

Carlson (1987)

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Semantics Seminar

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1 Introduction

- Carlson (1987) concerned with distinguishing/discussing the availability of SENTENCE INTERNAL readings of *same/different*.
- **Question:** When is the reading which (1b) has that (1a) does not available and when it is it not? Why?

- (1)
- a. The man went to the same play tonight.
 - b. Bob and Alice attend different classes (e.g., Bob attends Biology 101 and Alice attends Philosophy 799).

- Things to characterize (preliminarily):
 1. Syntactic licensing conditions for the phrase [*same/different* NP]
 2. Semantic conditions on denotations of XP's which license *same/different*.
 3. Which other formatives have similar semantics to *same/different*.
 4. Consequences of assuming an Event Semantics (*à la* Davidson 1980) of *same/different* for syntactic theories.

1.1 Take Home Messages

1. Sentence internal readings of *same/different* require a licensing XP which allows *distributive* readings.
2. Constituent [*same/different* NP] has scope properties (readings subject to island considerations, CSC, interacts with scopal predicates *persuade*, *think*, etc.).
3. Assuming an Event semantics of *same/different* starts us on the road to understanding their behavior.
4. *Same/different* can act as tests on proposed covert structures in certain syntactic environments (e.g., null anaphora).

2 Some Properties of [*same/different NP*]

- Three general readings of *same/different* exist which involve overt comparison and some sort of anaphora:
 1. OVERTLY ANAPHORIC: NP to which comparison is directed is contained within clause (2).
 2. SENTENCE EXTERNAL: NP of comparison comes from preceding discourse (3).
 3. SENTENCE INTERNAL: Comparison (somehow) provided by interpretation of rest of clause, but not overtly (4).
- (2) OVERTLY ANAPHORIC reading of *same/different*:
 - a. Harvey went to a Czech play and Jill went to the same one.
 - b. A different man than I saw ...
 - c. The same cat that chased my dog ...
- (3) SENTENCE EXTERNAL reading of *same/different*:
 - a. The man went to the same play tonight.
 - b. Smith went to a different place on his vacation this year.
 - c. Those two gorillas saw a woman who fed different men.
- (4) SENTENCE INTERNAL reading of *same/different*:
 - a. Bob and Alice attend different classes (e.g., Bob attends Biology 101 and Alice attends Philosophy 799).
 - b. The same salesman sold me these two magazine subscriptions (e.g., Salesman Jones sold me this subscription to *Consumer Reports* and Jones, too, sold me this subscription to *Cosmopolitan*).
 - c. The children like different cartoon shows (e.g., Johnny likes *Batman* and Jenny likes *Daffy Duck*).
 - d. Two men who belonged to the same political party met me at the train station (e.g., Two Democrats met me at the train station).
- Two reasons to separate sentence external/overtly anaphoric readings from sentence internal ones:
 1. Some elements allow only sentence internal readings (5).
 2. Event types compared in internal readings must be distinct; not so in other class (6).
- (5)
 - a. These two expressions mean unlike things.
 - b. *That means an unlike thing
- (6)
 - a. *Different men walked into the room and walked into the room.
 - b. A different man walked into the room.
- Readings we will *not* be interested in whatsoever:
 1. *Different* as “strange, unusual” (7).

- 2. *Different* as “various” (8).
- 3. *Different* as adjectival (9).

- (7) That haircut is very different.
- (8) John went to various places on his shopping trip.
- (9) ...several different animals.

- Also not treated: issues pertaining to singularity/plurality of NP after *same/different*.
- Appears to be agreement with licensing XP in terms of morphosyntactic number (e.g., (4), p. 533).

2.1 Observations on the Character of Licensing XP’s

- Wherever we find *same/different*, we also find a plural or distributive XP elsewhere in the clause (10).
 - Call the [*same/different* NP] the DEPENDENT NP and call the XP which accompanies its use the LICENSING XP.¹
- (10) a. THE MEN went to [the same play] tonight.
b. Sam went to [different places] on HIS VACATIONS this year.
- **NB:** (10b) shows possibility of “cataphoric” licensing – [*different* XP] can appear before licensing XP.
 - Licensor need not be just an NP, as (11) and (12) demonstrate:
- (11) Coordinate Structures as Licensing XP’s:
- a. [Different people] DISCOVERED AMERICA AND INVENTED BIFOCALS.
 - b. John SAW AND REVIEWED [different films].
 - c. Max put [different plates] ON THE TABLE AND IN THE CUPBOARD.
 - d. [Different people] voted FOR AND AGAINST THE PROPOSAL.
 - e. John painted [different houses] VERY RED AND SOMEWHAT BLUE.
 - f. (?)John does [different tasks] EAGERLY AND GRUDGINGLY.
- (12) RNR Structures as Licensing XP’s:
- a. JOHN MALIGNED, AND MARY PRAISED, [the same recording artists].
 - b. JOHN INVESTED MONEY IN, AND MARY BORROWED HUGE SUMS OF MONEY FROM, [different banks].
- Carlson (1987) says that these RNR facts don’t bode well for the traditional RNR as high attachment analysis. I do think it fits fine with a multiple domination analysis of RNR, though...

¹Where distinguishing the two is important, I will enclose the dependent NP in brackets and format the licensing XP in SMALL CAPS. However, this is for ease of recognition only and should not be interpreted as prominence, an incomplete constituent structure, etc.

- Additionally, we must say that the licensing XP must allow a *distributive* reading of the clause as a whole...
 - Morphosyntactic plurality is not sufficient to license *same/different* (13).
 - Having scope properties is not sufficient, either (14).
- (13) a. Morphosyntactically Singular DP's as Licensers:
 (i) Each man was given a different present.
 (ii) The same dog turned up at every home on our block last week.
 b. Morphosyntactically Plural DP's Failing as Licensers:
 (i) *Dogs like different foods (c.f.: All dogs like different foods).
 (ii) *The same woman chose gifts (c.f.: The same woman chose several gifts).
- (14) a. They chose different presents.
 b. The men saw different movies.
 c. *Any man may take a different apple (c.f.: Every man may take a different apple).
- When an NP capable of both a distributive and collective reading combines with *same/different*, collective reading disappears (15).
- (15) Disappearance of Collective Reading Under *same/different*:
 a. John and Alex threw the captain overboard.
 b. John and Bob threw different captains overboard.
- ...and predicates which demand a collective reading become ungrammatical with *same/different*:
- (16) a. *The twenty men dispersed to different rooms.
 b. *John, Bob, and Fred and Mary surrounded different guests.
- Returning to RNR structures, they also have a collective and distributive reading:
- (17) John reluctantly changed the oil and greased the chassis.
 a. DISTRIBUTIVE: John reluctantly changed the oil and happily greased the chassis.
 b. COLLECTIVE: John was reluctant about the combined activity of changing the oil and greasing the chassis.
- Collective reading disappears when *same/different* appears (18):
- (18) Different people reluctantly changed the oil and greased the chassis.
- Similarly:
- (19) a. John tried to marry a movie star and become rich.
 b. Different classmates tried to marry a movie star and become rich.

- **NB:** Forcing yourself into the collective reading is easier with prosodic prominence on *and*.
- Ross (1967) notes extraction from coordinate structures contrary to CSC; Carlson notes this is only possible under a collective reading; *same/different* is bad in these contexts:

- (20)
- John went to the store and bought some ice cream.
 - What did John go to the store and buy?
 - *What did different women go to the store and buy?
 - Different women went to the store and bought ice cream.
 - John and Bob went to the store and bought different brands of milk.

- Addition of distributive DP *John and Bob* in (20e) further confirms that *distributivity* is the relevant notion.

2.2 Syntactic Observations

- Despite tantalizing intuitive similarity to classical anaphors, *same/different* have different syntactic distributions vis-à-vis their licensing XP's.
- *same/different* can interact with licenser across an intervener (21).

- (21)
- Those men wanted Mary to shave $\left\{ \begin{array}{c} \text{different barbers} \\ * \text{themselves} \end{array} \right\}$.
 - Mary appeared to those men to be kicking $\left\{ \begin{array}{c} \text{different people} \\ * \text{themselves} \end{array} \right\}$.
 - Different dogs bit $\left\{ \begin{array}{c} \text{those two men} \\ * \text{each other} \end{array} \right\}$.

- However, *same/different* is not licensed by a potentially licensing XP across boundaries which movement may not take place, unlike binding of anaphors (22):

- (22)
- SPECIFIED SUBJECT: The two gorillas saw a woman who fed $\left\{ \begin{array}{c} * \text{different men} \\ \text{them} \end{array} \right\}$.
 - COMPLEX NP: The men wanted to see Jill's pictures of $\left\{ \begin{array}{c} * \text{different dogs} \\ \text{them} \end{array} \right\}$.
 - CSC: Mary painted those pictures, and Fred admired $\left\{ \begin{array}{c} * \text{different dogs} \\ \text{them} \end{array} \right\}$.

- (c.f.: the unacceptability of *wh*-movement out of these same structures, p. 534, (7)).
- Similarly, a single NP can extract from comparatives/equatives, provided it is not the subject of a paraphrasing clause following the *than* or *as*:

- (23)
- Who are Bob and Mike more impressive than ____ ?
 - *Who are Bob and Mike more impressive than ____ is?

- *Same/different* also may not appear in contexts such as (23b):
- (24) a. Bob and Mike are more impressive than different painters (e.g., each has such a distinct style, they can be compared meaningfully only to different groups of painters).
 b. *Bob and mike are more impressive than different painters are.
- Finally, *same/different* can't be licensed by a potential licenser which appears in a conjoined phrase which they are a constituent of, as in (25).
- (25) a. *John spilled his milk and poached different eggs.
 b. *Brer Rabbit ran into the briar patch and away from different enemies (but toward the same tarbabies).

3 Excursus: A Crash Course in Event Semantics

- **Question:** What other construction treats distributive NP's as a natural class?
- (26) a. *John simultaneously walked into the room.
- (27) a. John simultaneously patted his head and rubbed his stomach.
 b. John simultaneously praised and fed his dog.
 c. Simultaneously, the pipes broke and the roof caved in.
- There is no sentence-internal reading of (27a), but there is for (27b)-(27c).
 - One approach: *simultaneously* describes a relation between two *events*.
 - But plural NP's alone are sufficient for licensing *simultaneously*:
- (28) a. John and Bill simultaneously shouted out the right answer.
 b. John's proof simultaneously destroyed the positions of three very famous philosophers.
 c. Every candidate simultaneously withdrew from the race.
- **Idea:** NP's as propositional operators which create "plural" or "distributive" sentences.

3.1 Basic Event Semantics

- To (psuedo-)formalize an event semantics, we need a token/type distinction among events:
 - EVENTS: token class, events which occur in some specific world at some specific time (an actual instance of an event).
 - EVENTUALITIES: type class, sets of events which correspond to classes of events "of the same type."

- V', V'' , (untensed) sentences all denote into eventualities (or pluralities of eventualities).

– Thus $\llbracket \text{Frances kick bill} \rrbracket = \{e : e \text{ is an event of Frances kicking Bill}\}$

- Sequences of conjoined sentences (i.e., conjoined CP's) necessarily require *two distinct* events to be true; witness (29a) vs. (29b):

- (29) a. John did something amazing: he pulled a rabbit out of his hat!
 b. John did something amazing and (then) he pulled a rabbit out of his hat!

- **Question:** how do we define truth conditions for an event semantics?
- (Informal) **Answer:** a sentence is true iff there is an event in the actual world (at the appropriate time) which instantiates as a token of the eventuality denoted by the sentence.
- Sentences denoting plural eventualities requires one event to be instantiated for each eventuality.

3.2 Collective/Distributive Readings in Event Semantics

- **Question:** how do we define collective vs. distributive readings of elements in an event semantics?
- **Answer:** appeal to Link (1983)'s semantics of plurals:
 - \Rightarrow if a and b are members of some domain, then $a + b$ is also a member of that domain.
 - NP's with a distributive reading *operate on a sentence* and change its denotation from a single eventuality to a plural one.
 - Thus $\llbracket [\text{John and Bob}]_{\text{ConjP}} [x \text{ went to the store}]_{\text{VP}} \rrbracket$

$= \{e : e \text{ is an event of John going to the store}\} + \{e : e \text{ is an event of Bob going to the store}\}$

4 An Event Semantics for *same/different*

- The shortest section in the whole handout!

- (30) Sentence-internal readings of *same/different* can only operate on *distributive eventualities* which are composed of *distinct* eventualities.

- (31) [Different dogs] [x chased and bit the cat]

- The sentence-internal reading of (31) is true iff there are at least two dogs and two events.
- Type of the events *must be distinct*:

(32) *Different dogs went to the store and went to the store.

- “... *same* and *different* operate on sets of eventualities to create sets of sets of eventualities, which sets are structured in such a way as to obtain the appropriate truth conditions if any one of those sets is instantiated.”

5 Some Consequences

- Now that we have a (pseudo-) semantics for *same/different*, let's play – what can the behavior of these items tell us about other phenomena in language?

5.1 Distinguishing Distributivity/Plurality/Scope

- *Same/different* seem to force a distinction between distributivity (on the one hand) and plurality and scope (on the other).
- **Recall:** *repeatedly* requires multiple events:

(33) John repeatedly stamped on the ground.

- ... but this isn't enough to license *same/different*:

(34) *Different people repeatedly stamped on the ground.

- \Rightarrow requiring multiple events is not enough (witness (35) in support of this):

(35) a. *John visited different zoos again.
b. *Different people entered my house twice.
c. *Max re-entered different doors.

- *However*, there is also some evidence to want to separate NP/PP's which function adverbially and true AdvP's, because of (36):

(36) John visited different zoos on those two occasions.

- **NB:** *same/different* is also a good diagnostic for how far distributive information makes it up a syntactic structure.
- We already know from §2.2 that island boundaries must block distributivity transmission.
- Infinitival complements, however, do not:

(37) Different women wanted to try to talk to Fred and Jim.

- Conjoined *that*-CP's allow for *same/different* (and thus distributivity passing):

- (38) a. The same astronomers observed that the earth cast a rounded shadow on the moon and that ships sailing away disappeared over the horizon gradually.
 b. Different groups of linguists believe that grammatical relations are derivative and that grammatical relations are primitive.
- Distributivity may be passed “down” but not “up” over a finite clause boundary (39):
- (39) a. Mike and Bob think that America was discovered by the same explorer.
 b. It seems to Fred and Susan that different colors are emanating from the same piece of velvet.
 c. ??Different students think that America was discovered by those two famous explorers.
 d. ??It seems to different people that those two colors are emanating from these pieces of cloth.
- \Rightarrow it seems that distributivity cannot be passed up out of a finite complement. Notice the distinction between (40a) and (38b); (40b) and (40c):
- (40) a. ??Different groups of linguists think that grammatical relations are derivative and grammatical relations are primitive.
 b. Different policemen claimed that the robbery occurred and that there was indeed a tank in the area.
 c. ??Different policemen claimed that the robbery occurred and there was indeed a tank in the area.
- ...so much for plurality. What about scope?
 - Well, we can’t account for the ability of *same/different* to scope out of the embedded clause in (38) vs. its inability in, e.g. (39c).
 - We also seem to need to distinguish these two things to account for (41b) and (41c):
- (41) a. The men bought tickets to different hockey games.
 b. *Different men bought tickets to the hockey games.
 c. Different men bought tickets to each hockey game (i.e., the men who bought tickets to one hockey game were not the same as those who bought tickets to any other).

5.2 As a Test on the Structure of Conjoined Clauses

- We can also use *same/different* to tell us what is actually conjoined:
- (42) Amadevil can run very fast and will win the race.
 a. [_S Amadevil [_{VP} [_{VP} can run very fast] and [_{VP} will win the race]]].
 b. [_S [_S Amadevil can run very fast] and [_S ____ will win the race]]].
- If (42a) is correct, *same/different* should be licensed, but not if (42b) is...
- (43) ??Different horses can run very fast, and will win the race.

5.3 Implications for Null Anaphora

- Depending on what we think the structure is of various instances of null anaphora, we may (or may not) predict *same/different* to be licensed.

5.3.1 Pro

- There are two sentence-internal readings for (44):

- (44) John and Bill want to live in different cities.
- a. John and Bill want to live in cities x and y , respectively, where it just so happens that $x \neq y$.
 - b. John does not want to live in the city Bill lives in; Bill does not want to live in the city John lives in (perhaps a romantic partner once came between the two).

- Following McCawley (1971, *et seq.*), we might think this is due to the following difference in scope:

- (45) a. [different cities] [John and Bill want to live in x]
b. John and bill want [[different cities] to live in x]

- But we can't account for (44b) in terms of (45b), because it can't be [John and Bill] which licenses *different cities* the way it does in (45a)!
- ... unless there were some null element which got its distributivity from *John and Bill* in the lower clause == PRO!
- This would also explain why the opaque reading disappears in (46a) but returns in (46b)

- (46) a. John and Bill persuaded Mary to move to different cities.
b. John persuaded Mary and Susan to move to different cities.

- **Prediction:** wherever PRO appears with a singular antecedent, no sentence-internal opaque reading should be possible (47):

- (47) a. Each man expects to win a different prize.
b. Every man expects to win a different prize.
c. All the men expect to win a different prize.

- The predictions this makes for small-clauses (and whether or not they have PRO) are somewhat more subtle:

- (48) a. John and Mary appear [PRO interested in the same things].
b. John and Mary appear to be interested in the same things.

5.3.2 Variables of Movement

- If movement really does leave a variable/copy, then we might expect that variable/copy to license a sentence-internal opaque reading.

- This seems born out by the facts:

- (49)
- a. Which kids does the harried babysitter want to send ____ to different rooms?
 - b. These are the presents that Bob expects ____ to be hidden in different places.
 - c. These two faculty members, I would never recommend putting ____ in the same office.

- ...and these readings disappear with singular antecedents, as expected (50):

- (50)
- a. I tasted every sample that June wanted to put ____ on a different plate.
 - b. Each relative of yours, I would never recommend putting ____ in the same office.

- In case you lie awake at night worrying about the indeterminate status of *tough*-movement, don't fear! It patterns as A-bar movement in this case:

- (51)
- a. John and Bob would be easy to offer the same salary to ____.
 - b. All your relatives would be hard to put ____ in the same category.
 - c. The twins are impossible to give different presents to ____.

5.3.3 Variables in QR

- Judgments for putative QR structures are a bit harder, and where they are solid the data is different.
- If QR is just simple long-distance movement, then we expect the same "extraordinary" licensing facts to obtain. However, Carlson claims that (52) does not have such an extraordinary opaque reading:

- (52) Mary thinks that each relative of yours owns a different bank.

- \Rightarrow grammatically singular NP's cannot license narrow-scope sentence internal readings.
- **But:** what about plural NP's?
- Carlson claims that these also do not allow such a reading:

- (53) John's T.A. refused to correct all the exams with the same pen.

- \Rightarrow we seem to need to distinguish the kind of variable left by MOVE and the kind of variable left by QR.

5.3.4 VP-Ellipsis

- VPE facts seem, *prima facie*, to argue against the “scope-over” analysis which have been assuming, where [*same/different* NP] scopes out over the entire clause.
- We can get a sentence to have sentence internal readings despite VPE, which would seem to argue that *same/different* should be scoping *under* its licenser:

(54) The men saw different movies, and the women did ____, too.

- *But wait!* If that is correct, then (55) should not have a sentence-internal reading, contrary to fact:

(55) Different cats chased the two parakeets, and different dogs did, too.

- Along the same lines, if *same/different* is licensed by something other than the subject NP, the internal reading disappears in the elided conjunct:

(56) a. John and Bob went to different movies, and Mary and Jill told Frank to ____, also.
 b. If on Monday and Tuesday you send Barb different gifts, on Wednesday and Thursday Bob says you should ____, too.

- **Answer:** if we λ -abstract the subject position of the VP, then we have a variable in the VP which could license *same/different*!

(57) [_S The men [_{VP} λx_{pl} [different films y [x see y]]]]

- Some evidence supports this position. If we allow a variable to be abstracted over at the VP edge, then that variable should appear *under* VP-adverbs, and license narrow-scope readings of *same/different*.
- This fact seems to be borne out, given the contrast between (58a) and (58b):

(58) a. Different people reluctantly changed the oil and greased the chassis.
 b. John and Mary reluctantly moved to the same city.

6 Conclusion

- *Same/different* are licensed by the semantic notion of *distributivity*.
- *Same/different* have the type of clausal operators: they operate on a sentence to structure its meaning in a distributive way.
- Event semantics gives us a nice handle on the *kind* of structure *same/different* impose.
- Specifically, the events must be *distinct*.
- *Same/different* then structures these events into distributive sets.
- Recognizing this, *same/different* can act as tests on putative syntactic structures.