

Wondering about Concealed Questions

Ilaria Frana
ilaria@linguist.umass.edu

The underlined DPs in (1a) and (2a) are known in the literature as ‘concealed questions’ (CQ) because they can be paraphrased as the corresponding embedded questions in b. (Examples from Heim (1979)):

- 1a.** Kim knows the governor of California. b. Kim knows who the governor of California is.
2a. She revealed the winner of the contest. b. She revealed who the winner of the contest was.

In this paper, I argue that the DPs in 1(a) and 2(a) are not concealed questions in the literal sense. Instead, I propose that they are definite descriptions denoting properties, and that the so-called CQ-reading derives from independently motivated semantic selection properties of the embedding predicates.

An important fact about DPs with CQ-readings is their restricted distribution. As noted by Grimshaw (1979), not every attitude verb can take a DP with a CQ-reading as its complement. This is shown by (3)-(4) below:

- 3.** *Meg believed/thought the capital of Italy.
4. *I wonder the answer he gave.

I argue that CQ-readings only arise with factive predicates because they select for an argument that characterizes both the external (*res*, Lewis (1979)) and the internal (descriptive) content of the attitude (see also Kratzer 2000). Intuitively:

- 5.** Kim knows the governor of California =
Kim knows of *Arnold Schwarzenegger* that he is the *governor of California*.

External content

There is an actual x of which P holds in w_0 .

Internal content

Kim believes *de re* of x that it has property P.

Since ‘Believe’ and ‘wonder’ are not factives, they do not lexically select a *res* argument, and consequently, they cannot appear with direct objects that are interpreted as CQs.

My account assumes that definite descriptions can denote properties (Heim (1982), Partee (1986)). Mikkelsen (2004) argued that subjects of specificational clauses denote properties. In contrast to (6), which has a referential subject, the use of ‘it’ in (7) indicates a property interpretation for the definite description. This carries over to the CQ in (8):

- 6.** The winner of the contest is Iranian. Isn’t she/ *it? *PREDICATIONAL*
7. The winner of the contest is Susan. Isn’t it/ *she? *SPECIFICATIONAL*
8. I know the winner of the contest. It’s Susan/ *She is Susan. *CQ*

If property-denoting DPs can trigger CQ-readings, we predict that indefinite-descriptions can too. Intuitively, this seems correct, as shown by (9) and its paraphrase (10):

- 9.** John knows a doctor who can treat your illness.
10. John knows of a certain person that he is a doctor who can treat your illness.

Interestingly, once we consider indefinites as well, embedded question paraphrases do not capture the meaning of the CQ-reading anymore. For (10), this is illustrated in (11):

11. John knows who is a doctor who can treat your illness.

Sentence (11) implies that John knows the exhaustive list of doctors that can help you. On the other hand, in order for (10) to be true, John doesn't need to have an exhaustive list of doctors in mind. Indefinite descriptions thus show that the readings we are trying to capture are not concealed questions in the literal sense.

The existence of CQ-readings for indefinite descriptions is confirmed by languages like German and Italian that lexically distinguish two different predicates corresponding to English 'know': 'wissen' and 'kennen' in German, and 'sapere' and 'conoscere' in Italian. When 'wissen' and 'sapere' are allowed to take DP arguments, only the CQ-reading is available. This is shown for Italian in (12):

12. Giovanni sa il presidente del Congo. (Only CQ-reading)
"Giovanni knows the President of Congo."

As expected, both 'sapere' and 'wissen' can embed indefinite descriptions with concealed question readings:

Italian "sapere"

13.

- a. So un posto dove possiamo nasconderci.
"I know a place where we can hide."
- b. Chi sa un programma per mixare e cambiare la voce? (Google)
"Who knows a program to mix and change voices?"

German "wissen"

14.

- a. Wer weiß einen Verlag für Kindergedichte? (Google)
"Who knows a publisher for children's poems?"
- b. Ich weiß einen geheimen Weg. (Google)
"I know a secret path."

Heim (1979) and Romero (2005) have argued that CQ-readings are only possible with DPs that denote individual concepts (entities of type <s,e,>). It is not easy to see how such a proposal could account for CQ readings triggered by indefinite DPs, as in (9), (10), (13), and (14).

Some DPs that denote properties do not admit CQ-readings. Consider (15) below:

15. ?? I know the shoes. (#I know what the shoes are.)

However, when the DP in (15) is modified by a relative clause, as in (16), the sentence becomes completely acceptable and has a CQ-reading:

16. I know the shoes you like.

I will argue that this happens because the relative clause in (16) is providing an informative property that was missing in (15). Intuitively, (15) is unacceptable because, by uttering it, one would express the (usually, but not necessarily) odd and uninformative statement ‘I know of those things that they are shoes’. By adding the relative clause in (16), on the other hand, we are contributing an informative property (‘being the shoes that you like’) and turn the statement into an informative one.

Finally I address certain ambiguities discussed in Heim (1979) and Romero (2005). Consider (17) below:

17. John knows the price that you know.

(17) could be uttered in a context where the price of a particular car is at issue. (17) might then convey that (i) John and you know the same price for that car, say \$10,000; or (ii) John knows what price (for the car) you know. He might have been told, for example, that you know that the price of the car is \$15,000. Notice that in (i), John doesn’t have to know anything about what you know. These examples motivated Heim to consider the relevant property to be contextually determined, and Romero to argue for an intrinsic ambiguity of the predicate. I will argue that the ambiguity in (17) can be reduced to a classic transparent-opaque ambiguity and that reading (i) can be derived by saying that the world variable in the relative clause is anchored to the actual world, making the descriptive content in the RC not part of John’s belief.

To sum up, I propose an account that derives CQ-readings from independently motivated semantic selection properties of factive verbs. This solution captures the restricted distribution of CQs, and it correctly characterizes the non-exhaustive meaning of an indefinite CQ. I show how relative clauses can provide relevant information that rescues otherwise uninformative statements. Finally, I argue that certain ambiguities discussed in Heim (1979) and Romero (2005) are not problematic for the present analysis since they can be reduced to a classic transparent/opaque ambiguity.

References

- Grimshaw, J. (1979): “Complement selection and the lexicon” *Linguistics Inquiry* **10**, pg. 279-326.
- Heim, I. (1979): “Concealed Questions”, in R. Bäuerle, U. Egli and A. von Stechow (eds.), *Semantics from different point of views*, Berlin: Springer-Verlag, pg 51-60.
- Heim, I. (1982): “The Semantics of Definite and Indefinite Noun Phrases.” PhD dissertation, University of Massachusetts, Amherst.
- Kratzer, A. 2002: “Facts: Particulars of information units?” *Linguistics and Philosophy* **25**, pg. 655–670.
- Lewis, D.K. 1979: "Attitudes De Dicto and De Se". *Philosophical Review*, **88**.
- Mikkelsen, L.2004: “Specificational subjects- a formal characterization and some consequences”. *Acta Linguistica Hafniensia* **36**.
- Romero, M. (2005): “Concealed Questions and Specificational Subjects”, *Linguistics and Philosophy* **28**.
- Partee, B. 1986: “Noun phrase interpretation and type-shifting principles”, in P. Portner and B. Partee (eds) *Formal Semantics. The essential readings*, Blackwell, pg 357-381.