On Concealed Questions
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The underlined Nouns Phrases (NPs) in (1) have been called ‘Concealed Questions’ (CQ, henceforth) because sentences that embed them typically have the same truth-conditional meaning as the corresponding versions with a full-fledged embedded interrogative clause, as illustrated in (2) (Heim 1979):

(1) a. John knows the price of milk.
b. They announced the winner of the contest.
c. The temperature of the lake depends on the season.

(2) a. John knows how much the milk costs.
b. They announced who won the contest.
c. How warm the lake is depends on what season it is.

The goal of this talk is to review three main approaches to CQs in the literature, and to evaluate them with respect to several empirical patterns. The three approaches to be examined are:

- Pragmatic approach (Heim 1979):
  \[\text{[[Know]]} \text{ combines with an object of type } \text{e} \text{ (namely, a dollar amount or a degree on a scale) provided by the NP } \text{the price of milk} \text{ in (1).}\]

- The individual concept approach (Lasersohn 2005, Romero 2005a, among others):
  \[\text{[[Know]]} \text{ combines with an object of type } \text{<s,e>} \text{ provided by the NP } \text{the price of milk}.\]

- The propositional approach (Romero 2005b, Nathan 2005):
  \[\text{[[Know]]} \text{ combines with an object of type } \text{<s,t>} \text{ somehow arising from the NP } \text{the price of milk}.\]

The empirical patterns serving as evaluation metric are:

- Simple Concealed Questions, as in (1).
- Coordination of different types of verbs sharing the same NP complement.
- Heim’s (1979) ambiguity with nested Concealed Questions, illustrated in (3).

(3) John knows the price that Fred knows.
a. Reading A: “John knows the same price that Fred knows.”
b. Reading B: “John knows what price Fred knows.”

- Gupta’s syllogism (4) for other verbs combining with individual concepts, like rise and change (Dowty, Wall and Peters 1981, Lasersohn 2005):

(4) Gupta’s syllogism:
   i. Necessarily, the temperature is the price.
   ii. The temperature is rising.
   iii. The price is rising.
• Certain empirical differences between NPs with *rise/change* and NPs with *know*, as illustrated in (5).

(5)   A: John says he visits his niece Jordan with some frequency, but when I asked him what picture she has on her wall, he had no idea.
B: The picture on Jordan’s wall changes every month. #That’s why John didn’t know the picture on Jordan’s wall.  

(Nathan 2005:59)

The comparison of the three approaches with respect to these sets of data will lead to some conclusions and to some important open questions, helping characterize the state of the art of the CQ debate in the literature.