

Ora Matushansky, UiL OTS/CNRS/Université Paris-8

email: Ora.Matushansky@let.uu.nl

homepage: <http://mapage.noos.fr/matushansky/>

MORE OF THE SAME
GLOW 31, Newcastle University, March 26-29, 2008

The big picture:

- A compositional analysis of the semantics of the internal *same* on the basis of the semantics proposed by Barker (to appear)
- Extension: the deictic *same*
- Confirmation: *same* in Russian
- Equatives and a non-QR analysis of degree operators

1. THE SEMANTICS OF THE INTERNAL SAME

Carlson (1987), Moltmann (1992), etc., distinguish between the **deictic *same***, which requires a contextual antecedent or a comparison clause (*same... as*) and **the internal *same***, which is dependent on a plural or a universal:

- (1) a. Alice bought the same book as Beth. deictic
b. Alice bought *Neverwhere*. Beth bought the same book.
- (2) a. Alice and Beth bought the same book. internal
b. Every girl bought the same book.

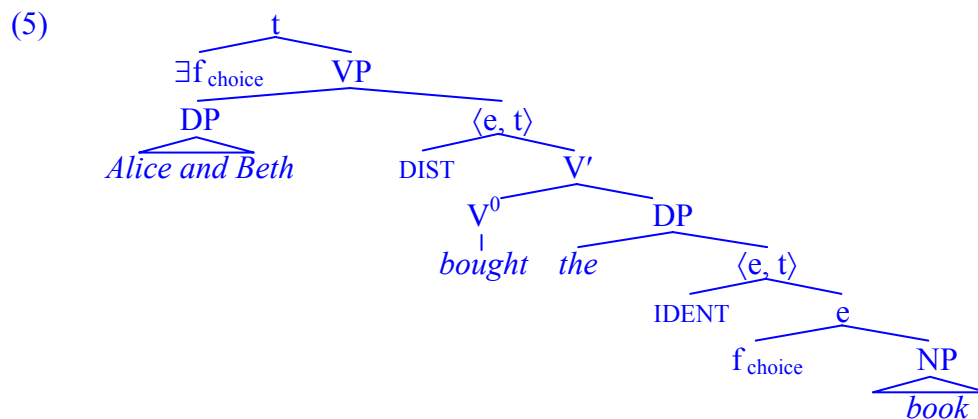
In a recent paper, Barker (to appear) proposes a novel approach to the semantics of *same* (and *different*). His starting point is the NP-internal use of *same*, where no plural antecedent is available and *same* is licensed by the plurality of the NP containing it:

- (3) I met two men with the same name.

Barker offers the following paraphrase as the basis for semantic composition:

- (4) $\exists f_{\text{choice}}$ I met two men with the f_{choice} (name).

To obtain these truth-conditions, he relies on a rather complex lexical entry for *same* (see Appendix 1). I propose to do so by a **different derivation**:



The structure in (5) contains the following pieces:

- The distributive operator with plurals (obviously, nothing with universals)
- A choice function f_{choice}
- An equivalent of Partee's IDENT type-shift (lexicalized as *same*): $x \rightarrow \lambda y . y=x$
- Existential closure over the choice function

None of these items is introduced for the purposes of *same* only; all have been independently proposed and can be motivated by the consideration of cross-linguistic lexicalization of *same*.

The two approaches are approximately even on empirical coverage (see Appendix 1)

2. THE DEICTIC SAME

Barker's account only deals with the "internal" *same*, the deictic *same*, as in (6), remains an unresolved issue. Our decomposition does not *a priori* offer a solution for this problem either.

- (6) a. Beth bought the same car as Alice.
 b. Alice bought a BMW. Beth bought the same car.

Importantly, the deictic *same* does demonstrate island-sensitivity:

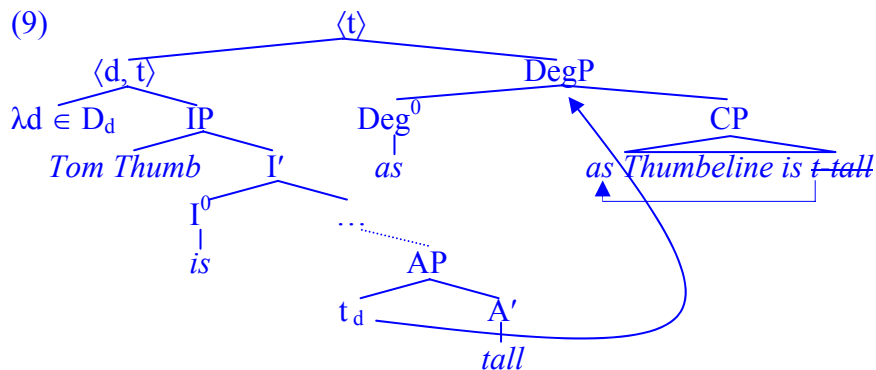
- (7) a. *Alice bought the same book as Beth heard the claim that she did.
 b. *Alice organized a party that took place on the same day as Beth did.

2.1. Standard view

The comparative clause is an argument of the deictic *same* and thus forms part of the DP containing *same*. In this respect the deictic *same* is treated just like an equative morpheme:

- (8) a. the same [as this one] book underlying form
 b. a book [as [as this one] long]

Standard view: the comparative clause is merged in the base position of the equative or the comparative morpheme and its surface position indicates the scope of this morpheme (various implementations, see in particular Williams (1974) and Fox and Nissenbaum (1999))



Bhatt and Pancheva (2004) propose that the comparative clause is counter-cyclically merged in the surface position of the equative or the comparative morpheme

Either analysis can be extended to *same*.

Problems:

- (a) the left-branch constraint (cf. Kennedy and Merchant (2000))
- (b) no connection to the internal *same* (cf. Beck (2000))
- (c) violation of the Head-Final Filter in the underlying representation (a complement to a prenominal adjective is normally not allowed) in the standard view

2.2. As indicates movement

Potts (2002a, 2002b), building on Ross (1984): the parenthetical in (10a) involves movement of the main clause (as opposed to its counterpart in (10b), where only the relative operator is moved):

- (10) a. Americans should get cheap oil, as the whole world knows.
 b. Americans should get cheap oil, which the whole world knows.

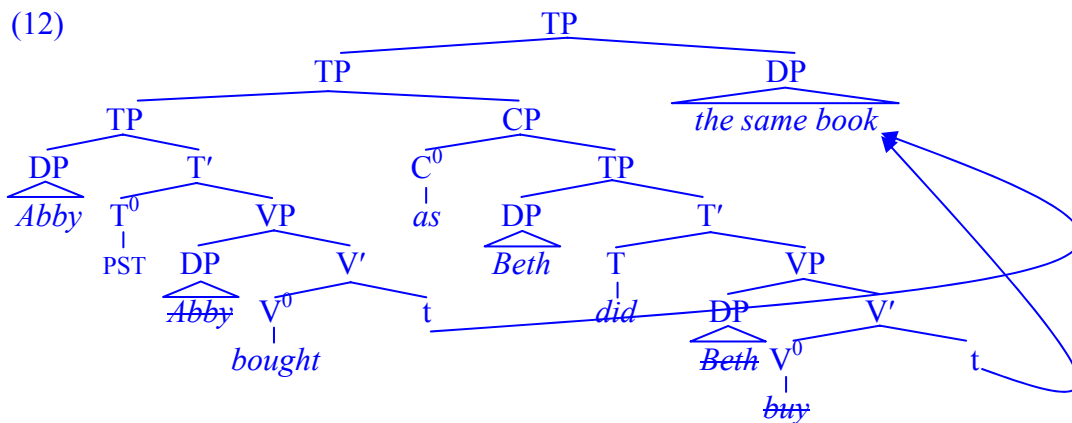
Potts' analysis:

(11) [_{CP} Americans should get cheap oil], as the whole world knows t.

Heim (2000), Bhatt and Pancheva (2004): Equatives and comparatives involve the movement of the equative/comparative degree operator in the matrix clause and of the λ -operator inside the subordinate clause. Here also, the presence of *as* again coincides with movement.

2.3. Same pied-piping

Hypothesis: the deictic *same* triggers ATB movement of the DP containing it:



In the structure in (12), the comparative clause is merged directly with the matrix TP (or CP), which means that it is not syntactically associated with the *same* DP at all.

The movement of the DP containing *same* correctly predicts the known island sensitivity of the deictic *same*.

Because the DP containing *same* takes scope over the two conjuncts, so does necessarily the existential closure over the choice function contained in it. Furthermore, this view eliminates the need for a choice function analysis altogether if we can argue that such movement also happens in the “internal” *same* constructions (see below)

The comparative clause becomes sentence-final as part of an **independent requirement for CPs to be peripheral**.

The assumption that what moves is the entire DP containing *same* permits us to avoid some of the problems noted above (LBC, coordinate structure constraint, specificity island), but it does not explain what triggers the movement of *same* to a clause-level position

2.4. The emphatic nature of *same*

Proposal: *same* (or more precisely, the IDENT function) is **intrinsically emphatic**. Emphatic elements (e.g., exclamation marks, both *wh*- and *not*) are known to trigger clause-level movement

Support: The use of emphatic elements in cross-linguistic lexicalizations (cf. Safir (1996)):

- French (and Romance): *même* ‘even’, also used for emphasis with logophors
- Russian: emphatic particle *že* (see below)
- Dutch (and German): root *zelf* ‘self’

Unlike in Barker’s proposal, movement is not triggered for semantic reasons (no type-clash), which is why no compositionality problem arises

NB: Or, more precisely, if there is a semantic trigger to emphatic movement, no new problems arise here

Under this view, the double use of *as* also indicates emphasis

2.5. Same movement and (pseudo-)gapping

Hypothesis: **the *as*-clause requires gapping or pseudo-gapping**, which means that before being extracted, the *same* DP raises to its periphery (to [Spec, CP]) and the VP (or T', in the case of gapping) is elided.

The availability of the escape hatch explains **why this adjunct is not an island**

Novel observation: If (pseudo-)gapping does not happen, an *as*-clause is generally judged ungrammatical, and a *that*-clause is used instead:

- (13) a. *Abby bought the same book as Beth sold. ?? in some idiolects
 b. Abby bought the (very) same book that Beth sold.

Note that exactly the same constraint applies to attributive comparatives, which also require gapping or pseudo-gapping (Pinkham (1982), Kennedy and Merchant (2000)).

The opposite seems false: *that*-clauses are perfectly compatible with pseudo-gapping, but not with gapping:

- c. Abby bought the (very) same book that Beth *(did).

Gapping is independently known to be impossible in relative clauses (probably because the relative operator occupies the position associated with the subject remnant).

I surmise that the structure in (12) is made possible by the prior movement of the *same* DP to [Spec, CP] (a subpart of the (pseudo-)gapping phenomenon). The non-total ungrammaticality of (13a) results from the confusion with (13b).

2.6. Same pied-piping

We can now propose a potential account for the contrasts in (32) and (33):

- (32) a. John and Mary had a strong belief that Sue took the same course.
 b. A car driven by the same driver hit John and Mary.
 c. *John and Mary were late because the same accident paralyzed the city traffic.
 d. John and Mary were late because of the same accident that paralyzed the city traffic.
 e. *That the prize was awarded to the same author surprised John and Mary.
- (33) a. Every student had a strong belief that Sue took the same course.
 b. A car driven by the same driver hit every student.
 c. *Every student was late because the same accident paralyzed the city traffic.
 d. Every student was late because of the same accident that paralyzed the city traffic
 e. *That the prize was awarded to the same author surprised everyone.

In order for *same* to be licensed, it has to move to a clause-level position (potentially, inside an island). In order for the sentence to be interpretable, the constituent containing *same* has to appear higher than a distributive operator or a universal.

Hypothesis: the ungrammatical examples involve structures where the island containing *same* (a clause) cannot be pied-piped to the periphery of the matrix clause.

Whereas complement and relative clauses can be right-extrapolated, adjunct clauses cannot

3. SAME IN RUSSIAN

A confirmation of Barker's decompositional re-analysis comes from the behavior of *same* in Russian (similar facts hold in Hebrew).

3.1. The deictic *same*

Setting aside the reciprocal property comparison adjective *odinakov-* (see Israeli (1999) and Matushansky and Ruys (2007)), the Russian *same* is purely functional and expressed by some deictic element in combination with the emphatic particle *že*:

(14) Lena kupila tu že knigu, čto i Vera. object comparison
Lena bought that JUST book that AND Vera
Lena bought the same book as Vera.

(15) a. Lena kupila takuju že knigu, kak (i) Vera. property comparison
Lena bought such JUST book that AND Vera
Lena bought the same kind of book as Vera.

b. Liza vospitana tak že, kak ee mama.
Liza brought up so JUST how her mother
Liza is brought up like her mother.

As in English, the Russian distal demonstrative can function as a marker of specificity:

(16) Ty pomniš' tu grečanku, kotoraja rabotala s nami v Rime?
you remember that Greek.F which worked with us in Rome
Do you remember that Greek woman who worked with us in Rome?

As the English gloss shows, the demonstrative here introduces a specific indefinite, which is fully in agreement with the choice-function treatment of *same*. Furthermore, the correlation between *same* and the demonstrative pronoun with an emphatic item is also found in English:

(17) a. Alice bought *Neverwhere*. Beth bought that very book as well.
b. We already bought *Neverwhere*. Why did you have to buy just that book?

At first blush, it would seem that Russian only has the deictic use of *same* constructed on the basis of a relative clause. However, in (14) instead of the standard relative pronoun *kotoraja* 'which', we have *čto*, which is ambiguous between the interrogative (or non-default relative) *what* and **the complementizer *that* (the equivalent of *as here*)**.

When the default relative pronoun is used, gapping is impossible, similar to English:

(18) Lena pročla tu že knigu, kotoruju *(čitaet) Vera.
Lena read that JUST book which reads Vera
Lena read the same book that Vera is reading.

Thus in Russian we have simultaneously a confirmation that the relative clause structure can be associated with *same* and support for Barker's choice function treatment (decomposed)

3.2. The internal *same*

Only the distal demonstrative *to-* 'that' allows an internal reading of *same*, which is probably due to the fact that such a reading is not possible in absence of a reinforcement:

(19) Lena i Vera kupili *(odin i) tot že dom.
Lena and Vera bought one-M.SG and that-M.SG JUST house
Lena and Vera bought (one and) the same house.

Important points:

- *i* 'and' is an emphatic marker in Russian
- *odin* 'one' is a specific indefinite marker (Ionin (2007))
- Almost the same construction is optionally used in French (*un (seul et) même NP*) and Spanish (*un mismo NP*) for the internal *same* in absence of a proper licenser (Laca and Tasmowski (2001)).

Hypothesis: the use of two items with the same function (identity) has the emphatic effect we find with *same* and which is required to induce movement.

NB: The *same* DP is infelicitous in the preverbal domain (between the subject and the verb, where topical/old information is usually located in Russian), which strongly supports the theory that it is an emphatic element that triggers movement to the clausal periphery

4. CONCLUSION AND NEW QUESTIONS

We propose that the English *same* is the lexicalization of the IDENT operator, which has an emphatic feature, triggering the pied-piping of the constituent containing it. This permits us to obtain the same truth-conditions as Barker’s account but without relying on the movement of *same* itself.

The obligatorily attributive nature of *same* suggests that **its true counterpart is not *different* but *other***.

The proposed analysis can be extended towards a novel account of the deictic *same*, which does rely on movement, and also to equatives (see the Appendix).

If the proposed account can be extended to equatives and comparatives, then we may have an **approach to comparison that does not rely on overt movement of degree morphemes**

The choice function + IDENT approach may be extensible towards **comparative superlatives**, which would be a very good thing (and Russian has some lexical evidence in favor of this)

5. APPENDIX 1: BARKER’S ANALYSIS

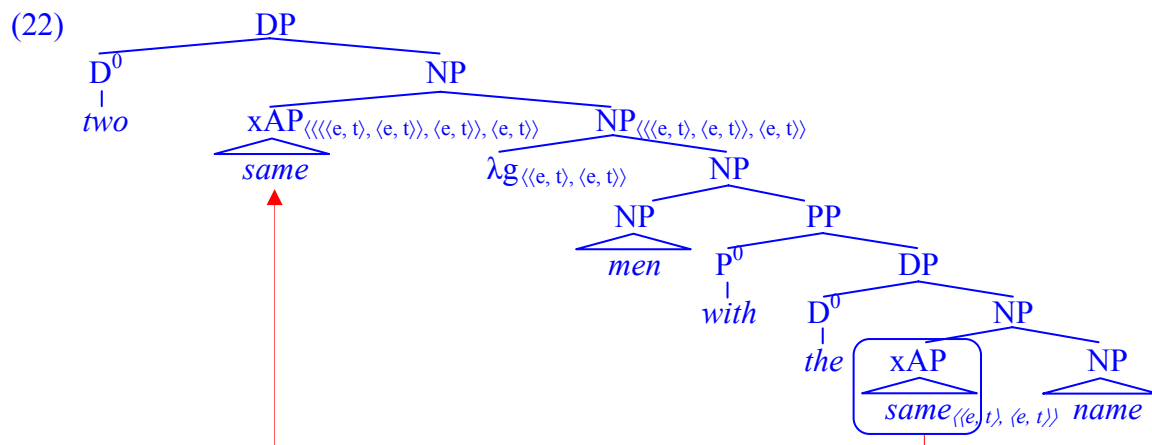
Barker (to appear): the NP-internal use of *same* is basic:

(20) Two men with the same name are sitting in this room.

To obtain the right truth-conditions, Barker proposes that *same* is a quantificational adjective with a rather complex meaning:

(21) $[[\text{same}]] = \lambda F_{\langle\langle e, t \rangle, \langle e, t \rangle, \langle e, t \rangle\rangle} . \lambda X_e . \exists f \forall x < X [[F(f)](x)]$
f is a choice function of the unusual type $\langle\langle e, t \rangle, \langle e, t \rangle\rangle$ and returns a singleton set (rather than an entity)

Because *same* is not interpretable in its base position, it must QR and adjoin to some node of the type $\langle e, t \rangle$, leaving behind a trace of the type $\langle\langle e, t \rangle, \langle e, t \rangle\rangle$.

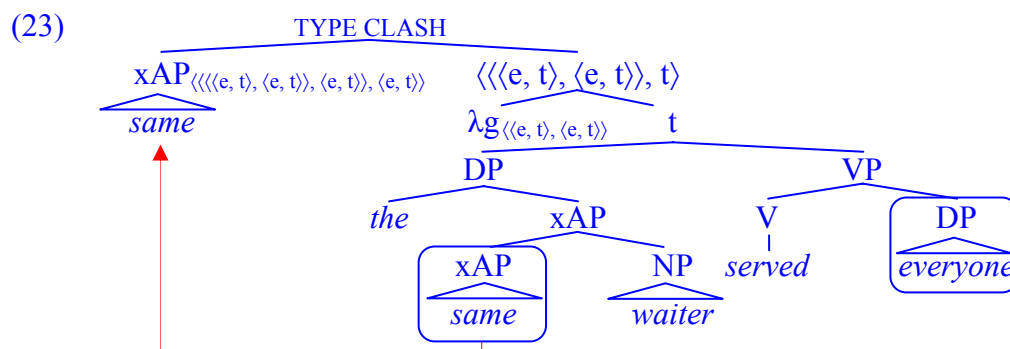


As a result, (4) is compositionally derived as the meaning of (3).

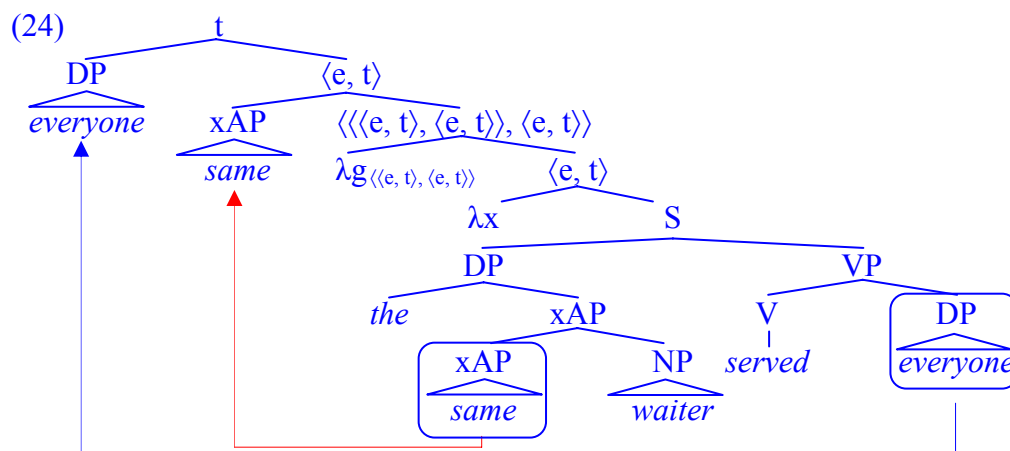
It is easy to see that all the pieces discussed above are made available by my analysis, with no additional stipulations:

- The complex trace of *same* (Barker’s special $\langle\langle e, t \rangle, \langle e, t \rangle\rangle$ choice-function) is just the **combination of IDENT applying to the NP containing a choice function**. In my analysis they are merged as two independent nodes not forming a constituent
- The **distributive operator** and the **existential closure over the choice function** (both freely available semantic operators in my analysis) are treated as part of the lexical entry for *same*.

Barker’s analysis is recast in variable-free semantics terms, but in more standard approaches it presupposes the **movement of *same***. This is a problematic assumption, when NP-external uses of *same* are considered:



To solve this problem, Barker proposes a variation on the standard compositional semantics of movement, where the adjunction of the moved element does not occur immediately after λ -abstraction (parasitic scope):



NB: A similar solution, which implies the syntactic reality of λ -abstraction, was proposed for the treatment of parasitic gaps by Nissenbaum (1998a, 1998b) and for comparative superlatives by Heim (1999)

5.1. Comparison of the two derivations

The truth-conditions derived by the two analyses are the same. The choice function treatment means that *same* is correctly predicted to be obligatorily attributive

The **presence of the definite article** follows if *same* has the meaning of IDENT, since IDENT has the **uniqueness presupposition associated with *the***:

(25) $\llbracket \text{IDENT} \rrbracket = \lambda x . \lambda y . y=x$

Likewise, Barker’s complex choice-function trace also has the uniqueness presupposition.

DPs containing *same* don't have the **existence presupposition associated with definites in argument positions** (Moltmann (1992), Van Peteghem (1997), Barker (to appear)). This is not a serious problem for either account, since **comparative superlatives** are another type of definites with this property (Szabolcsi (1986)).

NB: Project for the future: try to extend the choice-function analysis to comparative superlatives

Barker's analysis requires treating *everyone* as a generalized quantifier that can combine with non-atomic predicates. As noted by Barker, *each* is known to not have this property, but also permits *same*. In the decompositional analysis, the **distributive operator** is not projected for universals (*each* and *every*), so there's no problem with *each*.

In addition (Øystein Nilsen, p.c.), *same* can appear with cumulative predicates:

(26) Both actresses shared the same age, being 47, and perhaps shared the same passion for collagen implants. (online data)

Barker's analysis requires **plurals to QR**, because non-generic bare plurals can license *same* (see Carlson (1987), Laca and Tasmowski (2001)):

(27) a. The same bathroom was provided for men and women.
b. The same conditions applied to people from different backgrounds.

As bare plurals are generally assumed to be unable to QR, this assumption is problematic

NB: Not all bare plurals license *same* with equal ease, cf. *The same waiter served *(different) people*.

Finally, the decompositional analysis does not rely on **movement** in the way Barker's does

Briefly, the relation between *same* and its antecedent is not island-sensitive, although it does seem to obey some locality constraints (more on this below)

NB: It could have been objected that Barker's eventual analysis, based on continuations, does not require syntactic movement of *same*. However, as long as the same mechanism is also used for QR in general (which is known to be island-sensitive), the problem persists

5.2. Licensing of *same*

Heim (1985), Carlson (1987), Moltmann (1992), etc.: the internal *same* and *different* must be licensed by a plural or a universal

Barker (to appear): (28a) is impossible because an atomic individual has no proper subparts:

(28) a. John read the same book.
b. John ($\lambda X . \exists f \forall x < X . \text{read}(\text{the}(f(\text{book}))) (x)$)

However, if *John* has no proper subparts, the antecedent of the conditional (\rightarrow) introduced by the universal quantifier is false, which means that the entire conditional is true, as can be seen from the more conventional notation in (28c):

(28) c. John ($\lambda X . \exists f \forall x [x < X \rightarrow \text{read}(\text{the}(f(\text{book}))) (x)]$)

In other words, Barker predicts that (28a) should be false.

While in my analysis, adding a **plurality presupposition** to the freely available distributive operator is required for independent reasons (if a distributive operator can be inserted freely, distribution over singular individuals should be prevented everywhere), in Barker's account it would further complicate an already complex lexical entry, albeit in an expected way.

The decompositional analysis, which does not require the movement of *same*, predicts that it should be compatible not only with the absence of a licenser, but also with a configuration where the licenser (even after QR) does not c-command *same*. This is incorrect (see Carlson (1987)):

- (29) a. #The same actor believed that everyone hated his performance.
 b. #The same director hated Alice.

In order to deal with this problem, a better theory of emphasis is required. However:

- The combination of a choice function, IDENT and *the* has the same effect as just *the* (whether we believe that the definite determiner contains existential closure or piggy-backs on it)
- Consequently, this combination has to be emphatic and introduced for pragmatic reasons
- Possibility: the identity of the individual *x* picked out by the choice function to *x* implies that this choice function is salient (or that it picks out discourse-salient objects – otherwise, why emphasize?). This can result in the discourse-anaphoric reading. For the deictic reading with a comparative clause, the emphasis might yield the lack of salient choice functions rendering only one of the two conjuncts true – this concerns, in particular, the comparative clause, since it is regarded as old information.
- Importantly, when no alternatives are available, the use of emphasis is odd, which means that only the discourse-anaphoric reading is present

5.3. The movement of *same*

Movement of *same* out of the DP containing it runs afoul of several syntactic constraints:

- **LBC:** This problem is shared by movement accounts of attributive comparatives and equatives (cf. Kennedy and Merchant (2000)) and superlatives
- **Specificity constraint:** a DP containing *same* may be specific, as in (30a)
- **Coordinate structure constraint:** a DP containing *same* can be coordinated with a DP not containing it, as in (30b)

- (30) a. Alice and Beth saw the same car at the murder scene – Claire's BMW.
 b. Deirdre and Ellen bought [_{NP} the same journal but different newspapers].

Moltmann (1992): the syntactic relation between *different* and its licenser is not constrained by the standard locality constraints on movement (see also Laca and Tasmowski (2001)):

- (31) a. John and Mary want Sue to take different courses.
 b. John and Mary thought that Sue took different courses.
 c. John and Mary organized parties that took place on different days.
 d. John and Mary thought that Sue took courses that were taught by different teachers.
 e. John and Mary thought that Sue solved the problem by using different methods.

However, there are reasons to believe that some movement is nonetheless involved:

- (32) a. John and Mary had a strong belief that Sue took the same course.
 b. A car driven by the same driver hit John and Mary.
 c. *John and Mary were late because the same accident paralyzed the city traffic.
 d. John and Mary were late because of the same accident that paralyzed the city traffic.
 e. *That the prize was awarded to the same author surprised John and Mary.
- (33) a. Every student had a strong belief that Sue took the same course.
 b. A car driven by the same driver hit every student.
 c. *Every student was late because the same accident paralyzed the city traffic.
 d. Every student was late because of the same accident that paralyzed the city traffic
 e. *That the prize was awarded to the same author surprised everyone.

Judgment summary: (c) and (e) examples are the worst; other examples are judged to be fine to odd (in the latter case, (33) is judged to be worse than (32), but not ungrammatical)

⇒ *same* is not island-sensitive, with the exception of sentential islands. We will return to this. In short, movement of *same* itself seems problematic.

Summing up: The decompositional analysis achieves the **same truth-conditions** as Barker's original lexical entry, but **does not rely on movement**, which yields better syntax

6. APPENDIX 2: SOME SCATTERED THOUGHTS ABOUT EQUATIVES

Heim (1985): The syntax and semantics of equatives and comparatives are very similar to the syntax and semantics of *same* and *different*:

- Taking the *than*-phrase (like comparatives) or an *as*-phrase (like equatives)
- The comparison phrase can be a DP or a CP
- Taking scope

Schwarz (2007): German reciprocal equatives are based on the adjective *gleich* 'same':

- (34) Hans und Maria tragen gleich schwere Rucksäcke.
 Hans and Maria carry equally heavy backpacks
Hans and Maria carry equally heavy backpacks.

The same is true for Russian:

- (35) Liza i Lina odinakovo umny.
 Liza and Lina same-ADV clever-PL
Liza and Lina are clever to the same degree.

Non-reciprocal Russian equatives are constructed with the similarity demonstrative *tak*- 'so, such' and the particle *že*, just like *same*:

- (36) Lena kupila takuju že doroguju knigu, kak i Vera.
 Lena bought such-F.SG JUST expensive book how AND Vera
Lena bought as expensive a book as Vera.

How incidental is that?

Supposing that (36) means something like:

- (37) $\exists d$ [d is a degree of cost such that Lena bought a book expensive to d and Vera bought a book expensive to d]

The assumption that an equative implies existential quantification in the first conjunct (rather than an ι -operator or a universal quantifier) is supported by the possibility of (38):

- (38) Mary is as tall as John, and even taller.

NB: This is not my observation; I want to attribute it to Chris Kennedy, but I don't recall where I saw it.

Obviously, any equative would have been trivially true if the degree under consideration had been just any degree – instead, it has to be the maximal degree for the second conjunct (the standard of comparison). The same property seems to hold for the deictic *same*:

- (39) Alice saw the same movies as Beth did.
 a. In fact, Alice also saw *Orlando*.
 b. *In fact, Beth also saw *Orlando*.

To account for this observation in the standard approach (e.g. Heim (1985)) it is necessary to utilize the maximality operator in first conjunct but not in the second one.

Heim (1985): *-er* with a comparative clause (*taller than that*, *taller than 10*):

- (40) $\llbracket \text{more} \rrbracket = \lambda d \in D_d . \lambda f \in D_{\langle d, t \rangle} . \max (f) > d$ Heim (1985)
 where $\max (P) = \text{id} \in D_d [P(d) = 1 \wedge \forall d' \in D_d [P(d') = 1 \rightarrow d' \leq d]]$

Extension to comparative clauses (extrapolated from Bhatt and Pancheva (2004)):

- (41) $\llbracket \text{more} \rrbracket = \lambda g \in D_{\langle d, t \rangle} . \lambda f \in D_{\langle d, t \rangle} . \max (f) > \max (g)$

This does not yield the correct result for the equative *as*, unless equality is not used:

- (42) a. $\llbracket \text{as} \rrbracket = \lambda d \in D_d . \lambda f \in D_{\langle d, t \rangle} . \max (f) \geq d$
 b. $\llbracket \text{as} \rrbracket = \lambda g \in D_{\langle d, t \rangle} . \lambda f \in D_{\langle d, t \rangle} . \max (f) \geq \max (g)$

A possible alternative: reduce the symmetry between the main and the comparative clauses by using existential quantification in the main clause (which is truth-conditionally identical):

- (43) a. $\llbracket \text{as} \rrbracket = \lambda d \in D_d . \lambda f \in D_{\langle d, t \rangle} . \exists d' [f(d') \ \& \ d' = d]$
 b. $\llbracket \text{as} \rrbracket = \lambda g \in D_{\langle d, t \rangle} . \lambda f \in D_{\langle d, t \rangle} . \exists d' [f(d') \ \& \ d' = \max (g)]$

However, if the comparative clause contains a maximality operator, the parallelism with our analysis of *same* can no longer be maintained, since an ATB movement analysis is no longer applicable

A possible alternative involves suitably restricting the choice function (by sheer brute force; a neater approach is possible for relatives) in such a way that it returns a degree of height for the matrix clause and the maximal degree of height for the comparative clause.

A simpler way is to stipulate the presence of a null modifier with the meaning more or less identical to *maximally* in the comparative clause:

- (44) $\llbracket \text{max}_{\text{degree}} \rrbracket = \lambda f_{\langle d, \langle e, t \rangle \rangle} . \lambda d . \lambda x . [f(d)(x) \wedge \neg \exists d' [d' > d \wedge f(d')(x)]]$

Although this seems to solve the problem, the question arises why this maximality modifier has to be used in comparative clauses, and I have no answer to this question yet, except for a vague appeal to similar maximality effects in questions

On the bright side, such a maximality modifier can reasonably be argued to induce movement to a clausal level, thus yielding the well-known island effects in comparatives – the only difference from the standard analysis would be that movement will be triggered not by type conflicts but rather by the pragmatic necessity (if it is emphatic). As a result, it becomes no longer necessary to move just the degree operator – pied-piping becomes possible

Since equatives do not interact with quantifiers in detectable ways (Heim (2000)), we cannot check whether this analysis leads to incorrect predictions, but it does seem to derive the right truth conditions:

- (45) a. Every student is as tall as Alice.
 \approx there exists a degree such that every student is tall to that degree and Alice is maximally tall to that degree
 b. Alice is as tall as every student.
 \approx there exists a degree such that Alice is tall to that degree and every student is maximally tall to that degree

In addition, it seems to correctly predict the interpretation of multiples in equatives, although this is a peculiarity of English:

- (46) Lee is twice as tall as Lou.

7. REFERENCES

- Barker, C. (to appear). Parasitic scope. *Linguistics and Philosophy*.
 Beck, S. (2000). The semantics of *different*: Comparison operator and relational adjective. *Linguistics and Philosophy* 23, pp. 101-139.

- Bhatt, R. and R. Pancheva (2004). Late merge of degree clauses. *Linguistic Inquiry* 35/1, pp. 1-45.
- Carlson, G. N. (1987). *Same and different*: some consequences for syntax and semantics. *Linguistics and Philosophy* 10, pp. 531-566.
- Fox, D. and J. Nissenbaum (1999). Extraposition and scope: a case for overt QR. In S. F. Bird, A. Carnie, J. D. Haugen and P. Norquest, eds., *WCCFL 18: Proceedings of the 18th West Coast Conference on Formal Linguistics*. Somerville, Massachusetts: Cascadilla Press.
- Heim, I. (1985). Notes on comparatives and related matters. Ms., University of Texas, Austin.
- Heim, I. (1999). Split scope and anonymy. Paper presented at *The Twelfth Amsterdam Colloquium*, Amsterdam, the Netherlands.
- Heim, I. (2000). Degree operators and scope. In B. Jackson and T. Matthews, eds., *Proceedings of Semantics and Linguistic Theory (SALT) 10*. Ithaca, New York: CLC Publications, Department of Linguistics, Cornell University, pp. 40-64.
- Ionin, T. (2007). This one is certainly funny: Comparing specificity markers in English and Russian. Paper presented at *Funny Indefinites workshop*, July 6, 2007, Berlin.
- Israeli, A. (1999). "Same" and "different" in Russian. *Journal of Slavic Linguistics* 7/2, pp. 179-218.
- Kennedy, C. and J. Merchant (2000). Attributive comparative deletion. *Natural Language & Linguistic Theory* 19, pp. 89-146.
- Laca, B. and L. Tasmowski (2001). Distributivité et interprétations dépendantes des expressions d'identité. In G. Kleiber, B. Laca and L. Tasmowski, eds., *Typologie des groupes nominaux*. Rennes: Presses Universitaires de Rennes, pp. 143-166.
- Matushansky, O. and E. G. Ruys (2007). Same in Russian. Paper presented at *FSiM 3*, April 28, 2007, Moscow.
- Moltmann, F. (1992). Reciprocals and *same/different*: Towards a semantic analysis. *Linguistics and Philosophy* 15, pp. 411-462.
- Nissenbaum, J. (1998a). Derived predicates and the interpretation of parasitic gaps. In O. Percus and U. Sauerland, eds., *The Interpretive Tract*. MIT Working Papers in Linguistics. Cambridge, Mass.: MITWPL.
- Nissenbaum, J. (1998b). Movement and derived predicates: evidence from parasitic gaps. In K. N. Shahin, S. Blake and E.-S. Kim, eds., *The Proceedings of WCCFL 17*. Stanford: CSLI.
- Pinkham, J. E. (1982). The formation of comparative clauses in French and English. Ph.D. thesis, Indiana University.
- Potts, C. (2002a). The lexical semantics of parenthetical-*as* and appositive-*which*. *Syntax* 5/1, pp. 55-88.
- Potts, C. (2002b). The syntax and semantics of *as*-parentheticals. *Natural Language & Linguistic Theory* 20, pp. 623-689.
- Ross, J. R. (1984). Inner islands. In C. Brugman and M. Macaulay, eds., *Proceedings of the Tenth Annual Meeting of the Berkeley Linguistics Society*. Berkeley: Berkeley Linguistics Society, University of California, pp. 258-265.
- Safir, K. (1996). Semantic atoms of anaphora. *Natural Language & Linguistic Theory* 14, pp. 545-589.
- Schwarz, B. (2007). Reciprocal equatives. In E. Puig-Waldmüller, ed., *Proceedings of Sinn und Bedeutung 11*. Barcelona: Universitat Pompeu Fabra. Available at <http://www.upf.edu/dtf/sub11/>.
- Szabolcsi, A. (1986). Comparative superlatives. In N. Fukui, T. R. Rapoport and E. Sagey, eds., *MIT Working Papers in Linguistics* 8. Cambridge, Mass.: MIT, Department of Linguistics and Philosophy, MITWPL, pp. 245-265.
- Van Peteghem, M. (1997). Sur un indéfini marginal: *même* exprimant l'identité. *Langue française* 116, pp. 61-80.
- Williams, E. (1974). Rule Ordering in Syntax. Ph.D. thesis, MIT.

