Why we should ever bother about wh-questions: On NPI-licensing properties of wh-questions in Swedish

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Why we should ever bother about wh-questions[*]

On the NPI-licensing properties of wh-questions in Swedish

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ABSTRACT

This paper is an attempt to solve the somewhat elusive polarity item licensing properties of wh-questions in Swedish. As has been observed by Klima (1964) for English, NPIs are generally not compatible with genuinely information seeking wh-questions, but tend to induce rhetorical interpretations. Distinguishing between three types of wh-questions and the kind of information they request, I will systematically review the syntactic, semantic and pragmatic properties of each wh-type. Based on that overview, I argue that NPI-licensing in wh-questions is dependent on the relation between the implication of existence associated with the wh-word and the presupposition induced by the expressed proposition. According to my analysis, wh-words should not be regarded as NPI-licensing operators. Being place-holders, wh-words inherit whatever properties are associated with the item they replace. The licensing property of the wh-word is thus dependent on the licensing property of the referent. Thus, only wh-words referring to downward entailing expressions will license NPIs in their scope (e.g. when pointing to an empty set). Such wh-questions tend to be interpreted rhetorically.

1.   Introduction

The primary aim of this paper is to elucidate the negative polarity item licensing properties of wh-questions in Swedish. As illustrated below, NPI-licensing wh-questions tend to be interpreted rhetorically, whereas NPI-licensing yes/no-questions may be feliticiously used in genuinely information seeking contexts. The problem, of course, is how to account for this difference:

(1) a. **Vem** skulle *någonsin* vilja åka till Paris?   (rhetorical)
        Who would   ever   want (to) go   to Paris

     b. #**Vem** åkte *någonsin* till Paris?   (information seeking)
        Who went   ever   to Paris

(2) a. Kommer man *någonsin* att   kunna lita på banken   igen? (rhetorical)
       Will   you   ever   INF be-able-to trust bank-the again

    b. Har du *någonsin* varit i Paris?   (information seeking)
      Have you   ever   been to Paris

This observation is not new; as Klima (1964) noticed, so called 'strong' NPIs (e.g. *lift a finger*, *give a damn*) induce rhetorical interpretations of questions in English, and are consequently not compatible with genuine information-seeking questions, see (3) below. Weak NPIs (e.g. *any*, *ever*), on the other hand, may be licensed in information-seeking contexts, as in (4). The examples in (4) are taken from Guerzoni & Sharvit (2007:362).

(3) a. **Who** *gives a damn* about bankers and their lost fortunes?
    b. *Who will lift a finger* to legislate for the voiceless and powerless?

(4) a. **Who** cooked *anything*?
    b. **Who** was *ever* in Paris?

Swedish seems to differ from English in this respect, in that also weak NPIs induce rhetorical interpretations of wh-questions. But the generalization does not hold for all kinds of wh-questions; note that an NPI within the scope of *varför* ('why') and *hur* ('how') does not necessarily lend a rhetorical flavor to the question:

(5) A: **Varför** skulle jag *någonsin* vilja   göra det?
      Why   would I   ever   want (to) do   that
    B: För att det är nyttigt
      Because it is healthy

(6) A: **Hur** kan jag *någonsin* gottgöra dig?[1]
      How can   I   ever   compensate you
    B: Köp mig en kopp   kaffe!
      Buy me   a cup (of) coffee

Admittedly, both (5) and (6) are strongly suggestive of a negative answer (e.g. *nothing could ever make me want to do that* and *I could do nothing to compensate you*, respectively). But importantly, these questions may be answered informatively, e.g. by explicating the reasons for doing a certain thing or suggesting how the addressee may be compensated – a fact that distinguishes (5)

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[1] Note also that this question may be paraphrased as a *yes/no*-question: *Kan jag någonsin gottgöra dig?* ('Can I ever make it up to you').

and (6) from (1) above. The interpretation of an NPI-licensing wh-question thus seems to be partly dependent on the semantic properties of the wh-word.

Taking this brief sketch as the outset, I will address and attempt to answer the following two questions in the remainder of this article:

- What are the licensing properties of wh-questions in Swedish?

- When and why does an NPI give rise to a rhetorical interpretation in Swedish wh-questions?

In order to answer the first question, the second question may provide a good starting point. In section 2, I will present a categorization of wh-questions based on the kind of information they request. For each clause type, I will relate its syntactic form to its pragmatic function and its semantic interpretation, thus getting a rather fine-grained classification of wh-questions in Swedish. This section paves way for the analysis in section 3, in which I try to dissect the NPI-relevant aspects of wh-questions. In short, my proposal builds on the wh-variable: getting its scope from its syntactic position, it will license NPIs whenever it points to a downward entailing expression, e.g. an empty set. This in turn explains why NPIs are not compatible with information seeking contexts. A short summary in section 4 concludes this article.

2. The Structural Properties of wh-questions in Swedish

Before being able to reach any kind of generalization on the NPI-licensing properties of wh-questions, it is substantial to distinguish between the various wh-words and the kind of information they request, especially considering the difference we noted above regarding *who* and *why*.

As Karttunen (1977:footnote 1) points out, the term *wh-questions* is in itself somewhat misleading; *search questions* would perhaps be a better term, "since semantically these questions involve a search for a suitable value for a variable". And crucially, different search questions request fundamentally different kinds of information. We may distinguish at least three distinct categories of search questions:

i)   argument questions: *vem* ('who'), *vad* ('what'), *vilken* ('which')
         Questions belonging to this category request the identification of an unspecified syntactic argument as selected for by the verb. Syntactically, this is information belonging to the V-domain.

   ii)   framing questions:
- a) spatiotemporal questions: *när* ('when'), *var/vart* ('where')
- b) circumstantial questions: *hur* ('how')

The function of these questions is to request specification of a spatiotemporal or circumstantial anchor to the event under discussion. Prototypically, this kind of information is not part of the core proposition, which is syntactically reflected by the fact that they take the form of adverbials, adjoined to the V- or I-domain.

   iii)   propositional questions: *why*

This class of wh-questions requests the specification of e.g. the reasons for, the consequences of or the explication of the expressed proposition. This is information that lies outside the structural domains of the sentence, meaning that it is extra-propositional, as it were.

Note that the categorization is based on the semantic properties of each kind, not the morphological correlates often associated with it. That is, the wh-word is not in itself important, since there may be various paraphrases filling the same function: *why* may be paraphrased with *for what reason*, but the expression still requests propositional information.

Furthermore, there is no 1-1 mapping between the wh-word and the classification. For example, prototypical 'argument' wh-words may request the explication of an event rather than an argument, as in (7a). And spatiotemporal wh-words may request specification of an argument as selected for by the verb, similar to argument wh-words (7b). Finally, *how* may be combined with adverbs e.g. requesting spatiotemporal information (7c). Thus, we must keep the semantic function of the question distinct from its syntactic and morphologic correlates.

(7) a. Vad ska du göra imorgon?
       What will you do   tomorrow

    b. Var står din bil?
      where is your car

    c. Hur länge har du arbetat här?
      How long have you worked here

Following the classification above, I will in the next three subsections discuss each question type in turn, starting with argument wh-questions.

2.1 Argument wh-questions

As noted above, argument wh-questions prototypically request the identification of an argument as selected for by the verb. As is well known, wh-questions give rise to an existential implicature (see e.g. Karttunen 1977), i.e. an implicature to the effect that the set to which the wh-word refers is non-empty.

(8)   a. **Who** bought that book?
         >> someone bought that book

      b. **What** did you buy?
         >> you bought something

That the implication of existence is pragmatic rather than semantic in nature (i.e. an *implicature* rather than a *presupposition*) can be proven by the fact that an argument wh-question can be feliticiously answered in the negative:

(9)   a. A: **Vem** träffade du   igår?
            Whom   met   you yesterday
            'Whom did you meet yesterday?'
      B: Ingen.
         Nobody

      b. A: **Vad** åt du till lunch igår?
            What ate you for   lunch yesterday
            'What did you have for lunch yesterday?'
      B: Ingenting.
          Nothing

Interestingly, there is a distinct difference in Swedish between clefted and non-clefted wh-questions with regards to the implications of existence they give rise to. A clefted argument wh-question cannot be feliticiously answered in the negative, as the following examples show:

(10) a. A **Vem** var det som du   åt lunch med igår?
              Whom was   it that you had lunch with yesterday
         B: ??Ingen / Sven
             Noone / Sven

      b. A: **Vad** var det (som) du åt till lunch igår?
             What was it   that you ate for   lunch yesterday
         B: ??Ingenting / Ärtsoppa och pannkakor
             Nothing /   pea soup and   pancakes

As these two examples suggest, clefted wh-questions *presuppose* rather than *implicate* existence. Put differently, we may suggest that the implication of exis-

tence in clefted wh-questions is semantic in nature (i.e. a presupposition), whereas the implication of existence in non-clefted wh-questions is pragmatic (i.e. a generalized conversational implicature).

Let me briefly outline a possible explanation to this difference between non-clefted and clefted argument wh-questions in Swedish. The implication of existence is closely linked to the truth of the proposition expressed by the question as a whole: if I had nothing for lunch, the proposition that I had something for lunch is false. In other words, denying the implication of existence amounts to denying the implication induced by the proposition as well. The same is of course true if the implication of existence is affirmed: if the set to which the wh-refers is non-empty, the proposition must be true. Trivially, if there is someone such that I had lunch with that someone yesterday, the proposition that I had lunch with someone is true.

For wh-questions, this logical relation between the implication of existence on the one hand and the truth of the proposition on the other can be reversed. That is, an implication to the effect that the proposition is true will inevitably lead to an implication of existence as well: if there is a strong implication to the effect that there is an event such that I met someone for lunch, there is also a strong implication to the effect that the wh-word must point to non-empty set. A trivial truth-table for argument wh-questions is listed below:

Table 1: Truth-table for argument wh-questions

p		q
1	$\leftrightarrow$	1
0	$\leftrightarrow$	0

(Where p: presupposition of existence, and q: the proposition expressed by the wh-question)

In clefts, the proposition contained within the relative clause is standardly taken to be presupposed, as exemplified below:

(11) Vem var det <u>som köpte bilen</u>?
     Who was   it   that bought car-the
   >> Somebody bought the car

From the reversible logical relations of wh-questions as exemplified above, it follows that the set to which the wh-word refers in (11) is non-empty: presupposing the proposition that somebody bought a car commits us to an existential

presupposition as well. Thus, clefted questions cannot be feliticiously answered in the negative[2].

The truth of the proposition expressed by a non-clefted argument question, on the other hand, is not presupposed (although it may be pragmatically implicated). Consequently, no existential presupposition will arise either. Thus, answering a non-clefted wh-question in the negative is not contradictory, as B's answers in (9a) and (9b) show.

The kind of information clefted or non-clefted argument questions requests can be related to the different implications of existence each question type give rise to. A non-clefted argument wh-question, I would argue, requests *existential identification* of the argument denoted by the wh-word. Clefted argument wh-questions, on the other hand, request *referential specification* of the argument denoted by the wh-word. Another way of expressing this is saying that whereas the arguments requested by the non-clefted wh-words in (9a) and (9b) are neither existentially presupposed nor referentially specified, the arguments requested by the clefted wh-words in (10a) and (10b) are referentially unspecified but existentially presupposed.

It should be pointed out for non-Swedish speaking readers that cleft questions are abundant in Swedish, a fact often overlooked in the literature. Cleft-questions are preferred in any situation in which the identity, but crucially not the existence, is unspecified/unknown to the speaker. For example, if A wants to know who just called B (in a situation where A has overheard B's talking on the phone), this question would be formulated as a cleft rather than a standard wh-question, see (12a). For the same reason, if A points to an unknown person in the distance and wants to know who that person is, a cleft would be the natural choice, (12b). In both contexts, the existence of the argument denoted by the wh-word is non-negotiable, which is why a non-cleft (requesting existential identification) is less preferred[3]. Clefted wh-questions are thus intrinsically connected to a presupposition of existence.

(12)   a. Vem var det som ringde?
            Who was it   that called

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b. Vem är det som står där borta?
    Who is it that   is over there

If the difference between clefted and non-clefted wh-questions can be related to the presuppositions and implicatures they give rise to, we would predict argument wh-questions with existential verbs to behave similarly to clefts. That is, the lexical properties of the verb should induce an existential presupposition similar to the one found in clefts. This prediction is borne out. As illustrated below, existential wh-questions cannot be feliticiously denied, a fact that indicates that the implication of existence is presupposed rather than pragmatically implicated. Note also that existential wh-questions cannot be clefted in Swedish:

(13) a. A: Vem är det?
        Who is that
    B: #Ingen / Det är Lisa
      Nobody / it is Lisa
  b. *Vem är det som det är?

    Who is it that it is

(14) a. A: Vad är det?
        what is it
    B: #Ingenting / Det är en avokado
      Nothing /   it is an avocado
  b. *Vad är det som det är?
    What is it   that   it is

As stated in the previous section, the proposed categorization of the different types of wh-questions is based on their semantic properties, not on the wh-word often associated with them. Thus, a prototypical 'argument' wh-word can be used for other purposes than requesting arguments; for example, *vad* ('what') is often used to request an event, as in (7a) above and (15) and (16) below. Interestingly though, such questions seem to behave similarly to argument questions: the non-clefted variety induces an existential implicature, whereas the clefted one induces a presupposition[4].

(15) A: Vad ska du göra imorgon?
        What will you do tomorrow
        'What are your plans for tomorrow?'

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[4] As Christer Platzack (p.c.) pointed out to me, there is a distinct difference also in the interpretation of the verb *göra* in the clefted and non-clefted question. *Göra* in clefted contexts seems to necessarily get main verb interpretation, as opposed to *göra* in non-clefts, which may be clearly supportive: A: *Vad ska du göra i helgen?* B: *Bara ta det lugnt* vs. A: *Vad är det du ska göra i helgen?* B: ??*Bara ta det lugnt*.

B: Ingenting / Jag ska åka till Paris
   Nothing   /   I   will   go to Paris

(16) A: Vad är det (som) du ska göra imorgon?
        What is it   that you will do   tomorrow

       B: #Ingenting / Jag ska åka till Paris
           Nothing   /   I   will go   to Paris

Some of these event-requesting *what*-questions do induce strong presuppositions, and perhaps it is for this reason they show a strong reluctance for being clefted. Pragmatically, these kinds of questions express surprise or deviations from the expected:

(17) a. A: Vad gör du här?!   (surprised)
            What do you here
            'What are you doing here

       B: #Ingenting[5] / Jag ville bara kolla   en sak / Jag är här på
  semester
              Nothing /   I wanted just (to) check something / I am here on vacation

      b. A: ??Vad är det som du gör här?!   (surprised)
          What is   it   that you do here

It is to me not clear why the question in (17) behaves as it does, but it should be noted that it might be roughly paraphrased by a yes/no-question (*Är du här?* ('Are you here?')). This may suggest that the question in (17) is not necessarily an information-seeking question at all. But I will leave this area unexplored for the time being.

    Summarizing this section on argument wh-questions in Swedish, I suggest that non-clefted wh-questions prototypically request *existential identification* of a wh-word whose existence is implied via a generalized conversational implicature. Clefted wh-questions, on the other hand, prototypically request *referential specification* of an argument whose existence is presupposed. Non-clefted wh-questions constructed with existential verbs behave similarly to clefts (although they cannot in themselves be clefted) in that they request *referential specification*.

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[5] Admittedly, this answer sounds very likely in certain contexts. But crucially, we have to distinguish between speaker-denial and presupposition-denial. If B answers "nothing" in a context where A has reason to believe that B was up to something, B's answer will likely be interpreted as "I did nothing suspicious", or something of that sort. This use of *nothing* is of course similar to saying "There's nothing happening nowadays", which is taken to mean "nothing interesting" rather than "nothing at all". Hence, it does not deny existence as such.

2.2   Framing wh-questions

Wh-questions introduced by framing wh-words come in two varieties: *spatio-temporal* and *circumstantial*. Note first that both types seem to presuppose rather than (pragmatically) implicate the truth of the expressed proposition, as the following examples illustrate:

(18) a. **When** did you move to New York?
        >> you have moved to New York

      b. **Where** did you buy that sweater?
        >> you have bought that sweater

      c. **How** can you afford your rent?
        >> you can afford your rent

Let us first consider spatiotemporal wh-questions. Naturally, all events must be spatiotemporally anchored (in some way or another), which is reflected syntactically by the presence of finiteness features. As Platzack (1998:59) remarks: "Without this anchoring of the time line associated with the predication, no truth value can be determined, hence finiteness can be said to make a proposition out of a predication". From this it follows that even though the exact time and place of an expressed event (or state) may be underspecified in a given utterance, the existence of such a place and time is necessarily presupposed. In the terminology introduced above, requesting spatiotemporal information thus equals requesting *referential specification* of a certain time and/or place.

Consequently, non-clefted spatiotemporal questions are fundamentally different from non-clefted argument questions: the former request *referential specification*, the latter *existential identification*. This difference becomes evident when we consider negative answers to spatiotemporal questions, which inevitably lead to the cancellation of (the truth of) the proposition. Since spatiotemporal wh-words give rise to an existential presupposition, non-clefted spatiotemporal questions cannot be feliticiously answered in the negative, as opposed to non-clefted argument questions:

(19) A: **When** did John buy that book?
       B: #Never
(20) A: **Where** did John buy that book?
       B: #Nowhere

Crucially, clefted spatiotemporal wh-questions have a slightly different function from clefted argument questions. Because of the obvious redundancy of

clefting a presupposed question (the reason for clefting being to make it presuppositional), clefted spatiotemporal questions give rise to a conversational implicature: the requested information has previously been activated in the discourse, or should be regarded as common knowledge that for some reason or another is unavailable to the speaker at the time of utterance (often with the speaker being aware of this).

(21) A: **När** var det (som) Andra Världskriget bröt ut (nu igen)?
     When was it   that   second   world war-the broke out now again
   B: #Aldrig / Det vet väl alla?! / 1939
     Never / Everybody knows that! / 1939

(22) A: **Vart** var det (som) du var på semester (nu igen)?
     Where was it   that   you were on vacation now again
   B: #Ingenstans / Det har jag sagt tusen gånger! / Israel
     Nowhere   / That have I told (you) (a) thousand times / Israel

The difference between clefted and non-clefted spatiotemporal questions thus seems to be related to information structure considerations: only spatiotemporal information known to the speaker to be discourse old or part of the common ground feliticiously licenses the clefted variety. This use should not be confused with requesting the referential specification of a presupposed time or place, since it rather requests being *reminded* of the referential specification.

    Admittedly, clefted argument questions may have the exact same function, but often demand additional material, such as *nu igen* ('now again'), or *nu* ('now') to get this interpretation[6]

(23) A: **Vem** var det *nu* som var först på månen?
     Who was it now that was first on moon-the
     'Who was it again that first set foot on the moon?'
   B: Det borde du veta! / Neil Armstrong
     That ought you know / Neil Armstrong

(24) A: **Vad** var det (som) vi skulle ta med till nästa gång *nu igen*?
     What was it   that   we should bring for next time now again
   B: Har du redan glömt det?! / Papper och penna
     Have you already forgotten that /   paper and (a) pencil

As noted in the introduction of this article, some spatiotemporal wh-words request the specification of syntactic arguments as selected for by the verb (i.e. information belonging to the V-domain), rather than adjoined material (belong-

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[6] This addition, I believe, is highly preferred, but not necessary for this interpretation. The same interpretative result may be achieved with extra stress on the copula: *Vem VAR det som var först på månen?* ('Who WAS it that first walked on the moon').

ing to the I-domain). Even then, these wh-questions induce an existential pre-supposition (probably because of the existential predicates these spatiotemporal wh-words are arguments to)[7]:

(25) A: Var står din bil?
      Where is your car
    B: #Ingenstans / I garaget
      Nowhere / in garage-the

Summarizing this section, I have argued that spatiotemporal questions always request referential specification, rather than existential identification. This is because all propositions must be spatiotemporally anchored, from which it follows that the existence of a time and place of a given event is presupposed. Clefted spatiotemporal questions give rise to a conversational implicature of reminding the speaker of a previously made referential specification.

2.3 Propositional wh-questions

Although *why*-questions presuppose the truth of the expressed proposition, they can be answered in the negative without cancelling the presupposition as such, as in (26) below.

(26) A: **Varför** köpte du den boken?
      Why bought you that book-the
    'Why did you buy that book'
    B: Ingen anledning / Därför att den verkade intressant
      No reason / because it seemed interesting
    >> you bought that book

The possibility of wh-denial without denying the proposition distinguishes propositional wh-questions from framing wh-questions, which are presupposi-tional but non-cancellable. Intuitively, this is so because all propositions must be spatiotemporally anchored in some way or another, but there need to be no clear or obvious reason for the occurrence of an event[8]. Hence, denying the existential presupposition of a propositional wh-word does not equal denying the presuppo-sition induced by the proposition expressed by the wh-question.

At the same time, propositional wh-questions can be distinguished from argument wh-questions, which are cancellable but non-presuppositional (as (9a),

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[7] As pointed out to me by Lars-Åke Henningsson (p.c.), the existential presupposition can also account for the awkwardness of negative existential questions: ??*Vad står inte där?* ('What is not there?') and ??*Vem bor inte där?* ('Who does not live there'). With emphasis on the negative particle, these questions improve considerably, but will have a rhetorical flavor.
[8] This claim is unrelated to the philosophical question of whether any event must have a reason or purpose.

(9b) above show). In the terminology introduced previously in this article, propositional wh-questions neither request existential identification nor referential specification but rather information that must be located outside the expressed proposition.

Clefted propositional questions function similarly to framing ones, however, in that they request re-activation of previously salient information. Thus, the reason for using clefted propositional questions seems again to be related to information structure considerations. As with framing cleft-questions, propositional cleft-questions cannot be feliticiously negated:

(27) A: **Varför** var det (som) du åkte till Israel (nu igen)?
      Why   was it   that you went to Israel now again
   B: #Ingen anledning / Det har jag ju sagt!   / För en konferens
      No reason   / that have I PART told (you) said / for a conference

(28) A: **Hur** är det (som) man säger (nu igen)?
      How is it   that you say   now again
   B: Minns du inte det? / Bättre fly   än   illa fäkta
     Remember you not   that / better (to) run than (to) badly fence
   'Don't you remember?' / 'He who fights and run away lives to fight another day'

2.4   Summary

Having discussed three different types of wh-questions and their clefted and non-clefted varieties, we might finally summarize the syntactic, semantic and pragmatic properties connected to each of them. Table 2 provides an overview of the properties discussed:

Table 2: Properties of wh-questions in Swedish

	NC-argument	C-argument	NC-frame	C-frame	NC-prop.	C-prop.
Existential identification	Yes	No	No	No	No	No
Referential specification	No	Yes	Yes	Yes	No	No
Re-activation of old info.	No	No[9]	No	Yes	No	Yes
Presupposition of existence	No	Yes	Yes	Yes	No	Yes

(Key: NC = non-cleft, C = cleft, Rh = rhetorical)

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[9] Except with additional material, see examples (23) and (24) above.

3. NPI-licensing properties of wh-questions

Let us now return to the issue we first set out to discuss: the distribution of NPIs in wh-questions in Swedish. The first question that must be addressed is related to the property of the wh-word itself: is it an overt question operator licensing NPIs within its scope? Assuming an operator based approach has the obvious advantage of providing a generalized explanation for questions: the difference between yes/no-questions and wh-questions would then only be the absence/presence of a phonetically realized operator. This move appears theoretically satisfactory, but it is hardly empirically sufficient. The fact that most wh-words will not license NPIs in information-seeking contexts severely flaws an operator based approach:

(29) a. #**Vem** köpte *någonsin* boken
           who bought   ever   book-the
      b. #**Vad** ska du *ens* göra idag?
           What will you even do   today
      c. #**När** vill du *ens* träffas imorgon?
           When want you even   meet tomorrow
      d. #**Var** ställde du *någonsin* min nya bok?
           Where put   you   ever   my new book

Since we do not want arbitrariness in the system, the distributional facts of (29) are problematic: if the operator were responsible for the licensing, we would not expect the ungrammaticality above (i.e. the operator should not be sensitive to semantic or pragmatic factors). In comparison, a strong anti-veridical operator like negation always licenses NPIs (even though it may of course give the utterance a slightly different meaning).

As touched upon earlier, not all wh-words behave in a similar manner; *why* and *how* may license NPIs without necessarily having a rhetorical flavor, as exemplified in (5) and (6) above, repeated here for convenience:

(30) a. **Varför** skulle jag *någonsin* vilja   göra det?
           Why   would I   ever   want (to) do that
      b. **Hur** kan jag *någonsin* gottgöra dig?
           How can I   ever   compensate you

In the terminology introduced above, we might relate the licensing of polarity items to the function of question itself, i.e. the kind of information it requests: *existential identification* or *referential specification*. As mentioned several times already, the existential presupposition is closely linked to the presupposition induced by the proposition. Naturally, if the set of referents to which the wh-

word refers is empty, the proposition is false. And vice versa: if the proposition is false, then the set to which the wh-word refers is empty. This reversible relation was illustrated in table 1 above for argument wh-questions. Note that declarative sentences do not have the same semantic properties in this respect, since denying the proposition does not entail the non-existence of any of the arguments (be it a subject or object)[10].

Let us look more closely at two different questions: rhetorical questions and cleft-questions. If we start with the latter, it should be noted that cleft-questions do not license polarity items under any circumstances in Swedish:

(31) a. *Vem var det som du *någonsin* åt lunch med?
          Who was it   that you   ever   had lunch with
      b. *Vad var det som du *ens* ville   fråga mig?
          What was it   that you even wanted (to) ask me
      c. *När var det (som) du *någonsin* var i Paris?
          When was it   that you   ever   were in Paris
      d. *Vart var det (som) du *någonsin* åkte på semester?
          Where was it   that you   ever   went on vacation
      e. *Varför var det (som) du *någonsin* ville   åka till Paris?
          Why   was it   that you   ever   wanted (to) go to   Paris
      f. *Hur var det (som) man *ens* skulle börja göra detta?
          How was it   that   you even should start doing this

This distributional fact can be related to the reversible logical relations of questions. If the truth of the proposition is presupposed, the existence of the wh-argument is also presupposed. In other words, the wh-word points to a non-empty set. And this, I would argue, is precisely why polarity items cannot be licensed in clefts.

The non-occurrence of NPIs in clefts may thus provide us with a solution to the operator based approach above. Uncontroversially, wh-words can be regarded as 'dummy'-pronouns, i.e. place-holders with variable meanings. From that viewpoint, it follows that a wh-word in itself has very few semantic and syntactic properties. But it also follows that being a place-holder, it inherits whatever properties can be attributed to the item it replaces (i.e. its referent). This approach is inspired by the discussion on wh-questions in Jackendoff (1972:315), from which the following quote is taken[11]:

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[10] For example, *John didn't buy the book* does not equal the non-existence of John (or the book for that matter).

[11] Naturally, Jackendoff does not make the distinction explicated in this paper between *existential identification* and *referential specification*.

> The meaning of C_{wh} is that the identification of a referent depends on the answer to the question. *Wh* occurs in a position closely parallel to negatives (*who*, *what*, *where*, *when*, *which* vs. *nobody*, *nothing*, *nowhere*, *never*, *no* and perhaps *whether* vs. *not*), so it is plausible that its scope is similar to that of negatives, i.e., all commanded material to the right in surface structure (...). Just as the scope of negation determines the negated part of the sentence, the scope of *wh* determines the questioned part of the sentence.

If we assume in accordance with Jackendoff that the wh-word scopes over everything to the right of it, then we may also assume that a wh-word referring to a downward-entailing expression should be able to license NPIs within its scope. That is, when the wh-word refers to an empty or non-specific set, NPI-licensing becomes possible[12]. Whenever the wh-word refers to specific members of a set (i.e. upward entailing expressions), however, NPIs cannot be licensed within its scope. This is why an information question like *Vem köpte någonsin boken*? ('Who bought ever the book') is just as bad as its answer **Sven köpte någonsin boken* ('Sven bought ever the book').

But more importantly, this is why NPI-licensing is incompatible with genuinely information seeking questions, as observed by Klima: only if the speaker already assumes the wh-word to refer to an empty set is an NPI licensed. For example, if it is (to the speaker's mind at least) highly unlikely that there exists someone who would spend 4 years working on polarity items in Swedish, then it is equally unlikely that the proposition that someone would spend four years on polarity items in Swedish is true. And in such a context, a polarity item is feliticiously licensed: *Who would ever spend four years working on NPI-licensing in Swedish?*. Crucially, this is why NPI-licensing wh-questions tend to be interpreted rhetorically. The very function of rhetorical questions is to request information without expecting any, or – in our newly introduced terminology – request referential specification while presupposing non-existence. Following this line of reasoning, it follows that NPIs do not in themselves add a rhetorical flavor to wh-questions. But they can only be licensed whenever the wh-word points to a downward entailing expression. Hence – since questions introduced by such wh-words tend to be interpreted rhetorically – NPI-licensing and rhetorical interpretations are often associated. But crucially, rhetorical interpretations may be achieved independently of the presence/absence of an NPI[13] – and NPI-licensing may take place in non-rhetorical contexts.

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[12] The same is true for personal pronouns, whose (non)specific reference is dependent on the item they replace. Note for example that *dom* ('they') in Swedish can only get a non-specific reading when licensing NPIs: *Personer/dom som* någonsin *varit i Paris vet vad jag talar om* ('People/those who have ever been to Paris know what I'm talking about').

[13] This claim can be independently corroborated by the fact that NPIs are not necessary for a rhetorical intpretation: *VEM skulle göra något sådant?* ('WHO would do such a thing')

Based on the arguments explicated above, we might reach a quite intuitive understanding of why propositional wh-questions may license NPIs without being rhetorical. The reversible logical relations (i.e. between the presupposition of existence and the presupposition of the truth of the proposition) do not work for these kinds of questions. The truth table for non-clefted propositional wh-questions is presented below.

Table 3: Truth-table for propositional wh-questions

p		q
1	$\rightarrow$	1
1	$\nleftarrow$	1
0	$\leftarrow$	0
0	$\nrightarrow$	0

(Where p: presupposition of existence, and q: the proposition expressed by the wh-question)

As illustrated in this table, the logical relations are not reversible for propositional wh-questions. A presupposition of existence is linked to the truth of the presupposed proposition (i.e. if $p = 1 \rightarrow q = 1$). That is, if there is an obvious reason or motivation for an event, the event must be presupposed. But crucially, if there is no (obvious) reason or motivation for a certain event, it does not necessarily follow that there is no event taking place (i.e. if $p = 0 \nrightarrow q = 0$).

Moreover, presupposing the truth of the proposition does not equal presupposing the existence of a reason corresponding to the wh-argument either: an event can take place without any obvious reason or motivation (i.e. if $q = 1 \nrightarrow p = 1$). The existential presupposition, however, cannot arise without a true proposition; if there is no event, there cannot be a reason or motivation for that event (i.e. if $q = 0 \rightarrow p = 0$.)

NPI-licensing propositional wh-questions are thus compatible with genuine information seeking contexts, since the information requested is independent from the propositional content. That is, the wh-word may point to an empty set without affecting the truth of the proposition. Consequently, the wh-word (pointing to a downward entailing expression) may license NPIs inside a presupposed proposition – which in turn explains why NPI-licensing propositional wh-questions may still be interpreted as requesting information. And the heavy but not necessary bias towards a negative answer can be attributed to the empty set the wh-word refers to.

The information requested in argument and framing wh-questions, on the other hand, is always closely linked to the proposition expressed, either as being

arguments belonging to the VP or the IP. Hence, the wh-word cannot point to an empty set without at the same time affecting the presupposition of the truth of the proposition. The truth-conditions for argument and framing wh-questions is given below (a repetition of table 1 above):

Table 4: Truth-table for argument and framing wh-questions

p		q
1	$\leftrightarrow$	1
0	$\leftrightarrow$	0

(Where p: presupposition of existence, and q: the proposition expressed by the wh-question)

According to my proposal, NPIs are licensed only when the wh-word refers to a downward entailing expression. The only possibility for an NPI to be licensed in argument and framing wh-questions thus occurs when the wh-word refers to an empty or non-specific set – in which case there is no presupposition of an event either. Consequently, the only interpretation of an NPI-licensing argument and framing wh-question is rhetorical, since a rhetorical question requests referential specification while presupposing non-existence.

Finally, just a few words on the importance of tense. Because of the reversible logical relations of argument and framing wh-questions, the existence of an event equals the existence of a wh-referent and vice versa. And this explains why rhetorical questions are less easily accessible in the present and simple past tense, but very easily acceptable in the future tense and hypothetical past tense. Naturally, the non-existence of a wh-referent is more easily achieved with events belonging to the future or the hypothetical past than to the present or perfective past.

(32) a. #När åker jag *någonsin* till Paris?
          When go I   ever   to Paris
      b. #När åkte jag *någonsin* till Paris?¨
          When went I   ever   to Paris
      c. När skulle jag *någonsin* åka till Paris?
          When would I   ever   go to Paris
      d. När ska jag *någonsin* åka till Paris?
          When will I   ever   go to Paris

Summarizing this section, I have argued that wh-words are not inherently licensing operators from a syntactic point of view; this move away from syntax might explain the seemingly arbitrary licensing properties illustrated in (29) above. Rather, wh-words inherit their licensing properties from the expressions

they refer to. This means that syntax only determines the scope of the wh-word, not the licensing properties of it. But in order to defend such a claim, it is important to distinguish between the different roles of semantics and pragmatics. Semantic considerations are clearly important for the non NPI-licensing properties of clefts, since the presupposed status of the proposition expressed within the relative clause gives rise to the existential presupposition of the wh-word. But it seems to me that the non-existence of a referent can never be semantically presupposed, but rather pragmatically (or contextually) implicated. That is, NPIs in wh-questions are semantically blocked but pragmatically licensed. However, my claims need further support and looking into before any language universal implications can be drawn from them.

4.   Summary

The focus of this article has been the NPI-licensing properties of wh-questions in Swedish. In order to pinpoint the elusive licensing properties observed in both Swedish and English, I divided wh-questions into three distinct categories: *argument*, *framing* and *propositional* wh-questions. The three groups behave distinctly different with regards to what kind of information they request and how the proposition expressed is semantically related to the wh-word. Argument wh-questions are distinct from the other two groups, in that they request *existential identification*: this is because non-clefted argument questions give rise to an existential *implicature* which can be cancelled by a negative answer.

Framing wh-questions induce an existential presupposition; thus the function of such questions is to request the *referential specification* of the argument denoted by the wh-word rather than the *existential identification*. Clefts, a common way of expressing questions in Swedish, are inherently presupposing environments. But the interpretation of the cleft is also dependent on the wh-word: clefted argument wh-questions request referential specification, whereas clefted framing and propositional wh-questions have a pragmatic function of requesting reactivation of information.

From my viewpoint, wh-words are not syntactically NPI-licensing operators; rather the licensing properties of the wh-word are dependent on the properties of the referent. Since wh-words are place-holders, they inherit whatever properties are associated with the item they replace.

The information requested in argument and framing wh-questions is always closely linked to the proposition expressed: if the wh-word properly refers to a non-empty set, the proposition is by necessity true, whereas if the proposition is false, the wh-word must necessarily refer to an empty set. Since according to my

view NPIs are licensed by the properties of the wh-referent, this explains why NPIs are not compatible with information seeking questions: only when the wh emptily refers is an NPI properly licensed.

Propositional wh-questions do not adhere to these reversible logical relations between the existential proposition and the truth of the proposition. Hence, NPIs may be licensed also in information seeking contexts. This is intuitively understood from the fact that propositional wh-words request information independent from the expressed proposition.

The view on wh-questions advocated here depends heavily on the interaction between syntax, semantics and pragmatics. Such an approach, I believe, should be seen as advantageous rather than theoretically unsatisfactorily, since – in the words of Jackendoff (1972:320) – an interplay approach to language "can reveal generalizations that could not have been dreamed of within a purely syntactic approach".

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