Peter Öhl

Ob-Argument-Clauses, Negation, and (Subjective) Veridicality

The paper deals with the licensing of *ob*-argument-clauses in German and in particular the question why predicates such as *sicher sein* ('be certain'), which otherwise only embed *dass*-clauses, allow *ob*-clauses under certain conditions, such as in interaction with a nonveridical operator, e. g. negation.

(1a)[1] Gesine ist (sich) sicher, dass Gustav angerufen hat.
(1b) */# Gesine ist (sich) sicher, ob Gustav angerufen hat.
(1c) ✓Gesine ist (sich) nicht sicher, ob Gustav angerufen hat.

Predicates such as (*sich*) *fragen* ('wonder'), which generally only embed interrogative clauses, are often referred to as 'rogative'[2] (Lahiri 2002; cf. Spector/Egré 2015, p. 1734). The term *rogative* refers to a semantic property of these verbs and also of the embedding context of their complements; these always involve a question. Non-rogative contexts and non-rogative predicates such as *sicher* ('certain'), on the other hand, are not related to questions, thus an interrogative clauses is unexpected. However, some predicates, such as *wissen* ('know') or *entscheiden* ('decide'), generally allow both *dass*-clauses and interrogative clauses as complements:

(2a) Gesine weiß, dass/ob Gustav/ wer angerufen hat.
(2b) Gesine hat entschieden, dass/ob Gustav/ wer kommen wird.

The questions of why and when interrogative clauses can be embedded in non-rogative contexts have been widely discussed in research, but have not yet been satisfactorily explained. Combinatorial effects such as negation have also been repeatedly addressed; however, a detailed and systematic description of the factors that can license interrogative clauses in argument function is still a desideratum. This article focuses particularly on negation in conjunction with certain presuppositional properties of the relevant predicates, which are referred to by the terms *veridical* and *veridicality*. Predicates are classified as *veridical* if they allow an inference to the truth of the embedded proposition (cf. Lahiri 2002, p. 287; Spector/Egré 2015, p. 1734), as well as certain logical operators that allow such inferences for propositions within their scope (cf. Giannakidou 1998, etc.). Since predicates such as *wissen*, which generally allow both *dass*-clauses and interrogative clauses as complements, are obviously veridical (what you know must be true), a connection was established between these two properties. Predicates such as *sicher* were classified as *nonveridical*. According to this thesis, they should not be able to embed interrogative clauses. Why an *ob*-clause argument is licensed especially under negation, remains unclear with this approach.

The analysis developed in this paper is based on Giannakidou's (1998, 2002, 2013, etc.) concept of 'subjective veridicality'. I argue that predicates such as *sicher*, while not *objectively* veridical, determine the truth value of an embedded proposition in relation to an individual's knowledge, i. e., *subjectively*. This is encoded by the use of the

[1] '*' stands for ungrammatical, '#' for semantically ill-formed. In this case, both are true, in my view, which is detailly discussed in the paper. '✓' stands for expressions that are well-formed in both respects.

[2] Lat. *rogare*, 'to ask'.

complementizer *dass*. Operators such as negation, which are nonveridical, can neutralize this determination if and only if they take narrow scope over the predication (i. e., the predicate and its arguments); in this case, an *ob*-clause is licensed as a complement. *Dass*-clauses, in contrast, are licensed if the operators in question take scope over the entire sentence. Thus, it is not the case that an *ob*-clause can be used alternatively to a *dass*-clause in some cases; rather, it is embedded in a different structure under different conditions.

Complementizers such as *ob* primarily mark the disjunction of propositions by relating complementary sets of 'possible worlds' to sets of worlds for which the truth of the propositions is evaluated (cf. Groenendijk/Stokhof 1984). This results in the so-called 'intensional reading' of interrogative clauses. Predicates such as *wissen* can reduce the set of propositions of the *ob*-clause argument to the set corresponding to an actual world, thus resulting in the so-called 'extensional' reading of *ob*-clauses.

(3) Gesine weiß, ob Gustav angerufen hat.

Such predicates are classified as *responsive* because the argument clause contains the answer to a question, and also as *veridical* because it is the true answer. The complement in (3) refers to a proposition (i. e. the true answer to the question whether G. called), which, however, can be couched in an interrogative clause for various reasons.

Based on the analysis that *veridical* predicates select *ob*-clauses in the *extensional* reading on the one hand, but that *nonveridical* operations on the predication permit *intensional ob*-clauses on the other hand, it should be questioned why predicates such as *sicher*, which are classified as *nonveridical* by the relevant authors, allow *ob*-clauses precisely in combination with a *nonveridical* operator. The proposed solution is: *sicher* is not objectively veridical, like the verb *wissen*, which generally permits *ob*-clauses. However, it is *subjectively veridical*. Subjectively veridical predicates denote the commitment of an 'epistemic agent' (e. g., the subject of *sicher sein*) to the truth of the embedded proposition. For this reason, an *ob*-clause is initially not an option. Nonveridical operations can override this reading. Just as 'rogative' predicates of the type *sich fragen*, *nicht sicher sein* then permits an *ob*-clause in the *intensional* reading. Truly nonveridical predicates like *glauben* ('believe'), on the other hand, never permit *ob*-clauses.

(4a) Gesine fragt sich, ob Gustav angerufen hat.
(4b) Gesine ist sich nicht sicher, ob Gustav angerufen hat.
(4c) *Gesine glaubt nicht, ob Gustav angerufen hat.

This analysis could lead to the following new generalization about predicates that refer to a question-answer relation: All 'rogative' predicates such as *fragen* license intensional interrogative arguments without additional operators. Objectively veridical responsive predicates can extensionalize interrogative arguments and thus license extensional *ob*-clauses; under a nonveridical operator, however, they license intensional *ob*-clauses. Subjectively veridical responsive predicates only allow intensional interrogative arguments and only with support of a nonveridical operator.

Finally, a classification of predicates with argument clauses is proposed, which additionally contains a subclass of 'deontic' predicates that also embed intensional *ob*-clauses, regardless of whether they are in the scope of a nonveridical operator or not, and which are neither rogative nor responsive. In a classification of predicates that allow for *ob*-clauses,

they would receive a special status, since their *ob*-clause arguments describe conditions that must be met for a state of affairs to become factual. Unlike factive predicates, they do not presuppose factuality, but they refer to facts that are to be created. *Ob*-clauses can describe sets of worlds for which propositions receive a truth value, but also those for which states of affairs receive a factual value ('the case' or 'not the case').

This results in a classification as follows, which, however, does not claim to be complete:

(5) ***Predicates with argument clauses***
   a. factive (only *dass*-clauses): *bedauern, leugnen, ...*
   b. nonveridical non-responsive (only *dass*-clauses): *glauben, annehmen, ...*
   c. objectively veridical responsive (*dass*-, *ob*- and *w*-clauses): *wissen, zeigen, herausfinden*, ...
   d. subjectively veridical responsive (*dass*- and *w*-clauses; *ob*-clauses only under nonveridical operations): *sicher sein, überzeugt sein, ...*
   e. 'deontic' (*dass*-, *ob*- and *w*-clauses): *festlegen, entscheiden, bestimmen*, ...
   f. rogative (only *ob*- and *w*-clauses): *fragen, überlegen, sich umhören, ...*

'Factive' predicates require an extensional argument that describes a factual state of affairs. They cannot embed *ob*-clauses, even within the scope of a nonveridical operator. Their argument selection is not influenced by such an operator. Nonveridical non-responsive predicates require an intensional argument that describes a proposition that can be true or false. They cannot embed *ob*-clauses, and their argument selection is not affected by a nonveridical operator.

Objectively veridical predicates require an extensional argument, but one that represents a true proposition. They can embed *ob*-clauses by extensionalizing them. They can also embed *ob*-clauses within the scope of a nonveridical operator, but these are not extensionalized. Subjectively veridical predicates can only embed extensional arguments, but are unable to extensionalize *ob*-clauses. Only within the scope of a nonveridical operator do they allow an *ob*-clause, and then also in an intensional reading. 'Deontic' predicates require an intensional argument that represents sets of worlds in which the described state of affairs can become factual. They can also embed intensional *ob*-clauses, regardless of whether they lie within the scope of a nonveridical operator such as negation. Rogative predicates always require an intensional argument, regardless of whether they are in the scope of a nonveridical operator or not.

References

Giannakidou, Anastasia (1998): Polarity sensitivity as (non)veridical dependency. (= Linguistik Aktuell / Linguistics Today 23). Amsterdam/Philadelphia: Benjamins.

Giannakidou, Anastasia (2002): Licensing and sensitivity in polarity items: from downward entailment to nonveridicality. In: Andronis, Maria/Pycha, Anne/Yoshimura, Keiko (eds.): Papers from the 38th annual meeting of the Chicago Linguistic Society, Parasession on Polarity and Negation, CLS 38, issue 2, pp. 29–53.

Giannakidou, Anastasia (2013): *Inquisitive* assertions and nonveridicality. In: Aloni, Maria/Franke, Michael/Roelofsen, Floris (eds.): The dynamic, inquisitive, and visionary life of phi, ?phi, and possibly phi. A festschrift for Jeroen Groenendijk, Martin Stokhof and Frank Veltman. Amsterdam: Institute for Logic, Language and Computation (ILLC), pp. 115–126.

Groenendijk, Jerome/Stokhof, Martin (1984): Studies in the semantics of questions and the pragmatics of answers. Dissertation. Amsterdam: University of Amsterdam.

Lahiri, Utpal (2002): Questions and answers in embedded contexts. (= Oxford Studies in Theoretical Linguistics 2). Oxford: Oxford University Press.

Spector, Benjamin/Egré, Paul (2015): A uniform semantics for embedded interrogatives: An answer, not necessarily the answer. In: Synthese 192, 6, pp. 1729–1784.