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THE SAME AS?

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Plan of this talk:

- A compositional analysis of the semantics of the internal *same* on the basis of the semantics proposed by Barker (to appear)
- The syntax of the deictic same
- Confirmation: *same* in Russian
- Extension: equatives

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. b.	Alice bought the same book as Beth. Alice bought <i>Neverwhere</i> . Beth bought the same book.	deictic
(2)	a. b.	Alice and Beth bought the same book. Every girl bought the same book.	internal

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) The two girls liked the same movie.

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

(4) $\exists f_{choice}$ the two girls liked f(movie).

To obtain these truth-conditions, he relies on a rather complex lexical entry for same (below).

I propose to obtain Barker's truth-conditions by a **different derivation**:



The structure in (5) contains the following pieces:

- The distributive operator (generally assumed for distributive readings of plurals)
- A choice function
- An equivalent of the IDENT type-shift (lexicalized as *same*): $x \rightarrow \lambda y$. y=x
- Existential closure over the choice function

NB: Choice function treatment means that *same* is correctly predicted to be obligatorily attributive

1.1. Barker's lexical semantics

Barker (to appear): the NP-internal use of *same*, where no plural antecedent is available and *same* is licensed by the plurality of the NP containing it, is basic:

(6) 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 that has a rather complex meaning:

(7) $[[same]] = \lambda F_{\langle\langle\langle e, t \rangle, \langle e, t \rangle\rangle, \langle e, t \rangle\rangle} \cdot \lambda X_e \cdot \exists f \forall x < X [[F(f)](x)]$ 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:

- > 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 with the NP containing a choice function**.
- The distributive operator and the existential closure over the choice function are part of the lexical entry for *same*.

Barker's analysis presupposes the **movement of** *same*, which is a problematic assumption for several reasons

1.1.1. Parasitic scope

Barker's assumption that *same* must adjoin to an NP leads to a compositionality problem in the standard compositional account of movement due to Heim and Kratzer (1998), 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)

1.1.2. Continuations

Barker further develops his approach in a novel semantic framework based on continuations, which permits him to extend his analysis to the use of *same* licensed by a plurality of events (Carlson (1987), Moltmann (1992), Laca and Tasmowski (2001)):

(11) a. The same person discovered America and invented bifocals.b. The critic praised and maligned the same film.

Thus Barker offers an elegant compositional account of *same* – but the **lexical semantics** he assumes appears to me somewhat over-complicated and **moving** *same* leads to problems.

1.2. Comparison of the two derivations

The truth-conditions derived by the two analyses are the same.

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

(12) $\llbracket \text{IDENT} \rrbracket = \lambda x \cdot \lambda y \cdot y = x$

Barker's complex choice-function trace also has the uniqueness presupposition, but requires some look-ahead (since *same* itself doesn't).

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, so there's no problem with *each*.

Barker's analysis forces **plurals to QR**. This assumption is problematic, because bare plurals (unless they are generic) can license *same* (see Carlson (1987), Laca and Tasmowski (2001))

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

1.2.1. The movement of same

If same is interpreted in the base position, the interpretation of its modification, as in (13), is no longer problematic (as it is in Barker's analysis).

(13) a. Alice and Beth bought almost the same car. Both too little iron and too much iron can cause nearly the same symptoms. b.

NB: As far as I know, degree modification of same NPs has not been treated compositionally (though Alrenga (2006) discusses the fact of such modification) except briefly in Matushansky and Ruys (2007). Something to come back to

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, \geq equatives and superlatives
- **Specificity constraint**: a DP containing *same* may be specific, as in (14a)
- Coordinate structure constraint: a DP containing same can be coordinated with \triangleright a DP not containing it, as in (14b)
- Alice and Beth saw the same car at the murder scene Claire's BMW. (14) a. Deirdre and Ellen bought [NP the same journal but different newspapers]. b.

1.2.2. Islandhood

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

- John and Mary want Sue to take different courses. (15) a.
 - John and Mary thought that Sue took different courses. b.
 - John and Mary organized parties that took place on different days. C.
 - John and Mary thought that Sue took courses that were taught by different d. teachers.
 - John and Mary thought that Sue solved the problem by using different methods. e.

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

- (16) a. John and Mary had a strong belief that Sue took the same course.
 - A car driven by the same driver hit John and Mary. b.
 - * John and Mary were late because the same accident paralyzed the city traffic. c.
 - d. John and Mary were late because of the same accident that paralyzed the city traffic.
 - *That the prize was awarded to the same author surprised John and Mary. e.
- Every student had a strong belief that Sue took the same course. (17)а. A car driven by the same driver hit every student. b.

 - *Every student was late because the same accident paralyzed the city traffic. C.
 - Every student was late because of the same accident that paralyzed the city traffic d. *That the prize was awarded to the same author surprised everyone. e.

Judgment summary: (c) and (e) examples are the worst; other examples are judged to be fine to odd (in the latter case, (17) is judged to be worse than (16), but not ungrammatical)

 \Rightarrow same is not island-sensitive, with the exception of sentential islands. We will return to this

1.2.3. Licensing of same

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

Barker (to appear): (18a) is impossible because an atomic individual has no proper subparts:

(18) a. John read the same book. b. John(λX . $\exists f \forall x < X.read(the(f(book)))(x))$

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 (18c):

(18) c. John(λX . $\exists f \forall x [x < X \rightarrow read(the(f(book)))(x)])$

In other words, Barker predicts that (18a) should be false rather than infelicitous, and this his account has no advantage over ours in this respect. We will return to this issue.

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

2. THE DEICTIC SAME

Barker's account only deals with the "internal" *same*, the deictic *same*, as in (19), remains an unresolved issue. Our decomposition does not *a priori* offer a solution for this problem either.

(19) a. Beth bought the same car as Alice.

b. Alice bought a BMW. Beth bought the same car.

2.1. As indicates movement

Potts (2002a, 2002b), building on Ross (1984): the parenthetical in (20a) involves movement of the main clause (as opposed to its counterpart in (20b)):

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

Potts' analysis:

(21) [CP Americans should get cheap oil], as the whole world knows t.

In equatives (Heim (2000), Bhatt and Pancheva (2004), etc.) *as* is argued to coincide with the movement of the equative degree operator in the matrix clause and of the λ -operator inside the subordinate clause:



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



In the structure in (23), 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)

2.2. The comparative clause: further refinements

Hypothesis: **the** *as***-clause requires gapping or pseudo-gapping**, which means that before being extracted, the *same* DP raises to its periphery ([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:

(24) a. *Abby bought the same book as Beth sold.b. Abby bought the (very) same book that Beth sold.

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 (23) 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 (24a) results from the confusion with (24b).

The final movement of the *same* DP into its scope position can be argued to result from **the emphatic value associated with** *same* – **the DP is pied-piped** (we will return to this matter). As noted by Safir (1996), *same* is cross-linguistically emphatic (cf. *même* in French).

The comparative clause becomes sentence-final as part of a more general requirement for CPs to be peripheral.

2.3. *Same* pied-piping

We can now propose a potential account for the contrasts in (16) and (17), repeated below:

- (16) 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.
- (17) 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.

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

If the internal same involves movement as well, the choice-function analysis is superfluous

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 \underline{ze} :

(25)	Lena kupila	tu	že	knigu,	čto i	Vera.	object comparison
	Lena bought	that	JUST	book	that AND	Vera	
	Lena bought t						

- (26) 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:

(27) 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:

(28) 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 (25) 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:

(29) 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:

(30) 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 in usually located in Russian), which strongly supports the theory that it is an emphatic element that triggers movement to the clausal periphery

4. 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':

(31) 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:

(32) 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*:

(33) 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 (33) means something like:

(34) ∃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 (35):

(35) 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*:

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

I have no explanation for this observation, though it can be incorporated into the analysis by suitably restricting the choice function (by sheer brute force; a neater approach is possible for relatives).

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:

- (37) 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, which is a peculiarity of English:

(38) Lee is twice as tall as Lou.

5. CONCLUSION AND NEW QUESTIONS

We propose that the English *same* is the lexicalization of the IDENT operator, which has an emphatic feature, triggering the movement of the DP containing it (potentially with further pied-piping).

This permits us to achieve the same truth-conditions as Barker's account but without reliance on the movement of *same* itself.

We proposed a novel account of the deictic *same*, which does rely on movement, and a way of extending this account to equatives.

New questions:

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

Once we have established **the semantics and syntax of** *other*, we can do try to extend it to comparatives.

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 <u>a very good thing</u> (and Russian has some lexical evidence in favor of this)

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