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Authors	Creswell, Cassandre
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The Discourse Function of Verum Focus in Wh-Questions[†]

Cassandre Creswell

University of Pennsylvania

1. Introduction

Wh-questions in English can be produced with the nuclear accent on the finite verb, as in (1b), (2b), and (3b)-(3c). In some cases, this construction uses the full, non-cliticized form of the inflected auxiliary, as in (1b) and (2b); in others the inflected verb is a form of periphrastic *do*, as in (3b), rather than an inflected lexical verb. Note however that the prosodic stress can be placed on the lexical verb without the use of periphrastic *do*, as in (3c).

- (1) a. Why (di)d the chicken cross the road?
b. Why DID the chicken cross the road?
- (2) a. What's the dumbest joke you've ever heard?
b. What IS the dumbest joke you've ever heard?
- (3) a. Who wrote *How to do things with words*?
b. Who DID write *How to do things with words*?
c. Who WROTE *How to do things with words*?

[†] The analysis here has profited immeasurably from discussion with and suggestions of Maribel Romero, Ellen Prince, Robin Clark, Manfred Krifka, Mark Liberman, Alexander Williams, and Na-Rae Han, among others. Thanks to Kazuaki Maeda for technical assistance.

- (9) A.71 Well, I tell you what, if New Orleans ever gets a quarterback
 B.72 Yeah.
 A.73 Yeah. -- isn't nobody going to beat us [laughter].
 A.75 There ain't nobody going to beat us then. Because look how good we did without a quarterback this year [laughter].
 B.76 I know. **Who WAS the quarterback ?**
 A.77 Well
 B.78 Well, See, I can't even think of who the New Orleans quarterback, (swbI_sw2521)

2.3 Repetition of Salient Question

A contextual category not found in Switchboard is the immediate reutterance of a question by one speaker which was uttered previously by another speaker. These tokens, two of which are presented here in (10-11), were collected opportunistically.

- (10) BS: How are we getting there?
 SS: I don't know. **How ARE we getting there?**
- (11) I am in another oh-no-what-do-I-do-now phase, and this one is actually scaring me a bit. **What DO I do now?** And why? (orig. orthography; email, MK)

2.4 Question Is Still Unanswered

Both Switchboard tokens and collected tokens were found in contexts where a previous question, explicit or implicit, remained unanswered. Here the speaker apparently has expectations that the question should have been answered already and is waiting for the hearer to present the answer. These differ from the questions in Section 2.3 in that the utterance of the auxiliary-focused question does not follow the non-auxiliary-focused counterpart immediately, as in (12); in fact, the counterpart without auxiliary focus may never have been uttered, as in (13).

- (12) CC: We were sitting out in front of the library eating lunch, and he came up out of nowhere, and I was like, wow what are you doing on campus?
[further discussion of interaction with the unexpected person...]
 AB: **so what WAS he doing there?**
- (13) B.4 I, right now my car is terminally ill---
 A.5 Oh.
 B.6 so so I am really looking at, uh, facing the purchase of a car. And what I would like to have is so totally impractical for me that, I won't do it. But
 A.11 **What IS it?**
 B.12 Uh, well, I would like for one time in my life to have a convertible. (swb4_sw3265)

2.5 Requesting the Value of a Missing Property

Approximately 20 tokens occur in contexts where one speaker has been telling the hearer about some entity or set of entities unknown to the hearer. The hearer then requests the value of some property of the entity, as in the following example:

- (14) A.83 Uh-huh. Uh, it just, it developed into sort of a business, uh, you know, we breed them and all that, but, we didn't, you know, we didn't really start it for the money, it was just, they were fun to have around and we figured if we're going to have them we might as well have some purebreds and. And now it developed in to going to cat shows and finding studs for them, and, you know, all this kind of stuff.

B.84 Uh-huh. **What kind of cats ARE they?**

A.85 Uh, I've got a, uh, a Bombay, a Turkish Van and a Himalayan Persian. (swbl_sw2534)

3. Use 1 of Auxiliary-focus Form *Dictum Focus*

3.1 Marking the Propositional Content as "Old"

An account of the function of auxiliary focus in wh-questions must explain these five different contexts of usage: reasking the previously mentioned topic question, asking a question the speaker feels she should know the answer to, repeating a question the other conversant has just asked, bringing up an as-yet-unanswered question, and requesting the value of a property one expects to be told. The common thread in all these contexts is that the question itself is somehow "old," in the sense of familiar to the discourse participants.² A consequence of auxiliary focus, then, is that the propositional content of the speech act is taken as given.³ In this section I will make explicit what such a marking means in terms of theories of pragmatic presupposition and speech acts.

3.2 *Dictum Focus* as a Pragmatic Presupposition

Dictum focus, like other types of pragmatic presupposition, is used to indicate that certain information expressed in an utterance must already be part of the common ground of the

² See Höhle (1992) for some possibly related data involving German imperatives. Schmerling (1978) analyzes English imperatives with periphrastic *do* as involving contextual-givenness. Richter (1993) claims with respect to verum focus in German declaratives that at least the verb and its arguments must be "topical", i.e. given by the context.

³ I do not distinguish here between the different types of givenness, i.e. discourse-old vs. hearer old (Prince, 1992). Distinguishing between what is not discourse-old, but has been accommodated, and what the speaker assumes is hearer-old can be difficult. Auxiliary-focused wh-questions are found discourse initially, as in (i), the first sentence of a newspaper article:

- (i) What is the problem with J.D. Salinger? He won't do Oprah! He resists Leno and Letterman! He'd rather watch Entertainment Tonight than give it a sound bite! ("Still not caught," *The Philadelphia Inquirer*, 7/7/1999)

discourse (Stalnaker, 1974). In the case of dictum focus, the denotation of the wh-question must already be part of the context set. Under an analysis of questions as partitions over the context set, an "old" question can be defined as one included in a previous one, as defined in Groenendijk and Stokhof (1984).⁴

In some cases, the auxiliary focus prosodico-syntactic form is used when the question has explicitly been part of the discourse as in in (10-11) above, where the speaker is reintroducing the content of a previous utterance. In many cases in the Switchboard data, however, the question is only implicitly part of the common ground, as in (15):

- (15) A.1 Okay, did they tell you our topic?
 B.2 Uh, no, somebody else answered the phone and put my number in.
 A.3 Okay, it's, uh
 B.4 Uh, **what IS the topic?**
 A.5 The topic is cars. What kind of car will you buy next and what kind of decision you'd, do you think about getting, you know, pick that car out and, uh, and why. (swb5_sw3453)

In this type of usage where the question has not been explicitly part of the previous discourse, the speaker expects the hearer to accommodate, ala Lewis (1979), the missing presupposition, in this case the propositional content of the wh-question.

3.3 Dictum Focus and the Illocutionary Act

Note that embedded interrogative clauses do not tolerate dictum focus, as shown in (16).

- (16) A: I was wondering how much food to buy for tonight. Who's coming to the party?
 B: # Matt's wondering who IS coming to the party too because he's buying the drinks.

The infelicity of embedded dictum focus is may be related to a more general inability of embedded clauses to express canonical illocutionary force (Han, 1998; Sadock and

⁴ For questions Q and R , and non-empty subsets J and K of information set I , J/Q (the partition that Q makes in J) is included in K/R iff $\forall X \in J/Q \exists Y \in K/R: X \subseteq Y$.

In fact, entailment may not be the correct characterization of the relation between a dictum-focused question and its antecedent. For example, (i) cannot be felicitously followed by its entailment, (ia); on the other hand, implicational bridging is felicitous, as in (ii):

- (i) Which students came to the party?
 a. # How many students DID come to the party?
- (ii) Who called John a Republican?
 a. Who DID insult him?

The problem of defining givenness for questions here is, in fact, an instance of a more general problem that arises for other semantic types also.

Zwicky, 1985). It seems, then, that dictum focus does not just mark the denotation of its clause as old, but rather it signals the presupposed quality of the propositional content of the *speech act*; that is, dictum focus has the effect of marking the propositional content of the speech act—not just of the single embedded clause—as given, and hence it must be placed in a clause that expresses illocutionary force: the matrix clause.

In contrast with (16) above, an unembedded dictum focus, (17a) is fine; a slitted example is also acceptable, as in (17b); and even embedding under a first-person subject, (17c) is not terrible. The acceptability of these utterances with a dictum focus function parallels the degree to which they can be used to express the illocutionary force of questions (Horn, 1986).

- (17) A: I was wondering how much food to buy for tonight. Who's coming to the party?
 a. B2: Good question. Who IS coming to the party?
 b. B3: Yeah, who IS coming to the party, I wonder.
 c. B4: Yeah, I wonder who IS coming to the party.

Under Searle's (1969, 1979) analysis of speech acts, different types of speech acts can be distinguished by differences in their felicity conditions, the conditions that must be met for a successful and felicitous performance of the illocutionary act. Searle classifies felicity conditions into four types: propositional content, preparatory, essential, and sincerity. Speech acts then can differ in any of these four categories. The difference between a *wh*-question with and without auxiliary focus lies in their propositional content conditions. In a *wh*-question used with dictum focus, the propositional content must already be part of the background context set. Because a dictum-focused *wh*-question is otherwise identical in illocutionary force to its non-focused counterpart, the remainder of the conditions could remain the same.

4. Reasons Speakers Mark Propositional Content as Old

Speakers use auxiliary focus in *wh*-questions to mark the propositional content of the speech act as given, i.e. already part of the common ground. Speakers may want to use this “givenness” marking for several different reasons. First, it can mark that the question is not new to the speaker herself. Second, it can make it mutually understood that the speaker wants to know the answer to the question too. The speaker can also use this form to redirect the hearer's attention to an as-yet-unanswered question. Finally, speakers can use the form to request the value of a property of a discourse-old entity.

4.1 Old to Speaker

In cases where the question has not been explicitly part of the discourse, and, in fact, the speaker does not expect the hearer to accommodate the question as having been part of the common ground previously, the use of dictum focus can indicate that the speaker has already considered this question. Possibly she has a vague idea what the answer is but cannot come up with it herself, as in (18), or previously knew but has now forgotten the answer, as in (9) above.

- (18) A.43 But, uh, you know, we're going to drive up to Kansas City, see my wife's folks, and, uh, she, what's, what's your mother cooking for Christmas, yeah, well her mom's doing brisket.
 B.44 I don't, what IS brisket?
 A.45 Brisket? It's a part of the cow that they used to throw away.
 (swb5_sw3549)

4.2 Support for Mutual Beliefs

A speaker can also use dictum focus when the wh-question has already been explicitly uttered by the hearer. The repetition of the question then necessarily introduces a certain redundancy into the discourse. Under the Maxim of Quantity, speakers should not make uninformative contributions in a cooperative exchange (Grice, 1975). As such, how can immediately repeating the other participant's contribution be cooperative? Under a more general theory of redundancy (Walker, 1993), this type of repetition can be explained as an Attitude-type Informationally Redundant Utterance (IRU).

Walker defines an IRU as an utterance that expresses a proposition that a previous utterance in the discourse situation either entails, presupposes, or implicates. She claims that these utterances are nonetheless not *communicatively* redundant in a model of discourse that incorporates the resource limitations of the discourse participants. Discourse participants must take into account that other participants are autonomous and have their own preferences, beliefs, and goals. As such, speakers cannot expect their contributions to be automatically accepted by others. In addition, humans have a limited attentional capacity; only a small number of propositions can be held in working memory, i.e. remain salient, at any given point in discourse. In light of these limitations, two of Walker's communicative functions of IRUs, Attitude IRUs and Attention IRUs are particularly relevant in the explanation of the function of dictum focus.⁵ I will discuss the former here in this section and the latter in the following section.

Speakers use Attitude IRUs to provide evidence supporting beliefs about mutual understanding and acceptance. In the case of a wh-question, repeating the question can make it clear to the hearer that the speaker heard and understood the original question and also desires an answer to this question herself. The hearer's goal of obtaining an answer to his question has been adopted by the speaker too, and repetition of the question makes this adoption explicit, as in example (10).

4.3 Redirecting Attentional Focus of Discourse

Wh-questions used with a dictum focus function can also be Attention IRUs. Speakers use Attention IRUs to manipulate the focus of attention of the discourse participants by making proposition material already part of the common ground salient. When a speaker utters a wh-question in auxiliary-focused form, the question is marked as having

⁵ Walker's definition of IRU of course must be adapted to account for entailment relations between questions rather than just propositions.

previously been part of the common ground; if the original question was explicitly part of the earlier discourse, then by repeating it, the speaker can redirect the hearer's attention to it, as in (14) above. Because an auxiliary-focused question has the illocutionary force of a genuine question, the speaker can indicate that she still wants an answer to the question.

If the question's denotation has not been explicitly made part of the context set, the speaker can manipulate the attentional focus of the discourse by making the question explicit and implicate that she is still waiting for an answer, as in (13) above.

4.4 Value of Old Property

Speakers can also use a *wh*-question with dictum focus to request the value of a property that they might reasonably expect to be told about an entity. Under a file card-type model of discourse (Heim, 1983), these questions are requests for an instantiation of the value of a property already listed on the pre-existing filecard for an entity. Such properties are typical things that a hearer expects to be told about an entity—the age of a child, the color of paint, the breed of a pet, or the cost of using some service. In contrast, requesting the value of a property that one does not necessarily expect to be told with an auxiliary-focused seems infelicitous, as illustrated in (21). In (21), the question *How big IS your band?* is entirely felicitous. In contrast, (21a), seems odd.

- (21) A.53 Well we have our band practices on Monday night, and during the summer we have concerts every Monday night in the park, and we have, you know, some concerts during the year, and various people in the communities want us to play for things, but those are usually on the weekend, so that isn't too bad.
 B.54 **How big IS your band?**
 A.55 Well, we gotta pretty good size band. Not everybody shows up, but if everyone did we'd probably have over a hundred. (swb5_sw3681)
 a. #How big IS your band's budget?
 b. How big is your band's BUDget?

The difference between these two questions (21) and (21a) is that *Size of Band* is a property B can reasonably expect A to have told him already; *Size of Band's Budget* is far less likely to be something one expects to be told about a concert band in lieu of some special context where the instantiation of this variable is of interest. Only the form in (21b) then is an appropriate way to utter this question.⁶

There appears to be a parallel between the properties whose values can be requested with a dictum focus question and the type of properties available for focus movement in English (Prince, 1981;1998). For example, (22a) is a felicitous use of focus movement in the context of (22) because the name of a new dog is a property of a pet dog that one might expect to be told. The

⁶ Like most forms that differ from canonical forms only in non-truth-conditional meaning, use of an auxiliary-focused *wh*-question to indicate dictum focus is optional. Therefore, focus might also have been felicitously placed elsewhere in B.54's utterance.

proposition *he eats x* however is not something one expects to be told about a new pet. Unless the speaker believes the hearer has some particular interest in dog diets, (22b) is infelicitous.

- (22) My neighbors just got a new dog yesterday.
 a. Fido they named him.
 b. #Purina brand dog chow he eats.

5 Distinguishing Verum and Dictum Focus

5.1 Use 2 of Auxiliary-focus Form: *Verum Focus*

The terminology *verum focus* mentioned in Section 1 is so called because in declaratives this prosodico-syntactic phenomenon can be used to affirm the truth value of the proposition, as in (23):

- (23) A: Sharon has the crazy idea that you went to see *The Matrix* twice, but I don't believe her.
 B: No, she's right. I DID go to see *The Matrix* twice.

In such a case, the alternative values for the semantic focus corresponding to the nuclear accent can be either the proposition and its negation or a scale of probability of being true (i.e. definitely true, probably true, possibly true, possibly not true, definitely not true) (Höhle, 1992). In either case, it is the truth of the proposition that is focused, hence it is an instance of *verum focus*.⁷

It has been claimed that auxiliary focus in questions can function as *verum focus* also. Höhle discusses examples of questions with auxiliary-focus and argues that they have a *verum focus* interpretation. He characterizes this effect in *wh*-questions as meaning *For which x is it really the case that P(x)*.⁸ For example, in (24), the use of focus in the question in line B.1 could be regarded as contrasting how A would like to use his credit card and how he actually uses it.

- (24) B.5 Well, how do you use your credit card? I mean, do you just keep it in reserve
 A.6 Well, the way I'd like to try and use it is, you make your purchases at prime buying time
 B.7 Uh-huh.
 A.8 Uh-huh--and then you pay that off and don't use it until it's paid off.

⁷ Verum and dictum focus do not exhaust the typology of auxiliary focus. In English the inflected verb, auxiliary or lexical, carries information about tense and number as well. A given instance of auxiliary focus might be emphasizing any one of these components. For example in (i), the tense of the verb is in focus. (cf. (ii) where "degree of truth" is focused.

(i) Fred WAS a chef, but NOW he's been demoted to chef assistant.

(ii) Bobby could've eaten the cookies and Jan might have eaten the cookies. But Alice DID eat the cookies. Her fingerprints are all over the jar.

⁸ In the original "Für welches *x* ist es denn zutreffend, daß *P(x)*?"

- B.9 Uh-huh
 A.10 Uh-huh. That's, that's my ideal way
 B.11 Uh-huh. **How DO you use it?**
 A.12 Emergencies come along, and I use it. (swb4_sw3409)

However, it is worth noting that the difference between verum and dictum focus is, in many cases, not clear. In the above example, because the question *how does A use his credit card* remains unanswered, it may not be a semantic focus contrasting alternative propositions, (e.g. the set {*how A really uses it, how A probably uses it, how A might use it*}). It could just as easily be a marking of the givenness of the question used as an Attention IRU, to remind B to answer the original question.

Teasing apart a verum focus function from a dictum focus function in wh-questions is conceptually possible, but it is difficult because the set of contexts where verum focus is appropriate is a subset of the contexts where dictum focus is appropriate. In the next section, we will examine some contexts that appear to differentiate between these two functions.

5.2 Definitive Contexts for Verum and Dictum Functions

The function of auxiliary-focus in weak island type-contexts and in embeddings under third-person subjects can be used to demonstrate that these two functions are in fact independent. Because only one function is possible in each of these contexts, it can be shown that neither verum nor dictum focus can be reduced to the other.

5.2.1 Only Dictum Focus possible: Weak Island Context

As noted in the literature (Longobardi, 1987; Cinque, 1990; Cresti, 1995; Kroch, 1998; Szabolcsi and Zwarts, 1997), *how many* phrases extracted out of negative (weak) islands cannot have reconstructed scope inside the island. For example, (25) has the reading (25a), but its negated version (26) does not have the reading (26a):

- (25) How many cakes does the average baker make in a day?
 a. For which number *n*: the average baker is such that, every day, he makes *n*-many cakes.
- (26) # How many cakes doesn't the average baker make in a day?
 a.*/# For which number *n*: the average baker is such that it is not the case that, every day, he makes *n*-many cakes.

Given these island effects, we can construct a test to see whether dictum focus is independent from verum focus. In the test case a prosodic focus on the auxiliary cannot be interpreted as verum focus since that would involve the excluded reading (26a) as one of its alternative questions. If auxiliary focus is still felicitous, it must be under the dictum interpretation. Example (27) shows that auxiliary focus is acceptable here. This demonstrates the need for a dictum focus function of the focused auxiliary.

- (27) *Context: discussion of productivity at a bakery board of directors meeting*
How many cakes DOES the average baker make in a day? I got distracted and missed the answer.

5.2.2 Only Verum Focus possible; Embedding Under 3rd-person Subject

The auxiliary focus form is possible in embedded contexts with a verum-focus function, as in (28), but not with a dictum function, as in (29), repeated from above:

- (28) So many people will be out of town next weekend when Matt holds his party. John can't come; Bill can't come. Mary will probably cancel at the last minute. At this point, Matt's wondering who IS coming to the party.
- (29) A: I was wondering how much food to buy for tonight. Who's coming to the party?
B: # Matt's wondering who IS coming to the party too because he's buying the drinks.

The impossibility of embedded auxiliary focus with a dictum focus function, yet the acceptability of the same form with a verum focus function demonstrates the independent existence of the latter function.

6. Previous Analyses and the Dictum Focus Function

In section 3 I described the pragmatic effect of dictum focus as marking the propositional content of the speech act as old. This givenness presupposition, in fact, follows from the *lack* of focus in the units contributing to the truth-conditional denotation of the sentence. What is left to analyze still is the *presence* of focus on the auxiliary. This is the topic of this section. Two possibilities of how one might analyze the placement of the prosodic focus will be sketched here: (1) a focus-marking analysis and (2) a deaccenting analysis.

6.1 Semantic Focus Analysis

Previous analyses of prosodic focus most often treat focus in one of two closely-related ways (Rooth, 1992; Vallduvi and Vilkuna, 1998; McNally, 1998; Schwarzschild, 1998; Selkirk, 1995). A prosodic focus either marks the focused constituent as one member of a contextually-given set of alternatives. Or, it marks the focused constituent as the "new" information in the sentence, that is the instantiation of a variable in an open proposition. The open proposition corresponds to the remainder of the utterance with the focused constituent removed and must be contextually recoverable.

In an auxiliary focus construction used for dictum focus then there must be some set of possible alternative values present in the context. One possibility is a set of other performances of the speech act with identical propositional content, i.e. {*You asked Q at time t, Matt asked Q at time s, I asked Q at time r*}. Under such an analysis, it remains to be seen whether the pitch accent would necessarily have to correspond with an F-marked syntactic constituent or not. Association with focus phenomena are found with

metalinguistic negation where the focus does not correspond to something in the syntax or semantics of the utterance, but rather some phonological or lexical item. This suggests that an F-marked constituent in the syntax might not have to be posited in accounting for a set of relevant alternatives evoked by dictum focus.

6.2 Deaccenting Analysis

A second possible analysis is one in which the placement of the pitch accent in an auxiliary focus construction used for dictum focus does not correspond with some semantic focus value. In English, sometimes the placement of accent does not signal narrow focus on the constituent on which an accent appears, but rather it removes focus from something that needs to be realized *without* accent in order to signal coreferentiality (some sort of "givenness") (Ladd, 1980; 1996). For example, in (30) and (31), the pitch accent on *read* does not indicate a contrast with other things John does to books or other things the speaker wants to do to the surgeon, respectively. The focus placement here simply allows deaccenting of the following NPs.

- (30) A: Has John read Slaughterhouse Five?
B: No John doesn't READ books
- (31) A: How did your operation go?
B1: Don't talk to me about it--I'd like to STRANGLE the butcher.
B2: # Don't talk to me about it--I'd like to strangle the BUTCHER.

If the dictum focus function was analyzed as a pairing with a form involving deaccenting, one would then claim that the strongest pitch accent of sentence falls on the auxiliary verb in order to deaccent everything else in the sentence. An additional level of explanation would then be required to explain why it is the auxiliary position rather than some other constituent that receives the pitch accent. Also, a deaccenting analysis of dictum focus would lack parallelism with respect to the verum focus function. In verum focus, the placement of the pitch accent on the auxiliary contributes a semantic focus value to the meaning of the wh-question; the placement of the pitch accent in dictum focus would not have such an effect on the meaning.⁹ At this point, it is not clear which of the two analyses of focus placement discussed here is a better characterization of the dictum focus function.

7. Conclusions

This paper has presented evidence for two independent discourse functions, verum focus and dictum focus, of a single form, the prosodico-syntactic pattern of auxiliary-focus in wh-questions. On the basis of spoken English corpus data, I claim that dictum focus signals the presupposedness of the propositional content of the speech act the speaker is making.

⁹ This ambiguity in the interpretation of pitch accent placement is, of course, inherent in any theory of prosodic focus that includes deaccenting.

This research could be extended in several directions. First, a crosslinguistic comparison of other forms used to express these two discourse functions may be useful in deciding which analysis of the focus position is most viable. The study could also be extended within English to investigate auxiliary focus in yes-no interrogatives, imperatives, and declaratives. Finally, one might also want to develop of a discourse model that can account for both the verum and dictum functions of questions and for the connection between dictum focus and focus movement constructions.

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Department of Linguistics
619 Williams Hall
University of Pennsylvania
Philadelphia, PA 19104

creswell@ling.upenn.edu