Non-overt subjects in English: a relevance theory perspective

Abstract

Despite English being traditionally classified as a non-null subject language, there are certain discourse contexts in which subject pronouns may be left non-overt. While previous analyses of this phenomenon have focused on syntactic explanations, each has acknowledged that pragmatics plays a vital role in understanding their production and interpretation. This paper takes up where the syntactic analyses leave off, and offers an analysis of the pragmatic motivation behind null subjects in non-null subject languages, focusing particularly on English. It is argued that, far from being exceptional, pragmatically motivated null subjects are not surprising on a relevance-theoretic approach to utterance production and interpretation (Sperber & Wilson, 1986/95). Three categories of null subject are identified, each driven by the balance between hearer's effort and cognitive effects, while allowing for the speaker's abilities and preferences. It is argued that pronouns encode procedural information which guides the hearer to the intended subject referent. Furthermore, the analysis of the discourse contexts in which these subjects may be optionally omitted sheds light not only on the nature of the pronouns themselves, but on the nature of the utterance interpretation process generally, and has important implications for the study of style.

Keywords

Relevance theory; procedural meaning; subjectless sentences; reference; pronouns

1. Introduction

English is generally considered to be a non-null subject language. While subject pronouns standardly remain non-overt in some languages (including Spanish, Italian and Japanese), they must be overtly realized in others (including English, Danish and French) (Chomsky, 1981; Jaeggli and Safir, 1989). Thus, whilst (1) is perfectly grammatical in Spanish, the corresponding subjectless sentence in English, (2), is generally considered to be ungrammatical as the pronominal subject must usually be articulated, as in (3).

(1) baila bien.

dances well.

"He dances well"

(2) *dances well.

(3) He dances well.

However, in certain registers of English, speakers systematically produce utterances with missing or null subjects. This is perhaps most widespread in diaries and journals, where examples such as (4) are commonly attested.

(4) Got up late this morning.

Subjectless sentences are also found in other non-null subject languages. Haegeman (1990b; 1997) and Haegeman and Ihsane (2001) discuss examples from French, and Haegeman (1990b) provides examples from Dutch, German and Danish.

Given the significance for syntactic theory of null subject sentences in a non-null subject language, it is perhaps not surprising that most existing analyses have been heavily syntax oriented (Haegeman, 1990a, 1990b, 1997, 2000; Rizzi, 1994; Bromberg and Wexler, 1995; Horsey, 1998; Haegeman & Ihsane, 1999; 2001; Haegeman and Gueron, 1999). However, all of the existing syntactic treatments are united by the acknowledgement that the interpretation and acceptability of null subject utterances varies considerably from situation to situation. Most syntactic theorists appeal more or less explicitly to pragmatic factors to explain this variation. This paper aims to take up where these syntactic analyses have left off, and provide a pragmatic analysis of null subject utterances in English.

In section 2, I introduce the data, and briefly show how existing work, while acknowledging the need for a pragmatic analysis, has largely focused on syntactic aspects of the phenomenon. In section 3, I introduce the framework in which my analysis will be based, relevance theory (Sperber and Wilson, 1986/95), and discuss how it applies to reference assignment generally and to overt pronominals in particular, introducing the notion of procedural meaning. I also briefly consider existing cognitive pragmatic approaches to the data, and suggest that while insightful, they cannot fully explain the English data. In section 4, I consider how a procedural analysis of overt pronominals sheds light on the pragmatics of null pronominals, and I identify three broad categories of diary-style null subjects, each motivated by the speaker's aim of making her utterance optimally relevant. Finally, in section 5, I relate these data to literary and stylistic effects more generally.

2. The diary-style null subject in English

The term diary-drop has often been applied to the phenomenon of null subjects in written English, and many standard examples are taken from personal diaries and journals. In a survey of diary texts, Haegeman & Ihsane (1999) found that the rate of subject omission in declarative sentences varied between 2 and 92.11% in the diary extracts that they examined. However, non-overt pronominals in subject position can also be found in a wide range of other discourse contexts. We commonly find examples in emails, text messages, telegrams, postcards, note-taking and message boards and various other written formats1. The diaries themselves can be fictional or non-fictional, and examples can be found as far back as the diary of Samuel Pepys, as well as in contemporary diary-style fiction such as *Bridget Jones' Diary* (Fielding, 1996, 2004). Typical examples are given in (5) and (6):

(5) Walked to Westminster hall. (Pepys, 1985:610)

(6) Went to the chemist to discreetly buy pregnancy test. (Fielding, 1996:117)

Written sources where space or time is restricted provide a further range of examples, including postcards, as in (7), telegrams, as in (8), packaging and labels, as in (9), as well as newspaper headlines, as in (10). See Dor (2003) and Ifantidou (2009) for alternative relevance-based approaches to newspaper headlines.

(7) Visited the castle yesterday. Wish you were here.

(8) A: Please attend first night my new play. Will hold two tickets for you. Bring friend if you have one.

B: Impossible attend first night. Will attend second night if you have one.[2]

(9) Contains nuts.

(10) Falluja insurgents say not holding Hassan.

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[1] Many of the examples discussed in this paper come from written sources. However, I will refer throughout to "utterances" and to the "hearer" and "speaker". Unless specified, I do not mean to imply any interesting distinction between written and spoken uses of language.

[2] Attributed to George Bernard Shaw and Winston Churchill respectively.

The recent increase in digital and computer mediated written communication brings with it examples of diary-style nulls in emails, online message forums and text messages, as illustrated in (11)-(15):

(11) Still have horrible cold. (personal email)

(12) Probably wants you to reply to his message. (personal email)

(13) Was delivered promptly. (internet auction site message board)

(14) Will act on stage in 1st play. (posting on Twitter)

(15) Must have missed one another. (personal SMS/text message)

Whilst null subjects are most commonly understood as first person singular, they are not restricted to this interpretation. Examples (12) and (15) illustrate null subjects in the third person singular and first person plural, respectively, and Haegeman and Ihsane (2001:132) give (16) as an example of a second person null subject from a diary.

(16) Trouble is, Rebecca’s stings are aimed so subtly at one’s Achilles’ heels, like Gulf War missiles going “Fzzz Whoossssh” through Baghdad hotel corridors, that never see them coming. (Fielding, 1996:146)

As well as these referential examples, we find non-referential, expletive pronouns left non-overt, as in (17)-(19):

(17) Must be an accident up ahead. (Schmerling, 1972:582)

(18) Isn't much we can do about it. (Thrasher, 1977:44)

(19) Seems weird to have been so close during the year...(Fielding, 1996:296)

Rizzi (1994), Haegeman (1997), and Haegeman and Gueron (1999) assume that null subjects are restricted to root clauses, and their syntactic analyses are based on this assumption. However, Haegeman and Ihsane (1999, 2001) discuss data which cast doubt on the validity of this assumption. Certain recent diary-style texts contain null subjects in embedded positions, as illustrated in (20)-(22):

(20) But even that is inadvisable since am fat. (Fielding, 1996:17)

(21) Deceiving her impossible as would be unsuccessful in long run. (Ginsburg, 1995:49-50)

(22) Wonder if should quickly ring Mark Darcy to tell him where am going? (Fielding 2004:13)

While some texts contain only root null subjects, all those that include embedded null subjects also display root nulls. Setting aside theoretical considerations, it feels intuitively as if they are part of the same phenomenon and the analysis given in this paper covers both sets of data. In texts and registers which feature the diary-style null subjects, it is notable that omission of the overt pronominal is always optional. There appear to be no cases where it would be ungrammatical to use an overt form, and the overt and non-overt subjects alternate, apparently freely. Thus, an utterance such as (23) can be followed by (24) without either being judged ungrammatical in the diary-style register.

(23) Seems rude not to reply. (Fielding 1996:44)

(24) I'll just send him a tiny friendly message. (Fielding 1996:44)

However, despite their grammaticality and apparent synonymy, there are subtle stylistic differences between these two utterances, which an adequate pragmatic analysis should help to explain.

Haegeman (1990a) presents clear evidence which suggests that the null subjects in diary-style texts are syntactically and semantically active non-overt NPs. They can carry theta roles, and they enter into syntactic relations in much the same way as overt NPs, but have no realization at the level of phonological form.

The texts and registers in which we find null subjects commonly also display other omissions. The example from a telegram in (8) contains instances of unarticulated determiners, prepositions and even the infinitival 'to', and we see similar patterns in the diary texts. Determiners, both definite, as in (25) and (26), and indefinite, as in (27), are frequently left non-overt in such texts, and in (27) we also have an instance of a non-overt possessive pronoun.

(25) That would indeed be sick in manner of Oedipus. (Fielding, 2004:5)

(26) Dialling tone seems normal. (Fielding, 2004:45)

(27) Also managed to conceal coat by rolling it into ball to create pleasing sense of having been in for hours. (Fielding, 2004:8)

Auxiliary verbs and the copula also frequently remain non-overt straight after a null subject, as in (28) and (29).

(28) Maybe could read in car when at traffic lights. (Fielding, 2004:13)

(29) If not working might mean everything is fine. (Fielding, 2004:45)

Furthermore, while it is most frequently subject arguments which remain unarticulated, there are examples of null objects in many of the diary-style texts.

(30) Eventually locate under clothes from wardrobe. (Fielding, 1996:93)

(31) Search for hairbrush. Locate in handbag. (Fielding, 1996:92)[3]

(32) I have xmas cards in the office. If you wish to send one to a supplier please come to the office and collect. (personal communication)

[3] Examples (30) and (31) are taken from Haegeman & Ihsane (1999)

Ideally, a comprehensive analysis of the diary-style register should be able to shed light on these associated characteristics as well as the much-discussed null subjects, and the presence of these other omissions could be problematic for a purely syntactic approach.

My main aim in this paper, however, is to address an issue which could shed light on the general characteristic of the diary-style texts and which is acknowledged by all existing syntactic accounts, and which may, in fact, be the one thing they all agree on. I focus on the need for certain contextual and pragmatic conditions to be met if a null-subject utterance is to be both interpretable and appropriate. This is a theme that runs through all the existing attempts to analyze the diary drop data, and it is the starting point for my pragmatic analysis of the diary-style null subject.

In early work on the subject, Haegeman (1990a) expresses the view that "the accessibility of the referent is not a matter of syntax properly speaking but a matter of pragmatics" (1990a:167). Neeleman and Szendrői acknowledge that "a full theory of *pro* drop requires an additional pragmatic component that governs the use of null pronouns in languages whose grammar allows them," (2007:673); and according to Tomioka, "the descriptive content of the null NP is pragmatically retrieved" (2003:329).

I will therefore assume that the null subject is a fully specified, syntactically active pronominal which is optionally deleted under certain conditions. I will argue that since these conditions involve both pragmatic considerations and processing constraints, they are best investigated using a cognitively oriented pragmatic framework such as relevance theory. I give a brief outline of this framework in the next section.

3. Null subjects and Relevance

3.1 Relevance, Referring Expressions and Procedural Meaning

Relevance theory (Sperber & Wilson, 1986/95; Blakemore, 1992; Carston, 2002; Wilson and Sperber, 2004, 2012) takes a cognitive approach to utterance interpretation. Utterances, as acts of ostensive communication fall under the communicative principle of relevance, given in (33):

(33) Communicative principle of relevance: Every act of ostensive communication communicates a presumption of its own optimal relevance (Sperber & Wilson, 1986/95: 260).

According to Wilson and Sperber (2012:6) relevance is 'a property of inputs to cognitive processes' and 'an input is relevant when it connects with available contextual assumptions to yield positive cognitive effects'. All, else being equal, the greater the positive cognitive effects that an input achieves, the more relevant that input is in that context. However, deriving cognitive effects requires mental effort, and the amount of processing effort that it takes to derive the effects affects the overall relevance of the input. All else being equal, the less effort required to derive a given set of cognitive effects, the greater the relevance of the input. Thus, relevance is a function of cognitive effects and processing effort.

However, the addressee is not entitled to expect an utterance or other ostensive stimulus addressed to him is necessarily maximally relevant. That is, they cannot expect the input to achieve maximum positive cognitive effects for minimum processing effort. Rather the hearer is entitled to presume that any utterance addressed to him will be optimally relevant, and to interpret it accordingly. Optimal relevance (1986/95:270) is defined as follows:

(34) Presumption of optimal relevance (revised)

a. The ostensive stimulus is relevant enough for it to be worth the addressee's effort to process it.

b. The ostensive stimulus is the most relevant one compatible with the communicator's abilities and preferences.

This presumption motivates a comprehension procedure, (35), which, according to Sperber and Wilson (2002), is automatically used in interpreting an utterance:

(35) The Relevance Theoretic Comprehension Procedure:

a. Follow a path of least effort in deriving cognitive effects: test interpretive hypotheses (reference assignments, disambiguations, implicatures etc.) in order of accessibility.

b. Stop when your expectations of relevance are satisfied.

It follows that a hearer following this procedure should accept as intended the first accessible interpretation that makes the utterance relevant in the expected way. This observation will prove crucial for my analysis of both overt and non-overt subject pronouns.[4]

The resolution of referring expressions, including pronouns, is a standard pragmatic process that forms part of the hearer's task when interpreting an utterance. When faced with a referring expression, a hearer will follow the comprehension procedure and test possible interpretations in order of accessibility. For example, to interpret the utterance in (36), the hearer must assign reference to the definite description "the cat".

(36) The cat is called Tipsy

He will test an interpretation in which "the cat" is taken to refer to the most salient entity in the discourse context that fits with its descriptive content; in this case this will be the most salient cat. If this interpretation is relevant in the expected way, the hearer will take it to be the intended interpretation.

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[4] See also Blakemore (1992; 2002); Carston (2002); Wilson & Sperber (2002); Sperber & Wilson (2008); Wharton (2009) for fuller discussion of the relevance-theoretic approach to utterance interpretation.

However, it is not always the case that the intended referent is the most salient object in the discourse context, or even the most salient example of a particular type of object in that context. For example, imagine that (36) is uttered in a discourse context in which there are two cats. The descriptive content in the definite description tells the hearer to restrict the set of potential referents to just cats. However, both cats in the discourse context fall within this set, so unless the intended referent is more salient than the other in some way, the utterance may prove infelicitous, or the hearer may resolve reference on the non-intended cat. To avoid this, a speaker can adapt the form and content of the referring expression in such a way that the intended referent is left as the most salient candidate that is compatible with the information encoded by the referring expression. The speaker may do this by using the content of the referring expression to narrow down the set of potential referents to a point where the intended referent is the most accessible one (by ruling out more salient competing candidate references)[5]. One way in which she may do this is to add further descriptive content to the definite description, as in (37):

(37) The black cat is called Tipsy.

In this way the speaker rules out all and any cats that are not black, leaving the intended cat as the most accessible and the first to be tested (Reboul, 1998; Scott, 2011).

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[5] In discussing reference in a cognitive framework such as relevance theory, it is important to distinguish between the actual objects which are the intended referents of the referring expressions, and the mental representations of those objects which will be more or less accessible to speaker and hearer on a given occasion. “Accessibility” in relevance theory is a term that applies to mental representations rather than to actual objects, and I will try to talk systematically of representations as more or less “accessible” and of objects as being more or less “salient” in a given environment.

In the case of (37), the speaker has added extra conceptual information to her referring expression. Most regular content words (e.g. "black", "cat") encode concepts that figure in conceptual representations. However, this conceptually encoded meaning is only one of two types of encoded meaning identified by relevance theory. Alongside conceptual meaning, there are expressions which, it has been argued, are better analyzed in procedural terms. These procedural items may also play a role in reference resolution.

Procedural meaning was first identified by Blakemore (1987) as meaning that contributes to the computational aspect of utterance interpretation (Blakemore, 1987, 2002, 2007; Wilson and Sperber, 1993). She argued that a range of non-truth-conditional discourse connectives (e.g. *but, so, also*) are best seen as encoding, not information which contributes directly to conceptual representations, but information about the type of inferential computations the hearer is expected to go through in constructing an overall interpretation (Blakemore 1987).

Initially, these procedures were linked to the types of cognitive effects that the utterance might produce, and so, for example, according to Blakemore (2002:95) '*but* is analyzed as encoding the information that the hearer is intended to follow an inferential route which ends in the elimination of a contextual assumption'. For example, consider the utterance in (38):

(38) It's raining but I'm going for a walk.

The assertion that it is raining might make manifest a range of assumptions about the sort of behavior that is expected in rainy weather. The use of *but* indicates that what follows will contradict and eliminate one of these assumptions. It thus guides the hearer down a particular inferential route, saving the hearer effort, and thus increasing relevance.

In Blakemore's original cases, the procedural meaning does not contribute to the truth-conditional content of the utterance, but rather guides inferential processes that contribute to the implicitly communicated meaning. However, it has been argued (Carston, 2002) that inferential processes (reference assignment, disambiguation, enrichment) may also contribute to the derivation of what is explicitly communicated by an utterance. If this is the case, then we might expect to find procedural meaning associated with these inferential processes as well. Indeed, pronouns, it has been suggested (Wilson and Sperber, 1993; Hedley, 2005, 2007; Scott, 2010), are best analyzed in just this way, as encoding procedural information which contributes to the proposition expressed by an utterance. Consider a simple sentence, such as (39):

(39) He likes chocolate

The utterance in (39) will be true in just those cases where the person referred to by the pronoun *he* likes chocolate. Therefore, in order to evaluate the truth of this utterance we need to know who *he* refers to. It is not the pronoun itself that appears in the proposition expressed by the utterance, but the referent of the pronoun. As Hedley (2005:44) puts it, "their [pronouns'] meaning is computational, not representational". He goes on to suggest that the procedure encoded by the pronoun *he* is something like, "find an individual concept with the feature 'male'" (2005:9)[6]. Thus the procedural meaning encoded by a pronoun may contribute to relevance by narrowing the inferential search space, guiding the hearer to the intended referent, and reducing hearer effort and the chances of misunderstanding.

Thus, we find that both procedural meaning and conceptual meaning may play a role in the reference resolution process. With both types of meaning at her disposal, and assuming that a hearer will follow the relevance theoretic comprehension procedure when interpreting an utterance, the speaker should attempt to formulate her referring expression so that the first interpretation to be tested which satisfies the hearer's expectations of relevance is the intended interpretation[7].

3.2 Existing relevance-based accounts

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[6] Further discussion along similar lines can be found in Hussein (2008), Kaplan (1989), Powell (2010), Scott (2010), Wilson and Sperber (1993) and Zaki (2009).

[7] See Scott (2011) for further discussion of this approach to referring expressions.

Existing pragmatic analyses of referring expressions include work by Prince (1981), Ariel (1990, 2001) Wilson (1992), Gundel, Hedberg, and Zacharski (1993), Reboul (1998), Gundel (2010) and Scott (2011). Both Ariel (1990) and Gundel (2003) offer pragmatically-orientated approaches which are claimed to be compatible with the principles of relevance theory. Furthermore, the idea that referring expressions generally and pronouns in particular may encode procedural meaning is not new. According to Accessibility theory (Ariel, 1988, 1990; 2001;) and the Givenness hierarchy (Gundel et al, 1993; Gundel and Mulkern, 1998; Gundel, 2010), each referring expression type conventionally (i.e. linguistically) encodes information about the accessibility or cognitive status of the intended referent. This information guides the hearer in finding the intended referent from amongst the potential referents in the discourse context. As such, both accounts are broadly procedural in nature.

Both accounts also have something to say about the distribution of and motivation for null pronouns. According to Accessibility theory (Ariel, 1990) both pronouns and gaps are markers of high accessibility. Noting that zeros may occur when the intended referent (often the speaker or addressee) is particularly salient, Ariel concludes that zeros 'mark extremely high Accessibility' (1990:130), and that this high level of Accessibility may be a result of either syntactic or discourse factors.

Although this approach enables Ariel to incorporate English null subjects into her more general theory account of referring expressions, it does little to explain why these null subjects should occur in the first place. In her analysis of a literary text in Hebrew, Ariel finds that third person pronouns and zero subjects 'occur in perfectly complementary distributions' (1990:121). More generally, she states that '[g]iven that zero subjects occur rather often in Hebrew, such zeros seem to be in contrastive distribution with both full and cliticized pronouns' (1990:115-116). However, this is not the case in English. In diary-style examples such as (40), overt pronouns can be substituted for zero subjects in all cases without affecting the meaning or acceptability of the utterance, as in (41):

(40) Probably wants you to reply to his message (personal email message).

(41) He probably wants you to reply to his message.

This distributional fact has implications for the treatment of null subjects in English. When the variants occur in contrastive distribution, as in Hebrew, it is reasonable to appeal to a distinguishing factor such as the notion of encoded Accessibility to explain the distribution. However, the English null subject data pattern differently. Whilst Ariel's claim that the variations in Hebrew speakers' choice of referring expressions 'are not random' carries over to the English data, her further claim that the variations can be 'motivated by Accessibility theory quite straightforwardly' (1990:116) is perhaps not so easily maintained.

Ariel also discusses what she calls 'special uses' of referring expressions and her observations may shed some light on the English null subject phenomenon. Her suggestion is that the higher the Accessibility marker used, the more the speaker indicates that she empathizes with the intended referent. This aspect of Ariel's analysis is compatible with the fact that, in English, overt forms can always substitute for the nulls without affecting overall acceptability. It could be argued, in Ariel's terms, that by using an extremely high Accessibility marker where a high Accessibility marker would have sufficed, the speaker is encouraging the hearer to derive extra contextual implications. While I will move away from the idea that referring expressions encode levels of Accessibility, this acknowledgement that choice of referring expression might affect what is implicitly communicated by an utterance is crucial if we are to understand the (optional) alternations between overt and null referring expressions in the diary-style texts in English.

The other major pragmatically-oriented approach to referring expressions, based on the Givenness hierarchy, also offers to shed some light on null forms in English. Gundel et al (1993) examine the distribution of referring forms in five languages (Chinese, English, Japanese, Russian and Spanish), and conclude that 'the six statuses on the Givenness Hierarchy are adequate for describing appropriate use' in those languages (1993:284).

Although the status hierarchy itself is intended to be adequate cross-linguistically, the correlation between referring forms and cognitive statuses is seen as varying between languages. Notably, English is the only language in the survey which does not utilize zero subjects as standard. For each of the other languages, the zero form is seen as requiring that the referent be ‘in focus’. How, then, might a Givenness hierarchy analysis of referring expressions deal with the diary-style zero subjects in English and other non-null subject languages?

It seems that there are two possibilities. First, we might treat the zero subjects as signaling some sort of ‘super-in-focus’ status to the hearer. This would enable the speaker to distinguish between several competing ‘in focus’ potential referents in cases where one is more salient than the others, and so could therefore be classed as ‘super-in-focus’. Alternatively, it could be that when zeros alternate with overt pronouns, the contrast has nothing to do with the cognitive status of the referent, and instead serves some other purpose in the discourse.

Both options are problematic for a Givenness-based account of referring expressions. According to the first possibility, zero subjects in English would be analyzed as representing some higher cognitive status not otherwise allowed for in the original scale. This raises important questions about the universality of the approach. It would mean that the six statuses identified by Gundel et al (1993) are not, after all, cross-linguistically adequate. If we take the step of adding this language specific extra distinction, might there then be room for further distinctions, and if so, at what point does the hierarchy cease to involve language specific manifestations of universal principles, and instead just become language specific? Furthermore, if we introduce the idea of a ‘super-in-focus’ cognitive status, we might then ask why this does not seem to be needed (or even possible) in languages such as Japanese and Russian, where zeros already signal ‘in focus’? Finally, a ‘super-in-focus’ status could only be justified in English if it is needed to allow the speaker to distinguish between competing ‘in focus’ candidate referents. However, in many null subject utterances, there is only one ‘in focus’ potential referent in the discourse context. This is particularly evident in examples taken from diaries, such as (5) and (6), where the only 'in focus' entity is the author of the diary. It is unclear how the use of a zero subject could aid reference resolution in these cases.

These examples bring us to a second possibility: that the alternation between overt and zero forms relates to something other than the cognitive status of the intended referent. The status 'in focus' in English would then be seen as correlating with both zero and overt pronouns, and the speaker's choice of one over the other would be driven by some other factor, and would serve some other purpose in the discourse. This is exactly the position that my account will take, and although it is not incompatible with the Givenness hierarchy per se, an approach along these lines would bring into question the motivation for the hierarchy in the first place.

While both Accessibility theory and the work of Gundel et al offer valuable perspectives on the role of null subjects in English diary-style texts, the more general claim that their scalar, hierarchical approaches are compatible with principles of relevance, and the relevance theoretic comprehension procedure more generally is problematic. Both Accessibility theory and the Givenness hierarchy characterize referring expressions as encoders of semantic information relating to the status of the intended referent in the hearer's cognitive environment. According to Ariel, referring expressions are 'guidelines for retrievals' (Ariel 1988:68), and for Gundel et al they 'conventionally signal different cognitive statuses' (1993:274). In both cases, it is therefore possible for the speaker's choice of referring expression to direct the hearer to an entity with low accessibility or low cognitive status in preference to otherwise equally compatible higher ones. Ariel clearly states that 'since speakers may wish to refer not to the most salient potential referent, they should overtly instruct the addressee to search for a less salient antecedent' (1994:20).

However, if we take the relevance theoretic comprehension procedure seriously, then these approaches appear unnecessary and perhaps even problematic. The 'most accessible' interpretation of an utterance is, by definition, simply the first that the hearer comes across on the path of least effort. If this interpretation satisfies the hearer's expectations of relevance, then according to the relevance-theoretic comprehension procedure, he is entitled to stop, and accept it as the intended interpretation. The idea that the hearer may ignore or jump over highly accessible potential referents to reach less accessible ones seems to be directly at odds with the comprehension procedure. A hearer following this procedure will always test potential referents and contextual assumptions in order of accessibility, and signaling to the hearer that he should ignore a highly accessible referent in favor of a less accessible one is therefore in direct conflict with a basic principle of relevance theory. If a hearer really were following the relevance theoretic comprehension procedure, then the main effect of such a signal would probably be to cause confusion.

A crucial difference between these existing accounts and the approach I argue for here is that I will assume that hearers following the relevance theoretic comprehension procedure always test the most accessible potential referent in the discourse context first. By potential referent, I mean a referent that is compatible with any conceptual or procedural constraints encoded by the referring expression. Speakers choose referring expressions with this in mind. The conceptual and/or procedural information encoded by referring expressions therefore restricts the set of potential referents in the discourse context to a point where the most accessible interpretation is the intended one. The contribution of a referring expression is not determined by the type of expression used (definite description, pronoun, distal complex demonstrative etc.) and its place on a scale or hierarchy, but by the concepts and procedures that it encodes. In each case the encoded content interacts with the specific discourse context to contribute to the overall interpretation of the utterance[8].

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[8] Ariel appears to be moving in a similar direction when, in an overview of her work on referring, she explicitly describes Accessibility theory as a ‘procedural analysis’ (2001:29). However, I do not take her use of the term ‘procedural’ as signalling any development in her overall approach. She outlines the role of the procedure as being to ‘instruct the addressee to retrieve a certain piece of Given information from his memory by indicating to him how accessible this piece of information is to him at the current stage of the discourse’ (2001:29).

3.3 A move to towards a relevance only account

If, as Wilson and Sperber (1993) suggest pronouns encode procedural constraints on explicatures, then it could be tempting to claim that in contexts such as diaries and email messages, the (usually first person) referent is already so accessible to the hearer that the procedural information encoded by the pronoun is no longer needed. Diaries, by definition, are about the activities, emotions and experiences of the speaker, and email and text messages tend to have a “from” field which explicitly states who the speaker is. In both cases, therefore, a representation of the speaker will be highly activated, and as the most accessible potential referent, will be the first to be tested. In these cases, no extra information, procedural or conceptual, appears to be necessary, and if the information encoded by a pronoun is unnecessary, we might fully expect that pronoun to be non-overt. However, the high accessibility of the intended referent in these discourse contexts does not on its own fully explain the distribution of null subjects across general language use in English. If the accessibility of the intended referent were the only significant factor, then we might expect to see null subjects in many more discourse contexts than we in fact do. We might predict that first person null subjects would occur spontaneously whenever the speaker is the most accessible potential referent, but this is not the case. In general, the grammar of English requires arguments to be phonologically realized. Therefore, even when the intended referent is already the most accessible one in the discourse context, an appropriate overt pronoun must usually be used. It is only under certain contextual and processing conditions that this strict requirement may be relaxed, and its use is marked.

Thus, reference still depends on encoded information about the accessibility of the intended referent.

The next section explores the conditions under which we find the diary-style nulls, and argues that they are ultimately driven by the interaction of effects and effort, and therefore by the speaker's aim of achieving optimal relevance. I identify three broad categories of null subject use in English. All three categories are united by underlying considerations of relevance, but we find different elements in the overall equation of optimal relevance driving the omission in each category. Recall that relevance is a function of hearer effort and cognitive effects, but that the hearer is only entitled to assume that the utterance will be optimally, not maximally, relevant. The hearer must allow that the speaker may produce a less than maximally relevant utterance, if to do so would be beyond her abilities, or against her preferences. I identify an informal null subject where the omission leads to extra cognitive effects, a pressurized null subject where the speaker's abilities are the crucial factor, and finally, an ostensively vague null subject, which is driven by the speaker's preferences.

4. Three pragmatically motivated null subjects

4.1 The informal null

The informal (usually written) registers in which many instances of English null subjects occur tend to have the speaker's presence explicitly acknowledged elsewhere in the text. Diaries are essentially first person narratives in which the author and her activities are, by definition, the subject matter, and emails and SMS texts are direct messages from one individual to another (or others), and include from and to fields explicitly stating who the speaker and addressee are. While in these discourse contexts, the intended referent of the null subject is usually the speaker, and the identity of that speaker is highly salient, not all diaries, emails or text messages utilize null subjects. There seems to be something triggering the use of null subjects above and beyond the high accessibility of the intended referent. In many cases, this trigger appears to be related to the casual, informal nature of the text and the discourse context, and the choice to leave subject pronouns unarticulated contributes to the tone of the discourse. There may be many such instances in which the procedural information encoded by personal pronouns is superfluous for the purposes of reference resolution. However, by dropping this normally required information in specific discourse contexts, the speaker overtly indicates to the hearer that she feels this to be the case. As a result, she communicates that the mutual cognitive environment[9] she shares with the hearer is such that she can safely relax the normal requirements on formal language use, and still be confident that her message will be understood as she intends.

Sperber and Wilson (1986/95) argue that the style adopted by the speaker may communicate how she regards the relationship between herself and her hearer or hearers:

> A speaker aiming at optimal relevance will leave implicit everything her hearer can be trusted to supply with less effort than would be needed to process an explicit prompt. The more information she leaves implicit, the greater the degree of mutual understanding she makes it manifest that she takes to exist between her and her hearer (Sperber and Wilson, 1986/95:218).

The use of null subjects (and other omissions and abbreviations) in these informal registers communicates that the speaker not only regards the intended referent as the most accessible one for the hearer, but is also quite confident in this respect. As Sperber and Wilson note, there is "no entirely neutral style" (1986/95:218). The speaker in the diary null contexts reveals that she assumes a "certain degree of mutuality" (1986/95:218) between herself and the hearer, which makes it possible to trust the hearer to infer much of what she wishes to communicate without any overt linguistic prompt. As a result, the use of null subjects contributes to the overall tone of the discourse as relaxed, casual and intimate.

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[9] According to Sperber and Wilson (1986/95:39) an individual's cognitive environment is 'the set of all the facts that he can perceive or infer: all the facts that are manifest to him. See Sperber and Wilson 1986/96:38-46 for further discussion.

Although the addressee of a null subject utterance has less linguistic material to process, this option remains marked since null subjects are ungrammatical in most varieties of English. Marked options, by their very nature will be less frequently encountered and so will cost the hearer more effort to process (Sperber & Wilson, 1986/95:123-132). It therefore seems reasonable to assume that subjectless utterances in English - at least when first encountered in a text - require more processing effort than their overt subject counterparts. However, this marked use and the implications that arise from it lead to extra effects in terms of the tone and style of the discourse, and therefore justify the effort involved. If null subjects were unmarked in English, as in standard null subject languages, then we would be unable to explain why the null subject examples correlate with the informal discourse contexts.[10] It is the very fact that null subject sentences are marked in English that prompts the hearer to derive the extra effects relating to the tone and style of the discourse. Formal emails, diaries and text messages without null subjects exist alongside the casual examples in which we find use of null subjects. This is to be expected if we accept that there will be cases where, even though the identity of the referent might still be highly accessible, the speaker does not wish to create the same degree of intimacy. Compare (42) and (43).

(42) I am pleased to confirm that the Grant of Probate has now been issued.

(43) Forgot to mention, saw my ex-boyfriend Mike at the weekend.

Both are from personal emails, and in both cases the intended referent of the subject referring expression is the most highly accessible given the discourse context. Furthermore, the form of

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[10] This, in turn, predicts that overt subject use in null subject languages should create an extra effect of some sort. This seems to be the case. McCloskey & Hale (1983:491) observe that in such languages, “use of a pronoun subject is associated with emphatic or contrastive focus on the subject”.

the copula in (42) would make it clear that the intended subject is the first person singular. However, the discourse context and the nature of the relationship between speaker and hearer (solicitor and client in (42) as opposed to friends in (43)) means that it is appropriate to imply intimacy in (43), but not (42). The overtness of the pronoun does not change what is explicitly communicated in either case, but rather contributes to the style and tone of the discourse. Thus, it is not that informal registers license the use of null subjects, but rather that the use of null subjects is one way in which the speaker can set an informal tone for the discourse.

Bridget Jones' Diary (Fielding, 1996) features two distinct writing styles. The "diary style'" sections, which feature extensive use of dropped subjects and other missing elements, are found alongside much more traditional narrative episodes. Whilst both are purportedly extracts from a diary, sections featuring diary-style omissions focus strongly on the narrator's private thoughts, feelings and emotions. A typical example of a diary entry written in this style (Fielding, 1996:82-85) contained 23 non-overt subject pronouns, and 12 overt subject pronouns. The remaining sections describe events and incidents in a more detached and traditional first-person narrative style. A typical example of this style (Fielding, 1996:65-68) contained 1 non-overt subject pronoun, and 29 overt subject pronouns.[11] Thus, the tone of the writing reflects the subject matter, and directly mirrors the level of intimacy with, and empathy for, the narrator, that the reader is expected to feel.

In this section, I have argued that some instances of diary style null subjects are driven by the informality of the registers in which they occur. According to clause (b) of the definition of optimal relevance, the hearer is entitled to assume that the utterance the speaker has produced is the most relevant one compatible with her abilities and preferences. In these cases, the speaker had the ability to produce overt subjects, so the hearer must conclude that she chose not to. This in turn can be interpreted in two ways. The speaker should not be putting the

[11] For the purposes of this count I disregarded subject pronouns that occurred in reported speech.

hearer to any gratuitous effort, and so her decision to omit certain elements might imply that she did not judge the information encoded by those elements to be necessary given the mutual understanding between the interlocutors. Alternatively, the choice may be driven not by the speaker's abilities but by her preferences. It could be that the speaker preferred to save her own effort rather than go to the trouble of explicitly articulating or writing the omitted elements. This decision to favor her own interests over the hearer's might play a significant role in diaries and note-taking, where the writer is also the intended audience. If read by someone other than the writer, omissions of this type must be in some sense condoned as less than stylistically optimal from the audience's perspective.

These various possibilities do not, however, explain all occurrences of null subjects in non-null subject languages. To account for the remaining nulls, I again turn my attention to the second clause in the definition of optimal relevance.

4.2. The pressurized null

Many of the null subject utterances in non-null subject languages occur in discourse contexts where there is a restriction on time or space. These include newspaper headlines such as (10), certain internet message boards or forums such as (13), postcards such as (7), text messages such as (15), telegrams such as (8), and note-taking, such as (44).

(44) Can be integrated. Needs investigation. (notes for minutes of a meeting to discuss updating a database system)

In such cases, either the length of the utterance is restricted in some way (even to the point where only a limited number of characters is allowed, as in some electronic formats), or the utterance is produced under pressure or time constraints. The speaker's ability to produce a fuller version is in some way compromised. Recall that the speaker's overall aim is to produce an utterance which yields enough cognitive effects to justify the effort required of the hearer, and which will be the most relevant utterance compatible with the speaker's abilities and preferences (including any constraints on her production abilities). Procedural meaning contributes to the relevance of an utterance by guiding the hearer towards the intended effects, and thus reducing the effort required of him.

In these pressurized cases, the speaker only has a certain amount of space or time, or a certain number of characters at her disposal, and as a consequence the speaker must in some way curtail her utterance. Why, though, are subjects so often the things that are most vulnerable to omission? I have argued above that pronouns encode procedural meaning which contributes to the explicit content of an utterance. It is not, of course, the pronoun itself which enters into the explicit content, but (a representation of) the referent of the pronoun. Thus, it is not the presence or absence of the pronoun itself which is significant in the null subject examples, but rather the presence or absence of the procedural meaning, and the role this meaning plays in guiding the hearer to the intended referent in a particular discourse context. In the case of pronouns, this procedural meaning guides the reference resolution process, reducing the inferential search space, and thus reducing the hearer's effort. In the pressurized cases, the speaker's abilities are limited by time or space restrictions, and as a consequence some linguistic material must be omitted. The speaker must therefore prioritize material which encodes content that the hearer would not otherwise (or easily) be able to infer. In these cases, simply saving the hearer inferential effort takes low priority.

As discussed above, there are cases where it is very likely that the intended referent is already the most accessible candidate for the hearer in the discourse context. In such cases, the speaker is risking very little in terms of communicating the intended explicit content by omitting the pronoun. My approach predicts that first person pronouns will be omitted more frequently than others, since the speaker will very often be the most accessible potential referent in the discourse context. However, it does not rule out the possibility that other pronouns, or even other parts of the sentence, will be vulnerable, given a discourse context where the content they guide the hearer towards is already highly accessible.

Given my treatment of pressurized null subjects within the overall account of referring expressions, it may be tempting to ask why omission of highly accessible subjects is not more widespread. Communication takes place at a risk, and sending a hearer down the wrong inferential path (e.g. towards the wrong referent) is likely to be very costly in terms of effort. Processing a pronoun, on the other hand, is likely to be quite cheap in terms of hearer effort, both because they are high-frequency items and because of their limited semantic content. So, all else being equal, it does not make sense to risk misunderstanding for very little gain in terms of effort saved. In the pressurized discourse contexts, on the other hand, omission of the subjects frees up space, characters and/or time which the speaker can devote to encoding information which leads to cognitive effects, thereby making the utterance more relevant.

4.3 The ostensively vague null

There are some instances of diary-style null subjects which appear to be neither driven by informality nor produced under pressurized circumstances. In these cases, the speaker may not know, or may not want to commit to, the exact identity of the referent. Such uses are discussed by Oh (2006:842-843), who notes that "zero anaphora can be deployed precisely in order to avoid the selection of a particular term and the stance that speaker would thereby be taking". Alternatively, it may be that identification of an exact referent simply does not make a difference to overall relevance. I will call such instances the ostensively vague null subjects. In these cases, the utterances are not only relevant enough to be worth the addressee's attention, but they are also the most relevant ones compatible with the communicator's abilities and preferences. To illustrate, consider the examples in (45)-(48).

(45) To be collected. Spoke to waste services. (sign on a pile of trash outside a university department)

(46) OK. Got that! (message on an ATM after the user has entered their PIN).

(47) AB trying to find replacement cost for item returned damaged. Will contact when known. (Staff note on library user record)

(48) Very excited about entering our 2nd phase of 10 year plan.

In these examples, it seems that resolving reference on a specific person or persons is not important. The exact identity of the agent of the verb does not contribute to the overall relevance of the utterance. Rather, the utterance achieves relevance by asserting that an action has taken (or will take) place. In (45), it is not necessary for the hearer to know or to be able to infer who has spoken to waste services. It is enough to know that the event has taken place. If the hearer follows the path of least effort, they will reach an interpretation which makes the utterance optimally relevant (i.e. that somebody has spoken to waste services, and hence that the pile of trash is being dealt with), and will therefore stop before they reach the point of assigning a precise reference to the null expression.[12]

In (46) and (47), the null subject is driven not by the unimportance of precise details about the identity of the referent, but by the speaker's preference for being non-committal. The ATM (or rather the human who programmed the ATM) in (46) is, we assume, aiming to give the transaction a friendly, relaxed and personal tone. However, using the first person personal pronoun in this utterance would anthropomorphize the ATM in a way that seems inappropriate when one is obviously dealing with a machine. The null subject version offers a compromise.

Utterance (47) is a case of non-committal use in a different context. Although it may seem that the staff member "AB" is the most accessible potential referent in this discourse context, (47) does not commit her to contacting the customer herself. Rather, the utterance goes no further than asserting that the user will be contacted. In this example, it is also unclear what the overt version of the utterance would be (even if we assume co-reference with AB). We do not

[12] We might achieve a similar effect by using the passive form, for example: Waste services have been informed.

know if this was written by AB referring to herself in 3rd person, or by somebody else who is familiar with the situation. In terms of what is communicated, it does not matter. The utterance achieves relevance by asserting that the user will be contacted.

In utterance (48), it is again unclear what the overt version of the subject referring expression would have been. Assuming that a first person reading is highly accessible, a hearer still does not know whether the speaker is asserting (49) or (50). Again, it does not seem to matter in this case.

(49) We are very excited about entering our 2nd phase of 10 year plan.

(50) I am very excited about entering our 2nd phase of 10 year plan.

These examples highlight an important feature of the processing and interpretation of null subjects. Null subjects in English behave as referring expressions in their own right. It is not necessary to go through the process of identifying the content of the pronoun that has been elided. Rather, the hearer proceeds as with other referring expressions: he follows the path of least effort, looking for an overall interpretation that will satisfy his expectations of relevance. If identification of the agent is necessary (and as we have seen, this is not always the case), then he will test potential referents in order of accessibility. He need not go through the additional step of identifying a missing pronoun, and reconstructing its encoded meaning before proceeding.

4.4 Non-subject omissions

In section 2, I noted that other omissions are found alongside the non-overt subjects in the diary-style texts, and I argued that a pragmatic account of diary-null subjects should also have something to say about these associated omissions. An example of determiner omission in a null-subject sentence is given in (51):

(51) Still have horrible cold.

Notice, first, that if the speaker wishes simply to avoid directing the hearer to a specific referent, she has the unmarked option of using the indefinite article, as in (52). However, omitting the article altogether introduces a further element of vagueness or indeterminacy at the level of explicit content. In examples such as (51), it is not clear what exactly the overt form of the utterance would be if the determiner were to be articulated. For example, a fully articulated version of (51) could take any of the following forms.

(52) I still have a horrible cold.

(53) I still have my horrible cold.

(54) I still have that horrible cold.

The choice of one or other form does not increase the overall relevance of the utterance. By omitting the determiner, the speaker need not make this choice, and the hearer need not reconstruct the fully articulated sentence in order to retrieve the intended meaning. Thus, these types of determiner omission seem to function in a similar way to the ostensively vague null subjects discussed in section 4.3.

Null determiners can occur when the associated noun is intended to be understood as definite, as in (55) or indefinite, as in (27) and I suggest that they occur for similar reasons, and function in a similar way, to the null subjects.

(55) Am delighted with dress.

In some cases, the definite/indefinite information encoded by the determiner will make a crucial difference to the overall interpretation of the utterance. For example, when translating the phrase ‘the/a seagull’, in the play of the same name, from Russian to English, the choice between determiners makes a crucial difference to what the character Nina is understood to assert when she utters (56)/(57) (Frayn, 1986, pp. xix-xx).

(56) I am a seagull.

(57) I am the seagull.

Although both utterances are metaphorical, in (56) the metaphor attributes to Nina some properties of seagulls in general, whilst in (57) it attributes to her properties of a particular seagull that has featured earlier in the plot.

Whilst there are cases where the choice of determiner has a decisive effect on interpretation, in very many cases it will already be clear from the discourse context whether the speaker is referring to a particular definite category member or not. For example, the utterances in (55) and (58) are from internet auction feedback message boards:

(58) Very happy with dealer.

It is clear from the discourse context that the speaker is giving feedback about a specific dealer and a specific dress respectively. In utterance (27) ('Also managed to conceal coat by rolling it into ball to create pleasing sense…'), on the other hand, there is no identifiable ball in the discourse context to which the speaker might be referring, and the phrase achieves relevance merely by providing information about shape. However, in unmarked registers of English it is usual to mark definiteness on the determiner, just as it is usual to choose a gendered pronoun. Thus, following the same argument I used above for the pronominal subjects, these redundant determiners will be high on the list of vulnerable items when it comes to saving time or space, or when seeking to a create an informal tone or style.

The distribution of null versus overt forms of auxiliary verbs and the copula in English seems to further support the hypothesis that speech elements will be more vulnerable to omission the smaller their contribution to overall relevance. Occurring alongside the main verb in a sentence, auxiliaries in general provide information about the tense, aspect or voice of the verb, while modal auxiliaries carry information about the status of the embedded propositions as certainly, possibly or necessarily true. My approach to diary-style omissions would predict that the smaller the contribution such elements make to the relevance of the utterance, the more likely it is that they may be omitted in these registers. This does indeed seem to be the case. For example, modal auxiliaries encoding epistemic or deontic information are not usually omitted.

(59) Get up in a minute.

(60) I must get up in a minute.

(61) I should get up in a minute.

(62) I will get up in a minute.

If a speaker were to utter (59), say, it would be very difficult for the hearer to infer which (if any) of the possibilities in (60)-(62) she was intending to communicate. Since the content of the modal makes a substantial difference to the relevance of the utterance, omission will be highly likely to lead to infelicity or misunderstanding. Moreover, omission of both the subject and the modal auxiliary yields the same form as the imperative, increasing the range of non-equivalent possible interpretations. The meaning encoded by the modal is therefore crucial to the overall relevance of the utterance, and it cannot be omitted. Utterances (63) and (64) are examples of overt modal auxiliaries from a diary-style text:

(63) But could buy book of cocktails (Fielding, 1996:79).

(64) Must stop doing the instants (Fielding, 1996:108).

For similar reasons, the auxiliary ‘to have’ is required to distinguish between the simple past tense and the perfect past tense. Its omission will change the overall interpretation of the utterance, and so it too will generally be overtly realized, as illustrated by (65):

(65) Have decided to serve the shepherds *[sic]* pie. (Fielding, 1996:82)

Likewise, the so-called ‘dummy do’ auxiliary in constructions such as (66) is not usually dropped. This form not only carries tense information, but is only used in a positive declarative utterance when the speaker wishes to add emphasis. Since null elements are unable to carry stress, it is unclear how it could be dropped without changing the overall interpretation of the utterance.

(66) I did want to go.

(67) Did want to go.

(68) ?want to go.

(69) Wanted to go.

Although (68) is not ungrammatical in the diary register, it will lead to a present tense interpretation, and the variant in (69) does not carry the same emphasis.[13]

As outlined in section 2, diary-style utterances may contain instances of omitted objects as well as subjects, albeit much less frequently. My pragmatic account suggests an explanation both for the occurrence of null objects, and for the asymmetry in distribution. As is the case with subjects, objects will be vulnerable to omission in informal and pressurized registers when they contribute little or nothing to the overall relevance of the utterance. Thus, in certain circumstances, and when the intended referent is the most accessible in the discourse context, the overt form of the object referring expression may be omitted. The asymmetry arises purely from the fact that subjects are more likely to be highly accessible than objects. According to my

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[13] Notice also that although *I will* and *I am* are generally contracted to *I'll* and *I'm* when spoken, they are vulnerable to subject-drop in diary-style written contexts (e.g. 'Will call later' 'Am feeling under the weather today'). When written, the contracted form of *I am* has one character more than the auxiliary on its own, but both forms of 'I will' are the same length. However, the contracted forms are part of the standard grammar of English and so are unmarked. My account therefore predicts that subject drop (as opposed to contraction) of these phrases will occur more often in informal style and ostensively vague cases, where they lead to extra effects, than in pressurized contexts.

analysis, an object referring expression should only be vulnerable to omission if it refers to the most accessible potential referent in the discourse context. We would therefore normally expect to find an argument pronominalized when it is overtly realized in non-diary-style utterances. It follows that to study the rate of object drop in these registers, we should compare the frequency of null objects with the frequency of overt object pronouns. I assume that any non-pronominalized object referring expression encodes some other conceptual information that contributes to the overall relevance of the utterance. In a sample of 20 pages from a diary text featuring rampant subject drop, there were 3 overt object pronouns and 9 omitted object pronouns.[14] This seems to suggest that the asymmetry is not the result of a grammatical restriction, but rather a matter of pragmatics. When an argument in object position would normally be realized as a pronoun, it will be omitted in 75% of cases in the informal and pressurized diary-style texts.[15]

In this section, I have identified three categories of null subjects, and also considered non-subject omissions that may be driven by the same contextual factors. However, it is important to note that I am not presenting these three categories as necessarily an exhaustive taxonomy of English null subjects, or as theoretically distinct. They are simply illustrations of how a

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[14] Sample taken from Fielding (1996). Instances of null/overt pronouns in reported speech were not included in the count.

[15] I would suggest that the case for asymmetry is even weaker than this data suggests. The object pronouns which were overtly realised did not necessarily refer to a uniquely identifiable potential referent. For example:

(i) If Magda's husband has nothing to be ashamed of dining with this worthless trollop in my suit, he will introduce me.

If the object pronoun *me* were not overt, it would not be clear whether the speaker meant 'introduce me' or 'introduce her'. So the pronoun is overtly realised not because it is an object, but because it contributes to the overall relevance of the utterance.

speaker can use null subjects as a form of referring expression, and thereby make her utterance optimally relevant. All three categories are united by the underlying driving force of achieving an optimal balance between the effort expended by the hearer and the cognitive effects that the hearer derives. Ultimately, on this account, the choice to replace a standard overt referring expression with a diary-style null is an option that is available to the speaker when constructing an utterance in certain circumstances. As with overt referring expressions, the nulls interact with the discourse context to yield an interpretation that makes the utterance relevant in the expected way.

5. Null subjects and literary effects

In section 4, I surveyed three broad categories of data, but my main claim is that null referring expressions are a means by which a speaker may make her utterance optimally relevant. As a result, the null elements may interact with the discourse context in other ways, and achieve other effects, and the identified cases may also overlap. For example, entries in the fictional *Bridget Jones' Diary* by Helen Fielding were originally published as a serialized newspaper column, and as such were subject to strict word limits. As a result, whilst in some cases the nulls may contribute to the overall informal tone of the writing, they may also be one means of dealing with a length-restricted format, and their contribution to relevance may draw on both of these aspects.

A speaker's decision to use a null subject in a particular discourse context may also be put to literary effect. For example, the following passage is taken from the novel "The Crow Road" by Ian Banks, and features several null subjects:

> …I had to climb over the wall…gate was locked. By the time I got there he was out of reach. I thought he was shinning up a drainpipe. Just assumed. Heard rumbles, I think, but…didn't think anything of it. No flashes, that I can remember. Kenneth was yelling and swearing and shouting imprecations; calling down all

sorts of punishments; I was trying to get him to come down; told him he'd fall; told him the police were coming; told him to think of his family. But he kept climbing.

(Banks, 1996:314-315)

Here the author uses the null subject utterances and short sentences to introduce a sense of panic and urgency into the narrative, perhaps indicating that the speaker is out of breath or under pressure. The fictional narrator is producing pressurized nulls, and so the author is able to create a feeling of tension and panic that stems not just from the words themselves, but from the manner in which they are produced. The reader is given access to the feelings and emotions of the character at the time of the events, not at the time of the description.

Similar effects are discussed by Blakemore (2008), who considers the effects produced by apposition of two or more identical or similar phrases in the representation of a character's thoughts, as in (70):

(70) In the beginning it was a tension, an element of strain that grew and crept like a thin worm through the harmony of their embrace (Hulme, 1985:6) as quoted in Blakemore (2008:37)).

According to Blakemore, in this example, the repetition of the same idea, phrased in different ways, captures a difficulty in expressing a particular concept. However, she adds that crucially "it is not Keri Hulme (the author) who is represented as grappling with her feelings...but the character whose feelings Hulme represents" (2008:41). In this way, the author creates a sense of having direct access to the thoughts and emotions of the character and a sense of immediacy and intimacy is created. Likewise, it is not the author, Ian Banks, who is out of breath and panicking in the excerpt above, but the character, Prentice McHoan, as represented by Banks. Of course, these two examples differ in that Banks is writing a first person narrative, whereas Hulme is representing her character's thoughts in the free indirect style. However, Banks' first-person narrator is retelling past events, rather than relating them as they happen, and the feelings and emotions represented are taken to be those of the character at the time of the events, not at the time of the description.

Thus, above and beyond the categories described in this paper (pressurized, informal, ostensively vague null subjects) null subjects may also be used in the creation of stylistic effects. A writer/speaker may use them to create a particular style or tone by mimicking the sort of discourse contexts in which null subjects spontaneously occur, and thus creating a range of effects relating to the character's emotions and state of mind (e.g. feeling pressurized, relaxed or evasive). In fictional texts, the reward for the extra effort expected of the hearer/reader may lie "in the relationship which is created between the reader and the fictional individuals in the fictional world which the author is representing" (Blakemore, 2009).

6. Concluding remarks

This paper attempts to take up where the syntactic analyses of diary-style null subjects leave off, by considering the pragmatic factors driving their use.

Taking a relevance theoretic approach, I have argued that the use of null subjects in certain discourse contexts in English creates extra or different effects which in turn justify the extra effort to which the hearer is put in processing null subject utterances. This analysis is situated within a general account of how referring expressions encode procedural meaning which interacts with the discourse context to guide the hearer to the overall intended meaning. I identified three major categories of null subject: informal style nulls, which contribute to a casual, intimate tone of a discourse; pressurized nulls, which free up restricted speaker resources, and so contribute to overall relevance; and ostensively vague nulls, which save the hearer the effort of resolving reference when this does not directly contribute to the relevance of the utterance. Finally, I noted that use of null subjects may be exploited by writers and speakers to create stylistic effects.

Throughout this paper, I have argued that the use of null subjects is driven by considerations of relevance. A speaker aims to produce an utterance which provides the most cognitive effects in her hearer whilst minimizing the effort to which that hearer is put and allowing for her own abilities and preferences. When analyzed as driven by general pragmatic considerations, and as interacting with the discourse context in the same way as overt referring expressions, null subjects no longer appear exceptional, even in traditionally non-null subject languages.

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