \lambda X \lambda z[X(z)$ & **mp**$(\mu(z))$ & μ is monotonic on X] $\quad$ (Schwarzschild, 2002, p. 237)

The scale-function μ shown in (9) maps individuals to intervals of degrees of height, weight, and, in the case of (8-a), volume. The role of the measure-phrase is to predicate of the resulting interval that it is of a particular length—for example, sixty gallons if the interval is one of volume. Moreover, the semantics of Mon ensures that the interval mapped from the individual by μ is monotonic on its part-structure; Schwarzschild encodes this constraint as an entailment in (9).

Relevant to present purposes is that this way of implementing the monotonicity constraint makes use of intervals of degrees. μ maps individuals to degree-intervals, and the property of degree-intervals denoted by the measure-phrase predicates of them. The view of measure-phrase modification assumed by this implementation of monotonicity precludes regarding measure-phrases as denoting properties of individuals, which conflicts with the goal of uniting measure-phrases with modifiers in inversion-constructions. The next section therefore recasts monotonicity as a constraint on individual-properties.

2.2. Monotonicity as a constraint on properties

Another approach to the monotonicity constraint in pseudo-partitives involves ruling out the properties of individuals that would be denoted by non-monotonic measure-phrases.[5] The constraint

[5] An approach that regards measure-phrases as property-denoting is Brasoveanu (2007), who motivates the property-denoting status of measure-phrases based on agreement data from Romanian. Brasoveanu shows that subject-verb and pronominal agreement always reflect the number and gender of the measure-phrase of a pseudo-partitive, rather than the following substance noun. He takes such facts to indicate the head status—and therefore, property-denoting status—of the measure-phrase in the construction. As a result, a principle of "individuation-by-measure" is proposed, according to which a measure-phrase may undergo a degree-to-individual type-shift only if it is informative about quantity (i.e., if it is monotonic). Moreover, only those measure-phrases that undergo the type-shift may head a property-denoting pseudopartitive. I don't adopt this principle here, but build the monotonicity constraint into the semantics of the construction.

I take to be relevant to modifiers in pseudo-partitives is that they denote properties that are non-divisive (Krifka, 1989), as defined in (10).

(10) Non-divisiveness
An $\langle\alpha, \mathrm{t}\rangle$-type predicate P has non-divisive reference ($\neg$**DIV**(P)) iff
$\neg\forall x_\alpha[\forall y_\alpha[[P(x)$ & $y \leq_{\mathrm{D}_\alpha} x] \rightarrow P(y)]]$

A non-divisive property is one for which it is not the case that, if it is true of an individual, then it is also true of any other individual ordered below it. Given the 'part-of' relation of Link (1983) as that inducing the relevant ordering, a property is non-divisive if it is not the case that, for any individual for which it is true, it is true of all of its subparts. The distinction between properties that are divisive and those that are not makes the correct cut between non-monotonic and monotonic properties, respectively, as in (11).

(11) Non-divisive, monotonic: *sixty gallons*, *several pounds*, *many liters*

(12) Divisive, non-monotonic: *sixty degrees Fahrenheit*, *thirty karats*

Monotonic measure-phrases like *sixty gallons* denote non-divisive properties since any subportion of a sixty-gallon portion will measure less than sixty gallons. Measure-phrases like *many liters* pass this test even though they don't involve numerals, as there is always some subportion of a portion measuring many liters which does not itself measure many liters. On the other hand, certain measure-phrases, like *very few gallons* or *at most sixty gallons*, which can appear in pseudo-partitives, might appear to constitute counterexamples to the above distinction, as they are divisive when interpreted as single constituents. For example, any subportion of a portion measuring at most sixty gallons also measures at most sixty gallons. The solution to this apparent problem, which involves QR of the relevant degree-expression, will become clear once the compositional analysis is presented.

Non-monotonic measure-phraes, however, always denote divisive properties of portions, just as the measure-phrases themselves are distributive. All subportions of a portion measuring thirty degrees Fahrenheit also measure this amount, just as all subportions of a thirty-karat portion of gold also measure thirty karats. When non-monotonic measure-phrases are placed in predicate position, their distributivity comes out.

(13) a. These cherries are thirty degrees Fahrenheit
b. These gold rings are thirty karats

The distributivity of the measure-phrases is shown by the fact that they have entailments for each individual cherry and each gold ring in (13-a) and (13-b), respectively. If their distributivity carries over to the modifier-position of pseudo-partitives, they will be ruled out as violations of non-divisiveness.

2.3. The analysis

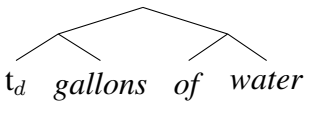
I now present a semantics for the pseudo-partitive that encodes monotonicity as a constraint on the non-divisiveness of measure-phrases. In particular, I attribute the constraint to a presupposition of the head *of* that enters into pseudo-partitive constructions.

(14) $[\![of]\!] = \lambda P_{\langle e,\, t\rangle}.\lambda Q_{\langle e,\, t\rangle}\colon \neg\mathbf{DIV}(Q).\lambda x_e.P(x)\ \&\ Q(x)$

Given this analysis, *of* will take as its specifier monotonic measure-phrases like *sixty gallons* but not non-monotonic ones like *thirty degrees Fahrenheit*, as the latter will not meet its definedness condition.

It is now also possible to give an analysis of apparent counterexamples to non-divisiveness like *very few gallons* and *at most sixty gallons*. In particular, I assume that the phrases *very few* and *at most sixty* QR, leaving a structure like (15), where *gallons* is interpreted as a $\langle$d, $\langle$e, t$\rangle\rangle$-relation, whose first argument is a degree, between individuals and the numbers of gallons they measure.

(15)



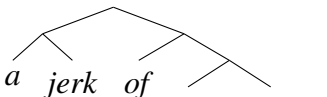
Although the property denoted by *at most sixty gallons* fails non-diviseness, the interpretation of the structure in (15) passes it. This result obtains because, when *of* composes with the measure-phrase in (15), the degree-denoting trace will be interpreted relative to an assignment function, which assigns to it a particular degree. In that case, the property denoted by the structure in (15) is non-divisive for the same reason that the one denoted by a measure-phrase like *sixty gallons* is.

3. Monotonicity in inversion-constructions

Now that the basic analysis has been laid out for pseudo-partitives, it can be extended to inversion constructions like (2), repeated in (16).

(16) a. too tasty of a cake
b. a disaster of a conference

In this section, I argue that the same head *of* which was given a semantics to implement monotonicity in pseudo-partitives is involved in constructions like (16). Rather than measure-phrases, however, the relevant modifiers in these constructions are degree-phrases like *too tasty* and noun-phrases like *a disaster*. But regarded as properties of individuals, the meanings of these phrases do not meet the definedness condition imposed by *of*; they are divisive. Instead, I will argue that modifiers in inversion-constructions denote properties of states, rather than properties of individuals. As a rough sketch, I consider an inversion construction like (16-a) to have a semantics as illustrated in (17).

(17) $[\![$ 

$]\!] = \lambda s_{\mathrm{s}}.s$ is a jerk-state & s is a linguist-state

In other words, I take the entire construction to denote a stative property, eventually to be predicated of an individual either via a functional head or a type-shift responsible for introducing the relevant thematic relation between states and the individuals who hold them. On an analysis in which the parts of an inversion construction are stative-property denoting, the semantics for the head *of* responsible for composing them will have to be extended to handle states.

(18) $[\![of]\!] = \lambda P_{\langle \mathrm{s,\,t}\rangle}.\lambda Q_{\langle \mathrm{s,\,t}\rangle}$: $\neg$**DIV**$(Q).\lambda s_{\mathrm{s}}.P(s)$ & $Q(s)$

Recall that the definition of non-divisiveness requires of a property that it be true of some individual but not true of all other individuals ordered below it. The ordering relevant to the individual domain is that induced by the "part-of" relation of Link (1983), so that non-divisive properties are true of some individuals but not all of their subparts. Extended to states, the definition requires that a property be true of some state, but not all states ordered below it. But this extension of non-divisiveness raises the question of what it means for states to be ordered. The next subsection draws on Wellwood (2012) to answer this question.

3.1. Stative orderings

Wellwood (2012) proposes that like individuals, as well as events (Bach, 1986), states may be ordered by a linguistically-accessible relation. She assumes that adjectives lexically denote stative

properties, but gives an analysis of their use with degree modifiers (as in *too tasty*) in which they appear with a covert *much*, following Bresnan (1973). Additionally, following Schwarzschild (2006) and Wellwood et al. (2012), she notes that *much* obeys the same monotonicity constraint seen with measure-phrases in pseudo-partitives when it modifies properties of individuals and events. (19) illustrates the monotonicity constraint on the interpretation *much*.

(19) a. Mary drank too much water
b. Bill ran too much
c. ??John died too much

(19-a) allows an interpretation of *too much water* on which Mary drank too much by weight or volume, but not too much by temperature. As discussed above, the former two relations are monotonic, while temperature is not. Likewise, (19-b) allows an interpretation of *too much* on which Bill ran too much by time or by distance, but not too much by speed. Moreover, given a part-structure on events mirroring that seen with individuals, relations like duration and distance are monotonic on eventive orderings, while speed is not. That is, as one moves from events to larger events containing them, duration and, for running events, distance increases, but speed does not. Finally, (19-c) is unacceptable on any interpretation because the domain of events of the property denoted by *die* is not ordered: dying events do not have other dying events as their subparts. As a result, there is no ordering with respect to which the monotonicity constraint of *much* could be defined.

Given the distribution of *much*, Wellwood proposes a semantics for it according to which it maps individuals and events to degrees in a monotonic fashion. That is, individuals may be mapped to degrees of weight or volume, and events may be mapped to degrees of duration. In conjunction with her proposal that stative-property denoting adjectives may combine with a covert *much*, she predicts that states may be ordered, just as individuals and events are. And just as *much* maps to degrees monotonically with properties of ordered individuals and events, it must do so too with properties of ordered states.

The conclusion Wellwood draws is that adjectives with stative orderings—that is, those for which a degree argument may be introduced by a covert *much*—are just those adjectives which are gradable. Thus, the contrast illustrating gradability in (20) is due to whether or not the domain of the underlying stative property denoted by the adjective is ordered. In (20-a), it is, and thus the adjective may combine covertly with *much* to obtain a degree argument, and as a result, it allows for modification by *too*. In (20-b), it is not, preventing the adjective from combining covertly with *much*, since a prerequisite for the monotonicity of *much* to be satisfied is an ordering on the domain of the property it combines with.

(20) a. The watch is too expensive

b. ??The watch is too digital

Wellwood therefore replaces the more conventional semantics according to which gradable adjectives are distinguished from non-gradable ones in that the former have a degree argument with what she considers to be a more basic distinction: that between properties with ordered and unordered domains. Stative properties with ordered domains are those that may be augmented with a degree argument by *much*, allowing for further modification by degree modifiers, while those without ordered domains are what are descriptively referred to as 'non-gradable'.

3.2. Non-divisiveness of stative properties

In the current analysis, I follow Wellwood in adopting the proposal that there are linguistically-accessible orderings on states—those on the domains of properties denoted by gradable adjectives. As given in (18), repeated in (21), the analysis of inversion-constructions states a definedness condition on the head *of* that combines with the modifier and the following noun-phrase—that the property denoted by the modifier be non-divisive.

(21) $[\![of]\!] = \lambda P_{\langle s,\, t\rangle}.\lambda Q_{\langle s,\, t\rangle}\colon \neg\mathbf{DIV}(Q).\lambda s_s.P(s)\ \&\ Q(s)$

Given Wellwood's proposal that adjectives that denote properties with ordered domains are gradable, as they may combine covertly with *much*, the definedness condition in (21) can be seen to have the following two consequences. First, modifiers in inversion-constructions should denote properties true of some states, but not of other states ordered below them. In other words, such properties should be true of states mapped by some monotonic relation to a particular degree, but not true of other states mapped by the same relation to lower degrees. A modifier denoting such a property is one that will be classified as gradable on conventional diagnostics since, in order to be true of some states in its domain but not others, its domain must be ordered in the first place.

Second, not any gradable-property denoting modifier should be allowed in inversion-constructions—just those that denote non-divisive properties. As a result, modifiers denoting properties true of every state in their domain—even if this domain is ordered—should be ruled out. Minimum-standard adjectives like *bent* denote just this kind of property. Being even slightly bent is enough to count as bent. Thus, *bent* is true of every state in its domain, whereas a maximum-standard adjective like *full* is true of only the maximal state in its ordering (see Husband (2012) for related discussion). Therefore, modifiers permitted by the analysis are, for example, maximum-standard adjectives like *full* and relative adjectives like *tall*, both of which may be true of some states but not others ordered below them. The next section is devoted to cashing the analysis out in terms of specific linguistic predictions.

4. Predictions of the analysis

The predictions to be explored in this section fall into two categories. The first category is specific to predictions resulting from the non-divisiveness of stative properties required for inversion constructions. One of these predictions, for example, is that modifiers in inversion constructions are always gradable. The second category is specific to predictions resulting from the claim that the modifier and head noun in inversion-constructions are stative-property denoting. Independent linguistic diagnostics of stativity are brought to bear in testing this claim.

4.1. Gradability of the modifier

The prediction modifiers should be gradable is difficult to test for adjectives in English because the syntax of inversion-constructions appears to require adjectives to occur with degree modifiers anyway.

(22) *tasty of a cake

Since degree modifiers may only combine with gradable adjectives, gradability is required in adjectival inversion-constructions for independent reasons.

Inversion-constructions involving nouns, however, allow them to occur bare. Assuming a diagnostic of gradability for nouns, it is therefore possible to test the prediction that modifiers should be gradable. The contrasts between (23) and (24) illustrate that the prediction is borne out.

(23)
a. a disaster of a conference
b. a marvel of a guy
c. a sweetheart of a kid
d. an idiot of a student
e. an asshole of a librarian
f. a jerk of a linguist

(24)
a. *a conference of a disaster
b. *a guy of a marvel
c. *a kid of a sweetheart
d. *a student of an idiot
e. *a librarian of an asshole
f. *a linguist of a jerk

In (23), the modifiers are nouns that pass tests for gradability given in Morzycki (2009), the same tests that the modifiers in (24) fail. One of these tests is the ability of a noun to appear with a nominal degree modifier like *utter*. As (25) shows, only the modifiers in (23) appear felicitously in this context.

(25) a. an utter {disaster, marvel, sweetheart, idiot, asshole, jerk}
b. #an utter {conference, guy, kid, student, librarian, linguist}

To test the same prediction for adjectives, it would be necesssary to look at a language whose inversion-constructions allow adjectives to occur bare. Norwegian provides such a case, as the following examples illustrate.[6]

(26) Norwegian attributive adjectives
a. en høy man
a tall man
b. en lykkelig mann
a happy man

(27) Norwegian inverted adjectives
a. høy en mann
tall a man
b. lykkelig en mann
happy a mann

The adjectives *høy* ('tall') and *lykkelig* ('happy') may modify nouns attributively (26), but, crucially, may also occur in inversion-constructions without any modifiers (27), unlike in English. The prediction to test, therefore, is that non-gradable adjectives, unlike gradable ones, may not invert. The following examples show that this prediction is borne out.

(28) Attributive adjectives: non-gradable
a. en mann død
a man dead
b. en Italiensk mann
a Italian man
c. en digital klokke
a digital watch

[6]Thanks to Camilla Buknotten for these judgments.

(29) Inverted adjectives: non-gradable

a. *død en mann
dead a man

b. *Italiensk en mann
Italian a man

c. *digital en klokke
digital a watch

While *død* ('dead'), *Italiensk* ('Italian'), and *digital* ('digital') may in principle modify nouns (28), they may not invert (29), unlike their gradable counterparts.

As mentioned above, not all gradable nouns should be felicitous as modifiers in inversion-constructions—just those that denote non-divisive properties. Therefore, minimum-standard adjectives are predicted to be ruled out. The following examples show this prediction to be borne out, as well.

(30) Attributive adjectives: minimum-standard

a. en humpete vei
a bumpy road

b. en bøyd stang
a bent rod

(31) Inverted adjectives: minimum-standard

a. *humpete en vei
bumpy a road

b. *bøyd en stang
bent a rod

On the other hand, the analysis also makes the following prediction. Minimum-standard adjectives should be felicitous just in case they occur with a degree modifier that causes them to denote a non-divisive property. A degree modifier that increases the degree that the state must satisfy beyond the minimum will cause the resulting stative property to be non-divisive and, therefore, felicitous as an inverted modifier. Comparing (31) with (32) shows that this prediction is also borne out.

(32) Inverted adjetives: minimum-standard with modifier

a. så humpete en vei
so bumpy a road

b. så bøyd en stang
so bent a rod

In conclusion, predictions from both English and Norwegian appear to support the hypothesis that modifiers in inversion-constructions are constrained to denote non-divisive properties of states. Both English and Norwegian show a restriction to gradability of the relevant modifiers, and, moreover, Norwegian shows the predicted restriction to non-divisiveness of the relevant modifier.

4.2. Stativity of the modifier and head noun

A second type of prediction made by the proposed analysis involves diagnostics of stativity. Three diagnostics are presented in this section: one involving the availability of cooccurrence with nominal degree modifiers, one involving depictive secondary predication, and a final diagnostic involving the availability of relative clause modification.

4.2.1. The distribution of nominal degree modifiers

Following Morzycki (2009)'s tests for nominal gradability, it can be seen that not just singular count nouns, but mass nouns and plurals, can be regarded as gradable.

(33) a. Mary is an utter jerk
b. Those guys are utter jerks
c. This paper is utter nonsense

On the proposal according to which gradability is a property of expressions denoting properties of ordered states, the presence of the nominal degree modifier *utter* in the examples in (33) indicates the presence of a state argument somewhere in the composition of the noun-phrases. As the following examples show, however, only the state arguments of singular count nouns appear to be available for further modification in pseudo-partitives.

(34) a. How much of a jerk is Mary?
b. *How much (of) jerks are those guys?
(cf. *How many jerks are those guys?*)
c. How much (*of) nonsense is this paper?

While the interpretation of (34-a) is one on which what is questioned is the degree to which Mary is a jerk, (34-b) is ungrammatical on any interpretation, while (34-c) can only be regarded as questioning an extensive degree, rather than an intensive one. That is, (34-c) cannot be paraphrased by *To what extent is this paper nonsense?*, but only by *How much paper is there?*. Apparently, the

state argument of mass nouns and plurals becomes closed off to further modification once a certain amount of structure is added, while the state argument of singular count nouns does not. The relevant amount of structure seems to be just enough to form a pseudo-partitive. Therefore, on the current account, on which pseudo-partitives and inversion-constructions involve the same syntax, while inversion-constructions compose properties of states, the latter are predicted to display a similar behavior. In this case, as well, the state argument of mass nouns and plurals should become closed off. (35) illustrates that this is the case.

(35) a. too friendly of a linguist
b. *too friendly (of) linguists
c. *too tasty (of) cake

(36) a. a jerk of a linguist
b. *a jerk (of) linguists
c. *a disaster (of) conferences

The correlation in judgments between examples like (34) that attempt to directly question the state argument of nouns in pseudo-partitives and inversion-constructions like (35) and (36) is predicted on an analysis of the latter in which the head nouns are required to have state arguments available for modication.

4.2.2. Depictive secondary predication

A second diagnostic involves examples of depictive secondary predication like (37).

(37) He entered the room annoyed

The secondary predicate in such examples contributes the entailment that there is a state of the relevant kind (in this case, annoyance) that temporally overlaps with the event characterized by the verb. In other words, (37) means that the subject was annoyed while entering the room. In order to capture this entailment, Pylkkänen (2002) introduces a head, with the meaning in (38), responsible for introducing depictive secondary predication.

(38) $[\![dep]\!] = \lambda f_{\langle e, \langle s, t\rangle\rangle}.\lambda x_e.\lambda e_v.\exists s_s[f(x)(s)\ \&\ e \circ s]$

Such a head requires the adjective it combines with to have a state argument available for composition. Given the data in the last section illustrating that the state argument remains available outside the noun-phrase only for singular count nouns, the current analysis makes the following prediction: among nouns, only singular count nouns should be available for secondary predication. Though there is some variability in judgments for these sentences, (39) and (40) appear to bear out this prediction.

(39) a. The dough ball came out of the oven a pizza
b. ??The dough ball came out of the oven pizza
c. ??The dough balls came out of the oven pizzas

(40) a. The batter will come out of the oven a cake
b. ??The batter will come out of the oven cake
c. ??The cups of batter will come out of the oven cakes

In conclusion, there is evidence that singular count nouns, but not mass nouns and plurals, may denote stative properties in English. Moreover, given this evidence, the prediction that only singular count nouns may enter inversion-constructions in English is borne out, as (35) and (36) illustrated.

4.2.3. Relative clause modification

A final prediction resulting from the claim that the modifier and head noun in inversion-constructions are stative-property denoting is that they should not be able to be modified by an individual-property denoting expression like a relative clause. This prediciton results because a modifier denoting a property of individuals should be unable to compose with a modifier denoting a property of states. It, too, appears to be borne out.

(41) a. I read a long book that Camilla recommended
b. ??I read too long of a book that Camilla recommended

While in (41-a), the relative clause *that Camilla recommended* modifies a noun-phrase that denotes a property of individuals, in (41-b), it modifies the head noun in an inversion construction, which denotes a property of states. Insofar as (41-b) is acceptable, it appears to involve modification, not of the head noun, but of the entire inversion-construction, presumably after either a type shift or some functional head in the clause has transformed it into a property of individuals.

In summary, three types of evidence support the hypothesis that inversion-constructions involve the composition of stative properties. The positions of stative modifiers like *utter* and *much* show that the state arguments of plurals and mass nouns become closed off outside the noun phrase—in particular, after enough structure to form a pseudo-partitive has been added to them. Singular count nouns, on the other hand, make their state arguments available for further composition, correctly predicting that inversion-constructions should only be felicitous with singular count nouns. Secondary predication provides another test of the stativity of singular count nouns, in that these, but not mass nouns and plurals, may be used as depictive secondary predicates. Finally, the unavailability of relative clause modification of the head noun in inversion-constructions further supports their status as stative-property denoting.

5. Conclusion

The main goal of this paper has been to show that the constructions conventionally classified as pseudo-partitives, on the one hand, and inversion-constructions, on the other, can be given a unified analysis that reflects their superficially similar syntax. In unifying them, it was shown that it is possible to give a compositional analysis of pseudo-partitives—one that enforces the monotonicity constraint—while still regarding both the modifier and the head noun as denoting properties of individuals. While the constraint is no longer, as in Schwarzschild (2002), considered to be hard-wired into the grammar, e.g., via the denotation of a functional head guaranteeing monotonicity, a proxy for it was instead shown to be found in the domain of properties of individuals—that is, non-divisiveness. Moreover, data from English and Norwegian show that the same constraint, but on inversion-constructions, can be seen in the domain of stative properties.

One particular question left unaddressed in this paper is what is allowed to "invert" in the inversion-constructions of a given language. Unlike most previous analyses of the construction (Bowers, 1975, 1987; Kennedy and Merchant, 2000; Matushansky, 2002, a.o.), the current proposal assumes that the syntax of the modifiers involves base-generation, rather than movement, of the modifier before the head noun. Such a hypothesis suggests an account on which the availability of a given modifier in a language with inversion is based on syntactic selection. For example, while English may allow only degree-phrases and noun-phrases to occupy the modifier position, languages like Norwegian may additionally allow bare adjective-phrases, explaning the non-obligatoriness in such languages for degree modification of the inverted adjective.

Another question which I leave unaddressed here, but which will have to figure into a complete account of inversion-constructions, is how a property of states is converted into a property of individuals in their interpretation. Above were mentioned two possiblities: conversion by a type-shift, and selection by a null functional head that introduces the relevant thematic relation between states and individuals. According to previous analyses of the distribution of null functional heads in the nominal projection, for example, that pursued in Chierchia (1998)'s analysis of bare nouns, such heads need to be licensed by some governing lexical head. Their distribution, as illustrated, for example, by bare nouns in Italian (42), shows that they are generally unlicensed in subject

position.

(42) a. Leo ha mangiato patate
Leo PST eat potatoes
'Leo ate potatoes'
b. *Studenti hanno telefonato
students have phoned

(Chierchia, 1998, pp. 283-284)

If null functional heads in the nominal projection in English are subject to similar constraints, then it may be possible to tease appart an account based on type-shifts from one based on null structure. As Bresnan (1973) points out, inversion-constructions do in fact become degraded when placed in subject position, potentially supporting an account based on a null functional head.

(43) a. Mary is too nice of linguist
b. Mary read too long of a book
c. ??Too nice of a linguist walked in

(44) a. Mary is a jerk of a linguist
b. Mary read a mammoth of a book
c. ??A jerk of a linguist walked in

While inversion-constructions generally appear felicitously in predicate and object position, they seem to become degraded as subjects. If a null functional head is involved in their interpretation as properties, then the licensing conditions involved might explain their distribution. These issues, however, will have to be left to future investigation.

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