

3 The theories and their relationship

- i. Karttunen and Hamblin output sets of propositions (with those sets potentially varying from world to world). G&S output relations between worlds (equivalence classes of worlds). Krifka outputs properties.
- ii. Karttunen, Hamblin, and Krifka must treat polarity interrogatives separately, whereas they fit directly into the partition semantics. (Think of our mapping from $\langle t, t \rangle$ to $\langle \langle e, t \rangle, \langle e, t \rangle \rangle$.)
- iii. Karttunen's theory adds a conjunct to Hamblin's. Hence, Karttunen-interrogatives always denote subsets of the corresponding Hamblin-interrogatives.
- iv. Answerhood conditions (one set of options):
 - a. Hamblin/Karttunen: intersection of all propositions true at the evaluation world.
 - b. Partitions: identify the partition of which the evaluation world is a member.
 - c. Structured meanings: characteristic set of the function.

4 Some central theoretical issues

Multiple-constituent questions Many languages permit these. The worksheet probes this issue.

Negative answers and constituent questions What is their predicted and actual status?

Interrogative- and declarative-embedding verbs We should formulate lexical items for embedding verbs using each of the three theories.

- (6)
 - a. Sam knows who giggled.
 - b. Sam discussed who giggled.
 - c. Sam wonders who giggled.
- (7) Sam wondered/knew/discussed who saw what.

Karttunen (1977) focuses on cases like these in order to avoid many of the pragmatic issues that arise if one looks at matrix interrogatives. For an overview of the issues and challenges, see Beck & Rullmann 1999.

Fragment answers Interrogatives are rarely answered with sentences that have straightforward propositional content, but all these theories seem to predict that such answers are required. Krifka (2001) uses this to argue for structured meanings. Merchant (2004) argues that fragment answers involve an ellipsis process comparable to sluicing (*Someone left, but I don't know who left*).

Scope-taking What are the predicted and actual facts concerning how quantifiers scope with respect to question words?

Over- and under-answering We rarely find perfect question–answer congruence in real discourse. Should the theory of the semantics of questions make adjustments to account for this?

Weak exhaustivity

Sam knows who was at the party.
Ali was at the party.

Sam knows that Ali was at the party.

Strong exhaustivity

Sam knows who was at the party.
Ali was not at the party.

Sam knows that Ali was not at the party.

All the theories impose weak exhaustivity. Only G&S impose strong exhaustivity.

5 Other interconnections

- van Rooy (2003b) observes that the partition semantics is intimately related to McCarthy’s (1980) *predicate circumscription*.
- Lewis (1988) develops a partition semantics for *issues*.
- Ginzburg (1995a,b) and Ginzburg & Sag (2001) develop accounts that are related to structured meanings but are built from an axiomatic situations semantics. Read Ginzburg 1996b first to get started on such approaches.
- Groenendijk (1999) develops a dynamic account of questions and answers that involves partitions but does not impose strong exhaustivity. See also Zeevat 1994; ten Cate & Shan 2007.
- The *inquisitive semantics* of Groenendijk & Roelofsen (2009) also relaxes the partition semantic, and furthermore allows that sentences can denote hybrid inquisitive–declarative objects. (To make sense of this, first master Groenendijk 1999.)
- Kratzer & Shimoyama (2002) use the Hamblin approach to interrogatives for the whole semantics. See also Shan 2004.
- There are deep connections between questions, focus meanings, and discourse strategies. I hope to address these later. In the meantime, see Clark & Schober 1992; Krifka 2001; Büring 2003; Ginzburg 1996a; Roberts 1996; van Rooy 2003b; Benz 2005.
- Biased questions are extremely challenging for the above theories. For discussion, see Borkin 1971; Bolinger 1978; Krifka 1995; Gunlogson 2001; van Rooy 2003a; Romero & Han 2004; Reese 2007.

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