

# On the interpretation of concealed questions

Lance Nathan, MIT

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## ABSTRACT

Determiner phrases in English and many other languages have the ability to act as “concealed questions” (CQs), taking on question meanings when the objects of certain question-embedding verbs. For instance, in the sentences in (1) and (2), the object DPs mean, roughly, “what time it is” and “what the capital of Vermont is”.

- (1) Kim knows the time.
- (2) Kim told me the capital of Vermont.

Thus, the sentences are synonymous with *Kim knows what time it is* and *Kim told me what the capital of Vermont is*, respectively.

Not all question-embedding verbs, however, are compatible with CQs:

- (3) \*Kim wonders the time.  
(cf *Kim wonders what time it is*)

The fact that *know* and *wonder* differ in their ability to embed CQs, though both accept clausal questions as complements, partially motivated the “Autonomy Hypothesis” in Grimshaw (1979) that verbs select the possible syntactic categories of their complements independently of selection for the possible semantic types of their complements. Theories of CQ meaning generally follow Grimshaw in assuming them to denote questions, or else take them to denote individual concepts (intensions of individuals; Heim 1979, Romero 2005). This dissertation argues that the Autonomy Hypothesis does not easily describe the semantically conditioned distribution of CQs, which can be embedded under only those verbs which allow propositional complements as well as question complements. The latter assumption of CQ meaning similarly makes the incorrect prediction that any DP with an individual concept meaning—which is to say, almost any DP at all—can be used as a CQ.

This dissertation therefore proposes a new theory to explain the two fundamental issues with concealed questions: which verbs can embed CQ objects, and which DPs can be CQs. At the foundation of the proposal is the premise that CQs denote not questions but propositions. For instance, the object DPs in (1) and (2) denote, respectively, the proposition that the time is  $x$ , where  $x$  has the value of whatever the current time might be; and the proposition that Montpelier is the capital of Vermont.

If CQs denote propositions, their incompatibility with non-proposition-embedding verbs such as *wonder* becomes less mysterious. The theory proposed in this dissertation, like Pesetsky’s (1982) revision of the Autonomy Hypothesis, relies on Case requirements of predicates. But Chapter 2 demonstrates that Case alone cannot account for the distribution, and that the semantic

correlations are too strong to ignore, as any syntactic theory arguing for autonomy from semantics must.

The remainder of the dissertation focuses on how to derive propositional meanings for DPs, and in particular for DPs that can be CQs but not for ones that cannot be. If CQ meanings (propositional or otherwise) were derived from the type- $e$  denotation of a DP or its  $\langle s, e \rangle$  intension, then (4) would be as acceptable with a CQ reading as (2). But it is not.

- (4) \*Kim told me the large city in Vermont.  
(cf *Kim told me that the large city in Vermont is Burlington*)

Chapter 3 examines two proposals. The first, Romero (2005), suggests that individual concept (IC) meanings, i.e. mappings from world/time indices to individuals with type  $\langle s, e \rangle$ , suffice for CQ meanings. The second, Lasersohn (2005), argues that IC meanings derive from type- $e$  denotations of DPs and thus ultimately from  $\langle e, t \rangle$  denotations of common nouns, and not (à la Montague) from  $\langle \langle s, e \rangle, t \rangle$  denotations of common nouns. To the extent that Lasersohn is correct that nouns useable in ICs are not set apart as a special class of nouns, we have another argument against deriving CQs from ICs, but we are still left without a way to derive propositional meanings for CQs.

Chapter 4 suggests that, while Lasersohn is correct that  $\langle \langle s, e \rangle, t \rangle$  meanings do not exist lexically, they must be derivable for sentences involving quantification over individual concepts. Consequently, this chapter explores what type-shifting operators must exist in order to derive propositional meanings for those and only those nouns that naturally head CQs. If these nouns are relational nouns (following Caponigro and Heller, forthcoming, among others), it becomes possible to derive propositional meanings from nouns that have the lexical type  $\langle e, \langle e, t \rangle \rangle$ : that is, nouns such as *capital* that express a relation between one individual (a state, country, or other geopolitical entity) and another (the city which is its capital). Lacking this meaning, nouns like *city* which denote simple sets of individuals will be unable to shift into propositional meanings. Certain modifiers, however, can act as shifting operators, such as the relative clause in (5).

- (5) Kim told me the city that she visited last month.

With a relative clause, *city* can head a CQ; rather than using a lexical typeshifter (which (4) suggests is unavailable to *city*), the relative clause itself turns the common noun into the necessary proposition-yielding type. (See Portner and Zanuttini (2005) for a similar proposal concerning matrix exclamatives).

Finally, Chapter 5 explores in greater detail the distributional correlation between concealed questions and embedded propositions. It draws inspiration from Lahiri (2000, 2002), who argues that clausal question complements of proposition-embedding verbs are, at least in cases of adverbial quantification, interpreted by raising the CP and leaving a propositional trace. Tying the two proposals together allows the elimination of lexical ambiguity in proposition-embedding verbs, and suggests solutions to other distributional mysteries.

*The full dissertation is available at: <http://www.mit.edu/~tahnna/papers/dissertation.pdf>.*