

## EMPIRICAL STUDY

# Overexplicit Referent Tracking in L2 English: Strategy, Avoidance, or Myth?

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The tendency of intermediate and advanced second language speakers to underuse pronouns and zero anaphora has been characterized as a developmental stage of overexplicitness, yet little consideration has been given to whether learners create sufficient contexts for their use. This study analyzed references across eight degrees of accessibility, revealing that this did not account for infrequent pronoun use by Chinese learners of English. Further analysis revealed that participants were seldom overexplicit when referring to highly accessible individuals, particularly those that represented continued topics, but were significantly more likely than native speakers to use lexical noun phrases elsewhere, particularly for main characters. This is discussed in relation to a possible role of overexplicitness as a clarity-based communication strategy.

**Keywords** referent tracking; overexplicitness; Accessibility Theory; L2 pragmatics; developmental pragmatics; noun phrases

### Introduction

In acts of referent tracking, speakers use referring expressions—usually definite noun phrases (NPs)—to refer to individuals that have previously been

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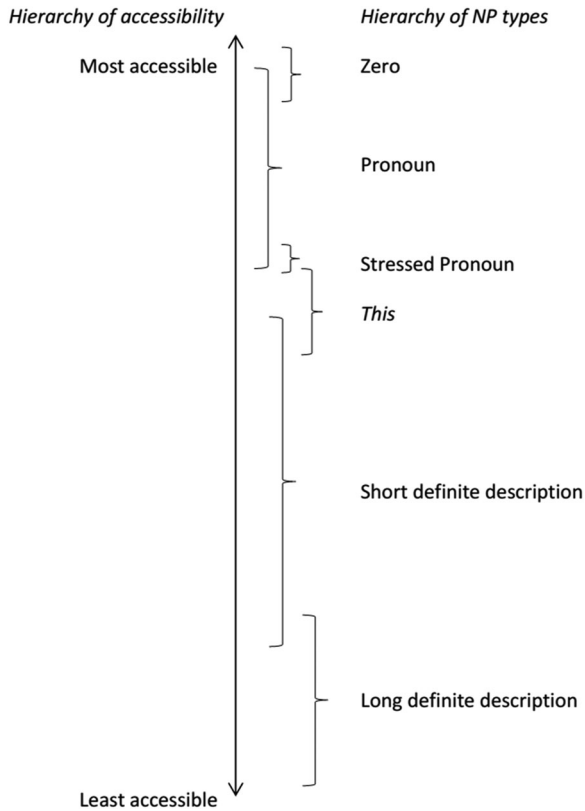
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introduced into the discourse. In so doing, the speaker's intention—minimally—is to clarify for the addressee which individual is being spoken of. Although clarity is prioritized, there is also an opposing preference for economy (Levinson, 2000), which promotes the use of briefer and less informative referring expressions (REs), providing that the referent remains unambiguous. Therefore, the more easily recoverable the referent is from memory (i.e., accessible), the more likely it is that the speaker will use a pronoun or zero anaphora rather than a lexical NP or name. This appears to be a pragma-linguistic universal (e.g., Givón, 1983). From a second language acquisition perspective, reference has proved to be of considerable interest as evidence has emerged of second language (L2) learners appearing to violate the principle of economy by producing NPs that are overexplicit, such as lexical NPs where pronouns or zero anaphora would be expected. This seems somewhat surprising given the apparent universality of the underlying principles and also the association in first language (L1) speech between lexical REs and implicatures of non-coreferentiality (Levinson, 2000), which can trigger communicative strain (Cloître & Bever, 1988) and even miscommunication (Goodman, 1986). A number of hypotheses have been raised to account for overexplicitness, yet relevant studies in this area have largely based their analyses on NP frequency counts in two or three discourse contexts, rather than through operationalizing a framework that can seek to account for targetlike NP selection. The present study addresses this issue by adopting an Accessibility Theory (Ariel, 1990, 2001) framework and a coding system based on Toole (1996). Analysis of references by Chinese learners of English revealed details not previously reported in the literature. These findings include evidence of nontargetlike L2 distribution of references by accessibility context, but it appears that this alone cannot account for infrequent use of pronouns and zero anaphora (hereafter, simply zero). Rather, it appears that the findings most strongly support the hypothesis that overexplicitness may be motivated by a concern for communicative clarity.

## **Theoretical Framework**

### **Accessibility Theory**

Accessibility Theory (Ariel, 1990, 2001) seeks to account for the use of all definite NP types through its central claim of a partially grammaticized relationship holding between a proposed hierarchy of referent accessibility (memory status or recoverability) and a proposed hierarchy of NP types. The hierarchy of accessibility ranges from the most salient to the most remote entities in a discourse context; the NP hierarchy ranges from zeros and pronouns to the longest and most descriptive NPs. Each NP type is thought to encode a different (yet



**Figure 1** Interaction of the two hierarchies.

partially overlapping) range of accessibility. Figure 1 (based on Ryan, 2012) is indicative of the basic nature of this relationship.<sup>1</sup>

The interaction of the two hierarchies allows referring expressions to function partially as accessibility markers, thereby encoding not only descriptive but also procedural information, both of which facilitate reference resolution. The pronoun *he*, for example, encodes the conceptual information “male” and the procedural information “highly accessible,” suggesting a male referent that is highly prominent within the discourse context. The accessibility of a referent is determined by the sum of multiple weighted factors, including distance, competition, salience, and unity (Ariel, 1990). Distance relates to the gap between an anaphor and its linguistic antecedent; competition occurs where there are two or more potential antecedents; unity relates to breaks in continuity, such

Full name + modifier > Full name > Long definite description > Short definite description > Last name > First name > *that* + modifier > *this* + modifier > *that* + NP > *this* + NP > *that* > *this* > Stressed pronoun > Unstressed pronoun > Zero

**Figure 2** Hierarchy of noun phrase types.

as episode boundaries or paragraphs; salience includes, for example, discourse topicality and the animacy of the referent. The relevance of such factors is attested in a large number of psycholinguistic studies, with useful overviews including Ariel (2001) and Arnold (2010).

The hierarchy of NP types is organized according to the partially overlapping principles of informativity (descriptive detail), attenuation (reduced phonological size or articulation), and rigidity (how narrowly a RE applies to the intended referent; Ariel, 1990). Cross-linguistically, wherever two forms are available, they are hypothesized to occur in the same hierarchical order. Figure 2 presents a simplified hierarchy of the main English NP types (based on Ariel, 2001).

The findings in the present study overwhelmingly relate to four types of NPs: zeros and personal pronouns (high-accessibility markers) and *the* + N and names (low-accessibility markers). As in a number of other studies involving narrative data (e.g., Hendriks, 2003; Jarvis, 2002; Swierzbinska, 2004), relatively few intermediate-accessibility markers (*this*, *that*, *this/that* + noun) were used in reference to persons.

## L2 Reference

A large number of findings relevant to L2 referent tracking have been reported, revealing that, while early stages of development tend to be characterized by underexplicitness (Ahrenholz, 2005; Kim, 2000; Klein & Perdue, 1992), intermediate and advanced learners tend to be overexplicit (with some underexplicit zeros also reported, e.g., Crosthwaite, 2014; Lumley, 2013; Williams, 1988). Overexplicitness is found, for example, in the use of pronouns, names and lexical phrases where zeros are preferred, and lexical phrases and names where pronouns are preferred; it appears to be a general feature of learner varieties, irrespective of source and target language. For example, Tomlin (1990, p. 170) reports on a mixed group of advanced learners of English (including Japanese, Arabic, Spanish, Mandarin, and Korean students) who, in a narrative elicitation task, “clearly do not alternate between nominal and pronominal structures,” relying heavily on lexical NPs. Overexplicitness has also been reported for Mandarin and Korean learners of

English (Crosthwaite, 2014), French learners of English and English learners of French (Leclercq & Lenart, 2013), German learners of Italian (Chini, 2005), Dutch learners of Japanese (Yoshioka, 2008), Dutch learners of French (Gullberg, 2006, 2008), French learners of Swedish and Swedish learners of French (Gullberg, 2003, 2008), Chinese learners of German (Hendriks, 2003), and English learners of Japanese (Lumley, 2013; Yanagimachi, 2000). In a more restricted sense, there is also evidence of overexplicitness in English speakers' avoidance of zeros in Chinese (Jin, 1994) and Korean (Jung, 2004) and in Spanish speakers' avoidance of zeros in English (Muñoz, 1995). Although much of this research is based on elicited oral narratives, Lumley (2013) includes findings from other modes of speech (e.g., discussions), while Kang's (2004, 2009) findings suggest it is more pronounced in speaking than writing. Possibly related are findings reported in Ryan (2012, 2015), in which L2 overexplicitness occurred in referential episodes above the NP level, for example, in the use of redundant preintroductory phases and clarification moves. In a wider sense, it is possible that overexplicitness is related to "waffle phenomena," whereby learners produce redundant speech in order to achieve other communicative goals (Blum-Kulka & Olshtain, 1986; Edmondson & House, 1991; cf. Tarone & Yule, 1987) or to the related notion of overcoherence, whereby learners overuse cohesive devices (Bublitz & Lenk, 1999); however, such possibilities have received little attention in the literature.

Among the few to express skepticism about systematic L2 overexplicitness has been Hendriks (2003), who reported on referent tracking by Chinese learners of three European languages but identified overexplicitness only in her L2 German data. Hendriks concluded that overexplicitness arose from complications arising from multiple source/target language factors, including the complexity of NP types (e.g., the intricate German pronoun system) and problems in discourse organization resulting in shorter referential chains. While the weight of evidence may now be at odds with Hendriks's findings, subsequent studies appear not to have addressed her crucial insight that infrequent pronoun use by L2 learners may actually reflect an appropriate response to other nontargetlike aspects of L2 discourse, whereby speakers may create "a less favourable context for the use of pronominal forms" (Hendriks, 2003, p. 310). Subsequent evidence that may support this hypothesis includes Nakahama's (2003, 2009) suggestion that learners may lack the linguistic competency to maintain referents in topical positions (e.g., through alternation between active and passive voice) and evidence that learners may adopt nontargetlike narrative perspective in recounting events (Carroll & von Stutterheim, 2003; Hendriks, 2003; Nakahama & Kurihara, 2007). Such features could lead to

frequent reference-switches and result in fewer references to highly accessible entities. Consequently, it is possible that the statistically significant correlations in L1 speech that hold between NP types and text-based distinctions, such as referent introduction, reintroduction, and maintenance (e.g., Chini, 2005; Gullberg, 2006; Muñoz, 1995; Yoshioka, 2008), may present a distorted view of L2 learners' overexplicitness due to confounding features of L2 text organization.

To confirm that systematic overexplicitness does indeed characterize L2 speech, analysis would therefore be required of how speakers realize the higher-level discourse functions that apparently underlie NP selection, such as marking for referent accessibility (Ariel, 1990, 2001) and with evidence that L2 learners tended to use NPs presenting redundant semantic information. Such an analysis would require operationalizing the type of coding system shown to have adequate predictive power in studies of L1 speech and to be capable of highlighting overexplicitness (such as those used by Ariel, 1999; Toole, 1996); however, this appears not to have been attempted in previous L2 research.<sup>2</sup> Studies by Kim (2000) and Swierzbis (2004) did provide overall assessments of cognitive status, but the Givenness Hierarchy frameworks they adopted are tolerant of overexplicitness,<sup>3</sup> and did not particularly problematize what appeared to be infelicitous uses of lexical NPs. This raises the first two research questions to be addressed in this study:

1. To what extent is the accessibility of characters referred to in the native English speaker (NS) narratives matched in the L2 narratives?
2. To what extent do any such observed differences account for between-group variation in the frequency of pronoun and zero use?

To address these issues, the present study used a refinement of the accessibility coding system developed by Toole (1996), which gives cumulative weightings to eight factors thought to influence accessibility. This is outlined in the Method section and is included in Appendix S1 in the Supporting Information online. The system enables distinctions to be made between NP selection in multiple accessibility contexts.

### **Accounting for Overexplicitness in L2 Reference**

Leaving aside for now Hendriks's (2003) concerns, the primary explanations in the literature for L2 overexplicitness fall into three main categories: the clarity principle, error avoidance, and planning difficulties. Source language influence is also a factor (e.g., Hendriks, 2003; Kang, 2004; Nakahama, 2009), but apparently not a primary explanation, as overexplicitness seems to occur irrespective of the source and target languages.

The term “clarity principle” is used here to describe a family of explanations drawing on the Gricean principle of a tension holding between the conflicting demands of language economy and clarity; in relation to reference, this tension has been recast as the twin preferences for using a minimal referring expression and for enabling the addressee to successfully identify the referent, that is, to achieve recognition (Levinson, 2007; Sacks & Schegloff, 2007). Skilled speakers generally achieve this balance with only occasional lapses into verbosity or vagueness (Geluykens, 1994), but it seems reasonable to assume that language learners may be less consistently accurate. As achieving recognition usually takes precedence over economy (Sacks & Schegloff, 2007), Lumley (2013) argues that learners may err in this direction. Perhaps compounding this, it could also be that learners adopt a strategy of increased explicitness for particularly problematic communicative acts. For instance, Hendriks (2003) notes that learners may be aware of potential difficulties for their addressees due to the likelihood of errors and other language limitations, and may therefore use fuller NPs that provide greater conceptual information (see also Leclercq & Lenart, 2013; Williams, 1988). Perhaps ironically, such overexplicitness may actually create ambiguity by misrepresenting referent accessibility and the related given-new distinction (as illustrated by Klein & Perdue, 1992, p. 317). Yet however unsatisfactory overexplicit REs can be, the suggestion that their use results from clarifying strategies implies the possibility of a unified account for L2 redundancy that embraces referent introductions (Ryan, 2012, 2015) and even waffle phenomena in other domains of L2 use.

A second hypothesis is that overexplicitness results from the nonmastery of pronouns and zeros. Certainly, Klein and Perdue (1992) identify early stages of acquisition in which learners have little option other than to be overexplicit. At more advanced stages, similar issues may arise, with speakers faced with the choice between overexplicit lexical REs and partially acquired, “error-prone pronominal forms that encode several grammatical distinctions simultaneously” (Gullberg, 2006, p. 157). In this view, overexplicitness by more advanced learners represents the strategic avoidance of pronouns and zeros. Although perhaps more relevant to a language such as German with its highly complex pronominal system, it is also true that mastery of English pronouns occurs relatively late for many learners, for whom they may remain a frequent source of error. Similarly, English zeros may present difficulties due to their grammaticized and highly restricted distribution (Muñoz, 1995; Williams, 1988).

A related hypothesis is that infrequent use of pronouns and zeros reflects difficulties in deployment during complex acts of communication (Chini, 2005;

Gullberg, 2006, 2008). Specifically, their use is said to require complex planning at both the local level (e.g., number, gender, case) and the global discourse level (cohesive or accessibility-related factors) and that this dual processing load may be too great for learners to manage. Gullberg argues that, “by opting for lexical NPs throughout, learners can plan at one level only and thus alleviate the processing load” (2006, p. 157). Similarly, Chini (2005) argues that learners may focus on “a more local planning strategy which does not or cannot, take into account larger stretches of discourse, because several other (lexical, morphosyntactic) problems are felt to be more urgent” (pp. 95–96). To date, such explanations remain speculative, and it may be that experimental work within a psycholinguistic framework would be required to provide empirical support for the hypothesis. Nevertheless, there appears to be indirect support from L1 psycholinguistic studies, with Arnold (2008, 2010) reporting that cognitive load, including the presence of multiple competing referents and the planning of longer utterances, can prompt L1 speakers to use fuller expressions than required by the addressee. A limitation of these findings is their use of tasks involving very short elicited texts that provide speakers with fewer opportunities to establish topicality and saliency and that could therefore be more highly sensitive to factors that encourage overexplicitness. Nevertheless, it seems highly likely that planning load would be a factor in some L2 overexplicitness; the relevant question is perhaps to ask to what extent.

A limitation of both the cognitive-load and pronoun-avoidance hypotheses is that they only attempt to account for overexplicitness in references to highly accessible entities. They cannot, for example, account for the infelicitous use of long definite descriptions where short definite descriptions are preferred, such as those that are found in some L2 referent introductions (Ryan, 2012, 2015); the comparison is relevant because, like pronouns, long definite descriptions are prone to error, and their felicitous use also requires planning at both local (e.g., definiteness marking) and discourse (e.g., considerations of competition and saliency) levels.

### **Reference in Mandarin**

For Mandarin-speaking learners of English, a number of linguistic and discursal features of their L1 appear relevant to overexplicitness in English. These intertwining features relate to the availability and distribution of NP types and to features of discourse organization. In terms of available NP types, Mandarin differs most notably from English in lacking articles; in Mandarin, definiteness (or genericity) is assumed for topics and is inferred elsewhere through context (resulting in a much wider distribution of bare nouns and demonstrative + N)



or is made clear through the use of other NP options (e.g., demonstratives and names; Lyons, 1999). Also relevant is that, in speech, Mandarin third-person pronouns are not marked for gender, with a single form (*tā*) representing the equivalent of English *he/she/it*; consequently, there may be occasions when pronouns would disambiguate a referent in English but not in Mandarin (Tao, 1996). In terms of distribution, the most important contrasts are the wider use of zeros in Mandarin and of pronouns in English, reflecting the structure of Mandarin as a topic-prominent language<sup>4</sup> and possible differences at the syntax-pragmatics interface. Cross-linguistically, topic prominence is associated with a tendency to omit NPs for which the hearer could be reasonably expected to infer the referent, and in Mandarin this is possible not only for grammatical subjects (*That dog, [I] have already seen*) but also objects (e.g., *Give [them] to me*; Li & Thompson, 1981); indeed, while English only permits zeros in a highly restricted range of syntactic contexts (notably the second subject of a coordinate clause), Mandarin only constrains their use in a highly restricted range of syntactic contexts (see Li & Thompson, 1981). Comparing the two languages, Huang (2000) argues that the heavy use of zeros in Mandarin, along with other features such as a lack of inflectional morphology, reflects a contrast at the grammar-pragmatics interface, whereby syntax plays a greater role in guiding interpretation in English, while context and inference play a greater role in Mandarin.

A relevant feature of discourse organization is the influence that the topic and focus<sup>5</sup> structure of adjacent propositions has on NP selection. Overall, it appears that both languages are responsive to topic continuation and discontinuation in ways predicted by Accessibility Theory. In particular, previous studies indicate a strong tendency for the second of two identical topics to be referred to with a pronoun in English and a zero in Mandarin (the main high-accessibility markers for the respective languages) and for the reintroduction of an earlier topic to be signalled with a low-accessibility marker (Crosthwaite, 2014).<sup>6</sup> There appear, however, to be some differences in how other relationships tend to be realized, with Crosthwaite reporting that when a grammatical subject becomes a nonsubject in the following clause,<sup>7</sup> Mandarin speakers more often encode the referent with a high-accessibility marker (often a pronoun) than native English speakers; conversely, when a nonsubject became a subject, it is more likely to be encoded by a high-accessibility marker in English than Mandarin.

On the basis of L1 influence, the preceding analysis suggests that Mandarin-speaking learners of English may be predicted to overuse zeros and bare NPs,

resulting in both over- and underexplicitness. Overall, they may use slightly more full NPs than the NSs but will be similarly responsive to referent accessibility and to the accessibility effects of continuing or shifting topic and focus. Learners may also choose to avoid pronouns due to the risk of errors (e.g., *he* for *she*), favoring either zeros or full NPs.

### **The Current Study**

The present study examines the distribution of NPs across multiple accessibility contexts in L1 and L2 English. The goals are, first, to confirm or disconfirm the presence of over- and underexplicit L2 references and, second, to examine the incidence and distribution of such REs with a view to identifying evidence that can account for overexplicitness. The focus is on references to characters in a narrative retelling by NSs and Chinese learners of English. Four research questions are proposed, with the first two exploring the extent to which overexplicitness characterizes the L2 narratives:

1. To what extent is the accessibility of characters referred to in the NS narratives matched in the L2 narratives?
2. To what extent do any such observed differences account for between-group variation in the frequency of pronoun and zero use?

Overexplicitness will be confirmed if the L2 participants use substantially fewer high-accessibility markers than there are discourse contexts appropriate to their use. The third and fourth research questions focus on the distribution of NP types in relation to accessibility contexts:

3. To what extent is there evidence of L2 overexplicitness and underexplicitness across a range of accessibility contexts?
4. To what extent does this distribution support current theories of overexplicitness in L2 reference?

The third question explores whether there is evidence that over- and underexplicitness occur with, for example, a relatively even distribution across accessibility contexts or whether their occurrence tends to cluster within certain contexts. The final question considers how best to account for this distribution. If overexplicitness is mainly due to error avoidance, it should be independent of the accessibility level. If, by contrast, overexplicitness is mainly due to an application of the clarity principle, it should be more pronounced at intermediate stages of accessibility.

## Method

### Participants

The participants who were assigned a speaking role in this study were undergraduate students in a New Zealand university, with the first group comprising 10 NSs of New Zealand English and the second comprising 10 Chinese Mandarin-speaking L2 learners of English. The Chinese participants had all recently achieved an International English Language Testing System (or equivalent) score of at least 6.0 in each band and so were considered to be competent users of English. Each participant spoke to a (different) designated hearer, all of whom were native English speakers. In all cases, pseudonyms have been used.

### Materials and Procedure

A two-part edited version of the Charlie Chaplin film *Modern Times* was used to elicit film retellings. The procedures closely followed those described by Perdue (1984), whereby both interactants watch Part One before the participant in the hearer role is called away on the pretext of answering the phone. The designated speaker watches Part Two and, upon the hearer's return, relates what happened. The narrative involves a number of unusual events, changes in location, and references to two major characters (Chaplin and the girl) and a range of minor characters. The semi-controlled nature of the task allows the researcher fairly strong grounds from which to infer the speaker's intended meaning (Klein & Perdue, 1992), while also providing some measure of control over avoidance strategies (Salaberry, 1999).

### Analysis of Accessibility

The coding system for analysing accessibility (presented in Appendix S1 in the Supporting Information online) is based on that of Toole (1996). Due to space constraints and a detailed treatment elsewhere (Ryan, 2012), the following discussion is brief, with an emphasis on those elements that differ from Toole's system and a more recent refinement (not discussed in Ryan, 2012). In accordance with Accessibility Theory (Ariel, 1990, 1999, 2001), the system estimates accessibility as the sum of multiple weighted factors. Although still rather rudimentary, it has strong predictive power in accounting for RE selection (Toole, 1996), and the refinements to Toole's system appear to adequately deal with a number of supposedly problematic examples in the literature (Ryan, 2012). The factors operationalized by Toole were distance (the gap between an anaphor and its antecedent) and unity (episode boundaries, the clause as a

structural unit), for which a combined weighting of up to +4 is given, competition for RE resolution (the local presence of other characters; weighted from -2 to 0), and salience/recurrence (frequency of recent mentions; weighted up to +2). To these, the present system adds additional weighting for grammatical role,<sup>8</sup> parallelism, character centrality, and animacy, which each warrant some justification.

In relation to the first of these, Centering Theory (Grosz, Joshi, & Weinstein, 1995) holds that the set of referents in an utterance have a ranked order of attentional focus and that this order is based on structural properties of the utterance. The relevant properties vary cross-linguistically, but for English it appears that grammatical role is central (Joshi, Prasad, & Miltsakaki, 2006). The basic hierarchy for English is generally considered to be subject followed by direct object, indirect object, and adjunct (Beaver, 2004; Brennan, Friedman, & Pollard, 1987; Grosz et al., 1995; but cf. Miltsakaki, 2003). The assumption is that the hierarchy reflects the order in which available entities are most likely to be referred to in the immediately following proposition. In the present coding system, two modifications were made to this basic hierarchy. First, a distinction is made between referents that appear as oblique (i.e., prepositional) objects and those that appear in clausal adjuncts. Oblique objects are specified in the hierarchy, where they rank below indirect objects; following Toole (1996), infinitive and participle clauses in an adjunctive relation represent separate propositions. Second, referents in embedded clauses are ranked lower than those in main clauses, and where there is more than one embedded clause, these are ranked as they appear in order of mention. The system adds an additional weighting of +1 to the highest ranked person referent, and this progressively decreases to -2 for fourth (and lower) ranked individuals.

In relation to parallelism, high accessibility markers such as English pronouns are associated with references that occur “in a parallel syntactic position, for example *Kate called Matt at work, and then she called him at home*” (Arnold, 2008, p. 501; Mitkov, 2002; cf. Ariel, 2004). This was operationalized in the coding system as an increased weighting of +1 for parallel subjects and +1 for parallel objects if the subject was also parallel. Animacy is also relevant to accessibility (e.g., Dahl & Fraurud, 1996) and in the present data appears to account for sometimes considerable distances (15 or more clauses) between pronouns and human antecedents. Specifically, this occurred in extended sequences focusing on locations and mechanical objects in which there were no competing human referents. This factor was operationalized by an increased weighting of +1 (for 1–3 propositions with no human referents intervening

between an anaphor and its antecedent) or +2 (for 4 or more propositions). Finally, as narratives usually focus on one or more main characters (e.g., Klein & Perdue, 1992), these individuals appear to retain accessibility for longer (discourse topicality), partially accounting for why they tend to be pronominalized more frequently than minor characters (Clancy, 1980; Karmiloff-Smith, 1985; Hickmann & Hendriks, 1999). This was operationalized as a weighting of +1 for the two main characters (Chaplin and the girl).

The coding system distinguishes eight degrees of accessibility for all previously mentioned, singular characters. In these data, it generated a score of D0 (degree 0) for what it deemed the least accessible referents,<sup>9</sup> these were characters not referred to in the last four propositions and who faced competition from other characters of the same gender. The most accessible entities were coded as D7 and were nearly always central characters maintained as grammatical subjects and referred to in several immediately preceding clauses.<sup>10</sup> Two coded transcripts with coding notes are supplied in Appendix S2 in the Supporting Information online.

As with other accessibility coding systems (Ariel, 1999; Toole, 1996), it must be emphasized that the present system is rudimentary. Although each factor it operationalizes is well established in the psycholinguistic and/or linguistic literature (e.g., Ariel, 2001; Arnold, 2010), there are further factors thought to influence accessibility (e.g., thematic roles; Arnold, 2008). More importantly, the operationalization and weighting of these factors is merely a best attempt based on Toole (1996) and refinements made through a period of piloting. Nevertheless, as argued elsewhere (Ryan, 2012), the system does appear to adequately account for most references by NSs and so appears sufficiently accurate for present purposes.

In measuring intercoder reliability, approximately 12% of the data was coded by an assistant trained in the use of the system. Following an initial training period of approximately 20 minutes, the assistant identified propositional boundaries in the transcripts, and the researcher then formatted the transcripts to reflect these boundaries. The researcher then used a superscript to identify the referent of each pronoun or lexical NP. The assistant was then trained in the use of the accessibility coding system (approximately 45 minutes) before coding the data. An appropriate measure of intercoder agreement for ordinal data such as these is Krippendorff's alpha, which takes into account the possibility of chance agreement and the magnitude of disagreement (Neuendorf, 2002). This was computed using a macro created for SPSS (described in Hayes & Krippendorff, 2007), with the analysis revealing a high level of agreement for referent accessibility ( $\alpha = .96$ ,  $N = 163$ ). In addition, there were two cases

of disagreement over NP type (nominal data;  $\alpha = .99$ ,  $N = 163$ ). Discrepancies were discussed between the researcher and assistant and, where they were agreed upon, these were corrected in the data. In most cases, variations appeared to result from differences in how propositions had been distinguished.

### **Analysis of Referents by Topic and Focus Contexts**

The data were further examined to explore whether NP selection reflected topic and focus organization. Given the notorious difficulty in establishing rigorous criteria to identify topics (Huddleston & Pullum, 2002), a simplified notion of local (clause/sentence) topic was used, based on the linear arrangement of referents in a proposition (see Reinhart, 1981, for limitations of this approach). Very often this coincides with the grammatical subject of a main clause, but may occur elsewhere through the use of devices such as preposing (e.g., *the man she hit*), existential constructions (*there was the man*), and clefts (*it was the girl*). The transcripts were then coded as to whether the position of the referent in the second of two adjacent propositions represented topic continuity (the same topic as the immediately preceding proposition), topic shift (a different topic to the previous), or topic to focus (the previous topic now in nontopic position); referents that were in the focus (nontopic) position were also coded as to whether they appeared alongside a continuing or shifted topic. Referents in the focus position were omitted from the analysis if they were also the topic of that proposition (e.g., *He pulls the bread from behind his back*); also omitted were abandoned topics and a small number of ambiguous cases. Where there was a compound subject (e.g., *the girl and the man*), only the first was recorded as the topic.

## **Results**

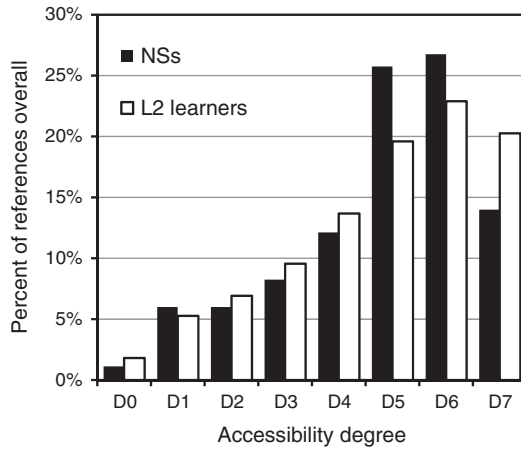
### **Quantitative Analysis**

In total, the sample consists of 607 acts of referent tracking by the L2 participants and 800 by the NSs; five further references were excluded due to doubt over the identity of the referent, NP type, or accessibility. The main statistical procedure followed was Pearson's chi-square test, which is appropriate for categorical data such as these. Where the result was significant the effect size is also reported in the form of the odds ratio. An alpha level of .05 was set for all tests.

Overall, very similar proportions of NS and L2 singular references were to one of the two main characters (75.4% and 75.1%, respectively), although the NSs produced substantially more references to Chaplin (46.9%) than the girl (28.5%), while the L2 narratives had a more even balance (38.5% and 36.6%). Also very similar were the proportions of references that represented

**Table 1** Number of references at each accessibility degree

Group	D0	D1	D2	D3	D4	D5	D6	D7	Total
Native speakers	9	48	48	66	97	206	214	112	800
L2 learners	11	32	42	58	83	119	139	123	607



**Figure 3** Percentage of references at each accessibility degree.

continuing topics (31.8% and 30.8%, respectively), topic shifts (18.8% and 14.5%), and referents in focus position (21.0% and 22.8%). The number of references at each accessibility degree is presented in Table 1, revealing that a substantial majority of references were to entities coded between accessibility D4 and D7. Figure 3 presents the same information, highlighting intergroup variation in how references were distributed by accessibility degree.

These differences between the NSs and L2 learners are statistically significant only at D5,  $\chi^2(1) = 7.34, p = .007$ , and at D7,  $\chi^2(1) = 9.73, p = .002, N = 1407$ . Based on the odds ratios, the odds of NSs referring to entities with accessibility D5 were 1.42 times higher than for L2 learners; at D7 they were 1.56 times higher for L2 learners. The reasons for these differences are unclear, but they could be influenced by factors such as differences in narrative perspective and/or topic continuity, the length and complexity of narratives, or the number of competing referents. Then, there do appear to be some between-group differences in the accessibility of referents in the retellings.

Turning now to referring expressions, Table 2 summarizes the percentages of NP types used, collapsing most demonstrative forms (e.g., bare *this*;

**Table 2** NP types used

NP type	Native speakers		L2 learners	
	<i>n</i>	%	<i>n</i>	%
∅	76	9.5	47	7.7
Pronoun	491	61.5	231	38.1
Demonstrative (+N)	14	1.7	9	1.5
Single name	54	6.7	68	11.2
Short description	111	13.8	195	32.1
Long description	10	1.2	5	0.8
Full name	42	5.2	25	4.1
Non-conventional	2	0.2	27	4.4
Total	800	100.0	607	100.0

*that* + noun) and names into single categories. Long and short descriptions were distinguished on the basis of the former having more than two lexical components (e.g., two adjectives and a noun) and/or postmodification (e.g., modified by a relative clause) and, for the purposes of the following discussion, include demonstrative + long description (e.g., *that man we saw*). The nonconventional forms used were bare nouns, indefinites, and *the* + name.

As in previous studies, then, the L2 participants used significantly more short descriptions,  $\chi^2(1) = 69.76, p < .0001$ , odds ratio = 3.00, and fewer pronouns,  $\chi^2(1) = 75.22, p < .0001$ , odds ratio = 2.60, than the NS participants. The only other strong association was in the L2 learners' more frequent use of nonconventional forms,  $\chi^2(1) = 30.76, p < .0001$ , odds ratio = 18.93; also of statistical significance was the more frequent L2 use of a single name,  $\chi^2(1) = 8.13, p = .004$ , odds ratio = 1.72. When comparing the use of lexical NPs (short and long descriptions, demonstrative + N, bare NPs, and indefinite NPs), the NSs used significantly more long definite descriptions than the L2 learners,  $\chi^2(1) = 5.5, p = .02$ , odds ratio = 3.46,  $N = 341$ . It appears that L2 use of high-accessibility markers, particularly pronouns, was far lower than what could be accounted for by the observed differences in referent accessibility (Table 1), suggesting that overexplicitness may indeed characterize these data. This possibility is explored in the following subsection.

### Accessibility Marking

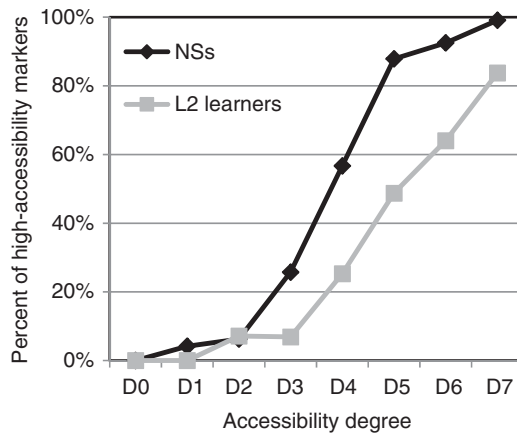
The analysis turns now to the distribution of NP types by accessibility context. Table 3 provides an overview, focusing on the proportion of high-accessibility markers used at each accessibility context.



**Table 3** Use of high-accessibility markers across accessibility contexts

Accessibility	Native speakers			L2 learners		
	Total REs	Zeros/Pronouns		Total REs	Zeros/Pronouns	
	<i>n</i>	<i>n</i>	%	<i>n</i>	<i>n</i>	%
D0	9	0	0.0	11	0	0.0
D1	48	2	4.2	32	0	0.0
D2	48	3	6.3	42	3	7.1
D3	66	17	25.8	58	4	6.9
D4	97	55	56.7	83	21	25.3
D5	206	181	87.9	119	58	48.7
D6	214	198	92.5	139	89	64.0
D7	112	111	99.1	123	103	83.7

*Note.* REs = referring expressions (anaphoric noun phrases used to refer to persons).



**Figure 4** Use of high-accessibility markers across accessibility contexts.

Differences in NS and L2 use of high-accessibility markers are also presented graphically in Figure 4, highlighting the NSs’ substantially greater use of these forms between accessibility D3 to D7. This appears to support the claim that L2 reference tends to be overexplicit.

The following sections present a closer examination of the NP types used for specific degrees of accessibility, beginning with the highest accessibility contexts first. Due to the scarcity of some NP types and in order to clearly present the most salient findings, the analyses largely focus on the broad distinction

between low-accessibility markers (lexical NPs and names) and pronouns and zeros (both high-accessibility markers).

### *Accessibility D7*

For referents with accessibility D7, the use of high-accessibility markers was dominant for both the NSs (99.1%) and the L2 learners (83.7%), and in both cases this mainly involved the use of pronouns (78.6% and 66.7%, respectively), with zeros also frequently used (20.5% and 17.1%). There were no lexical NPs and only one name in the NS data, suggesting that this single occurrence was either an infelicitous NP or perhaps an infrequent stylistic choice to achieve some other communicative purpose. In contrast, there were 18 lexical NPs and two names in the L2 data, accounting for 16.3% of the L2 references. A chi-square test reveals that the use of low-accessibility markers in this context significantly differs by group,  $\chi^2(1) = 17.01, p < .0001, N = 235$ , with the L2 learners being nearly 22 times more likely to use one (odds ratio = 21.55). This suggests a strong relationship in this accessibility context between overexplicitness and use of L2 English.

As discussed in the Method section, the analysis of topic and focus excluded a small number of referents (e.g., the second referent in a compound subject). Of the remaining referents, most were continuing topics (NSs 74.0%; L2 learners 65.2%), including the only low-accessibility marker used by a NS. Of 14 full NPs in the L2 data, six represented continued topics and four represented topic shifts (in each case, from focus position in the previous clause).

In relation to individual variation, instances of overexplicitness occurred in all L2 retellings except that of Lian (who used 14 pronouns and zeros). However, for most participants, this appeared to be an occasional lapse, with six participants using low-accessibility markers only once each. Three speakers appeared more consistently overexplicit and collectively contributed the majority of low-accessibility markers (Tian, 7 out of 14 references; Kang, 4 of 15; Shu, 4 of 13).

One consequence of the coding system's weighting for character centrality is that context D7 is effectively limited to references to main characters. This raises the possibility, to be explored in the following subsections, that L2 use of pronouns and zeros at D7 could primarily be a response to character centrality rather than to accessibility per se (cf. Kim, 2000; Lumley, 2013).

### *Accessibility D6*

At D6, the NSs typically used high-accessibility markers (92.5%), suggesting that lexical NPs also tend to be overexplicit in this context. There were only

slight, nonsignificant decreases in NS use of pronouns compared to D7 (from 78.6% to 76.6%),  $\chi^2(1) = .16, p = .69$ , and of zeros (from 20.5% to 15.9%),  $\chi^2(1) = 1.10, p = .29, N = 326$ . For the L2 learners, decreases were more substantial, with zeros falling from 17.1% to 5.8%,  $\chi^2(1) = 8.49, p = .004, N = 262$ , and being three times more likely to occur at D7 than D6 (odds ratio = 3.37); pronouns decreased from 66.7% to 58.3% although this did not reach the threshold for statistical significance,  $\chi^2(1) = 1.96, p = .162$ . The L2 learners used far more names and lexical REs (36.0%) than the NSs (7.5%), with a chi-square test revealing a strong association between such explicitness and L2 English,  $\chi^2(1) = 45.01, p < .0001$ , odds ratio = 6.95,  $N = 353$ . Only 9 of the 139 references by L2 learners were to minor characters, indicating that this did not account for the significant decrease in pronoun and zero use.

For both groups, approximately half of the low-accessibility markers were used in the context of topic shifts (NSs = 8/13; L2 learners = 22/47), with occasional instances of topic continuity (NSs = 3; L2 learners = 8) and topic to focus (NSs = 2; L2 learners = 4). Where the two groups differed most markedly was for referents in focus position, with the NS participants only ever using high-accessibility markers, irrespective of whether the topic continued (14/14) or shifted (8/8), while the L2 learners used low-accessibility markers for approximately half of all such references (8/17 and 5/13, respectively).

Individually, most NSs used low-accessibility markers on one or two occasions (4.5–8.5% of references), although Jeff and Vicky used pronouns and zeros exclusively (13 and 10 occurrences). Most L2 speakers used lexical REs and names for between 30% and 50% of these references, including Lian (7 of 18 references), who had not used these forms at D7. Findings for three participants fell outside this range, with Jiao relying heavily on low-accessibility markers (9 of 11 references), while two speakers used high-accessibility markers with targetlike frequency. These were Bojing, who used pronouns exclusively (nine instances), and Jingfei, who used a combination of high- and intermediate-accessibility markers (1 zero, 18 pronouns, 3 *this/that* + N).

#### *Accessibility D5*

In the NS data, D5 was again strongly associated with the use of high-accessibility markers (87.9%), suggesting that lexical NPs are generally overexplicit in this context; in the L2 data, high-accessibility markers accounted for less than half of the references (48.7%). For the NSs, there was a statistically significant decrease in the use of zeros from D6 to D5,  $\chi^2(1) = 4.23, p = .040$ , odds ratio = 1.86,  $N = 420$ , and a very slight, nonsignificant increase in the use of pronouns,  $\chi^2(1) = .24, p = .62$ , odds ratio = 1.12. This again contrasts

with a significant drop in the L2 use of pronouns,  $\chi^2(1) = 11.64, p = .0006, N = 258$ , and a slight, nonsignificant increase in the use of zeros,  $\chi^2(1) = 2.97, p = .085$ . Based on the odds ratio, the L2 learners were 2.38 times more likely to use a pronoun at D6 than D5, and 2.18 times more likely to use a zero at D5. The use of low-accessibility markers was again strongly associated with L2 English,  $\chi^2(1) = 59.33, p < .0001$ , odds ratio = 7.61,  $N = 325$ .

Most NS uses of low-accessibility markers occurred in the context of topic shift (17/23), with only one used for a continued topic and few used in any focus context (5/61). For the L2 learners, low-accessibility markers dominated in all contexts except topic continuity (6/31), with similar frequencies for referents in the position of topic shift (21/35) and focus (30/52). References to minor characters were frequent at D5, accounting for 26.7% in the NS data and 28.8% of the L2 data. For the NSs, there was a nonsignificant relationship between NP type and character status,  $\chi^2(1) = 1.91, p = .167, N = 207$ ; however, for the L2 learners, the relationship was significant,  $\chi^2(1) = 34.74, p < .0001, N = 119$ , with speakers being 22.5 times more likely to use high-accessibility markers for minor characters than main characters. Further analysis indicates that the decline in pronoun and zero use from D6 to D5 was largely restricted to references to main characters,  $\chi^2(1) = 21.33, p < .0001, N = 223$ , with no significant relationship found for minor characters ( $p = .054$ ). For main characters, the L2 learners were nearly four and a half times more likely to use a low-accessibility marker.

Most NSs used names and lexical REs for 10–20% of references, with the major exceptions being Shelley (2 of 38) and Vicky (0 of 13). Among the L2 learners, most used these forms for 44–62% of references, with the major exception again being Bojing (2 of 11).

#### *Accessibility D4*

The junction between codes D5 and D4 appears to correspond to an important shift in the NSs' referring behavior, with no zeros recorded at D4 and pronouns accounting for just 56.7% of all NPs. These decreases were significant<sup>11</sup> both for zeros,  $\chi^2(1) = 9.55, p = .002, N = 302$ , Cramér's  $V = .18$ , and for pronouns,  $\chi^2(1) = 15.62, p < .0001$ , with the odds of pronoun use being 2.81 times higher at D5 than D4. In the L2 data, a significant decrease in the use of pronouns,  $\chi^2(1) = 6.31, p = .012, N = 202$ , and a nonsignificant decrease in the use of zeros,  $\chi^2(1) = 2.91, p = .088$ , were observed. Based on the odds ratio, the L2 learners were 2.28 times more likely to use pronouns at D5. Use of lexical NPs and names again significantly differed by group,  $\chi^2(1) = 18.08, p < .0001, N = 180$ , being more likely in the L2 retellings (odds ratio = 3.87). As both high- and

low-accessibility markers appear acceptable at D4, an appropriate conclusion may be that here the L2 learners tended to be *more* explicit than the NSs, rather than overexplicit. Also of interest were four apparently underexplicit zeros, produced by four different speakers, which each occurred outside syntactically permissible positions. There was no evidence (e.g., from repair initiation) of these triggering interpretation problems for the hearers.

Again, there was a significant relationship between character status and the use of high-accessibility markers in the L2 retellings,  $\chi^2(1) = 5.41, p = .02, N = 83$ , but not in the NS data,  $\chi^2(1) = 1.9, p = .168, N = 97$ . For the L2 learners, the shift from D5 to D4 included a decrease in the use of pronouns for both main and minor characters. This did not reach the level of statistical significance for main characters,  $\chi^2(1) = 3.17, p = .075, N = 147$ , but did for minor characters (based on a Fisher Exact Probability Test,  $^{12}p < .0001$ ). In most topic/focus contexts, the NSs used slightly more pronouns than full NPs (topic shift 30/54; focus position 18/33), while the L2 learners used substantially more full NPs than pronouns (topic shift 25/31; focus position 22/28). In the few instances of topic continuity, both groups used mostly pronouns (NSs 6/6; L2 learners 3/5).

Among the six NSs who made 10 or more references at D4, five used lexical REs and names for between 44% and 64% of these references. The exception was Vicky, who used pronouns exclusively for her 11 references. Among the L2 learners, most used lexical REs and names for more than 60% of references, including three speakers who used these forms exclusively (17 occasions in total). The only exceptions were Anming and Bojing, who used pronouns for half of their references (12 in total).

### *Accessibility D3*

At D3, low-accessibility markers (definite descriptions and names) dominated both the NS and L2 data; nevertheless, pronouns remained relatively frequent in the NS retellings (25.8%) but substantially less so (6.9%) in the L2 retellings; no zeros were used by either group. The decrease in pronoun use was significant for both the NSs,  $\chi^2(1) = 10.96, p = .0009$ , odds ratio = 2.94,  $N = 170$ , and the L2 learners,  $\chi^2(1) = 4.3, p = .038$ , odds ratio = 3.22,  $N = 141$ . The use of lexical NPs and names differed significantly by group,  $\chi^2(1) = 7.81, p = .005, N = 124$ , with the L2 learners being nearly five times as likely to use these forms (odds ratio = 4.68); as at D4, this is perhaps best discussed in terms of the L2 learners tending to be more explicit rather than overexplicit.

For both groups, the majority of references at D3 involved topic shifts (NSs 41/66; L2 learners 29/54), and only one reference (by a L2 learner) involved

topic continuity. For the NSs, pronoun use was fairly evenly distributed across the topic/focus contexts (topic shift 10/41; topic to focus 1/1; focus 7/22). The four L2 uses of pronouns occurred in the context of topic continuity (1/1), topic shift (2/27), and focus (1/24). Based on a one-tailed Fisher Exact Probability Test, there was no significant relationship in the L2 data between main/minor character and NP selection at D3 ( $p = .634$ ). As only four pronouns were used at D3 (each referring to main characters), no statistical analyses were conducted.

#### *Accessibility D2, D1, and D0*

At D2 and below, the NS and L2 groups relied heavily on lexical NPs and names, with no zeros, very few pronouns, and (at D2 only) a small number of demonstrative forms. Due to the limited number of tokens and close similarities across the three contexts, these categories have been conflated for the purposes of the statistical analyses. Results of a one-tailed Fisher Exact Probability Test revealed a nonsignificant relationship between NP selection and participant group ( $p = .48$ ). In terms of individual variation, it was notable that Bojing used pronouns for three of his five references at D2, suggesting a tendency toward underexplicitness; no other L2 learners used pronouns in this accessibility context. While there were also isolated occurrences of pronoun use in the NS data at D2 and D1, these appeared infelicitous and perhaps resulted from occasional misjudgements during unplanned speech.

#### *Main and Minor Characters*

Because the coding system applies weighting to character centrality, it is important to consider whether the L2 findings reflect nonresponsiveness to the accessibility effects that apply to main characters. This can be examined by removing the additional weighting applied to Chaplin and the girl. This means comparing main characters coded D6 with minor characters coded D5 (which are referred to as context D5a) and major characters at D5 with minor characters at D4 (context D4a). At D5a, the association nevertheless remains statistically significant,  $\chi^2(1) = 11.76, p = .0006, N = 173$ , with L2 use of high-accessibility markers being nine times more likely to be used for minor characters; at D4a, L2 use of high-accessibility markers was also more common for minor characters although the association was nonsignificant,  $\chi^2(1) = 1.18, p = .277, N = 104$ .

#### *Individual Variation*

To briefly summarize, overall there was considerable consistency in NP selection by the NS participants. The major exception was Vicky, who was notably less explicit than any other participant, using pronouns and zeros exclusively in accessibility contexts D4 and above. A possible explanation could be that

frequent pronominalization represents a feature of Vicky's sociolect, as has been reported for some social groups (Bernstein, 1971; Hawkins, 1973). If so, it is unclear which elements of her socially constructed identity would be relevant, although a potentially relevant biographic detail is that Vicky had recently relocated from a relatively distant and remote rural area.

Among the L2 participants, there was also considerable overall consistency, but this was coupled with more notable variation. All L2 learners produced overexplicit NPs, and eight appeared much more explicit than any NS participant. The two exceptions were Jingfei and Bojing. Jingfei was substantially overexplicit only at D5 and only on occasion at D6 and D7, while Bojing appeared largely targetlike at contexts D4 and above. However, Bojing also produced pronouns at D2 (the only L2 learner to do so), which could suggest a tendency towards underexplicitness. The most frequently overexplicit participants were Jiao and Tian. Although Jiao was only once overexplicit at D7, she seldom used pronouns and zeros in other contexts. At D6 for instance, nine of her 11 references were with low-accessibility markers. Tian was consistently overexplicit, and this included using low-accessibility markers for approximately 50% of references in contexts D5–D7.

#### *Topic and Focus Contexts*

To briefly summarize the NS data, at D5 and above speakers mostly used pronouns/zeros irrespective of whether the referent represented a continuing or shifting topic or was in focus position; full NPs were most frequent in the context of topic shift, where they represented 19.1% of the 131 references, compared to 2.3% for topic continuity and 5.0% for referents in focus position. Irrespective of topic/focus context, there was an overall tendency for the use of pronouns at D4, and a tendency for the use of full NPs at D3 and below.

For the L2 learners, the figures reveal evidence of overexplicitness in each context. This was particularly so in topic shift contexts at D5 and above, where full NPs accounted for the majority of references (65.8%; NSs = 19.1%) and also in focus positions where they accounted for almost half the references (43.7%; NSs = 5.0%). The only context in which high-accessibility markers dominated was for continued topics, although at 12.4%, this was still significantly higher than the 2.3% used by the NSs,  $\chi^2(1) = 15.72$ ,  $p < .0001$ , odds ratio = 6.13,  $N = 382$ . Few instances of topic continuity occurred at D4 and below for either group. In short, then, there was a tendency for L2 overexplicitness in all topic/focus contexts, but the distinction between continuing topics and noncontinuing topics proved relevant, with overexplicitness being much more frequent in the latter.

Illustrative examples of these recurring patterns in overexplicitness from the L2 data are presented below, with the accessibility of the referent recorded in superscript. In Excerpt 1, the gamin is the topic of both the first and second propositions and, as was typical in such cases, was referred to with a pronoun in the latter. The topic shift in the third line (here involving the focus of the previous proposition) appears overexplicit (in this and other excerpts, superscripted values refer to accessibility, Ø indicates zero anaphora, and numbers in parenthesis indicate seconds of silence):

Excerpt 1: Jingfei and Abby (topic continuity and topic shift)

J:           the girl was running away,  
              and she kn- ah knock into Charlie Chaplin,<sup>D1</sup>  
              and Charlie Chaplin<sup>D5</sup> actually was very helpful.

Excerpt 2 presents an example of apparent overexplicitness in topic-to-focus shift. Chaplin moves from topic position in the first proposition to the focus of the second:

Excerpt 2: Bojing and Seth (topic to focus)

B:           he er Charlie Chaplin<sup>D4</sup> said “I did!”  
              so so the policeman catch the catch the Charlie Chaplin<sup>D6</sup> to go  
              to the police (2.0) to jail?

Excerpt 3 illustrates the tendency for the L2 learners to use low-accessibility markers for referents in focus position and for this to occur irrespective of whether the topic shifted (line 2) or was continued (line 3).

Excerpt 3: Shu and Otis (focus position)

S:           so the policeman<sup>D1</sup> um ran after the lady<sup>D5</sup>  
              and Ø<sup>D5</sup> caught the la- the young lady<sup>D5</sup> um at last,  
              and Ø<sup>D5</sup> send the young lady<sup>D6</sup> to the tr- truck.

### Qualitative Analysis

Also relevant to issues of accessibility marking are the results of a qualitative analysis revealing evidence of pronoun avoidance in one particular telling. Kang made more than twice as many pronoun errors as any other participant (use of *he/him* for *she/her*; 11 instances, 22% of all pronouns used). One was self-initiated and self-repaired, two repairs were initiated by the hearer (Raquel), and eight remained unrepaired; in addition, Raquel sought clarification on one further occasion (apparently suspecting an error). As the retelling progressed,



Kang more frequently used names and descriptions in the types of accessibility contexts where he had previously used pronouns. This change in Kang's referring behaviour appears to have followed the hearer-initiated correction in Excerpt 4 and may have been triggered by it (text in square brackets indicates overlapping speech, a dot within parentheses indicates a very short pause, a dash indicates cut-off, and capitalization indicates voiced emphasis):

Excerpt 4: Kang and Raquel

- R: so where is Chapman?, he's just (.) walking [on the street?]  
 K: [w- w- walking] on the street, ah when when the beautiful lady  
 (.) mm, (.) oh, he – she is very (.) ah hangry (.)  
 R: hungry?  
 K: uh uh HUNGrY,  
 R: oh  
 K: hungry, he wa- he was very hungry, and er (.)  
 R: SHE, or HE?  
 K: she.

By bringing attention to the pronoun error, Raquel both interrupted the flow of discourse and explicitly prompted Kang to clarify his meaning. Both of these outcomes are dispreferred in L1 conversation (Auer, 1984; Schegloff, Jefferson, & Sacks, 1977) and represent a face threat to Kang (Tzanne, 2000). Prior to this exchange, Kang had felicitously used pronouns and zeros for all six references to persons with accessibility D5 or more; after the repair, 40% (14 of 35) of references at D5 or higher were overexplicit (lexical REs and names). Similar results were found for references with accessibility D4. Some examples of apparent pronoun avoidance from this retelling are presented in Excerpt 5 (underlined):

Excerpt 5: Kang and Raquel

- K: the old lady ah didn't tell the worker about . er . who- . er stolen the bread and after this time, old lady told the worker about this uh, and . and the worker just run away.

## Discussion

In this study, the issue of overexplicit L2 reference was explored by coding for accessibility context, which allowed for an analysis of the distribution of NP types across eight degrees of accessibility. The first goal was to establish whether infrequent L2 use of pronouns and zeros could legitimately be

characterized as overexplicitness or whether it resulted from L2 learners generating fewer appropriate contexts for their use. The second goal was to consider which previously discussed hypotheses best account for the incidence and frequency of overexplicit NPs. In relation to the first goal, the following research questions were posed:

1. To what extent is the accessibility of characters referred to in the NS narratives matched in the L2 narratives?
2. To what extent do any such observed differences account for between-group variation in the frequency of pronoun and zero use?

Regarding the first research question, the present findings do provide support for Hendriks's (2003) suggestion that L2 learners may construct discourse in a nontargetlike manner that has a bearing on the use of pronouns and zero anaphora. In particular, the L2 learners made substantially more references to entities with the highest degree of accessibility (D7) and tended to retell the narrative with more equal attention to both main characters compared to the NSs' tendency to present more details relating solely to Chaplin. Consequently, it could be misleading to measure overexplicitness through straightforward comparisons of the relative number of pronoun and zero tokens in NS (71.0%) and L2 (41.8%) data. However, in the present data, it is not the case that the L2 learners created substantially fewer contexts for the use of pronouns and zeros: A very similar proportion of NS (66.5%) and L2 (62.8%) references were at accessibility contexts D5–D7 where high-accessibility markers appear to be overwhelmingly preferred. Rather, the main difference to emerge was within this high-accessibility range. Specifically, the L2 learners made a substantially greater proportion of references at D7 (i.e., to the most highly accessibility entities) than did the NSs, with the latter making more references to slightly less accessible entities (D6 and D5). If anything, rather than accounting for fewer L2 uses of pronouns and zeros, this finding could be interpreted to predict slightly greater L2 use of these forms. Therefore, in relation to the second research question, there appear to be strong grounds to reject the hypothesis that relatively infrequent L2 use of high-accessibility markers reflected fewer references to highly accessible referents. Consequently, it does appear appropriate to describe these L2 narratives as being characterized by overexplicit reference.

It is also worth noting that all of the L2 participants used overexplicit NPs, albeit with variations in frequency. Although the present data includes only 10 participants, when considered in light of previous studies (e.g., Gullberg, 2006; Chini, 2005; Lumley, 2013), this supports the suggestion that overexplicitness is characteristic of intermediate learner varieties. Also of interest are the

findings for the one L2 participant (Bojing) who appeared to err slightly toward underexplicitness. Although a number of studies have reported underexplicit zeros, there appears to have been little previous evidence of intermediate-level speakers using underexplicit pronouns. This finding was made possible through coding for multiple accessibility contexts, and it may be that in previous studies the presence of underexplicitness went unnoticed due to a focus on broader distinctions (e.g., reference maintenance and reintroduction). This raises a question for further research, as it is unclear to what extent the findings for Bojing represent an occasional anomaly or an important variation in the general tendency for overexplicitness. Longitudinal studies could reveal whether the apparent progression from overexplicitness to targetlike speech is perhaps punctuated by late-stage phases of underexplicitness.

The second goal of the study was encapsulated in the following questions:

1. To what extent is there evidence of L2 overexplicitness and underexplicitness across a range of accessibility contexts?
2. To what extent does this distribution support current theories of overexplicitness in L2 reference?

Two sets of findings appear relevant to accounting for overexplicitness: the distribution of NP types by accessibility and topic/focus contexts and, within higher-accessibility contexts, the L2 learner tendency to be overexplicit mainly in relation to main characters. These findings seem most consistent with the clarity-based argument (e.g., Leclercq & Lenart, 2013; Lumley, 2013; Williams, 1988). The L2 learner tendency for overexplicit references to main characters was unexpected. Cross-linguistic studies (including of both Mandarin and English; Hickmann & Hendriks, 1999) have demonstrated that main characters are substantially more likely to be encoded with high-accessibility markers than minor characters, with this preference usually being attributed to the discourse topicality of such referents (e.g., Ariel, 2004; Clancy, 1980; Karmiloff-Smith, 1985). One interpretation of the present finding is that the L2 learners may have prioritized achieving recognition of the main characters, perhaps because maintaining a clear topical chain relating to the protagonists is central to narrative comprehension; this interpretation has some parallel in Morrow's (1985) finding that NS readers prioritize the resolution of such key references.

Also consistent with the clarity-based argument is the finding that there were few overexplicit references to main characters with the highest degree of accessibility (D7), despite frequent overexplicitness elsewhere. Furthermore, the decreases in accessibility represented in the shift from D7 to D6 and from

D6 to D5 were each associated with significant decreases in L2 use of pronouns and/or zeros but only modest, statistically nonsignificant decreases in the NS data. A plausible interpretation of these findings is that only for the most accessible entities did the L2 learners trust in the use of mostly procedural information (encoded in zeros and pronouns) to facilitate recognition. This may particularly be the case for Mandarin speakers, who may not trust gender marking to distinguish otherwise ambiguous referents due to the absence of such marking in (spoken) Mandarin pronouns.<sup>13</sup> Where the protagonist was a less clear-cut referential centre of attention, it appears the L2 learners tended to opt for NPs that encode greater conceptual information, perhaps at the expense of more felicitous accessibility marking. In the previous L2 studies reviewed, such evidence has not been available, as the analyses have focused on single factors that do not allow for multiple distinctions in shades of accessibility.

Overexplicitness across differing topic/focus positions also appears consistent with the clarity-based argument. As topics are generally more likely to be continued than discontinued, it may be that the L2 learners responded to a general expectation of continuity by opting to clearly mark discontinuity (topic shift and topic to focus). For referents in focus position, the opposite may be true: As the referents in focus position frequently change, speakers may opt to explicitly clarify each referent. Processing load may also play an important role as shifts between topic and focus require switching between subject and object pronouns, while topic continuity enables a single pronoun type to be maintained.

In relation to the cognitive load and error avoidance theories of overexplicitness, the most problematic findings may be the effect of main and minor characters; it is not immediately clear how either theory could account for this finding. Elsewhere, however, there is some support for the suggestion that overexplicitness stems from error avoidance. This evidence relates specifically to the participant (Kang) who appeared to begin avoiding pronouns midway through his retelling following a hearer-initiated repair relating to *he* or *she*. Overall, however, the avoidance hypothesis does not adequately account for the other findings. Indeed, the L2 participants used high-accessibility markers extensively, with pronouns being the most frequently used RE type of all (38.4% of all forms used) and zeros being the third most frequent. At accessibility D7, pronouns (66.7%) and zeros (17.1%) accounted for the overwhelming majority of the 123 references by the L2 participants. Furthermore, pronoun avoidance creates its own challenges and, indeed, Lang (2010) has speculated that Chinese learners actually avoid English articles by opting for

pronoun use. It is also worth emphasizing that Kang's eight uncorrected pronoun errors account for nearly half of all such L2 errors in the data. Overall, then, it seems that pronoun avoidance is probably a relatively minor factor in these data although it may play a more substantial role for some individual speakers.

In relating the present findings to previous studies, a picture begins to emerge in which probably no single factor accounts for overexplicit reference. The current study indicates support most strongly for the influence of a clarity-based strategy, but this should be tempered with acknowledgement that cognitive load does trigger overexplicitness even in NS speech (Arnold, 2008) and is likely to be a substantial factor in L2 speech where the load will almost certainly be higher (Gullberg, 2006). Additionally, source-language influence is known to be particularly apparent when it involves new NP types or multiple inflections, as required in many pronoun systems; the present findings support the suggestion (e.g., Hendriks, 2003) that errors arising from the use of such forms may prompt avoidance for some speakers.

### **Limitations and Suggestions for Future Research**

The first main limitation of the present study is the Accessibility Theory coding system, which does not operationalize all factors affecting accessibility, and whose weightings are merely a best estimate. Further refinement of this system and application to a wider range of both NS and L2 data may prove fruitful for exploring theories of reference and developmental pragmatics. As a starting point for further refinements, it may be useful to consider incorporating thematic roles and to explore whether it would be appropriate to reduce the competition effect of referents in subordinate clauses. A reduced weighting for referents in topic shift contexts (perhaps  $-1$ ) might also be appropriate given that topic shifts accounted for the majority of full NPs used by NSs at D5.

In relation to the data, although the number of references is suitable for the statistical analyses, these were drawn from a limited number of retellings at one competency level. Replication with a larger group of participants at multiple proficiency levels could therefore prove enlightening. For instance, unlike the other participants in this study, Bojing appeared to err toward underexplicitness, and it remains unclear to what extent L2 learners with a similar tendency may be represented in larger cohorts. A suggestion for future research is the use of an elicitation task that requires the reintroduction of minor characters following episode boundaries and lengthy sequences of intervening events. This would elicit references to characters with lower accessibility than occurred in this study, perhaps shedding further light on the issue of overexplicitness.

## Conclusion

The present study confirms previous claims that overexplicit references are a feature of intermediate/advanced interlanguage, while providing additional detail about the contexts in which overexplicitness occurs. The present findings appear most strongly to support the hypothesis that the clarity principle plays an important role in overexplicitness, perhaps to compensate for other nontargetlike features of the participants' interlanguage (Hendriks, 2003) or as a cautious approach when learning the accessibility range of REs or perhaps simply because learners find it successful. The clarity hypothesis also suggests that a common principle applies not only to overexplicit anaphors, but also to overexplicit referent introductions that can take place over multiple clauses or utterances (Ryan, 2012, 2015) and perhaps even other types of speech act for which learners are known to be unnecessarily verbose.

If the avoidance of communicative breakdowns is a primary motivation for overexplicitness, then this also suggests an alternative account of how L2 learners will eventually progress to a stage of targetlike RE use, based on general pragmatic principles. Specifically, as general language competency increases and breakdowns decrease, the tension between Gricean principles of economy and clarity may force a decrease in overexplicit REs and other redundant forms of communication. As Levinson (2000) argues, a "bottleneck" exists in oral communication, in which a competent speaker's acoustic production of speech is usually much slower than their ability to plan the utterance and to the audience's ability to comprehend it. Undoubtedly, this bottleneck means that unnecessarily slow, redundant, or overexplicit speech can be frustrating for both the speaker and hearer, and this could prove to be a powerful force for the use of economical referring expressions by advanced adult L2 learners.

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## Notes

- 1 Although the simplified order of NP types follows Ariel (1990), Figure 1 is not intended to accurately represent the range of accessibility that each form maps onto nor the extent to which NP types have overlapping ranges.
- 2 Others have focused on single factors known to contribute to accessibility, such as the narrative centrality of a character (Kang, 2004) and episode boundaries (Tomlin, 1990), yet these appear to be a substantially less reliable way of predicting NP choice in L1 speech than the sum of multiple weighted factors (Ariel, 1990, 1999; Lumley, 2013; Toole, 1996).
- 3 In the Givenness Hierarchy, "each of the cognitive statuses . . . entails all lower statuses," meaning that "a particular form can often be replaced by forms which require a lower status" (Gundel, Hedberg, & Zacharski, 1993, p. 294).

- 4 In topic-prominent languages, the topic (informally, “what the sentence is about”; Li & Thompson, 1981, p. 15) comes first in an utterance, framing how the remainder of the utterance is interpreted. How this contrasts with English is most clearly observed when the topic differs from the grammatical subject, such as in the translated “That dog, I have already seen” (Li & Thompson, p. 86).
- 5 The focus is the part of the clause that presents information about the topic.
- 6 Crosthwaite’s analysis focuses on the categories subject and nonsubject, corresponding approximately to the topic and focus in the present study.
- 7 Corresponding approximately to the category of topic to focus adopted in the present study.
- 8 My thanks to an anonymous reviewer for suggesting this modification to the coding system.
- 9 The coding system also allows for scores of –D1 where the antecedent of a minor character appears in a previous episode; however, in the *Modern Times* narrative each minor character appears in just one episode.
- 10 The coding system also allows for a score of D8 for the second of two references to a highly accessible entity occurring in a single clause. In practice, however, there were just three such references in the NS data (from two speakers) and five in the Chinese L2 data (two speakers), and each was expressed with a pronoun. These limited data are not further considered here.
- 11 Cramér’s  $V$  is reported because the odds ratio procedure produces a computational error where zero events are observed. Use of a zero-cell correction of .5 produces odds ratio = 19.71.
- 12 A chi-square test was inappropriate for this analysis as two of the expected cell frequencies in the contingency table were less than five.
- 13 My thanks to an anonymous reviewer for this insight.

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### Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's website:

**Appendix S1.** Coding Protocol for Persons with Co-Textual Antecedents.

**Appendix S2.** Coding Examples and Notes.