# Predicate catenae
# A dependency grammar analysis of *it*-clefts

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## Abstract

This manuscript proposes a syntactic analysis of *it*-cleft sentences in English in dependency syntax. The connectivity effects of *it*-clefts are addressed in terms of the catena unit. A central claim is that despite the presence of two finite clauses, the matrix predicate of *it*-clefts, which is a catena, reaches into the embedded clause to include the primary predicate residing there. This means that despite the presence of two finite verbs, *it*-clefts are in fact mono-clausal in a central way. Given this essentially mono-clausal status of *it*-clefts, the widely discussed connectivity effects that appear in them are not surprising.

## 1 Introduction

The connectivity effects of *it*-clefts, pseudoclefts, and specificational copular sentences in general challenge theories of syntax in a central way and have therefore helped give rise to an unending stream of studies into these sentence types over the past few decades (e.g. Akmajian 1970; Gundel 1977; Delahunty 1984, 1986; Heggie 1988; Moro 1997; Heycock & Kroch 1999, Hedberg 2000; Mikkelsen 2004; Reeve 2012; among many others). This contribution demonstrates that a dependency grammar (DG) that acknowledges the *catena* unit (O'Grady 1998; Osborne 2005; Osborne et al. 2012) is in a particularly strong position to account for the connectivity effects of these sentence types. The focus here, however, is on only one of these three sentence types, namely *it*-clefts.

The core phenomenon examined in this manuscript is illustrated with sentence (1):

(1) It was **herself$_1$** that **Jill$_1$** critiqued.

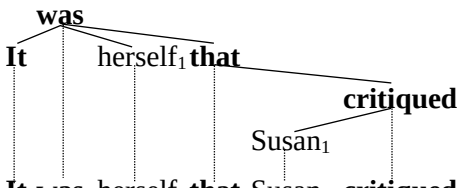
The reading indicated by co-indexation is natural in this case. This is a surprising state of affairs in view of the fact that *herself* appears in the matrix clause, the clause associated with the finite copula *was*, whereas the full noun with which it is co-indexed appears in the embedded clause associated with the finite content verb *critiqued*. Compare sentence (1) with sentence (2) in this regard:

(2) *They told **herself$_1$** that **Jill$_1$** was too critical.

Despite the outward similarity of sentence (2) to sentence (1), sentence (2) is clearly bad. The reflexive pronoun *herself* in the matrix clause cannot take its reference from the full noun *Jill* in the embedded clause. The acceptability contrast across (1) and (2) reveals that *it*-cleft sentences behave uniquely regarding binding patterns. The greater phenomenon is known as *connectivity*. The foregrounded constituent in cleft sentences behaves as though it is "connected" into a simple clause, in the case of (1) the simple clause being *Jill critiqued herself*.

This manuscript demonstrates that a flexible understanding of predicates and their arguments can capture this behavior of *it*-clefts. The central claim is that the matrix predicate in *it*-clefts reaches into the embedded clause to include the main predicate there. The following dependency tree of sentence (1) presents the account in brief:

(3)




a. **It was** herself$_1$ **that** Susan$_1$ **critiqued**.

b. IT WAS THAT CRITIQUED (SUSAN$_1$, HERSELF$_1$)

The words in bold in (3a) form a *catena* and this catena is the matrix predicate of the entire sentence. The arguments of this predicate are *Susan* and *herself*. The predicate-argument analysis of (3a) is given in (3b) according to the convention of predicate-calculus (and using small caps): the predicate is placed on the left and its arguments are listed in parenthesis to the right of the predicate. The key insight concerning this analysis is that the matrix predicate is a catena that includes the expletive *it*, the two finite verbs *was* and *critiqued* as well as the subordinator *that*.

By acknowledging that the matrix predicate is a catena in this manner, it becomes possible to account for connectivity effects in representational terms in surface syntax. Appeals to transformations/derivations that derive *it*-cleft sentences from more basic sentence types (e.g. Akmajian 1970; Pinkham & Hankamer 1975; Emonds 1976; Meinunger 1998; Reeve 2012) and/or appeals to semantic or logical structures (Heycock & Kroch 1999; Lahousse 2009), e.g. Logical Form, are not necessary. Connectivity effects also appear in pseudocleft and specificational copular sentences in general. While the theoretical apparatus developed here can be extended to these related sentence types, no attempt to do so is undertaken here due to length limitations. The manuscript is organized as follows. Section 2 illustrates and discusses connectivity effects in *it*-clefts more extensively. Section 3 provides some background discussion concerning varying notions of predicates. Section 4 establishes that matrix predicates are catenae. Section 5 presents the core analysis of connectivity effects in *it*-clefts in terms of the catena unit. Section 6 draws attention to two additional aspects of *it*-clefts. Section 7 concludes the manuscript.

## 2 Connectivity effects

The next examples illustrate the effect of Condition A of the traditional binding theory (Chomsky 1981, 1986). Condition A is the requirement in GB (Government and Binding) binding theory that requires a reflexive pronoun to have a local antecedent, roughly a clause-mate, e.g.

Condition A violated

(4) a. *They told **himself$_1$** that **Tom$_1$** was injured.
b. *It surprised **herself$_1$** that **Susan$_1$** won the prize.
c. *Susan asked **himself$_1$** whether **Frank$_1$** would help.

These sentences are robustly ungrammatical because Condition A is violated each time: the reflexive pronoun is not locally c-commanded by an antecedent; that is, *Tom*, *Susan*, and *Frank* do not locally c-command *himself*, *herself*, and *himself*, respectively. Note that each of these sentences contains two finite clauses, each headed by a finite verb.

*It*-cleft sentences can have an outward appearance that is similar to sentences (4a-c), yet the presence of the reflexive pronoun is perfectly acceptable (cf. Delahunty 1984: 69; Lahouse 2009; Reeve 2012: 42):

Condition A obviated

(5) a. It was **himself$_1$** that **Tom$_1$** injured.
b. It was **herself$_1$** that **Susan$_1$** surprised.
c. It was **himself$_1$** that **Frank$_1$** asked to help.

The perfect grammaticality of these sentences is unexpected based on the ungrammaticality of sentences (4a-c). Each sentence in both sets is bi-clausal, whereby both clauses are headed by a finite verb. Furthermore, the embedded clauses across the two sets are similar in that they are all introduced by the subordinator

*that*. Apparently, some trait of *it*-clefts fundamentally alters the basic binding relationships such that Condition A is obviated.

The situation is the same concerning the other two conditions of the traditional binding theory, that is, *it*-clefts also appear to ignore Conditions B and C. Condition B of the GB binding theory states that a non-reflexive pronoun must be free in its local binding domain, and Condition C of GB binding theory states a fully referential expression, an R-expression, must be free everywhere. To illustrate, each data set now contains three sentences, whereby the a-sentence illustrates the normal situation associated with the binding condition at hand and the b-sentence shows that the cleft sentence ignores this condition. The c-sentences are added to establish a point about mono-clausality:

Condition B

(6) a. They told **him$_1$** that **he$_1$** was injured.
b. *It was **him$_1$** that **he$_1$** injured.
c. ***He$_1$** injured **him$_1$**.

Condition C

(7) a. They told **Tom$_1$** that **he$_1$** was injured.
b. *It was **Tom$_1$** that **he$_1$** injured.
c. ***He$_1$** injured **Tom$_1$**.

Based on the perfect acceptability of the readings in (6a) and (7a), the readings indicated in the *it*-clefts in (6b) and (7b) are unexpectedly unavailable. The c-sentences draw attention to the fact that *it*-clefts behave like mono-clausal sentences in this area despite the fact that *it*-clefts are bi-clausal, containing two finite verbs.

Examples (6-7) suggest an approach to *it*-clefts that derives them from the corresponding non-cleft counterparts – (6b) from (6c) and (7b) from (7c). An important insight in this regard is that the order of the coindexed nominals in each cleft sentence above would match that of the corresponding non-cleft counterpart in which topicalization has occurred:

(8) a. It was **himself$_1$** that **Tom$_1$** injured. = (5a)
b. …but **himself$_1$ Tom$_1$** did injure.

(9) a. *It was **him$_1$** that **he$_1$** injured. = (6b)
b. *…but **him$_1$ he$_1$** did injure.

(10) a. *It was **Tom$_1$** that **he$_1$** injured. = (7b)
b. *…but **Tom$_1$ he$_1$** did injure.

The bolded nominals across each pair match with respect to linear order of appearance and the syntactic function that each fulfills; *himself* each time, *him* each time, and *Tom* each time are all objects of *injured/injure*.

The insight is supported by most so-called *anti-connectivity* effects (cf. Pinkham & Hankamer 1975: 431; Delahunty 1986: 34; Lahousse 2009: 143-145; Reeve 2012: 44). The binding behavior of *it*-clefts does not necessarily match that of the corresponding non-cleft counterpart as illustrated with the following b-sentences. It does, however, match that of the corresponding non-cleft counterpart in which topicalization has occurred as illustrated with the c-sentences:

(11) a. It was **himself$_1$/*him$_1$** that Bill$_1$ asked Sue to wash. (Pinkham & Hankamer 1975: 431)
b. **Bill$_1$** asked Sue to wash ***himself$_1$/ him$_1$**.
c. …but **himself$_1$/*him$_1$** Bill$_1$ did ask Sue to wash.

(12) a. It was **herself$_1$/*her$_1$** that **Sue$_1$** said Bill wants to date.
b. **Sue$_1$** said Bill wants to date ***herself$_1$/her$_1$**.
c. …but **herself$_1$/*her$_1$ Sue$_1$** did say Bill wants to date.

The distribution of pronoun forms in the cleft sentences does not match that of the corresponding non-cleft counterpart in which standard SVO word order obtains (b-sentences). It does, however, match that of the sentences in which OSV order obtains due to topicalization (c-sentences).

To summarize so far, the binding pattern of *it*-cleft sentences can match that of their corresponding non-cleft counterparts in which topicalization has occurred, whereby the foregrounded constituent of the cleft sentence corresponds to the topicalized constituent in the non-cleft counterpart. When the non-cleft counterpart is mono-clausal, the corresponding cleft sentence also behaves as if it is mono-clausal despite the presence of two finite verbs. When the non-cleft sentence is bi-clausal, the foregrounded constituent of the corresponding cleft sentence behaves like a topicalized constituent in the non-cleft counterpart.

The insight established with the examples so far extends to other phenomena, such as to the ambiguities associated with negation and a causal adjunct (13a-c), the distribution of the negative polarity item *any* (14a-c), and ambiguities of quantifier scope (15a-c):

Negation and causal adjunct

(13) a. Frank did **not** leave **because** he had to work. (not > because, not < because)
b. It was **because** he had to work that Frank did **not** leave. (because > not, *because < not)
c. **Because** he had to work, Frank did **not** leave. (because > not, *because < not)

Distribution of NPI *any*

(14) a. Frank did **not** insult **any**one.
b. *It was **any**one that Frank did **not** insult.
c. *…but **any**one Frank did **not** insult.

Ambiguities of quantifier scope

(15) a. **Every boy** kissed **a girl**. (a > every, every > a)
b. It was **a girl** that **every boy** kissed. (a > every, every > a)
(cf. Reeve 2012: 42)
c. …but **a girl every boy** did kiss. (a > every, every > a)

The ambiguity of (13a) disappears in the corresponding cleft sentence that foregrounds the causal adjunct (13b), just as it disappears in the corresponding simple sentence that has experienced topicalization of the adjunct (13c).[1] The polarity item *any-* follows its trigger *not* in (14a), but when it precedes it in the corresponding cleft sentence, the sentence is ungrammatical, just as the corresponding simple sentence (14c) is ungrammatical in which the object *anyone* has been topicalized. Concerning examples (15a-c), all three sentences are ambiguous in the same way. The relevant point in this regard is that just as the ambiguity of (15a) is maintained in the cleft sentence (15b), so too it is maintained in the corresponding simple sentence with topicalization (15c).

The examples discussed so far all have the object as the foregrounded constituent in the *it*-cleft. When the subject is foregrounded instead of an object, the *it*-cleft also patterns like the corresponding simple sentence:

Binding (Condition A)

(16) a. It was **Sam$_1$** who hurt **himself$_1$**.
b. **Sam$_1$** hurt **himself$_1$**.

Negation and causal adjunct

(17) a It was Frank who did **not** leave **because** he had to work. (not > because, not < because)
b. Frank did **not** leave **because** he had to work. (not > because, not < because)

Distribution of NPI *any*

(18) a. It was Frank who did **not** insult **any**one.
b. Frank did **not** insult **any**one.

[1] The use of terminology here suggests a transformational approach to syntax, e.g. "foregrounds" and "topicalization". This terminology should be understood in a metaphorical sense and is used in the interest of vivid descriptions that are accessible to a wide audience. The DG espoused here is strictly monostratal in syntax, which means all transformations are rejected that would derive some sentences from other, more basic sentences.

Ambiguities of quantifier scope

(19) a. It was **every** boy that kissed **a** girl. (every > a; every < a)
b. **Every** boy kissed **a** girl. (every > a; every < a)

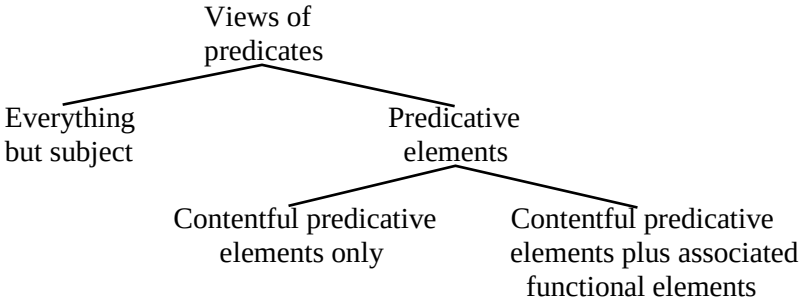
In these cases, foregrounded constituent in the *it*-cleft sentence is the subject. Each time the *it*-cleft sentence, the a-sentence, patterns just like the corresponding simple sentence, the b-sentence. Topicalization in the simple sentence is not needed because the linear order of the bolded constituents is already consistent across the two sentence types.

To summarize the data, *it*-cleft sentences pattern just like the corresponding simple sentences with respect to a number of phenomena of syntax. To ensure completeness of the correspondence, however, one must control for linear order. Doing so necessitates that topicalization occur in the simple sentence if the foregrounded constituent in the corresponding *it*-cleft is a non-subject. This state of affairs suggests strongly that *it*-clefts are in fact mono-clausal in a central respect, despite the appearance of two finite verbs.

## 3 Predicates

There are two main competing views of what qualifies as a main clause predicate in theories of grammar, a fact that can be verified by a quick check in most dictionaries of linguistic terminology (e.g. *Routledge Dictionary of Grammatical Terms in Linguistics* 1993, p. 213; *Oxford Concise Dictionary of Linguistics* 1997, p. 291), and within one of these views, two distinct sub-views can be discerned. The following diagram gives an overview:

(20)




The following sentence is used to illustrate these views of predicates:

(21) Frank has been studying syntax.

The one prominent understanding of predicates takes everything in a simple sentence except the subject as the predicate of the sentence. Hence on this approach, the predicate in (21) is *has been studying syntax*. This understanding of predicates is compatible with traditional phrase structure syntax insofar as the predicate corresponds to the VP of the initial binary division of a sentence S into a subject NP and a predicate VP (S → NP VP).

The main alternative understanding of predicates is inspired by predicate calculus associated above all with Gottlob Frege (1848-1925). A predicate serves to assign a property to an argument or to relate more than one argument to each other. On this approach, the content verb *studying* is deemed as (the core of) the main predicate in sentence (21), and *Frank* and *syntax* are its arguments. Within this alternative approach to predicates, one can discern two sub-views. The one sub-view takes predicates and their arguments as semantic entities that are often manifest as content verbs or adjectives (e.g. Poole 2002: 77-79; Adger 2003: 78-82; Carnie 2013: 57–60); on this sub-view, the matrix predicate in (21) is the content verb *studying* alone. The other sub-view is oriented more toward surface syntax; it takes predicates to consist of at least one main content word plus one or more associated function words. On this sub-view, the matrix predicate in (21) is *has been studying*.

These competing views of predicates are summarized as follows. The matrix predicate on each view appears in bold:

Everything but subject:

(22) a. Frank **has been studying syntax**.

Content predicative word only:

b. Frank has been **studying** syntax.

Content predicative word plus associated function words:

c. Frank **has been studying** syntax.

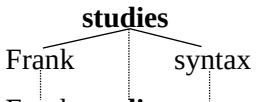
The view of predicates given as (22c) is the one pursued here below. A predicate consists of one or more content words plus any associated function words. Variants of this approach to predicates have been developed in detail (see e.g. Napoli 1989 and Ackermann and Webelhuth 1998). It is also the understanding of predicates that is dominant in the grammars of German (e.g. Helbig and Buscha 1998: 536–543; *Duden* 1984: 567–571). Most importantly, it represents an approach to predicate-argument structures that is particularly congruent with dependency syntax. This congruity is due to the fact that the word combinations that qualify as predicates are catenae in surface syntax, and so are the arguments of these predicates.

## 4 Predicate catenae

The main insight about predicates and arguments that makes the current account of *it*-clefts possible is that these entities are manifest as catenae in dependency structures. This fact is established and illustrated here using a series of examples, whereby traditional predicate-calculus-style analyses, as first appeared in (3b) above, are included to make the illustrations more concrete.

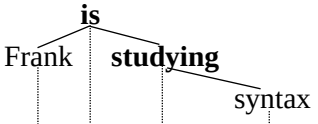
A catena is a word or a combination of words that are linked together by dependencies (O'Grady 1999; Osborne 2005; Osborne et al. 2012).[2] A typical matrix predicate consists of a content verb and any pure auxiliaries that are present. This fact is illustrated first using the example from above about Frank studying syntax:

(23)



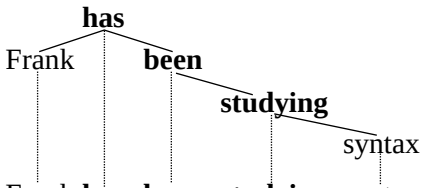

a. Frank **studies** syntax.
b. STUDIES (FRANK, SYNTAX)

(24)



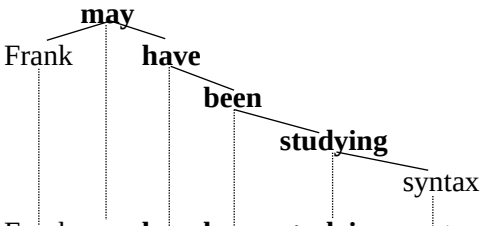

a. Frank **is studying** syntax.
b. IS STUDYING (FRANK, SYNTAX)

(25)




a. Frank **has been studying** syntax.
b. HAS BEEN STUDYING (FRANK, SYNTAX)

(26)




a. Frank **may have been studying** syntax.
b. MAY HAVE BEEN STUDYING (FRANK, SYNTAX)

Each additional auxiliary verb that appears is easily incorporated into the matrix predicate. On occasion, the words that constitute the matrix predicate are not linearly continuous, a fact illustrated here using two examples from German:

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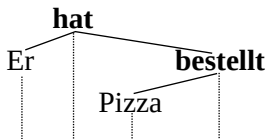
[2] A more formal definition of the catena unit, a set-theoretic one, is given next:

> **Catena** (set-theoretic definition)
> Given a dependency tree T, a catena is a set of nodes N in T such that exactly one node in N is not immediately dominated by another node in N.

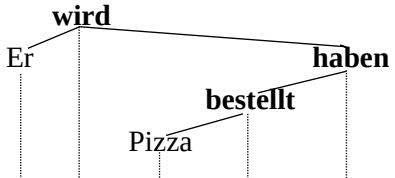
(27)




a. Er **hat** Pizza **bestellt**.
he has pizza ordered
'He ordered pizza.'

b. HAT BESTELLT (ER, PIZZA)

(28)



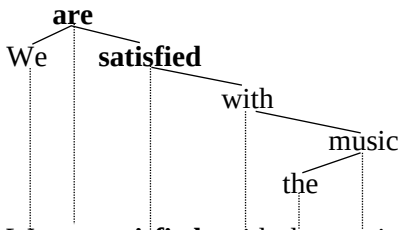

a. Er **wird** Pizza **bestellt** **haben**.
he will pizza ordered have
'He will have ordered pizza.'

b. WIRD BESTELLT HABEN (ER, PIZZA)

Due to the appearance of *Pizza* in these cases, the words that constitute the matrix predicate are not linearly continuous. This fact does not prevent them from forming a catena.

The next examples concern the auxiliary verb *be*. This verb is usually semantically almost empty and hence a pure function word. It forms a predicate with (one of) its post-dependent(s). The next examples involve a predicative adjective and a predicative nominal:

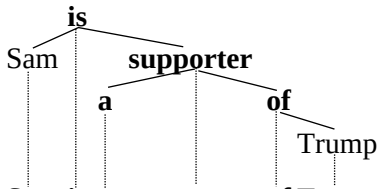
(29)




a. We **are** **satisfied** with the music.

b. ARE SATISFIED (WE, WITH THE MUSIC)

(30)



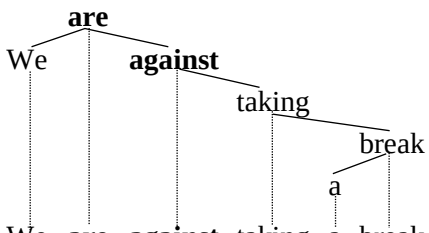

a. Sam **is** **a** **supporter** **of** Trump.

b. IS A SUPPORTER OF (SAM, TRUMP)

The copula *are* in (29) forms the matrix predicate with the predicative adjective *satisfied*, and the copula *is* in (30) forms the matrix predicate with predicative nominal *a supporter of*. Note that there is flexibility concerning the status of the prepositions *with* and *of* in these two examples, that is, concerning their inclusion or exclusion from the matrix predicate. Alternative analyses in this regard might also be plausible: ARE SATISFIED WITH (WE, THE MUSIC) and IS A SUPPORTER (SAM, OF TRUMP). On either analysis each time, the matrix predicate is a catena. Note also that the matrix predicate *is a supporter of* in (30) corresponds to a simple content verb *supports* in the almost synonymous simple sentence *Sam supports Trump*: SUPPORTS (SAM, TRUMP).

The next examples further illustrate the extent to which forms of auxiliary *be* appear in the matrix predicate with whatever occurs as their post-dependent. Prepositions can be directly included in the matrix predicate, whereby the object of the preposition is an argument:

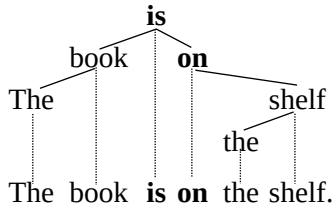
(31)




a. We **are** **against** taking a break.

b. ARE AGAINST (WE, TAKING A BREAK)

(32)




a. The book **is** **on** the shelf.

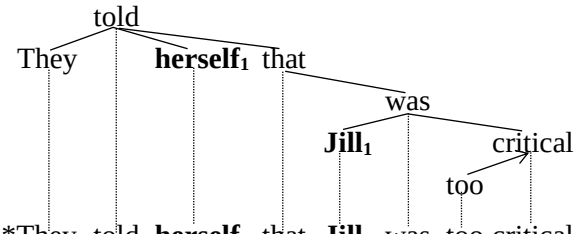
b. IS ON (THE BOOK, THE SHELF)

Examples (29-32) are particularly relevant to the analysis of clefts. They show the manner in which the matrix predicate includes the copula and (part of) a post-dependent of the copula. For cleft sentences, this means that the matrix predicate reaches into the embedded clause.

## 5 Connectivity accounted for

Many matrix predicates do not reach below the main content verb. This is certainly the case in example (2) above, which is reproduced here as example (33), with the dependency structure and predicate-argument analysis added:

(33)



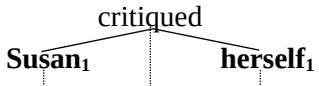

a. *They told **herself$_1$** that **Jill$_1$** was too critical.

b. TOLD (THEY, HERSELF$_1$, THAT JILL$_1$ WAS TOO CRITICAL).

The source of the ungrammaticality in this case is apparent based on the predicate-argument analysis. The reflexive pronoun *herself* fails to find an antecedent at its level of the predicate-argument structure; *Jill* is not its co-argument, but rather is embedded in its co-argument.

The next examples demonstrate that when the reflexive pronoun is licensed, its antecedent is often a co-argument that is ranked higher on the scale of argument functions: SUBJECT > 1$^{ST}$ OBJECT > 2$^{ND}$ OBJECT > OBLIQUE OBJECT.

(34)



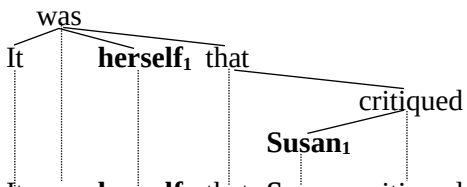

a. **Susan$_1$** critiqued **herself$_1$**.

b. CRITIQUED (SUSAN$_1$, HERSELF$_1$)

The reflexive pronoun *herself* is the object of *critiqued*, and its antecedent is *Susan*, the subject of *critiqued*. Thus, *herself* can appear by virtue of the fact that it finds a more highly ranked co-argument as its antecedent.

The predicate-argument analysis of *it*-clefts is similar. The matrix predicate reaches down from the root copula to include the main predicate in the embedded clause, rendering the foregrounded constituent a co-argument of the argument(s) in the embedded clause. Example (3) is repeated here as (35):

(35)




a. It was **herself$_1$** that **Susan$_1$** critiqued.

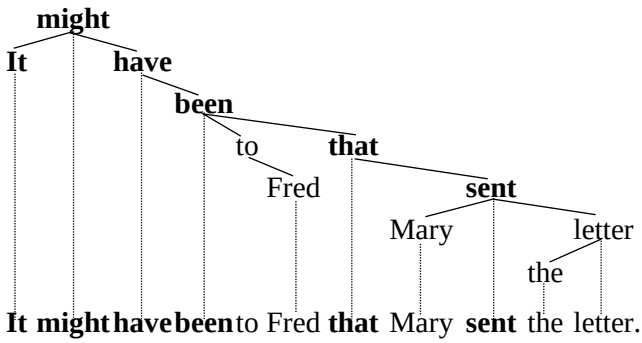
b. IT WAS THAT CRITIQUED (SUSAN$_1$, HERSELF$_1$)

Despite the fact that *herself$_1$* appears in the matrix clause, it can take its reference from the argument in the embedded clause. It can do this because the matrix predicate reaches into the embedded clause in a manner that renders *Susan* and *herself* co-arguments, whereby *Susan*, as a subject, is ranked higher than *herself*, an object. Two key aspects of this analysis are worth restating: first, the copula is a function word and so the matrix predicate necessarily reaches below it to include (part of) a post-dependent, just as in examples (29-32) above; and second, the words constituting the matrix predicate form a catena despite the fact they are discontinuous in the linear dimension and hence do not form a string.

A third aspect of example (35) is tentative: the expletive *It* is included as part of the matrix predicate. Nothing crucial rides on this aspect of the account. An alternative analysis would exclude the expletive *It* from the matrix predicate. The advantage of including it therein is that one is not confronted with the challenge of having to decide how to categorize it: should the expletive be viewed as an argument, an adjunct, or something else?

The next example illustrates the ability of the matrix predicate catena of an *it*-cleft to be very long indeed. The sentence is from Delahunty (1986: 22), whereby the dependency structure and predicate-argument analysis have been added:

(36)




a. **It might have been** to Fred **that** Mary **sent** the letter.
b. IT MIGHT HAVE BEEN THAT SENT (MARY, THE LETTER, TO FRED)

The matrix predicate includes six words, only one of which can be viewed as a full content word, namely *sent*, which is the lowest of the six. We see again that a typical aspect of matrix predicates is the manner in which they reach down from the root of the sentence until they include a full content word.

Example (35) demonstrates how the connectivity associated with binding Condition A is addressed and accommodated in terms of predicate catenae. The same reasoning applies to the other connectivity effects discussed and illustrated in Section 2. These connectivity effects are expected by virtue of the fact that the matrix predicate in an *it*-cleft sentence reaches down to include the main predicate in the embedded clause.

## 6 Two further aspects

Before concluding this manuscript, two further aspects of the current account are briefly addressed. The first of these concerns the fact that the matrix predicate of *it*-clefts reaches into the embedded clause, but not into the foregrounded constituent. The second concerns the ability of the matrix predicate to include the relative pronoun of the embedded clause.

A widely acknowledged fact about *it*-clefts is that a verb phrase may not be foregrounded, e.g.

(37) a. *It is **blow up some buildings** that you should. (Emonds 1976: 133)
b. *It's **submit her manuscript to Fortune** that Alice did. (cf. McCawley 1998: 66)
c. *It is **(to) apply for special leave** that you must do. (Huddleston and Pullum 2002: 1422)

A related observation is that other predicative elements, such as predicative adjectives and nominals, also cannot be foregrounded:[3]

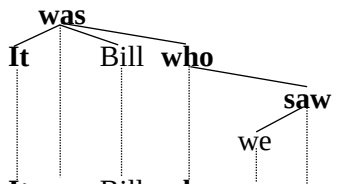
(38) a. *It is **tall** that John is. (Akmajian 1970: 166)
b. *It's **my doctor** that John Smith is. (Heggie 1988: 81)
c. *It is **on the couch** that Frank is.

The ungrammaticality of examples (37-38) is congruent with the current analysis of *it*-clefts. The key trait of *it*-clefts established above is that the matrix predicate necessarily reaches into the embedded clause to include the main predicate that resides there. If there is no main predicate there because that predicate appears instead as (part of) the foregrounded constituent, then the matrix predicate would have to reach into the foregrounded constituent; apparently, it cannot do this. The foregrounded constituent of an *it*-cleft sentence should be an argument or adjunct of the matrix predicate; it cannot include part of the matrix predicate.

The other aspect of *it*-clefts mentioned here concerns the fact that often, the relative pronoun of the embedded cleft clause is included in the matrix predicate, e.g. It was Bill who we saw.

[3] There are some important exceptions to this generalization concerning predicative adjectives. For instance, Heggie (1988: 206) and Reeve (2012: 54-56) observe that if contrastive emphasis is present on the adjective, then predicative adjectives can (at least marginally) be foregrounded, e.g. *A: Her eyes are green. B: No, its* BLUE *that her eyes are, not* GREEN.

(39)




a. **It was** Bill **who** we **saw**.
b. IT WAS WHO SAW (WE, BILL)

This analysis of the embedded cleft clause, which is a type of relative clause, follows the analysis of relative clauses in Groß and Osborne (2009) and Osborne (2014).[4] The relative pronoun *who* is positioned as the root of the relative clause. In the current context, the relevant aspect of this analysis is that the relative pronoun can be viewed more as a function word than as a content word, so its inclusion in the matrix predicate is consistent with the account above. Consider in this regard that non-subject relative pronouns are often omitted in English, e.g. *the man (who) I know* and that when the relative pronoun is a subject followed by a form of *be*, the two can also be omitted, e.g. *the man (who is) studying syntax*. These observations help reveal that the relative pronoun is non-essential at times, a fact that increases the plausibility of viewing it as a type of function word.

## 7 Concluding statement

There are of course many aspects of *it*-clefts that have not been addressed above. Hopefully, however, enough of the current approach to *it*-clefts has been presented to convince the reader that such an approach is worth pursuing further. Finally, it is appropriate to state again that the current approach in terms of catenae and predicate-argument structures can be extended to related sentence types, namely to pseudoclefts and specificational copular sentences in general. Connectivity effects also appear in these additional sentence types.

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[4] Certain aspects of Groß and Osborne's diagrammatic analysis of relative clauses have been suppressed here because they are not directly relevant to the point at hand.

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