English Reflexive Logophors

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English Reflexive Logophors
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1 Introduction
Under any version of Condition A of the Binding Theory, the antecedents of anaphors must occur in a structurally local domain, whether the notion of locality is argued to rely on c-command in a specific domain (classical theory of Condition A, see Chomsky 1986) or coargumenthood (predicate-based theories, see Pollard & Sag 1992, Reinhart & Reuland 1993, a.o.). But for more than forty years, it has been observed that in various languages, some anaphors can be exempt from this locality constraint. The exact conditions under which exemption from Condition A is licensed are however debated and poorly understood.

The goal of this paper is to examine this problem in English. We will strengthen the empirical evidence for English exempt anaphors and propose an account for them based on logophoricity: the antecedents of exempt anaphors have to be perspective centers, which come in three different kinds and are syntactically represented by logophoric operators. Ultimately, this means that seemingly exempt anaphors are in fact not exempt, but locally bound by silent logophoric operators; that’s why they have the same form as plain anaphors standardly subject to Condition A.

To argue for this analysis, we will first explain the strategy we adopt to distinguish between plain and exempt anaphors without presupposing the validity of any formulation of Condition A (Section 2). Applying this strategy, we will examine the properties of exempt anaphors and based on specific tests, we will show that they are characterized by three different types of logophoric antecedents: attitude holders, empathy loci and deictic centers (Section 3). This will lead us to hypothesize that exempt anaphors are in fact locally bound by three different types of logophoric operators that interact in specific ways (Section 4).

2 How to identify exempt anaphors
To our knowledge, anaphors that seem to be exempt from Condition A always have the same form as plain anaphors that standardly obey Condition A (e.g. English himself, French lui-même, Mandarin ziji, Icelandic sig). Given that the formulation of Condition A is debated, this raises the following issue: how can we identify exempt anaphors without presupposing the validity of a certain theory about Condition A? To know what falls outside the scope of Condition A, we indeed need...
to know the scope of Condition A; but to determine the scope of Condition A, we reasonably need to examine the distribution of all anaphors; so how can we non-arbitrarily distinguish exempt from plain anaphors?

2.1 Previous theories

2.1.1 Chomskian theory

This issue does not arise under the classical Chomskian theory, which aims to capture the distribution of all anaphors without exception: as indicated in (1), it essentially states that all anaphors must have a c-commanding antecedent within their local domain.

(1) **Chomskian Condition A**: an anaphor must be bound within the smallest XP containing the anaphor and a subject distinct from it. (Chomsky 1986)

This theory is, however, challenged by empirical problems, as illustrated in (2).

(2) a. Bill, said that [the rain had damaged pictures of himself].
   (adapted from Pollard & Sag 1992)

   b. In her opinion, physicists like herself are rare.
   (adapted from Kuno 1987)

   c. Max boasted that [the queen invited Lucie and himself for a drink].
   (Reinhart & Reuland 1993, 670)

In (2a) and (2c), *himself* is not bound within its (bracketed) local domain, and in (2b), *herself* does not have a binder; all these sentences are nevertheless acceptable contrary to what is predicted by (1).

Moreover, examples (3)–(4)\(^1\) show that simply redefining the locality domain indicated in (1) cannot solve the problem.

(3) a. *Tom thinks that [Julie admires himself].
   b. Tom thinks that [Julie admires everyone but himself].
   (adapted from Keenan 1988)

(4) a. *Anonymous posts about itself on the internet hurt [the camera]’s sales.
   b. Anonymous posts about herself on the internet hurt Lucy’s feelings.

In (3a), *himself* cannot be anteceded by *Tom*, which sits outside its local domain, but it can in (3b), even if the antecedent is further away from the anaphor. In (4), there is no obvious difference in the locality of the antecedent with respect to the anaphor, but *itself* is deviant in (4a) while *herself* is acceptable in (4b). This calls for a theory of exemption from Condition A.

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\(^1\)Unless otherwise noted, the English examples of this paper have been constructed by Chrissy Zlogar; the judgments are her own and have been informally checked with other native speakers of American English. As we are aware that there are sharp dialectal differences in English with respect to exempt anaphors, we are in the process of checking judgments experimentally using online questionnaires.
2.1.2 Predicate-based theories

Predicate-based approaches to anaphor binding (Pollard & Sag 1992, Reinhart & Reuland 1993, Pollard 2005, Reuland 2011, a.o.) offer a theory of exemption from Condition A while simultaneously redefining it. These theories are based on the notion of coargumenthood as stated in (5).

(5) a. **Predicate-based Condition A**: an anaphor must be bound by a coargument.

   b. **Predicate-based exemption**: an anaphor is exempt from Condition A if and only if it does not have a coargument.

The grammaticality of (2) can thus be explained: *himself* and *herself* are exempt in (2a) and (2b) because they are the single argument of the predicates *pictures* and *like* respectively; *himself* is exempt in (2c) because it is part of the conjunct argument *Lucie and himself* and as such it does not have a coargument either.

However, as pointed out by Charnavel & Sportiche (2016) based on the behavior of French anaphors, this theory faces problems. First, the predicate-based theory of exemption is too weak because some anaphors lacking coarguments (especially inanimates) are nevertheless subject to locality constraints. More problematically, it is too strong because some anaphors, while having coarguments, do not have to be bound by them. The two points also hold for English anaphors as illustrated in (6).

(6) a. *[The Nature of it All]_i argued that no book except itself_i was of any value. (Postal 2006, 10)

   b. Ebenezer_i saw Jacob’s picture of himself_i. (Runner & Kaiser 2005)

In (6a), *itself* cannot be anteceded by the non-local *The Nature of it All* even if *itself* does not have a coargument. Conversely, in (6b), *himself* can be bound by *Ebenezer* despite the presence of *Jacob*, which would count as a coargument in predicate-based theories. These examples seriously challenge these theories. Furthermore, such theories problematically use the same criterion—coargumenthood—to determine both Condition A and exemption from it.

For these reasons, we will not adopt a predicate-based theory, but instead stick to a Chomskian-type theory of Condition A like Charnavel & Sportiche (2016) — although we agree that a theory of exemption is needed.

2.2 Our strategy based on inanimacy

To distinguish between plain and exempt anaphors, we instead propose a criterion that is independent of the formulation of Condition A, namely inanimacy. Drawing on Charnavel & Sportiche’s (2016) argument for French, we assume that English inanimate anaphors can never be exempt. The reasoning is based on the following observation: even if there is no consensus on the exact definition of logophoricity, most—if not all—studies (Sells 1987, Huang & Liu 2001, a.o.) agree that anaphors anteceded by logophoric, i.e. perspectival, centers do not need to obey Condition A (see Section 3). Since by nature inanimates do not have mental states, they cannot be logophoric centers under any definition of logophoricity or perspective. Inanimacy thus allows us to exclude logophoricity as a confound in determining the scope of Condition A.
Charnavel & Sportiche (2016) therefore conclude that inanimacy is a sufficient condition for plain anaphor-hood: the scope of Condition A can be determined based on the distribution of inanimate anaphors. Conversely, we deduce that animacy is a necessary condition for exemption: animate anaphors that occur in configurations disallowing inanimate anaphors are exempt anaphors. For instance in (4a) repeated below as (7a), inanimate *itself* which as a plain anaphor has to obey Condition A, is deviant, but in (4b), repeated below as (7b), *herself* is not, even if it is in the exact same syntactic position with respect to its antecedent; thus *herself* is necessarily exempt in (4b). The same holds for *itself* vs. *himself* in (8).

(7) a. [=4a] *Anonymous posts about itself* on the internet hurt [the camera]’s sales.

(8) a. [=6a] *[The Nature of it All]* argued that no book except itself was of any value.
   b. [Winston Q. Felix] argued that no one except himself was of any value.
   (Postal 2006, 10)

In sum, the strategy we adopt to guarantee that a given animate anaphor is exempt is to compare the sentence it occurs in with a structurally similar sentence containing an inanimate anaphor. If the inanimate anaphor is deviant, but the animate one is acceptable, the latter is exempt.

Thus exempt anaphors do not seem to be characterized by their position (non-coargumental vs. coargumental), but by the properties of their antecedents (at least animacy). In the next section, we further examine these properties in order to specify the conditions for exemption.

3 The logophoric properties of exempt anaphors

The goal of this section is to show that English exempt anaphors (identified by the strategy explained in the previous section) need to be anteceded by perspective centers, i.e. logophoricity is crucially responsible for exemption. The notion of perspective has already been argued to be relevant for so-called logophoric pronouns in West African languages (see Hagège 1974, Clements 1975, Culy 1994, a.o.) or long distance reflexives in, e.g., Icelandic, Japanese and Mandarin (see Maling 1984, Kuno 1987, Huang & Liu 2001, a.o.). But logophoricity is defined in various and often imprecise ways in the literature, which makes it hard to evaluate the validity of the notion for English exempt anaphors. We therefore propose to divide the notion of logophoric center into three subtypes (attitude holder, empathy locus, deictic center) based on specific tests that will be presented below (cf. Charnavel 2014 for French).

Note that our tripartition of logophoric centers differs from Sells’s (1987) division into Source, Self, and Pivot in two respects as illustrated in Figure 1. First, we combine Source and Self into a single notion of attitude holder for both crosslinguistic and empirical reasons: we do not know of any language that licenses
exempt anaphors when anteceded by a SOURCE, but not a SELF, or vice versa; and many linguistic phenomena (evaluative expressions, expressives, \textit{de rel/de dicto} readings, a.o.) are specifically sensitive to attitude contexts. Second, we divide PIVOT into empathy loci and deictic centers, also for both crosslinguistic and empirical reasons: while some exempt anaphors (e.g. English ones) can be anteceded by either type, others (e.g. French ones) are only licensed by the former type of antecedent (see Charnavel 2014). Moreover, as will be shown in Section 4.2, the presence of a distinct empathy locus prevents a deictic center from anteceding an English exempt anaphor, which proves that the two types do not play the same role with respect to exempt anaphors.

\begin{figure}
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\includegraphics[width=0.5\textwidth]{figure1.png}
\caption{Comparison between Sells's (1987) and our division into subtypes of logophoric centers.}
\end{figure}

\subsection*{3.1 First subtype of logophoric antecedent: attitude holders}
The first type of logophoric center that licenses exempt anaphors, we argue, is the intellectual type of perspective, i.e. \textbf{attitude holders}. In fact, many exempt anaphors occur in attitude contexts created by intensional expressions such as \textit{said}, \textit{opinion} or \textit{boasted} in (2). This is further illustrated in (9), where the relevant intensional expressions are underlined; (9e) is an example of free indirect discourse.

\begin{enumerate}
\item According to John\textsubscript{i}, the article was written by Ann and himself\textsubscript{i}. \\
\begin{footnotesize}(Kuno 1987, 121)\end{footnotesize}
\item Joe\textsubscript{i} worried that his girlfriend was pulling away from himself\textsubscript{i}.
\item In [the prince\textsubscript{j}’s opinion], a man more handsome than himself\textsubscript{j} could not be found.
\item John\textsubscript{i} decided that Mary’s remarks had been intended for himself\textsubscript{i}. \\
\begin{footnotesize}(Cantrall 1974)\end{footnotesize}
\item John\textsubscript{i} was going to get even with Mary. That picture of himself\textsubscript{i} in the paper would really annoy her, as would the other stunts he had planned. \\
\begin{footnotesize}(Pollard & Sag 1992, 274)\end{footnotesize}
\end{enumerate}

In all of the sentences in (9), the exempt anaphor \textit{himself} occurs in an attitude context and is anteceded by the attitude holder of that context. Based on such cases, we hypothesize that exempt anaphors can be licensed by attitude holders as antecedents. We propose several tests to identify antecedents of exempt anaphors as attitude holders. Our first test is based on Dubinsky & Hamilton’s (1998) observation that an epithet like \textit{the idiot} cannot be anteceded by the perspective bearer of the context.

\begin{enumerate}
\item *According to John\textsubscript{i}, [the idiot]\textsubscript{i} is married to a genius.
\end{enumerate}
b. Speaking of John\textsubscript{i}, [the idiot\textsubscript{i}] is married to a genius.

(Dubinsky & Hamilton 1998, 688)

In (10a) where the expression *according to* makes its complement *John* the perspective holder, *the idiot* cannot refer to *John*, but it can in (10b) where *John* is the argument of the non-intensional expression *speaking of*. In other words, an epithet cannot be anteceded by the attitude holder of the context.

Drawing on this contrast, we adopt the epithet test formulated in (11) to detect attitude holders as antecedents of exempt anaphors.

(11) **Epithet Test**: replace the exempt anaphor\textsuperscript{2} by a co-referring epithet and check whether the sentence becomes unacceptable.

This test is applied to sentence (9a), repeated below as (12a), in (12b), thus confirming that the antecedent of the exempt anaphor *himself*, i.e. *John*, is an attitude holder.

(12) a. [=9a] According to John\textsubscript{i}, the article was written by Ann and himself\textsubscript{i}.
   
   b. *According to John\textsubscript{i}, the article was written by Ann and [the idiot\textsubscript{i}].

(13) illustrates the reverse pattern: in (13b), the epithet *the idiot* can refer to *John*, which is therefore not an attitude holder; accordingly, *John* cannot antecede the exempt anaphor *himself* in (13a). Note nevertheless that this pattern will not always hold, as we will identify other subtypes of logophoric centers that can license exempt anaphors; that’s why the epithet test in (11) is not bidirectional (i.e. it is not necessarily the case that if an epithet is acceptable, a coreferring exempt anaphor is not).

(13) a. *Speaking of John\textsubscript{i}, the article was written by Ann and himself\textsubscript{i}.

   b. Speaking of John\textsubscript{i}, the article was written by Ann and [the idiot\textsubscript{i}].

The other tests defined in (14), which we also use to diagnose attitude holders as antecedents of exempt anaphors, are based on classic observations about attitude contexts.

(14) a. **Double Orientation Test**: replace the exempt anaphor with an evaluative expression and check whether it can be evaluated by both the speaker and the antecedent of the anaphor.

   b. **Substitution Test**: replace the exempt anaphor with two different coreferent terms and check whether the truth conditions change.

The double orientation test is applied to sentence (9a) in (15): Ann’s co-author can here be evaluated as *great* either by the speaker or by the attitude holder *John*.

(15) According to John, the article was written by Ann and a great author.

(16) illustrates the substitution test based on Frege’s (1980/1892) famous observation that the substitution of coreferring terms fails in the scope of intensional predicates. For example, (16a) and (16b) do not have the same truth conditions; this

\textsuperscript{2}The fact that we replace an exempt anaphor (i.e. an anaphor that is not locally bound) with the epithet ensures that any infelicity that arises is not due to a Condition B violation (see Dubinsky & Hamilton’s (1998) claim that epithets are pronominal).
is particularly clear if John is not aware of the fact that Lewis Carroll and Charles Lutwidge Dodgson are one and the same person.

(16) a. According to John, the article was written by Ann and Lewis Carroll.
    b. According to John, the article was written by Ann and Charles Lutwidge Dodgson.

The application of these three tests thus allows us to confirm that attitude holders can antecede exempt anaphors. More specifically, this is only the case if exempt anaphors are read \textit{de se}, as illustrated in (17).

(17) [Context: John is looking at a research article that he co-wrote with Ann many years ago, but does not recognize it as one of his own papers. Instead, he falsely assumes that Ann's co-author is a colleague of his who happens to have the same name as him.]

\#According to John, the article was written by Ann and himself.

In the context of (17), John does not recognize himself as the co-author of the article in question. In that situation, the exempt anaphor \textit{himself} cannot be felicitously used: it can only be read \textit{de se}. Note that this is a commonly reported property of logophors (Huang \& Liu 2001, Schlenker 2003, Anand 2006, a.o.), though it does not seem to necessarily hold of all logophors (Pearson 2015).

Thus many exempt anaphors require a logophoric interpretation in that they have to refer to an attitude holder. This explains the animacy restriction that we have observed in Section 2 as attitude holders are necessarily animate.

3.2 Second subtype of logophoric antecedent: empathy loci

It is however not sufficient to characterize the antecedents of exempt anaphors as attitude holders, because some exempt anaphors appear in non-attitude contexts.

    b. His computer screen-saver features a picture of himself kissing a fish.
    (\textit{San Francisco Chronicle} 1997 [COCA])
    c. Paul worked with his wife at a university where physicists like himself were highly regarded.
    d. He sat down at the desk and opened the drawers. In the top right-hand one was an envelope addressed to himself.
    (Lodge 1975, cited in Zribi-Hertz 1989, 716)

In (18), none of the exempt anaphors\footnote{The Corpus of Contemporary American English (COCA), Davies 2008} are anteceded by an attitude holder as we can show using the tests presented in the previous Section 3.1. For instance, if we apply the epithet test to sentence (18b), we obtain the acceptable sentence (19). This shows that the antecedent \textit{his} of the exempt anaphor \textit{himself} in (18b) is not an attitude holder.

\footnote{\textit{Herself} is exempt in (18a) even under Belletti \& Rizzi's (1988) analysis of psych-verbs: given that \textit{Lucy} is embedded in the DP \textit{[Lucy's feelings]}, it does not c-command \textit{herself} at any level of representation.}
(19) His computer screen-saver features a picture of [the idiot], kissing a fish.

Similarly, (18a) fails the double orientation test in (20): the posts can only be evaluated as horrible by the speaker, not by Lucy (unless the whole statement is evaluated under a free indirect discourse interpretation, which we want to exclude here); therefore Lucy is not an attitude holder.

(20) The horrible posts about herself on the internet hurt Lucy’s feelings.

To account for the grammaticality of exempt anaphors in (18), we propose that there is a second subtype of logophoric center that can antecede exempt anaphors: empathy loci. The notion of empathy locus comes from the literature on Japanese (Kuno 1987, Oshima 2007, Nishigauchi 2014, a.o.), where some non-attitude verbs such as the ‘giving’ verbs yaru and kureru can encode different points of view or ‘camera angles’ in Kuno’s (1987) terms: the giving event is described from the perspective of the referent of the nominative in the case of yaru, but from the perspective of the referent of the dative in the case of kureru. According to Kuno (1987:246), that’s why a first person, which represents the primary point of view, has to be the subject of yaru, but the dative object of kureru, as illustrated in (21).

(21) a. Boku-ga Hanako-ni okane-o {*kure-ru/ya-ru}
   I-NOM Hanako-DAT money-ACC give-PRES
   ‘I give money to Hanako.’
   b. Taroo-ga boku-ni okane-o {kure-ru/*ya-ru}
   Taroo-NOM me-DAT money-ACC give-PRES
   ‘Taroo gives me money.’ (Kuno 1987, 246)

Based on such cases, Kuno (1987) defines the notion of empathy locus as in (22).

(22) **Empathy Locus**: the event participant that the speaker identifies with, or empathizes with (i.e. takes the mental perspective of).

Note that the notion of empathy is a technical term that is not to be confused with informal notions such as ‘have sympathy for’ or ‘pity’; in particular, even an event participant towards whom the speaker has a negative attitude can be an empathy locus, as, for example, could be the case in (18b).

We suggest that this notion of empathy, or emotional perspective, is also relevant in English for the case of exempt anaphors. For instance, it explains the contrast between (23a) and (23b).

(23) a. [cf. 4b] Anonymous posts about herself on the internet hurt Lucy’s {feelings/self-image}.
   b. *Anonymous posts about herself on the internet hurt Lucy’s {popularity/public image}.

In (23a), the psychological expressions feelings or self-image allow the speaker to empathize with Lucy, unlike the non-psychological expressions popularity or public image in (23b); consequently, Lucy is an empathy locus in (23a) but not in (23b), and can thus antecede the exempt anaphor herself in (23a) but not in (23b).

Unlike Japanese, though, English does not have expressions such as yaru/kureru that lexically encode empathy. To ensure that the antecedents of exempt anaphors in
sentences such as (18) are indeed empathy loci, we therefore construct a test based on the use of the word beloved (cf. Charnavel 2014 on French son cher ‘his dear’, Kuno 1987 on beloved/his dear) as formulated in (24).

(24) **Beloved Test**: replace the exempt anaphor by *his/her beloved + noun* and check whether the sentence is acceptable (under a non-ironic reading).

This test relies on the idea that ‘beloved-ness’ can only be evaluated by the person experiencing the feeling: unless (s)he wants to distance himself/herself from his/her character by irony, the speaker has to empathize with the antecedent of *his/her beloved* since this expression is intrinsically first personal and evaluative. The test is applied to (23) in (25).


   b. *Anonymous posts about her, beloved son on the internet hurt Lucy,‘s popularity/public image.

In (25a), Lucy can antecede *her beloved*, which shows that *Lucy* is an empathy locus; accordingly, it licenses the exempt anaphor *herself* in (23a). In (25b), however, *her beloved* is degraded, which implies that the speaker cannot empathize with the referent of *Lucy*, which therefore cannot antecede *herself* in (23b).

The *beloved* test is furthermore consistent with the observation that exempt anaphors have to be animate. Inanimates can never antecede *its beloved*, which shows that they cannot be empathy loci; the empathy hypothesis therefore predicts that inanimates cannot license exempt anaphors (as empathy loci at least), which is borne out. The failure of the *beloved* test in the case of an inanimate is illustrated in (26), which accounts for the ungrammaticality of *itself* in (4a) repeated in (26a): *the camera* is not an empathy locus in (26b) and thus cannot antecede the exempt anaphor *itself* in (26a).

(26) a. *Anonymous posts about itself, on the internet hurt [the camera],’s sales.

   b. *Anonymous posts about its, beloved lens on the internet hurt [the camera],’s sales.

The same holds for deceased animates: exempt anaphors cannot refer to deceased antecedents, as shown in (27).

(27) a. The picture of himself, that hangs in Obama,’s study is quite dignified looking.

   b. *The picture of himself, that hangs in Lincoln,’s study is quite dignified looking. (adapted from Cantrall 1974, 107)

3.3 **Third subtype of logophoric antecedent: deictic centers**

The third and last type of logophoric center that can antecede exempt anaphors, we argue, is the spatial—or more specifically perceptual, as we will see—type of perspective, i.e. **deictic centers**. It is exemplified in the sentences in (28), which are meant to describe the situation in Figure 2.
(28)  a. [The man], is facing away from us, with the dog behind himself.
    b. *[The man], is facing away from us, with the fireplace behind himself.
    c. [The man], is facing away from us, with {the dog/the fireplace} behind him.  
       (adapted from Cantrall 1974)

Figure 2: Man and dog standing near fireplace.

In the drawing represented in Figure 2, the man has his back turned to us. In that configuration, the dog appears behind the man from his point of view, but in front of the man from our point of view; conversely the fireplace is located before the man from his perspective, but behind him from our perspective. This situation is felicitously described in (28a) and (28c), but not in (28b). In other words, the exempt anaphor himself (unlike the pronoun him, which does not have such a restriction) is only felicitous if the referent of its antecedent corresponds to the point of view of the sentence (in the spatial sense).

To identify the deictic center as antecedent of the exempt anaphor himself in (28a), we use the deictic test formulated in (29).

(29) **Deictic Test**: Evaluate the sentence containing the exempt anaphor in a situation where the speaker’s and the referent of the antecedent’s spatial perspectives conflict, and check whether the latter perspective has to be adopted.

Obviously, this test can only be used in sentences involving spatial perspective, i.e. in the presence of spatial prepositions like behind/before, to the left/to the right, above/below, or motion verbs such as come/go as illustrated in (30).

(30)  a. He was happy when his own mother came to visit him in the hospital.
    b. ??He was happy when his own mother went to visit him in the hospital.  
       (Sells 1987, 465)

In general, the reference point should be at the goal in the case of come, but should not be at the goal in the case of go (see Oshima 2007, a.o., for more details). Thus

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5The original sentence from Cantrall (1974:146–147) is:
(i) The adults in the picture are facing away from us, with the children placed behind them/themselves.

the referent of him corresponds to the deictic center in (30a), but not in (30b). Accordingly, the coreferring pronoun he can antecede the exempt anaphor his own in (30a), but not in (30b).

Importantly, the notion of spatial perspective is not sufficient to account for exemption here, since inanimates, which can also have a spatial orientation, cannot antecede exempt anaphors even when they are understood as deictic centers. This is exemplified in (31): the exempt anaphor itself is unacceptable even in a situation similar to Figure 2 where the back of the house would appear on the picture and the elm tree would stand before the house from our perspective, but behind the house if we take it as a reference point.

(31) [The house in the picture], is facing away from us, with an elm tree behind it/*itself. (Cantrall 1974, 146–147)

For that reason, we hypothesize that it is not the notion of spatial orientation, but spatial perception, that is crucial for exemption: anaphors can be exempt from Condition A when anteceded by a perceptual perspective center.

Recall that unlike Sells (1987) who would subsume the two notions under PIVOT, we distinguish between perceptual and emotional perspective centers (deictic centers vs. empathy loci) with respect to exemption. The beloved test cannot justify this distinction though since there is no instance where it would fail but an exempt anaphor would be acceptable, since a deictic center (or an attitude holder) can always be made an empathy locus. Even so, in addition to the conceptual considerations and crosslinguistic patterns noted at the start of Section 3 (French exempt anaphors are licensed by empathy loci, but not by deictic centers, see Charnavel 2014), the interaction between the two types of logophoric centers that will be presented in Section 4.2 supports this hypothesis.

In sum, there are three types of logophoric centers that allow anaphors to be exempt when anteceding them: attitude holders, empathy loci and deictic centers. We have shown that it is not just animacy, but more specifically logophoricity—which encompasses intellectual, emotional and perceptual perspectives—that is a necessary condition for exemption in English.

Nevertheless, note that logophoricity is not a sufficient condition for exemption, as shown in (3a) repeated below: even if Tom is an attitude holder in (32), it cannot antecede the exempt anaphor himself.

(32) [=3a] *Tom, thinks that [Julie admires himself,].

The generalization responsible for the unacceptability of (32) seems to be that exempt anaphors can never appear in object positions of verbs. Based on French patterns (see Charnavel 2014, Charnavel & Sportiche 2016), we assume that this is due to a restriction independent from Condition A or logophoricity: anaphors cannot appear in prosodically weak positions, except in the presence of Reflexive Voice for locally bound subject oriented anaphors (see Ahn 2015). Note that throughout this article, we strived to avoid stress on the anaphor (it is always possible to put stress on other elements of the sentence) to exclude focus as a possibly confounding factor in our data. The interaction between focus and (exempt) anaphors would indeed deserve a whole study on its own.
4 Analysis
4.1 Logophoric operators
To explain why logophoricity is a necessary condition for exemption, we assume the presence of silent, syntactically represented logophoric operators (cf. Koopman & Sportiche 1989, Anand 2006, Sundaresan 2012), which are coreferent (or in a relation of non-obligatory control) with the logophoric antecedent, and bind the anaphor. On the one hand, this accounts for why exempt anaphors have to be logophorically interpreted even if they do not have any lexical property imposing such an interpretation: their interpretation is derived from their binder, i.e. the silent logophoric operator. On the other hand, this explains why exempt anaphors do not seem to be subject to Condition A even if they have the same form as plain anaphors standardly obeying Condition A: exempt anaphors are in fact not exempt, but locally bound by silent logophoric operators; thus they are just regular anaphors obeying Condition A and that is why in language after language we do not find any exempt anaphors that do not have the same form as plain anaphors.

Given this hypothesis, we must assume that logophoric operators occur in the local domain of the seemingly exempt anaphors. According to Charnavel & Sportiche’s (2016) formulation of Condition A in (33), this implies that logophoric operators must appear within the spellout domain of exempt anaphors.

(33) **Condition A**: an anaphor must be interpreted within the spellout domain containing it. (Charnavel & Sportiche 2016)

Specifically with respect to the C phase, this means that logophoric operators $O\!P_{\log}$ occur within TP\(^7\) as shown in (34a) representing (2a). In the case of DP phases, i.e. DPs with subjects, this formulation of Condition A similarly implies that logophoric operators appear within the spellout domain of the DP phase as in (34b).\(^8\)

(34) a. Bill\(_i\) said that [$TP \; O\!P_{\log\!i} \; the \; rain \; had \; damaged \; pictures \; of \; himself\(_i\)].
   b. Liz\(_i\) said that [$DP \; O\!P_{\log\!i} \; the \; newspaper’s \; nasty \; remarks \; about \; herself\(_i\)] were mean.

We assume further that there is at most one logophoric operator in the relevant domain (cf. Koopman & Sportiche 1989, Sundaresan 2012). This correctly predicts two non-coreferring exempt anaphors cannot co-occur in the same spellout domain (cf. clausemate long distance Mandarin $zijí$ must co-refer, Huang & Liu 2001).

(35) a. *According to Tom\(_i\), Sue\(_k\) said that [$TP \; physics\;ists \; like \; himself\(_i\) \; and \; chemists \; like \; herself\(_k\) \; are \; rare]$.
   b. According to Tom\(_i\), Sue\(_k\) said that [$TP \; physics\;ists \; like \; himself\(_i\) \; and \; chemists \; like \; her\(_k\) \; are \; rare]$.

\(^7\)Charnavel & Sportiche’s (2016) motivation for characterizing the local domain of anaphors as their spellout domain (at least for French) is the distribution of French anaphors: an inanimate anaphor occurring within the subject of an embedded tensed clause cannot be anteceded by a DP in the matrix clause, *contra* Chomsky 1986 (see example 6a above).

\(^8\)For space reasons, we cannot examine here in detail the relation between logophoric operators occurring within TP and those occurring within DP with subjects: Do we need both when they corefer? Can we have a logophoric operator in a DP that is embedded in a TP containing a non-coreferring logophoric operator? Can we have different logophoric operators in different DPs with subjects contained in the same TP? All of these questions will be examined in future work.
c. According to Tom, Sue said that physicists like him, and chemists like herself are rare.

In (35a), the exempt anaphors *himself* and *herself* are each antecedced by an attitude holder, respectively Tom and Sue, but the sentence is degraded because they both occur in the same TP. The fact that (35b) and (35c) are, however, fine shows that the deviance of (35a) is not due to an independent reason.

### 4.2 Interaction between logophoric centers

In the previous Section 4.1, we have specified the relation between the logophoric operator and the exempt anaphor: a single operator binds the anaphor in its spellout domain. We now turn to the relation between the operator and the antecedent. In particular, which logophoric center can/should the operator refer to when several are available in the sentence?

What we observe is that when the logophoric centers are of the same type (attitude holders, empathy loci or deictic centers) the operator can freely refer to any (as in (35b–c) with two attitude holders), but when they are of different types, the operator must refer to the highest one on the hierarchy represented in (36).\(^9\)

(36) Attitude Holder > Empathy Locus > Deictic Center

For instance, (37a–c) involves an attitude holder, i.e. the subject of *believes*, Liz, and an empathy locus, i.e. Sue, as diagnosed by the use of *beloved*. The exempt anaphor *herself* should refer to Liz as shown in (37a), while it can refer to Sue in the absence of a competing higher logophoric center as in (37c), and the pronoun *her* can refer to either as seen in (37b).

(37) Attitude > Empathy

a. Liz believes that Sue’s beloved boyfriend will write a poem dedicated to herself.

b. Liz believes that Sue’s beloved boyfriend will write a poem dedicated to her.

c. Sue’s beloved boyfriend will write a poem dedicated to herself.

Similarly, (38) demonstrates that attitude trumps deixis, and (39) that empathy trumps deixis. These examples are meant to refer to a situation where Liz and Sue face each other and their portraits hang behind each of them.

(38) Attitude > Deixis  

[(Context: Liz and Sue face each other)]

a. Liz said that the painting hanging behind herself was a good likeness of Sue.

b. Liz said that the painting hanging behind her was a good likeness of Sue.

c. The painting hanging behind herself was a good likeness of Sue.

\(^9\)For space reasons, we cannot examine the interaction of these perspective centers with discourse participants (*I, you*), which interestingly give rise to intervention effects in English (cf. blocking effects in Mandarin, Huang & Liu 2001). This will be presented in future work.
Empathy > Deixis  

[Context: Liz and Sue face each other]

a. The flattering portrait of Lizₜ hanging behind herselfₜ/k?? arousing feelings of jealousy in Sueₜ.

b. The flattering portrait of Lizₜ hanging behind herₜ/k?? arousing feelings of jealousy in Sueₜ.

c. The portrait of Lizₜ hanging behind herselfₜ was quite flattering.

A possible way to implement this interaction between the three hypothesized logophoric centers is to assume that there are correspondingly three types of logophoric operators, which are structurally ordered, and the exempt anaphor must be bound by the closest one that is active, i.e. that has an antecedent.₁₀ This is schematized in (40).

(40) \[ \text{SPELLOUT-DOMAIN} \ [ \ OP_{\text{DEIX}} [ \ OP_{\text{EMP}} [ \ OP_{\text{ATT}} \ldots \ himself ] ] ] ] \]

5 Conclusion

This paper has provided evidence that logophoricity plays a crucial role in exemption from Condition A in English. Besides strengthening the existence of English exempt anaphors, we have argued that these seemingly exempt anaphors are in fact bound by silent, syntactically represented logophoric operators that come in three kinds (attitude holders, empathy loci, deictic centers) and are structurally ordered. This yields the following result that satisfyingly meets economical considerations: there is only one type of anaphor in language, which has to obey Condition A. But depending on the situation, anaphors give rise to different visible effects: what appears to be crucial is (i) the configuration they occur in when they are bound by overt antecedents; (ii) the interpretation they get when they are bound by silent operators; and (iii) their position when they are associated with Reflexive Voice.

References


₁₀This condition would, however, have to be specific to logophoric operators since antecedent/anaphor binding generally does not care about intervening elements (Charnavel & Sportiche 2016).


