

## Fantasy Islands? Testing Semantic Constraints on *wh*-Extraction

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**Issue** Some authors have claimed that *wh*-extraction is not purely a function of structure, but that some restrictions are best described in semantic terms. The contrast in (1) below originates in Truswell (2007), while the contrast in (2) is from Cattell (1978):

- (1) a. What did John arrive whistling?      b. \*What did John work whistling?  
(2) a. Which car did Jane like the gears in?      b. \*Which car did Jane like the people in?

For (2), the answer *She likes the ones in the hatchback* makes the contrast clearer. Cattell claims that (2a) and (2b) are structurally identical, but with a semantic distinction: gears are more inherent to cars than people. For (1), Truswell proposes an account based on event semantics and telicity of the predicates. In this paper, we report on a judgement task experiment testing the reliability of these claims, using context as a variable to evaluate the semantic sensitivity of these effects. Based on our findings, we make the following claims: i) semantic island effects are detectable; ii) contextual sensitivity can be used as a distinguishing factor between island types; iii) so-called semantic islands are not homogeneous, perhaps suggesting a structural account in some cases.

**A Third Suspect** In addition to those above, we tested a third potential semantic constraint in (3), based on sentences involving container direct objects:

- (3) a. What did Sally drink a bottle of?      b. ?What did Sally break a bottle of?

In (3a), the extracted element is actually being drunk, while in (3b) it is not being broken. For some speakers, degradation of (3b) is informally reported. With the addition of this contrast, our experiment examines three different possible semantic constraints on extraction.

**Experiment Design** Six sentence pairs for each of (1)-(3) were constructed, along with relevant answers. This yields 36 trials, split into two lists so that each participant only saw one member of each pair. These were intermixed with 36 filler *wh*-questions of varying grammaticality. Half of the participants saw only the questions, asked to rate their acceptability on a 7-point Likert scale, while half saw question-answer pairs, and were asked to rate the felicity of the exchange.

**Results and Discussion** Based on testing 48 participants, we find the following mean ratings:

	Questions Only (Q)		Question/Answer Pair (QA)	
	Acceptable (a)	Unacceptable (b)	Felicitous (a)	Infelicitous (b)
Truswell (1)	3.55	2.54	3.99	3.21
Cattell (2)	5.54	5.36	5.13	4.69
Container (3)	6.04	5.72	6.16	5.58

Averages trend along predicted lines, with significant effects of felicity (a vs b), and island type (1-3) when results from the Q and QA conditions are pooled (claim i). In pairwise comparisons, the (1) cases show a significant effect by felicity, though island type (3) also approaches significance. Treating the Q vs QA condition as a variable, we find a significant effect of island type, of condition, and an interaction between the two. This reflects the observation in the means that a cogent answer widens the effect of felicity in the Container and Cattell cases, while narrowing that effect in the Truswell cases. This shows that sensitivity to context may be used to distinguish constraints on *wh*-extraction (claim ii). The narrowing in the Truswell case is similar to effects observed in our filler trials using relative clause and *wh*-islands, meaning that the Truswell cases may be structurally-based, as other structural island effects are mitigated when presented alongside a cogent answer (claim iii). These results motivate a re-thinking of the syntax-semantics interface: that semantics impacts overt movement suggests an architecture along the lines of Culicover and Jackendoff (2005) where syntax and semantics are parallel modules interacting simultaneously.

## References

- Cattell, Ray. 1978. On the source of interrogative adverbs. *Language* 54:61–77.
- Culicover, Peter W., and Ray Jackendoff. 2005. *Simpler syntax*. Oxford, UK: Oxford University Press.
- Truswell, Robert. 2007. Extraction from adjuncts and the structure of events. *Lingua* 117:1355–1377.