

$$(50) \quad \left\{ \begin{array}{l} \lambda w. \diamond_w \exists x [\text{students}(x) \wedge |x| = 3 \wedge \text{spt}(x)], \\ \lambda w. \diamond_w \exists x [\text{students}(x) \wedge |x| = 4 \wedge \text{spt}(x)], \\ \lambda w. \diamond_w \exists x [\text{students}(x) \wedge |x| = 3 \wedge \text{spt}(x)] \wedge \\ \quad \diamond_w \exists x [\text{students}(x) \wedge |x| = 4 \wedge \text{spt}(x)] \end{array} \right\}$$

In an approach pioneered by Fox (2007), free choice strengthening can arise from exhaustification, the strengthening process that also gives rise to scalar implicatures, and exhaustification is credited to syntactically represented operator exhaustification, Exh. A central benefit of this approach in the present context is that it permits strengthening of individual Hamblin answers, by positing that Exh can appear in the question nucleus. However, exhaustification may not actually deliver (50). Exhaustification is relative to a set of alternative propositions. If this alternative set is equated with the Hamblin set that would obtain in the absence of exhaustification, then free choice strengthening should result in (51) instead of (50).

$$(51) \quad \left\{ \begin{array}{l} \lambda w. \diamond_w \exists x [\text{students}(x) \wedge |x| = 3 \wedge \text{spt}(x)] \wedge \\ \quad \neg \diamond_w \exists x [\text{students}(x) \wedge |x| = 4 \wedge \text{spt}(x)], \\ \lambda w. \neg \diamond_w \exists x [\text{students}(x) \wedge |x| = 3 \wedge \text{spt}(x)] \wedge \\ \quad \diamond_w \exists x [\text{students}(x) \wedge |x| = 4 \wedge \text{spt}(x)], \\ \lambda w. \diamond_w \exists x [\text{students}(x) \wedge |x| = 3 \wedge \text{spt}(x)] \wedge \\ \quad \diamond_w \exists x [\text{students}(x) \wedge |x| = 4 \wedge \text{spt}(x)] \end{array} \right\}$$

So the Hamblin answers resulting from free choice strengthening would be mutually incompatible propositions. This can be shown to be inconsequential for the content of the presupposition delivered by the MIP. For a set of exhaustified, mutually incompatible, Hamblin answers, the MIP is met just in case one of the exhaustified answers is true, which is equivalent to saying that the set of true classic, non-exhaustified, Hamblin answers contains one that entails all the others. In particular, the MIP maps (51) to the same proposition as (50), viz. the proposition that at least one of the cardinalities 3 and 4 is such that a student group of that cardinality is allowed to solve the problem together.

However, if free choice strengthening of Hamblin answers always rendered Hamblin answers mutually incompatible, then the obviation of uniqueness in questions embedded under responsive predicates (in the sense of Lahiri, 2002) should force strongly exhaustive readings in the sense of Groenendijk and Stokhof (1984). Exploring this prediction, and its consequences for the analysis of uniqueness obviation, is a task that we leave for future work.

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