Specifying why a doctor isn't Mary Generals Paper 2: Semantics/Pragmatics

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1 Introduction

The specificational clause is one of the varieties of copular clauses identified by Higgins (1973), characterized by an apparently predicative DP in subject position (DP1) and an argumental DP in post-copular position (DP2). They contrast with predicational copular clauses in which DP1 is argumental and DP2 is predicational.

(1) a. **Specificational**

My favourite book is War & Peace.

b. Predicational

War & Peace is my favourite book.

In predicational clauses, DP1 can be any argumental DP and DP2 can be any DP predicate. In specificational clauses (SCs), there is a restriction on indefinite subjects.

(2) a. Specificational

*A book is War & Peace.

b. **Predicational**

War \mathcal{E} Peace is a book.

The restriction on indefinite SC subjects, which this paper addresses, presents a puzzle for any syntactic or semantic analysis of SCs because it is not an absolute ban on indefinite DPs in subject position. Rather, as I will discuss in section 2, the fact that some indefinite DPs are able to act as SC subjects, as demonstrated below in (3), means that, before we can adduce the indefinite restriction as evidence for or against a particular analysis of SCs, we must first understand its provenance.

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- (3) a. (i) *A doctor is Mary.
 - (ii) A newly-minted doctor is Mary.
 - b. (i) *A linguist is Eric Lenneberg.
 - (ii) An underrated linguist is Eric Lenneberg.
 - c. (i) *A building is Robarts.
 - (ii) A building no-one likes is Robarts.

In the remainder of this paper I argue that the indefinite restriction is pragmatic in nature. Specifically, I claim that there is a requirement that SC subjects contain both "new" and "old" information. It is important to note that this claim is not only about *indefinite* SC subjects, but SC subjects in general. As such, I will demonstrate that definite DPs also meet this requirement. In section 3, I introduce some of the theoretical machinery required for my analysis and in section 4 I present my main claim and the arguments in its favour. In section 5 I expand my proposal to a general constraint on contrastive topic and focus structures, and in 6 I conclude.

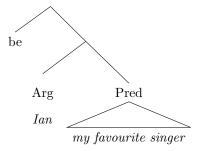
2 The place of the indefinite restriction in linguistic theory

Though rarely discussed in much depth, the restriction on indefinite SC subjects is often exploited for evidence in the debate over the proper syntactic/semantic analysis of SCs. As such, I will briefly outline the analyses and how indefinite subjects fit into them.

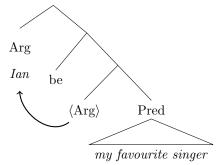
The inversion analysis is argued for explicitly by Mikkelsen (2004) and Moro (1997), and states that that predicative copular clauses and SCs have identical underlying structures. According to this analysis, the two sentences in (4) are each derived from the same small clause structure, given in (5), and differ in which constituent of the small clause is raised. Predicative clauses surface when the argument raises, and SCs surface when the predicate raises.

- (4) a. Ian is my favourite singer.
 - b. My favourite singer is Ian.

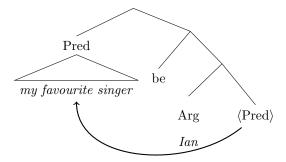
(5) Base Structure



a. Predicational Clause



b. Specificational Clause



Semantically, this analysis requires that SC subjects be construed as predicates (type $\langle e, t \rangle$ or higher) rather than arguments (type e).

The equational analysis, as presented by Heycock and Kroch (1999), says that both DPs in SCs are type e and the copula serves to equate them. In (4-b), then, my favourite singer and Ian each refers to an individual, and the copula says that they refer to the same individual. Heycock and Kroch (1999) use the restriction on indefinite subjects to argue that SC subjects cannot be construed as predicates. If SC subjects were inverted predicates, the argument goes, we would expect all predicative phrases, including indefinite descriptions, to be acceptable.

As I will describe in more detail in section 2.1, Mikkelsen (2004) proposes that pragmatic factors are responsible for the indefinite restriction. Specifically, SC's have a fixed information structure, requiring

their subjects to be topics, a role which indefinites are not well-suited for. Heycock (2012), responds to Mikkelsen's analysis and data by arguing that, rather than a requirement that SC subjects be topics, the indefinite restriction is actually a restriction on weak indefinites (i.e., DPs headed by weak determiners) as SC subjects.

The restriction on indefinites, then is a fact that must be explained or allowed for in any syntactic/semantic analysis of SCs.

2.1 Mikkelsen (2004)

Line Mikkelsen's dissertation contains one of the only attempts to define the restriction on indefinite SC subjects. Though she admits that her attempt falls short of a proper explication of the restriction, the attempt itself provides an excellent starting point for my attempt.

After arguing in favour of a predicate inversion analysis of SC, Mikkelsen considers the restriction on indefinites and concedes that, as Heycock and Kroch (1999) argue, it is not predicted by the inversion analysis. She does not concede, however, that it represents a strong argument against the inversion analysis. The restriction on indefinites would only be strong evidence against an inversion analysis if it were a categorical restriction, which it is not.

Mikkelsen demonstrates the non-categorical nature of the restriction with the following examples

- (6) A philosopher who seems to share the Kiparskys' intuition on some factive predicates is Unger (1972) who argues that ... ¹
- (7) Another speaker at the conference was the *Times* columnist Nicholas Kristof, who got Wilson's permission to mention the Niger trip in a column.²
- (8) One Iraqi émigré who has heard from the scientists' families is Shakir al Kha Fagi, who left Iraq as a young man and runs a successful business in the Detroit area.³
- (9) A doctor who might be able to help you is Harry Barcan.⁴

Since the restriction is not categorical, she argues, it is not due to a semantic type mismatch, rather it must be pragmatic in nature.

Mikkelsen points out that, unlike predicational clauses, SCs have a fixed information structure. As demonstrated in (10), SCs are infelicitous in contexts that focus the initial DP, while predicational clauses

¹Delacruz (1976, p. 195 fn8) cited by Mikkelsen (2004)

²Seymore M. Hersh "The Stovepipe", The New Yorker, Oct 27, 2003, p. 86 cited by Mikkelsen (2004)

³Seymore M. Hersh "The Stovepipe", The New Yorker, Oct 27, 2003, p. 86 cited by Mikkelsen (2004)

⁴Mikkelsen 2004.

are more flexible.

(10) a. Q: Who is the winner?

A1: The winner is JOHN. [Specificational]

A2: JOHN is the winner. [Predicational]

b. Q: What is John?

A1: #The WINNER is John. [Specificational]

A2: John is the WINNER. [Predicational]

(Mikkelsen 2004)

Mikkelsen argues that this fixed information structure of SCs follows from SCs being inversion structures. Following Birner (1994, 1996), she assumes that the discourse function of inversion is to mark the inverted material as linking a clause to previous discourse. The inverted material, then, must be more discourse-familiar than the post-verbal logical subject. Mikkelsen then shows that these discourse familiarity considerations can explain the acceptability of (6)-(9).

This pragmatic account, while sufficient to explain the acceptability of (6)-(9), does not explain why the restriction on simple indefinites as SC subjects, as shown in (3), seems to be categorical. That is, even if the material in a simple indefinite is familiar, the indefinite cannot be the subject of an SC.

(11) Bill is a doctor. #A doctor is John (too).

Mikkelsen suggests that the discourse familiarity requirement of inverted material clashes with the Novelty Condition on indefinites (Heim 1982). She points out, however, that this cannot be the entire story, since the Novelty Condition only requires that indefinites introduce new discourse referents. This means that, since the two instances of a doctor in (11) do not share a discourse referent, the Novelty Condition does not rule out the indefinite subject.

Mikkelsen also suggests that those instances of familiar yet unacceptable simple indefinite SC subjects might be infelicitous because there is a general ban on repeating indefinites, as in the example below.

(12) Sally is a doctor. #A doctor came to dinner last night.

This, however, does not seem to hold. Utterences, such as (12), that are barred because of repeated indefinites are made better if the first occurrence of the indefinite is modified. If the barred utterance has an SC with an indefinite subject, as in (11), then only changing the SC will improve it.

- (13) I know many doctors.
 - a. #A doctor is Patrick.

b. A doctor came to dinner last night.

To sum up, Mikkelsen observes that there seems to be a requirement that SC subjects be topical. She attempts to use this requirement to explain the restriction on indefinite subjects, arguing that topics must be given, while indefinites tend to be novel, so indefinites are not good topics and, as a corollary, indefinites tend to make poor SC subjects. She notes, however, that this account runs into a problem in that even when simple indefinites can be made topical, they cannot be SC subjects.

2.2 Heycock (2012)

Addressing the indefinite restriction, Heycock (2012) begins with the information structure pattern shown in (10), which she frames as a restriction on focusing SC subjects. She notes that this is parallel to a fact about scrambling in German observed by Lenerz (1977).

- (14) a. Wem hat Peter das Futter gegeben? who.DAT has Peter the.ACC food given "Who has Peter given the food?"
 - (i) Peter hat der Katze das Futter gegeben. Peter has the DAT cat the ACC food given "Peter has given the cat the food"

[Default order]

(ii) Peter hat das Futter der Katze gegeben. Peter has the ACC food the DAT cat given "Peter has given the food to the cat"

[Scrambled order]

- b. Was hat Peter der Katze gegeben? what.ACC has Peter the.DAT cat given "What has Peter given (to) the cat?"
 - (i) Peter hat der Katze das Futter gegeben. Peter has the DAT cat the ACC food given "Peter has given the cat the food"

[Default order]

(ii) #Peter hat das Futter der Katze gegeben.

Peter has the ACC food the DAT cat given

"Peter has given the food to the cat"

[Scrambled order]

As (14) demonstrates the canonical order for ditransitive objects in German is DAT \prec ACC. The scrambled order, ACC \prec DAT, is unavailable when the accusative argument is focused, as shown in (14-b-ii). Just as SCs subjects cannot be focused in English, scrambled objects cannot be focused in German.

With this information structure parallel established, Heycock (2012) attempts to extend the comparison of English SC subjects with German scrambled objects to a semantic parallel. Following Hoop (1992) and Diesing (1992), Heycock assumes that scrambled DPs in German are necessarily interpreted as strong DPs. She claims that SC subjects are also restricted to strong interpretations. As evidence for this claim she

presents another parallel. A property of weak indefinites, according to Milsark (1974), is that they cannot serve as subjects of Individual-Level predicates, as shown in (15)

- (15) I had been struggling with a complicated set of data ...
 - a. ?*A problem was particularly hard.
 - b. One problem was particularly hard.
 - c. {?A/one} problem that I came across was particularly hard.
 - d. One of the problems was particularly hard.

(Heycock 2012)

Heycock argues that the same pattern holds for indefinite SC subjects as shown in (16).

- (16) a. ?*A problem was that we didn't understand all the parameters.
 - b. One problem was that we didn't understand all the parameters.
 - c. {A/one} problem that I came across was that we didn't understand all the parameters.
 - d. One of the problems was that we didn't understand all the parameters. (Heycock 2012)

Given these parallels, Heycock proposes that the indefinite restriction is actually a restriction on weak indefinites as SC subjects.

Assuming Heycock is using the terms weak and strong to refer to those DPs that do not, and and those DPs that do show Milsark (1974) Definiteness Effect, respectively, this proposal is problematic for two reasons. First, the terms weak and strong in this context, properly refer to interpretations rather than lexical items. A determiner is called strong if it is always interpreted as strong, while weak determiners can be interpreted as either weak or strong depending on the context (Diesing 1992). So, supposing we take Heycock (2012) analysis to be correct, the question changes from "Why is the indefinite X a licit SC subject, while Y is illicit?" to "Why can X receive a strong interpretation, while Y cannot?".

The second, and perhaps more compelling, argument against Heycock (2012) proposal is that it is not borne out by the data. Although most weak quantifiers are ambiguous between weak and strong, a(n) and sm (the reduced form of the strong quantifier some) do not seem to be. Despite not being strong though, a(n) and sm can head SC subjects.

- (17) a. An UNDERrated figure in the history of generative grammar is Eric Lenneberg.
 - b. Sm SIDE-effects are headache, blurred vision and sore throat.

DPs with strong quantifiers, however, do not seem to be able to function as SC subjects, as demonstrated below in (18).

(18) a. Each doctor is Mary, Bill, Sue, and John. (*Specificational)

- b. ?Most early generative grammarians are Chomsky and Halle. (*Specificational)
- c. ?SOME side-effects are drowsiness and blurred vision. (*Specificational)

Copular clauses with strong indefinite subjects, instead, are most naturally interpreted as identificational. Consider also, the minimal pair in (19), with only strong/weak varying between the two.

- (19) a. SOME side-effects are drowsiness and blurred vision. (*Specificational)
 - b. sm side-effects are drowsiness and blurred vision.

The subject in (19-b) is a weak indefinite because it and others like it can be used in existential constructions.

- (20) a. There is a building no-one likes on St George Street.
 - b. a building no-one likes is Robarts.
- (21) a. There are **sm side-effects**.
 - b. Sm side-effects are headaches and dizziness.

Contrary to Heycock (2012) proposal, it is the weak counterpart that can be the subject of an SC. It seems, then, that the proposal that weak indefinites are barred from being SC subjects cannot stand.

2.3 Summary

Each of the two approaches to explaining the indefinite restriction reviewed in this section has its own issues. The pragmatic approach of Mikkelsen (2004) covers a greater portion of the data but lacks a precise and cohesive account of it. The semantic approach of Heycock and Kroch (1999) and Heycock (2012) is more precise at the expense of its empirical coverage. In the following sections I will outline a pragmatic explanation of the indefinite restriction that increases not only the precision of Mikkelsen (2004) approach, but its empirical coverage.

3 Theoretical Background

The notion of Contrastive Topic (CT) as discussed by Büring (2003, to appear) is central to the analysis I will propose for the indefinite restriction Büring's theory itself builds off of Roberts' (2012) formal pragmatics and Rooth's (1992) alternative semantics account of focus. In the two following subsections, I will introduce the latter two theories before introducing Büring's CT-theory in section 3.3.

3.1 Alternative Semantics (Rooth 1992)

Alternative semantics, as developed by Rooth (1992), proposes that, in addition to ordinary interpretations $(\llbracket \cdot \rrbracket^{\mathcal{O}})$, sentences receive a focus interpretation $(\llbracket \cdot \rrbracket^f)$ which is derived from the ordinary interpretation and the focused constituent. Consider the following example.

(22) $[Mary]_F$ answered Sue.

The ordinary interpretation of this sentence is the proposition it expresses

(23)
$$[(22)]^{\mathcal{O}} = [answered(\mathbf{m}, \mathbf{s})]$$

The focus interpretation is the set of propositions generated by replacing the focused material with a variable.

(24)
$$[(22)]^f = \{answered(x, \mathbf{s}) | x \in D_e \}$$

Note that the focus semantics of (22) is equivalent to the ordinary interpretation of the question *Who* answered Sue? following Hamblin (1973). This relation between focus interpretation and question interpretation is key to the model of discourse I assume here.

3.2 Discourse Pragmatics (Roberts 2012)

Roberts (2012) models discourse as a cooperative game, following Lewis (1979), the goal of which is to answer the questions under discussion (QUDs). Utterences are represented as moves, with questions being setup moves and assertions being payoff moves. At a given point in the discourse there is an immediate QUD, and discourse proceeds either by answering that question or by asking a subquestion (i.e. one whose answer is a partial answer to the QUD), which becomes the new immediate QUD. Roberts models the QUDs as a stack structure, so new subquestions are pushed into the stack when asked, and the immediate QUD is popped off of stack upon being answered. A move is considered (ir)relevant based on the question at the top of the QUD stack.

Roberts' model of a particular discourse is given below as a series of questions, subquestions, and answers.

- (\mathcal{D}_0) Who ate what?
 - a. What did Hilary eat?
 - i. Did Hilary eat bagels?

$$Ans(a_i) = yes$$

ii. Did Hilary eat tofu?

$$Ans(a_{ii}) = no$$

- b. What did Robin eat?
 - i. Did Robin eat bagels?

$$\operatorname{Ans}(b_i) = \operatorname{no}$$

ii. Did Robin eat tofu?

$$Ans(b_{ii}) = yes$$

Note, that this discourse goes beyond the explicitness we see in natural speech. For example, when question (a) is asked, we don't require that (a_i) and (a_{ii}) are asked so that we may answer yes or no. Instead we can answer with an assertion that includes a focused constituent that matches the wh-word of the QUD.

(25) A: a/#b B: Hilary ate $[bagels]_F$.

To ensure that an assertion is used felicitously, Roberts exploits the fact that focus interpretations of assertions are of the same type as question interpretations. An assertion, like that in (25) is felicitous if its focus interpretation is equal to the interpretation of the QUD.

$$(26) \quad \text{a.} \quad \text{[Hilary ate [bagels]}_F. \text{]}^f = \begin{cases} \text{Hilary ate bagels.} \\ \text{Hilary ate tofu.} \end{cases}$$

$$\text{b.} \quad \text{[What did Hilary eat?]}^{\mathcal{O}} = \begin{cases} \text{Hilary ate bagels.} \\ \text{Hilary ate tofu.} \end{cases}$$

$$\text{c.} \quad \text{[What did Robin eat?]}^{\mathcal{O}} = \begin{cases} \text{Robin ate bagels.} \\ \text{Robin ate tofu.} \end{cases}$$

$$(=(26\text{-a}))$$

Roberts goes on to address contrastive topics, which she refers to as *dependent focus*, in much the same way as she treats focus. Structures with CT and focus are given focus interpretation, that is, they are interpreted as a set of alternatives under alternative semantics. An example of a CT-F utterance and its focus interpretation is given below in (27).

(27) a. [Hilary]_{CT} ate [bagels]_F. b. $\{x \text{ ate } y | x, y \in D_e\}$

This suggests that (27-a) presupposes the question in (27-b) (*Who ate what?*), a proposal that Roberts shows does not hold up to further scrutiny. This hypothesis predicts that (27-a) ought to have the same felicity conditions if its CT and F marking were reversed as in (28) below.

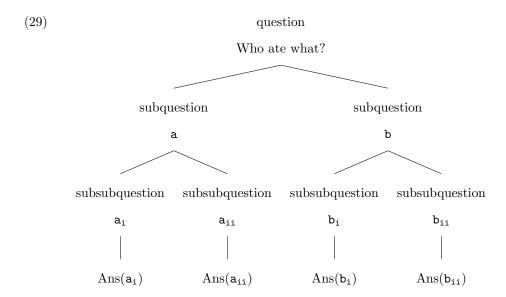
(28) a. $[Hilary]_F$ ate $[bagels]_{CT}$.

b. $\{x \text{ ate } y | x, y \in D_e\}$

Roberts suggests that, rather than only presupposing a QUD, CT-F structured utterances also presuppose "a possibly complex strategy of questions." (Roberts 2012, p.50) As Roberts acknowledges, this is a very preliminary account of the pragmatics of CT which will require further empirical and theoretical investigation.

3.3 Contrastive Topic (Büring 2003, to appear)

Büring (2003) represents Roberts' structured discourses as d(iscourse)-trees. The discourse \mathcal{D}_0 , then is represented by the tree below.



Büring also distinguishes between the focus value ($\llbracket \cdot \rrbracket^f$) and the CT value ($\llbracket \cdot \rrbracket^{ct}$) of an utterance and defines an algorithm for determining the CT value, given below in (30).

(30) CT-value formation:

step 1:Replace the focus with a *wh*-word and front the latter; if focus marks the finite verb or negation, front the finite verb instead.

step 2:Form a set of questions from the result of step 1 by replacing the contrastive topic with some alternative to it.

(Büring 2003)

Note, as demonstrated below, this algorithm generates a set of questions, which is a set of sets of propositions. This way, Büring (2003) is able to build into his representations the fact that a CT-F structure presupposes a QUD and a strategy for answering it.

(31) a. $[\text{Hilary}]_{CT}$ ate $[\text{bagels}]_F$.

b. CT-value formation:

step 1: What did Hilary eat?
$$\begin{cases} \text{What did Hilary eat?} \\ \text{What did Robin eat?} \end{cases}$$
c.
$$[[\text{Hilary}]_{CT} \text{ ate } [\text{bagels}]_F.]]^{ct} = \{\{x \text{ ate } y | y \in D_e\} \mid x \in D_e\}$$

Under this analysis of CT-value, the CT-F structure of an utterance is represented by the value. So the CT-value of (31-a) is distinct from that (32-a), below, which inverts the CT-F structure.

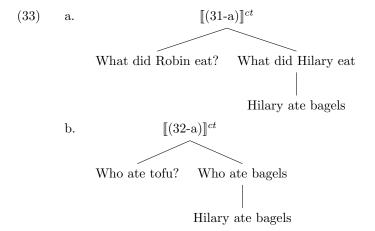
- (32) a. $[\text{Hilary}]_F$ ate $[\text{bagels}]_{CT}$.
 - b. CT-value formation:

step 1:Who ate bagels?
$$\begin{cases} \text{Who ate bagels?} \\ \text{Who ate tofu?} \end{cases}$$

$$[[\text{Hilary}]_F \text{ ate } [\text{bagels}]_{CT}.]] = \{ \{x \text{ ate } y | x \in D_e \} y \in D_e \}$$

$$(\neq [(31-a)]^{ct})$$

The nested nature of these CT-values, makes them directly translatable into d-trees which I provide below.



D-trees provide a perspicuous way of representing various aspects of discourse structure in a way that leverages a vocabulary already used by generative linguists. They allow us to define pragmatic notions such as assertions, questions, alternatives, *etc* in terms of nodes, sisterhood, dominance, *etc*. For instance, assertions and questions are distinguished by the fact that the former are terminal nodes while the latter are non-terminal.

It should be noted that CT-F structures are used in a variety of discourse contexts to achieve subtly different conversational goals. Consider the following examples.

B: I'm going to $[China]_{CT}$ in $[April]_F$.

(35) A: What did the pop stars wear? (Büring 2003)

B: The $[female]_{CT}$ popstars wore $[caftans]_F$.

(36) A: Who's a good psychiatrist?

B: $[My \text{ sister Monica}]_F$ is a $[psychologist]_{CT}$.

All of these instances of CT-F structures signal what Büring calls *implicit moves*, each instance has a different sort of implicit move that can be easily represented by its d-tree. In (34) the assertion directly answers the question, but implies the existence of a relevant superquestion (*When are you going to which place?*). The d-tree in (37) shows this by marking the explicit moves in bold.

When are you going which place?

When are you going to ...? When are you going to China?

April

The assertion in (35), on the other hand, does not answer the explicit question, but instead answers an implied subquestion (What did the female pop-stars wear). Again this can be represented clearly in the d-tree in (38).

What did the pop stars wear?

What did the male pop stars wear?

What did the female pop stars wear?

The female pop stars wore caftans.

Finally, the assertion in (36) answers neither the explicit question, nor an implied subquestion. Instead, it answers an implicit subquestion of a superquestion of the explicit question, as we can see in its d-tree in (39).

Who's a good mental health professional?

Who's a good psychiatrist ...? Who's a good ...? Who's a good psychologist ...?

Monica

So, although a given CT-F structure can be mapped onto a single d-tree in a predictable way, the context in which it is uttered determines its place in and effect on the discourse. Implicit in Büring (2003) is an

informal condition on CT felicity which I give in (40).

(40) M is a move that uses a CT-F structure.

Q is a question.

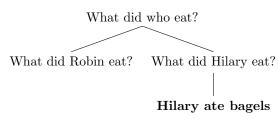
M is felicitous in the context of the QUD Q iff the M defines a d-tree DT such that Q is represented in DT.

Though informal, this condition can effectively rule out several examples of infelicitous CT-F structures. The infelicity of the CT-Foc structures in (41) and (42) is predicted by the fact that the explicit question that they answer is not found in the d-trees they project.

(41) a. A: Who ate bagels?

B: $\#[\text{Hilary}]_{CT}$ ate $[\text{bagels}]_F$.

b. $[[Hilary]_{CT}$ ate $[bagels]_F]^{ct}$



(42) a. A: Who's a good psychiatrist?

b.

B: $\#[My \text{ sister Monica}]_{CT}$ is a $[psychologist]_F$

Who's a good mental health professional?

Monica's a good mental health professional? Joe's a good mental health professional?

Monica's a good psychologist ...

4 The Contrastive Topic requirement on SC subjects

I am now prepared to modify Mikkelsen's (2004) analysis of SCs so that is properly captures the indefinite restriction. Recall that Mikkelsen argued that SCs have a fixed information structure, with the postcopular DP being focus and the subject being topic, as shown in (43) below, and that for Mikkelsen, topicality requires discourse familiarity.

(43) [My favourite singer]_{Top} is $[Ian]_F$.

I propose that SC subjects must *contain* (but not be) a *contrastive* topic, in the sense of Büring (2003, to appear). I will show, in the remainder of this section, that this addition to Mikkelsen's analysis effectively

captures the indefinite restriction. Specifically, requiring SC subjects to contain a CT will account for the fact that more complex/heavy indefinites (such as those in (6)-(9)) are more likely to be acceptable SC subjects as well as the fact that simple indefinites are almost never allowed as SC subjects.

(44) The Contrastive Topic requirement on Specificational Clauses

A clause of the form X BE Y is a licit specificational clause iff

- a. [X]([Y]) is defined,
- b. Y is F-marked, (Mikkelsen 2004)
- c. Some constituent of X is CT-marked, and
- d. X is not CT-Marked.

In the above definition, (44-a) restricts the requirement to possible SCs, and (44-b) incorporates Mikkelsen's observation of the fixed information structure of SCs. The final two parts of the requirement, (44-c) and (44-d) are what I will argue for in the following two sections.

I have framed this proposal as a condition on SCs in general rather than one on indefinite subjects of SCs for reasons of parsimony. While indefinite subjects play an important role in the discussion that follows, I intersperse SCs with definite subjects for ease of demonstration.

4.1 SC subjects must contain contrastive topics

The first claim of my proposal that must be justified is that *contrastive* topichood, rather than givenness or aboutness topichood is the relevant notion for SC subjects. This claim can be further divided into three claims. First, CT-Foc structure is a licit information structure for SCs. Second, SC subjects cannot be entirely discourse given. Finally, SC subjects cannot be aboutness topics. In the following subsection I will present evidence for each of these claims in turn. Following that, I will address the second component claim of my proposal, that SC subjects cannot be wholly CT marked

4.1.1 CT-Foc structure is compatible with SCs

English SCs are most naturally uttered with intonational stress on some part of their subject as shown in (45).

- (45) a. A building on campus no-one LIKES is Roberts.
 - b. A building on campus NO-ONE likes is Robarts.
 - c. A building on CAMPUS no-one likes is Robarts.
 - d. A building ON campus no-one likes is Robarts.

- e. A BUILDING on campus no-one likes is Robarts.
- f. ?A building on campus no-one likes is Robarts.

English intonational stress is associated with informational prominence, and since, as Mikkelsen shows, DP2 position in SCs is necessarily focused, the intonational stress in the subjects of (45) cannot be primary focus.

Pragmatically, CT-Foc structures are characterized by association with a complex discourse strategy of a question and subquestion. SCs can indeed be associated with a question-subquestion strategy. Consider the example in (46).

(46) (Not many people like the Athletic Centre.)

A building on campus NO ONE likes is Robarts.

If DP2 is Foc-Marked, and the stressed constituent *no one* is CT-Marked, then we can use Büring (2003) CT-value formation procedure to construct the d-tree associated with it.

(47) CT-value formation:

step 1: What's a building on campus no one likes?

What's a building on campus no one likes?

What's a building on campus someone likes?

...

What's a building on campus everyone likes?

(48) What is a building on campus who likes?

What is a building on campus no one likes? ...

Is Robarts a building on campus no one likes? ...

A building on campus no one likes is Robarts.

Similarly, we can see that the felicity conditions on the accent placement in SC subjects match the those of the canonical CT-Foc structures demonstrated in (41) and (42). So, the SCs in question need to imply a question and subquestion to which they provide a (partial) answer, and this question-subquestion-answer sequence must be congruent with the QUD.

- (49) a. Everyone likes Hart House# A BUILDING on campus no-one likes is Robarts.
- (50) a. A: What's a building on campus no one knows?

B: #A building on campus [everyone LIKES] is Hart House].

So, intonational stress in SC subjects is consistent with CT-Foc structure.

4.1.2 SC subjects are not wholly givenness topics

If Mikkelsen (2004) is correct, and SC subjects are necessarily givenness topics, we would expect that a maximally given DP is the ideal SC subject. As (51-a) demonstrates, however, maximally given DPs are not good SC subjects, but SC subjects that are minimally contrastive are acceptable.⁵

- (51) Many philosophers have written about the mind-body problem.
 - a. # A philosopher who has written about the mind-body problem is Chomsky.
 - b. A modern philosopher who has written about the mind-body problem is Chomsky.

So, SC subjects are not givenness topics.

4.1.3 SC subjects are not wholly aboutness topics

Reinhart (1981) argues that the important notion associated with topichood is aboutness rather than givenness. If we wish to retain Mikkelsen (2004) analysis, the natural move would be to claim that licit SC subjects are characterized by aboutness. Aboutness is diagnosable by a paraphrasing test.

(52) Reinhart's test for aboutness

If sentence S is about constituent X, then S is paraphrasable by the sentence *They said about* X, that S', where S' is derived by replacing X in S with a proform.

As (53) shows, when the entire SC subject is the aboutness topic, as diagnosed by Reinhart's test, it is interpreted *de re*, rendering the copular clause equational rather than specificational. Conversely, when the subject is not entirely the aboutness topic, it is interpreted *de dicto* rendering the clause specificational.

(53) **Background:** David Bowie = John's favourite singer.

(Mary said that) John's favourite singer is Iggy Pop. (Identificational/Specificational)

a. Mary said of John's favourite singer that {he/?it}'s Iggy Pop.(Identificational/*Specificational) (=Mary said David Bowie is Iggy Pop)

- (i) Many philosophers have written about the mind-body problem.
 - a. #A philosopher who has written about the mind-body problem is Chomsky.
 - b. A philosopher who has written about the mind-body problem came to dinner last night.

 $^{^{5}}$ The infelicity is not due to a constraint on repeating indefinites. Consider the following pair:

- b. Mary said of singers that John's favourite (one) is Iggy Pop. (*Identificational/Specificational)
 (≠Mary said David Bowie is Iggy Pop)
- c. Mary said of John that his favourite singer is Iggy Pop. (*Identificational/Specificational)
 (≠Mary said David Bowie is Iggy Pop)
- d. Mary said of people's favourite singers that John's is Iggy Pop. (*Identificational/Specificational)
 (≠Mary said David Bowie is Iggy Pop)

In the above examples, Mary's claim that John's favourite singer is Iggy Pop is invariably false, but varies in the exact claim being made. In the case that *John's favourite singer* is understood *de re*, Mary is wrongly identifying David Bowie as Iggy Pop. When *John's favourite singer* is understood *de dicto*, Mary is wrongly specifying the singer that John prefers above all other singers is Iggy Pop.

It has been suggested to me that it is the pronominal subject of (53-a) that forces its identificational reading. While I am not prepared to concede this point, even if it were true, we are left with (53-b)–(53-d) which cannot be captured by this claim. If pronomial subjects forced Identificational readings, the reverse could not be true, as most SCs with full (definite) DP subjects are ambiguous with identificational readings. If we were to apply this hypothesis to (53-b)–(53-d) it would be non-predictive, so we would need a further explanation for the fact that specificational readings are forced when only part of the subject is an aboutness topic as in (53-b)–(53-d).

So, absent any compelling argument otherwise, it seems that while some part of an SC subject can be an aboutness topic, the entire subject DP cannot be the aboutness topic.

4.1.4 Summary

Since SC subjects are compatible with CT marking and cannot be givenness or aboutness topics, it is reasonable to assume that the presence of CT is necessary for SC subjects.

4.2 SC subjects cannot entirely be contrastive topics

The second claim of my proposal is that SC subjects cannot be CT-marked constituents. So, if the entirety of the SC subject is new/contrastive, the SC is unacceptable.

(54) a. A: Tell me about your home university?

B: #A BUILDING on campus no-one likes is Robarts.

If SC subjects must minimally contain a CT marked constituent, it follows directly from the unacceptability of simple indefinite SC subjects that SC subject DPs cannot be CT-marked. Consider the unacceptable SC

*A doctor is Mary. The subject a doctor must contain a CT-marked constituent, in this case doctor. Since the indefinite article does not encode any particular information, CT marking on the nominal is equivalent to CT marking on the entire DP.

It is worth noting here that indefinite articles can be CT-marked when a definiteness contrast is relevant in a discourse. In these cases, simple indefinites can be SC subjects.

(55) Who is the guitarist?

[ej] guitarist is John.

So, simple indefinites can be SC subjects if they contain but do not comprise a CT-marked constituent.

4.3 Apparent counter-examples

4.3.1 One and another

As mentioned in above the determiner-like elements one and another can serve as CTs in SC subjects.

(56) a. *A $doctor_{CT}$ is Mary.

b. One_{CT} doctor is Mary.

c. Another $_{CT}$ doctor is Mary.

In this section I argue that *one* and *another* can be CT marked, meaning they encode enough semantic material to generate alternatives. Where possible I will attempt to sketch what is encoded by these items and what their alternatives might be. Since *one* and *another* each warrant a dedicated research project, these sketches are decidedly preliminary.

Let's consider *another* first. Following Heim, Lasnik, and May (1991), I take the meaning of *other* to include two crucial parts: anaphoricity and distinctness. Consider the sentence in (57).

(57) Alice met with another student.

This sentence presupposes that there is a previously mentioned student (anaphoricity) and asserts that the student Alice met with is distinct from the presupposed antecedent (distinctness). As we can see from (58), the anaphoricity projects when embedded, but the distinctness does not.

(58) a. Alice didn't meet with another student

(i) #...she never met with any student.

(ii) ...it was the same student.

b. If Alice met with another student, she would have told us.

- (i) #She didn't tell us because she hadn't met with a student previous to this one.
- (ii) She didn't tell us because it was the same student.
- c. Alice probably met with another student.
 - (i) #but she might not have met with a student previous to this one.
 - (ii) but it might have been the same student.
- d. Johan thought that Alice met with another student.
 - (i) #He was wrong. She hadn't met with a student previous to this one.
 - (ii) He was wrong. It was the same student.

The SC in (56-c), then, is roughly paraphrasable as A doctor [OTHER than x] is Mary, where the value of x is resolved contextually. Assuming that other is CT marked in (56-c), and, following Heim, Lasnik, and May (1991), that other is a three-place predicate⁶, we can calculate the SC's CT-value.⁷ If we calculate the CT-value of (56-c) given this understanding of its semantics, we can see that its acceptibility is expected under my proposal.

- (59) a. (i) $[ANOTHER_{CT} \text{ doctor is } Mary_F]^f = \{doctor(x) \land other(x)(\bigwedge doctor)(y) | x \in D_e\} (y \text{ is a doctor})$ (Who is another doctor?)
 - (ii) $[ANOTHER_{CT} \text{ doctor is } Mary_F]^{ct} = \{ \{doctor(x) \land P(x)(y)(\bigwedge doctor) | x \in D_e \} | P \in D_{\langle e, \langle e, \langle e, t \rangle \rangle \rangle} \}$ (\approx Who is a doctor?)
 - b. $Molly_i$ is a doctor.

Another $_i$ doctor is Mary.

c. Who is a doctor?

Molly_i is a doctor. Who is another_i doctor?

Another_i doctor is Mary. ...

So, ANOTHER doctor contains both new/contrastive information, in other and given/presupposed material in doctor, thus it is a licit SC subject.

The SC in (56-b) shows the inverse felicity conditions, it requires that doctors have been discussed but

If we were to translate this directly into the example under discussion (Another doctor is Mary.), x would be the contextually given doctor, y would be the plural individual doctor and z would be Mary. So the SC roughly means that x is a doctor, Mary is not x, and Mary is a doctor.

⁶Heim, Lasnik, and May (1991), discussing the reciprocals each other and one another give the following denotation for other: z is an atomic part of y, a plural individual, and z is distinct from x.

⁽i) $[other] = \lambda x \lambda y \lambda z (x \cdot \Pi y \wedge z \neq x)$

⁷There may be good reason to question the particulars of both of these assumptions. There is also good reason to believe that the particulars of these assumptions are irrelevant to the discussion at hand.

none have been named.

(60) a. Let me tell you about doctors.

One doctor is Mary.

b. Molly is a doctor.

#One doctor is Mary.

If one is merely the stressed pronunciation of a/an, then the account I have proposed would likely require serious revision. Fortunately, there are good reasons doubt that one and a/an are distinct lexical items. First, it is unlikely that one is the stressed version of a/an, since a/an has another stressed version pronounced [ej]/[æn], which usually marks a contrast of definiteness.

(61) A: Are you the professor?

B: I'm [ej] professor.

Also, Kayne (2015) presents several pieces of evidence that one is lexically distinct from a/an. While a/an NP can be interpreted as generic, one NP cannot

(62) a. A spider has eight legs and many eyes. (generic/specific)

b. One spider has eight legs and many eyes. (*generic/specific) (Kayne 2015)

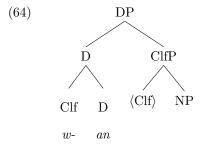
He also notes that the syntactic distribution of a/an differs from one as shown below.

(63) a. (i) too long a book

- (ii) *too long one book
- b. (i) a few books
 - (ii) *one few books
- c. (i) *They're selling a-drawer desks in the back of the store.
 - (ii) They're selling one-drawer desks in the back of the store.

(Kayne 2015)

Kayne argues that *one* is a complex determiner composed of a/an and a *singular classifier*, with the syntactic structure given below in (64) Since the locus of CT marking is not the indefinite article, it must be the *singular classifier*, which means that the classifier ought to be contentful enough to generate alternatives.



The licit SC One doctor is Mary would, by hypothesis, have the following CT-Foc structure.

(65) $\mathbf{CT}: [w-]$

Focus: Mary

given/presupposed: doctor/doctors/a doctor

If this is correct, then the singular classifier must be able to generate alternatives. The question is, what counts as an alternative to *one*. A proper answer to that question would require an in depth study of the semantics and pragmatics of *one*, which is beyond the scope of this paper.

4.3.2 Simple Definite SC Subjects

Heycock (2010) and Béjar and Kahnemuyipour (2013) discuss a particular reading of SCs with simple definite subjects, called "the Poirot reading" which is shown below in (66).

(66) And Poirot pointed at the Major and said "For a long time now we have been trying to establish the identity of the murderer. But now I know...

... The murderer is you"

At first blush, this seems to be a counterexample to my proposal. In this context, the existence and relevance the murderer is entirely given/presupposed, while the fact that the identity of the murderer is Poirot's addressee seems to be new/contrastive. This would mean that no part of the subject is CT-marked, which should render the clause unacceptable.

If we consider the context carefully, we can see that this is not the entire story. The sentence *The murderer* is you would occur at the culmination of a murder mystery at which point many properties of the murderer have been gleaned from the evidence. The only relevant "property" left is the murderer's identity. So, what is given is the existence, salience and uniqueness of some murderer and several of the murderer's properties. What is new/contrastive is the identity of the murderer, and that that identity is Poirot's addressee.

Consider the following alternative discourse:

(67) We already know the following: The murderer is 6 feet tall. The murder has dark hair. The murderer

walks with a limp. From this I have deduced that

... The murderer is you.

In the discourse leading up to *The murderer is you*, we can see that the murderer is only used referentially.

The culminating accusation shifts the usage of the murderer to that of a predicate. For the purposes of this

paper, I will assume that shifting the murderer from e to $\langle e, t \rangle$ is accomplished by an IDENT operator (cf.

Partee 1987). The SC in (67) and (66), then, has the following CT-Foc structure:

(68)The murderer is you.

Focus: you

CT: IDENT

Given/presupposed: the murderer

So, simple definite SC subjects can, in fact, be accounted for by the proposal in this paper, and therefore do

not represent a counterexample.

Difficulties in expressing the CT condition syntactically 4.4

Since the CT-condition is a restriction on a particular syntactic structure, it should be expressible in syntactic

terms. Mikkelsen (2004) proposes that SCs arise when the T head of a copular clause bears an uninterpretable

topic feature ([uTop] which is satisfied by moving a topic marked predicative DP into its specifier.

Adapting this analysis to reflect the CT condition, however, is problematic. To demonstrate this, I will

assume that a CT feature on the predicative DP triggers/licenses SCs (at least with indefinite subjects).

Consider the SC in (69), below.

(69) $[p_P]$ figure $[p_P]$ in the history $[p_P]$ generative grammar $[p_P]$ is Eric Lenneberg.

In this case the CT feature is on an adjective in a PP, which is embedded in a PP in the SC subject, rather

than the SC subject itself. If we assume that CT-marking behaves like F-marking, then it ought to project

in the manner that Selkirk (1996) describes.

(70)Focus Projection (Selkirk 1996)

F-marking of the *head* of a phrase licenses the F-marking of the phrase.

F-marking of an *internal argument* of a head licenses the F-marking of the head.

Crucially, according to Selkirk, non-arguments do not project focus, so CT-marking of generative in (69)

Would not project to the entire subject.

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Suppose, however, the CT condition is satisfied by Agree. It is still not clear that this could account for the SC in (69), as the CT-marked constituent is contained in a strong island (*i.e.* a complex NP). In standard theories, Agree has the same structural requirements as movement, so we expect it to obey strong island constraints, rendering the the CT-Marked constituent *generative* inaccessible to Agree.

It seems, then, that more work will be required to express the CT condition syntactically.

4.5 Summary

In this section I have presented evidence that the restriction on indefinite SC subjects comes from a requirement that SC subjects contain but not be CT marked constituents. I first showed that *contrastive* rather than aboutness or givenness topichood is the source of the restriction. I then argued that the ban on simple indefinite SC subjects is neatly predicted if the SC subject is banned from being the CT marked constituent. In the next section, I will argue that the indefinite restriction, in fact, can be derived from a more general constraint on CT-Foc structures that is implicit in the the literature on CTs.

5 A General Constraint on CT-Foc structures

In the previous section, I argued that the restriction on indefinite SC subjects was due to a requirement that SC subjects contain but not be CT marked constituents. In this section I will argue that, rather than being a parochial constraint, this requirement can be derived from a more general constraint on CT-Foc structure. The general constraint I will propose, is that in addition to contrastive/new information, as marked by CT and Foc intonation, CT-Foc structured utterances require given/presupposed material.

(71) A General constraint on CT-Foc Structure

In addition to the new/contrastive material marked by CT and Foc, a CT-Foc structured utterance must contain discourse given⁸/presupposed content.

When we consider the types of utterances and discourses that CT-Foc theory was designed to account for, we can see that none violate the constraint. Take, for example, the main example from Jackendoff (1972) reproduced below.

(72) (What about FRED? What did HE eat?) FRED $_{CT}$ ate [the BEANS] $_F$.

⁸Schwarzschild (1999) proposes a formal definition of givenness, whereby an utterance is given iff the existential closure of the alternative set generated by the utterance is entailed by the salient context. This proposal would be an inversion of the common sense conception of givenness that I assume here. That is, an instance in which I take nothing to be given, Schwarzschild would take everything to be given. Absent any empirical or theoretical distinction between the two, I assume that they are roughly equivalent.

a. **Focus:** the beans

CT: Fred

Given/presupposed: x ate y

b. Who ate what?

What did Fred eat? ...

Did Fred eat the beans? ...

In this case we can see that, even though both argument constituents are entirely new/contrastive, the relation defined by the verb is given/presupposed. The same holds of every example of licit CT-Foc structured uterrances. In fact we can even have utterances in which the entire sentence as uttered is marked as either CT or Foc so long as there is some implicit given/presupposed material. Consider the example in (73).

(73) (What about FRED? what did HE do?)

 $FRED_{CT}$ [ate the beans]_F.

a. **Focus:** ate the beans

CT: Fred

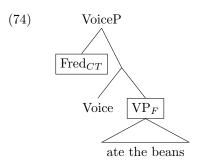
Given/presupposed: $\exists x \exists e [Agent(x, e)]$

b. Who did what?

What did Fred do? ...

Did Fred eat the beans? ...

So, in (73), even though it is not pronounced, the given/presupposed infomation that allows the CT-Foc structure is the fact that there is some event with an agent. In fact, most current conceptions of clause structure assume a phonologically null head, $v/v^*/\text{Voice}$, that assigns the agent thematic role, so the given material is encoded directly in the syntax as shown in the tree below.



Given the data used to propose CT-Foc structure, it should come as no surprise that there has been no explicit mention of any constraint on CT-Foc structure of the nature I propose here. Copular structures however are distinct from utterances with ordinary verbs in their absence of thematic structure, since copular structures only seem to encode the fact that some predicate holds of some individual. As shown below, ruled-out SCs would only presuppose a predicate-argument relation, which is not enough to be considered given/presupposed

(75) *A doctor is Mary

a. **Focus:** Mary

CT: A doctor

given/presupposed: $\exists P \exists x [P(x)]$

b. ??
Who is a doctor? ...

Is Mary a doctor? ...

Yes

A possible counterexample to the general constraint is given below in (76)

(76) JOHN $_{CT}$ is ALTRUISTIC $_F$.

If *John* and *altruistic* are new/contrastive, then we would be left with only the copula as given/presupposed. This, however would be associated with a particular discourse context, one in which (76) could not be uttered felicitously.

(77) (What about JOHN? What is HE?)

#? $JOHN_{CT}$ is $ALTRUISTIC_F$.

Focus: Altruistic

CT: John

given/presupposed: $\exists P \exists x [P(x)]$

The more natural discourse that (76) could be uttered in would focus the polarity of the utterance and leave the predicate given/presupposed as shown below in (78).

(78) (What about JOHN? Is HE altruistic?)

 $JOHN_{CT}$ is $ALTRUISTIC_F$.

Focus: Polarity=Positive

CT: John

given/presupposed: $\exists x [Altruistic(x) \in \{0,1\}]$

This type of CT-Foc structure, though allowed by the general constraint, is unavailable in SCs because the subject, where CT must be marked, and the copula, where polarity is encoded, do not form a syntactic constituent.

Another type of predicational clause that seems problematic for this general constraint is demonstrated below in (79).

(79) MARY $_{CT}$ is [a doctor] $_F$.

If we assume that these clauses are uninverted versions of SCs, we would expect the following type of information structure from them.

(80) a. **Focus:** A doctor

CT: Mary

given/presupposed: \emptyset

b. ??
What is Mary? ...
Is Mary a doctor? ...

Mary is a doctor

If this were the information structure of (79), it would violate the general constraint I propose here. Of course, it isn't obvious that (80) represents the information structure of (79) when we consider how (79) is most naturally used and interpreted. Consider the mini-discourse in (81).

- (81) A: What about MARY? What does SHE do?
 - B: $MARY_{CT}$ is [a doctor]_F.

Notice the parallel between (81) and (73), which was another apparent counterexample until we saw that the subject's agency was discourse given. Likewise, in the discourse in (81), the question is What does she do?, so the focus value of the answer would be things that can be done, that is, activities. This gives us a different information structure, shown below in (82), one that does not violate the general constraint.

- (82) a. A: What about MARY? What does SHE do?
 - B: $MARY_{CT}$ is [a doctor]_F.
 - b. Focus: A doctor

CT: Mary

given/presupposed: x does y

What does Mary do? ...

Is Mary a doctor? ...

Mary is a doctor.

This analysis of the CT-Foc structure of (79), seems to predict that its syntactic structure is distinct from ordinary predicational copular clauses. Specifically, it predicts that the syntactic structure of (79) contains an agent-assigning Voice head⁹. Since an explication of the particulars of syntactic structures is beyond the scope of this paper, I will leave this as a prediction to be tested in later work. However, assuming it to be the case that (79) encodes the agentivity of the subject in its syntactic structure, the sentence will differ from copular structures in that it has thematic structure and thus would not invert as easily. This explains why the corresponding apparent SC is not licit even when agentivity is presupposed.

The general constraint on CT-Foc structure that I have proposed here seems to hold, but why it should

- (i) A: Which man did the boy see?
 - B: The boy saw the man with binoculars.

Surely, Gricean reasoning would lead A to assume that B, being cooperative, intended to produce one structure associated with the uttered string and not the other possible structure. In this case Gricean reasoning allows A to choose between two syntactic structures rather than inferring one proposition from another. The claim that (79) is an example of Gricean reasoning, then, is not an argument against the syntactic ambiguity argued for here.

⁹One might claim that (79) only expresses predication, and the link between it and the question it answers is some sort of Gricean inference. So, when A hears *Mary is a doctor*, they interpret it as narrowly saying that the property of being a doctor holds of Mary, and infer that the answer to the question is that Mary does things that doctors do. This, however, assumes that Gricean reasoning is necessarily taking propositions built from narrowly interpreting sentences and returning distinct propositions, and this assumption is unfounded. Consider the following discourse:

hold is not immediately clear. There are a few options that we can rule out, though. The constraint is unlikely to be phonological in nature, as it is about the discourse status of the semantic content of an utterance. It is also not syntactic, since the distribution of new and given material cannot be stated in any sensible syntactic terms. The given/presupposed content can be its own constituent, it can form a constituent with either the CT-marked or Foc-marked material or both, or it can be relatively freely distributed throughout the clause.

This leaves semantics and pragmatics as the possible locus of the constraint. Choosing whether the constraint is semantic or pragmatic requires a definition of the domains of semantic vs pragmatic constraints. Since there is no such thing as an uncontroversial distinction between semantics and pragmatics, I will leave the question for later research.

6 Conclusions

In this paper I have presented a pragmatic account of the restriction on indefinite SC subjects. According to this account, SC subjects must contain but not be a CT-marked constituent. I have shown how this captures the fact that simple indefinites cannot be SC subjects. Furthermore, I argued that the indefinite restriction can be derived from a more general constraint on CT-Foc structured sentences that requires them to include given/presupposed material.

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