1. Introduction

There are two prominent models in the field of sentence production: the Audience Design Model and the Speaker-internal Constraints Model. The Audience Design Model (Clark & Murphy, 1982; Temperley, 2003) posits that speakers tailor their utterances to the audience for the ease of comprehension, using ambiguity-avoidance devices or providing cues for difficult structures. Evidence for the Audience Design Model mainly comes from studies on the choice of referential expressions (Arnold, Eisenband, Brown-Schmidt, & Trueswell, 2000; Arnold & Griffin, 2007). These studies find that speakers use gender-marked pronouns more often when there are two characters of different genders than when there are two characters of the same gender, suggesting that speakers choose referential expressions accordingly to help hearers identify the referent efficiently.

In contrast, the Speaker-internal Constraint Model (Lindblom, 1990; Ferreira & Dell, 2000) proposes that speakers produce more accessible words or syntactic structure first, in order to minimize their production efforts and buy time to plan more difficult linguistic materials (Race & MacDonald, 2003; Arnold, Wasow, Asudeh, & Alrenga, 2004). Evidence for the Speaker-internal Constraint Model mainly comes from availability effects in a wide range of structures involving order of mention (Bock, 1982, 1986, 1987). Recently, Ferreira & Dell (2000) investigated the use of optional complementizers “that” in English relative clauses (RCs). They failed to find ambiguity-avoidance effects, as speakers did not show the tendency to insert “that” in ambiguous reduced RCs. Instead, they found that speakers tended to omit the optional “that” if the linguistic information after “that” was mentioned before, thus lending support to the availability hypothesis.

Both the Audience Design Model and the Speaker-internal Constraints Model have supporting evidence from English, thus more research is needed from other languages. Chinese relative clause construction in conjunction with the demonstrative classifier phrase stands as a good test case to distinguish these two models, as detailed below.

1.1. Flexible Ordering of Demonstrative-Classifiers in Chinese Relative Clauses

Chinese RC construction is typologically unique, because it combines the (S)V0 word order and noun-final properties (Greenberg, 1966; Dryer, 1994). Chinese RCs are head final (or pre-nominal), with the head noun following the RC (1), whereas English RCs are head initial (or post-nominal), with the head noun preceding the RC (2).

(1) head-final RC in Chinese

\[ [\text{RC } \text{xingtan yujian de}] \text{nuehai star-hunter meet DE girl} \]

(2) head-initial RC in English

the girl \[ [\text{RC that star-hunter met}] \]
Other than the head-final properties, Chinese RC does not have relative pronouns as in English. The relative clause marker, DE, appears at the end of the clause, and is located right before the head noun, as illustrated in (1).

With these typologically distinctive properties, Chinese RC has become a focus of research among psycholinguists in recent years. Existing work on Chinese RC processing has mostly focused on two most common types of RC cross-linguistically (cf. Keenan & Comrie, 1977), namely, subject-extracted RCs (SRCs) and object-extracted RCs (ORCs). In SRCs (3), head nouns are extracted from the subject position; in ORCs (4), head nouns are extracted from the object position.

(3) Subject-extracted RCs

\[ [\text{RC} \text{ yujian xingtan de}] \text{nuehai zhangde hen piaoliang} \]
meet star-hunter DE girl look very beautiful
‘The girl who met the star-hunter looks very beautiful.’

(4) Object-extracted RCs

\[ [\text{RC} \text{ xingtan yujian de}] \text{nuehai zhangde hen piaoliang} \]
star-hunter meet DE girl look very beautiful
‘The girl whom the star-hunter met looks very beautiful.’

Moreover, Chinese is known as an isolating language with little morphological inflections. One exception is its numeral classifier system, in which a classifier must agree with its modified noun phrase. Related to the RC construction, the classifier-noun agreement implies that a classifier must be semantically congruent with its head noun.

Crucially related to the present research, when a demonstrative-classifier (DCL) sequence co-occurs with a RC, the DCL can occur either before or after the RC, forming two constructions: pre-RC classifier construction (5) in SRC, or post-RC classifier construction (6) in ORC.

(5) Pre-RC DCL in SRC

\[ \text{na-ge} [\text{RC} \text{ yujian xingtan de}] \text{nuehai zhangde hen piaoliang} \]
that-CL meet star-hunter DE girl look very beautiful
‘The girl who met the star-hunter looks very beautiful.’

(6) Post-RC DCL in ORC

\[ [\text{RC} \text{ xingtan yujian de}] \text{na-ge nuehai zhangde hen piaoliang} \]
star-hunter meet DE that-CL girl look very beautiful
‘The girl whom the star-hunter met looks very beautiful.’

The flexible word order of DCL in Chinese RCs stands as a good case to detect the two models, because they make different predictions regarding the distribution pattern of DCL positioning in RCs.

1.2. Contrastive Predictions Made by the Two Models

When applied to Chinese sentences (5-6) as above, the Audience Design Model and the Speaker-internal Constraints Model make distinct predictions on DCL positioning in RCs of different extraction types. Let’s first examine the predictions made by the Speaker-internal Constraints model, which posits that speakers tend to produce whatever is easiest first in order to plan more difficult linguistic units. According to Hawkins’ (1983) Heaviness Serialization
Principle\(^1\), RCs are longer or heavier in syntactic weight than demonstratives or numerals. Thus, DCLs should be easier than complex RC structure, and be available first for speakers to produce, regardless of the extraction type of RC. Therefore, the Speaker-internal Constraints Model predicts no differences in DCL positioning between (5) and (6).

Now we turn to the Audience Design Model, which posits that speakers tend to tailor their utterances to the audience for the ease of comprehension. They may use ambiguity-avoidance devices or other strategies to help hearers overcome comprehension difficulties brought by certain syntactic structures. It argues that speakers organize their utterances in ways that can provide their listeners with more cues in order to help listeners better understand their words and phrases. Thus the Audience Design Model predicts that speakers would help listeners to pre-build RC structure by providing early cues, which in this case are the DCLs. Therefore, speakers tend to use pre-RC DCLs.

However, in ORCs, pre-RC DCLs might cause structural ambiguity resulted from a classifier congruent with both local and head nouns, as in the case of (7), or semantic clash incurred by the incongruence between a mismatching classifier and a local noun, as in the case of (8).

(7) Pre-RC DCL in ORC (structural ambiguity)

\[
\text{na-ge [rc xingtan yujian de] nuchai zhangde hen piaoliang that-CL\text*_human star-hunter meet DE girl look very beautiful} \\
\text{‘The girl whom the star-hunter met looks very beautiful.}
\]

(8) Pre-RC DCL in ORC (semantic clash)

\[
\text{na-kuai [rc baoan duokai de] shikuai diaozai dishang. that-CL\text*_stone/human guard dodge DE stone fall ground} \\
\text{‘The stone that the security man dodged fell to the ground.}
\]

Taken together, the Audience Design Model predicts an asymmetric pattern of DCL positioning: DCLs tend to occur at the left edge of SRCs (5), but at the right edge of ORCs (6), in order to avoid potential ambiguity (7) or semantic clash (8).

1.3. Review of Existing Work

Existing work on the frequency of different types of RCs in Chinese or the distribution of DCLs in Chinese RCs has almost exclusively focused on written corpora (Tang, 2007; Pu, 2008; Wu, 2009; Ming & Chen, 2010). A unanimous finding was that SRCs occur more frequently than ORCs, and that classifiers tend to occur at the left edge of SRCs (i.e. in pre-RC positions), but at the right edge of ORCs (i.e., in post-RC positions) (Tang, 2007; Pu, 2008; Wu, 2009; Wu, Kaiser, & Andersen, 2010; Ming & Chen, 2010).

However, very few studies examined spoken corpus, to our best knowledge perhaps only two — Tang (2007) and Pu (2008), each with a small portion of spoken corpus data. Apparently, more research needs to be done to clarify whether the pattern found in written corpora can be extended to spoken corpora.

Furthermore, few of related studies have investigated the distribution of classifiers in RCs. Existing few studies exploring this issue suggest that mismatching classifiers may induce great lexical disruption in accessing the local noun (Hsu, Phillips, & Yoshida, 2005), but given facilitative discourse contexts, they could provide cues for ORC structure-building (Wu, Haskell, & Andersen, 2006; Hsu, 2006; Wu, Kaiser, & Andersen, 2009). Evidence from the Chinese Treebank 5.0 corpus data, however, shows that there is virtually no token of

---

\(^1\) Specifically, the Heaviness Serialization Principle states as follows: 
\[
\text{Rel > Gen > Adj > Dem/Num ( “>” means longer or heavier than)}
\]
classifier mismatch-match configuration in ORCs in natural language use (Wu, 2011), suggesting that the potential lexical disruption effect induced by a mismatch between the classifier and the adjacent noun might be deliberately avoided in the written news corpus.

However, it remains unknown whether the finding of Wu’s news corpus study can be generalized to oral speech because, presumably under great time pressure, speakers may be less listener-oriented or altruistic than writers or editors in avoiding potential lexical disruption (e.g., Mims & Trueswell, 1999; Ferreira & Dell, 2000).

In sum, previous studies on the correlation between DCL positioning and RC-extraction types were either conducted on rather small oral data sets (Tang, 2007; Pu, 2008) or exclusively on written data (Wu, 2009; Ming & Chen, 2010). To fill the research gap, we conducted a spoken corpus investigation and two word-based sentence production experiments.

1.4. Organization of the Paper

The present study aimed to investigate the distributional pattern of DCL positioning in Chinese RCs and its underlying reasons from the perspective of sentence production. Specifically, we use both spoken corpora and behavioral data to (i) further our understanding of how native speakers of Mandarin Chinese process RCs, and to (ii) evaluate and refine currently available accounts of language production models in general.

The rest of the paper is organized as follows. In Section 2, we present a spoken corpus investigation of classifier positioning in different RC extractions, and offer possible reasons underlying the distribution pattern from the perspective of language production strategies. In Section 3, we report two experimental studies to verify the distribution pattern obtained from the spoken corpus and to further test the influence of animacy in the DCL-RC processing. In Section 4, we summarize the major findings, and discuss the implications of the spoken corpus study and the experimental study.

2. A Spoken Corpus Study

The purpose of the spoken corpus analysis was to examine the distribution pattern of DCL positioning in RCs, and to see whether the pattern found fits the predictions of the two models.

2.1. Method

The spoken corpus consisted of five volumes of transcribed texts (totaling 309,848 words) from a Chinese live TV-show similar to Oprah Winfrey’s talk show — Lu Yu You Yue (‘Appointment with Luyu’).

A total of 356 relative clauses were extracted, and manually coded for the following factors: (1) presence vs. absence of the demonstrative + Classifier (DCL) sequence; (2) head noun’s syntactic role in the main clause (5 types); (3) extraction types of RC (subject- or object-extracted); (4) position of DCL sequence (pre-RC or post-RC); (5) RC-internal verb types (transitive, intransitive, ditransitive).

2.2. Results and Discussion

Out of 356 RCs, only 128 (or 35.96%) have DCL sequences, in contrast to 228 tokens (or 64.04%) that do not contain classifiers. Given our interests, the discussions below focus on those 128 target RCs.

Taking into consideration of RC extraction types, out of 128 DCL-RC co-occurring tokens, 100 (78.13%) are SRCs, and 28 (21.88%) are ORCs. The difference is statistically
significant \((p < .0001)\). This result replicated the pattern reported in previous corpus studies, written or spoken, that SRCs occur more frequently than ORCs (Hsiao & Gibson, 2003; Tang, 2007; Pu, 2008; Wu, 2009; Ming & Chen, 2010).

Figure 1 shows the distribution pattern of DCL positioning in SRCs and ORCs. As we can see from Figure 1, there is an asymmetric distribution of classifiers as a function of RC extraction types: Out of 100 SRCs, 85 (85\%) occurred in pre-RC positions and 15 (15\%) in post-RC positions. The difference is statistically significant \((p < .0001)\). In contrast, out of 28 ORCs, 20 (71.43\%) occurred in post-RC positions, whereas only 8 (28.57\%) in pre-RC positions. The difference is again statistically significant \((p < 0.05)\). Thus, SRCs prefer to occur in pre-RC positions, and ORCs in post-RC positions.

![Figure 1 Distribution pattern of DCL positioning in SRCs and ORCs](image)

The most important finding in the current corpus study is that the distribution pattern clearly demonstrates that SRCs tend to have pre-RC classifiers, whereas ORCs tend to have post-RC classifiers in Chinese. This asymmetric classifier positioning pattern in SRCs and ORCs suggests that speakers in the TV show were considerate enough, designing their utterance by taking into consideration of listeners. Particularly in ORCs, speakers deliberately avoided pre-RC classifier to ease the lexical retrieval difficulty for their listeners. This pattern is predicted by the Audience Design Model, but not by the Speaker-internal Constraints Model.

It is worth noting that the asymmetrical distribution pattern of DCL positioning in SRCs and ORCs found in the current spoken corpus replicates the result of previous written corpus studies (Tang, 2007; Pu, 2008; Wu, 2009; Ming & Chen, 2010). The strikingly similar distribution pattern found in corpora of different sources and genres sheds light on the common processing mechanism underlying the human language.

Although the spoken corpus analysis proves to be a useful tool to uncover the correlation between DCL positioning and RC-extraction types in natural utterance production, the conclusion may still not be readily extended to a general population due to the small size of the current corpus. It is also possible that preparations before live TV interviews may have influenced the final product of the current spoken corpus in ways that do not occur in natural setting.

To partly address these concerns, two real-time experiments were designed using oral sentence production tasks.

3. Two Sentence Production Experiments

Two on-line sentence production experiments were conducted to determine whether the results of the corpus analysis could be extended to oral production. Experiment 1 manipulated
the RC types, keeping both head and embedded nouns animate. To eliminate the potential ambiguity incurred by the double animate configuration, Experiment 2 crossed RC types with contrastive animacy configuration (i.e., inanimate head, animate embedded noun). The findings of these two experiments directly tested the predictions made by the two language production models.

3.1. Experiment 1

3.1.1. Method

3.1.1.1. Participants

Forty-two students from a University in Shanghai participated in the experiment. All were native speakers of Mandarin Chinese and they were paid for their participation.

3.1.1.2. Materials and Design

Twenty-four sets of critical sentences were constructed. Each consisted of four components: a DCL sequence (e.g., na-ge ‘that-CL’), an RC (e.g., yujian xingtan de ‘meet star-hunter DE’), a head noun (HN) (e.g., nuehai ‘girl’) and a main clause (MC) (e.g., zhangde hen piaoliang ‘grow very beautiful’). Each set had two RC-type conditions (SRC vs. ORC), as shown in (9a-b).

(9) a. SRC condition

na-ge yujian xingtan de nuehai zhangde hen piaoliang
that-CL\textsubscript{animate} meet star-hunter DE girl looks very pretty
‘The girl who met the star-hunter looks very beautiful.’

b. ORC condition

xingtan yujian de na-ge nuehai zhangde hen piaoliang
star-hunter meet DE that-CL\textsubscript{animate} girl looks very pretty
‘The girl whom the star-hunter met looks very beautiful.’

In addition to the target items, there were 48 filler items. Similar to target items, all fillers were chunked into four components, and their presentation layouts were counterbalanced.

The four components of each sentence were assigned to four rectangular boxes on a visual display (Figure 2). The positions of boxes were fixed on the screen: top, left, right, and bottom. To randomly assign key words into the rectangular boxes—specifically, DCL, HN and RC, we kept the distance between DCL and RC the same as the distance between DCL and HN. Such visual equidistance could minimize the potential effects on mental conceptualization of an utterance from the physical distance between words shown on the display. This resulted in 8 possible versions of visual display.
However, a DCL in the top box would result in a head noun and an RC right below it, left or right. Thus, the linear presentation of words might lead a “visual” participant to simply read them out, namely either DCL-RC (e.g., ‘that-CL meet star-hunter DE’) or DCL-head (e.g., ‘that girl’) sequences. To eliminate positioning confounds and to make the task more challenging, these two versions were excluded, leaving 6 visual layouts in total for further counterbalancing.

3.1.1.3. Procedure

The stimuli are presented to the participants via Paradigm software on the computer screen. The task used in this experiment was similar to that used in Ferreira (1996) and Huang and Kaiser (2011). Participants sat in front of a computer screen and used the space bar on the keyboard to initiate and end trials. The sentences to be produced in each trial were displayed on a laptop, using Paradigm software (Perception Research Systems). Participants’ spoken responses were recorded with a head-mounted microphone.

Each trial began with words presented in four rectangular boxes on the screen. The procedure is like this: the four word chunks were shown on the screen for 4500ms, then they disappeared; at the same time, participants heard a warning tone. They could start to speak out a sentence; once they finished, they pressed the spare bar to proceed to the next trial. If they did not say anything within 20 seconds, the program would go to next trial automatically. It took about 20 minutes to complete the whole experiment.

3.1.2. Responses and Data Coding

Forty-two participants yielded a total number of 1008 responses, including 504 responses for subject-gap condition and 504 responses for object-gap condition. In ORC condition, four null responses were discarded, and due to a script error, ten responses were removed. Thus, 504 responses in SRC condition and 490 responses in ORC condition were included in statistical analyses.

To ensure reliability in transcription, the data recorded were carefully transcribed and were entered into a spreadsheet for coding and analysis. Sometimes participants made two responses for one single trial, however, only the second was reported in the results below because the participants were allowed to correct themselves as long as the time permitted.
An utterance was coded into one of the following three categories:

1. **Perfect** (as expected). The utterance matched the target sentence, without any new or changed words.
2. **Unexpected** (but grammatical). The utterance contained addition, deletion or alternation of words (specifically, two NPs), but still contained an RC with unexpected “exchange errors”.
3. **Wrong**. The utterance was a phrase instead of a sentence, typically a determiner phrase (DP). The utterance also counted as ‘wrong’ if it was not well-formed and semantically unacceptable.

### 3.1.3. Results and Discussion

Given the focus of this study, we only discuss the first category, the perfect responses, because those utterances contain the target structure. There are more perfect (as expected) utterances in the SRC condition than the ORC condition (88.1% vs. 84.7%). In 444 target SRCs, participants overwhelmingly prefer to use pre-RC DCL and were less likely to use post-RC DCL (77.5% vs. 22.5%; \( p < .0001 \)).

In the case of ORCs, we find no preference, though numerically there are a few more post-RC DCLs than pre-RC DCLs (51% vs. 49%). The distribution preference of pre-RC DCL and post-RC DCL in SRC and ORC condition is not clear. However, if we shift our perspective slightly by observing the distribution percentage of SRCs and ORCs in pre-RC DCL and post-RC DCL sentences, we get an asymmetric distribution pattern: in 548 pre-RC DCLs, there are much more SRCs than ORCs (62.7% vs. 37.3%; \( p < .0001 \)), while in 311 post-RC DCLs, there are more ORCs than SRCs (68.1% vs. 31.9%; \( p < .0001 \)). This asymmetry appears to support the Audience Design.

As discussed above, in Experiment 1 we found the expected asymmetric pattern of DCL positioning in SRC condition. However, the asymmetry appears not that distinct in the ORC condition, wherein no significant differences were found between pre-RC and post-RC DCLs. This may be due to the double animacy configuration used in Experiment 1, which rarely occur in natural language corpora (Hsiao & Gibson, 2003; Kuo & Vasishth, 2006; Wu, 2011). It is further noted that RCs with two animate NPs may potentially induce similarity-based interference (Gordon, 2001; 2004). Moreover, Wu, Kaiser, & Andersen (2012) found a late facilitatory effect of contrastive animacy configuration in on-line study comprehension study.

To investigate whether animacy affects DCL positioning in ORCs, Experiment 2 used a contrastive animacy configuration, namely, animate EN and inanimate HN.

### 3.2. Experiment 2

Experiment 2 was designed to verify the results of Experiment 1 and to eliminate the confounding effects might be caused by the double animacy configuration. Predictions are similar to those of Experiment 1. In addition, the Audience Design Model predicts that animacy affects DCL positioning in ORCs, because the lexical disruptions can be avoided by putting DCLs in the post-RC position. However, the Speaker-internal Constraints Model predicts no effects of animacy.

#### 3.2.1. Method

##### 3.2.1.1. Participants

Forty-eight students from a university in Shanghai participated in the experiment. All were native speakers of Mandarin Chinese and they were paid for their participation. They did
not participate in Experiment 1.

### 3.2.1.2. Materials and Design

The materials were constructed in the same way as in Experiment 1, except that in Experiment 2, all the RC HN were inanimate, and the DCL only could modify the RC inanimate HN, but not the RC embedded noun.

The target sets of sentence were mainly adapted from Wu et al. (2012), in which two NPs and RC-verbs are generally well controlled in terms of frequency and plausibility. Some words were modified or changed. Moreover, specific classifiers (e.g., *kuai*) were used for corresponding head nouns. One target example was given below:

(10) a. SRC condition
    na-kuai zazhong baoan de shikuai diaozai dishang  
    that-Cl<sub>stone</sub> hit guard DE stone fell to ground  
    ‘The stone which hit the security man fell to the ground.’

    b. ORC condition
    nakuai baoan duokai de shikuai diaozai dishang  
    that-CL<sub>stone</sub> guard dodge DE stone fell to ground  
    ‘The stone which the security man dodged fell to the ground.’

### 3.2.1.3. Procedure

The procedure was the same as in Experiment 1.

### 3.2.2. Responses and Data Coding

Forty-eight participants yielded a total number of 1152 responses, including 576 responses for subject-gap condition and 576 responses for object-gap condition. In SRC condition, four null responses were discarded. After trimming, 572 responses in SRC condition and 576 responses in ORC condition were included in the statistical analysis. As in Experiment 1, the data were coded in three categories: Perfect (as expected); Unexpected (but grammatical); Wrong.

### 3.2.3. Results and Discussion

Again, we only discuss the perfect responses, as those utterances contain the target structure. In 515 target SRCs, participants overwhelmingly preferred to use pre-RC DCL, and they were less likely to use post-RC DCL (71.5% vs. 28.5%; \(p < .0001\)); in 460 ORCs, they preferred to use post-RC DCL, and were less likely to use pre-RC DCL (33.9% vs. 66.1%; \(p < .0001\)).

Moreover, if we shift our perspective slightly, observing the distribution percentage of SRCs and ORCs from the perspective of DCL positioning, again we get the asymmetric distribution pattern: Out of 523 pre-RC DCLs, there were much more SRCs than ORCs (70.2% vs. 29.8%; \(p < .0001\)), but out of 452 post-RC DCLs, there were more ORCs than SRCs (67.4% vs. 32.6%; \(p < .0001\)). This result lends further support for the Audience Design Model.

Thus in Exp. 2, we found the strong asymmetrical pattern both within RC-extraction conditions and within DCL positioning conditions. The pattern obtained from Exp. 2 is clearer than Exp.1, in which strong preference was only shown within DCL positioning conditions. The difference between the Exp. 1 and Exp. 2 confirmed the influence of HN-EN animacy configuration.
The experimental results of Exp. 2 also confirmed the results of previous written and spoken corpus studies, that is, there has a connection between classifier positioning and RC-extraction types. Moreover, the distribution preference found in the Exp. 2 replicates that of the spoken corpus study as we reported in section 2.

3.3. General Discussion

To summarize, we have two key findings in on-line sentence production experiments. First, there is a correlation between RC-extraction type and DCL positioning: SRCs prefer pre-RC DCL, ORCs prefer post-RC DCL. Second, as shown in Exp.2, animacy configuration modulates DCL positioning.

The pattern got from this experiment clearly demonstrates that there is a significant correlation between DCL positioning and RC-extraction types. In SRCs, the participants prefer to use pre-RC DCL, but in ORCs, they prefer post-RC DCL.

This significant correlation further confirms the Audience Design accounts of language production. According to Audience Design Model, speakers tend to produce pre-RC DCL in SRCs. On one hand, the pre-RC DCL in SRCs can give the speakers more time to construct the upcoming RC structure. On the other hand, pre-RC DCL in SRCs also can help listeners build the upcoming RC structure.

However, speakers would prefer to use post-RC DCL in ORCs. This is because the pre-RC DCL in the ORC condition might bring to listeners great lexical disruption (Hsu et al., 2005) or semantic clash (Wu, 2009) in processing the mismatched HN. Thus speakers preferred to use post-RC DCL to help listeners avoid the possible lexical disruption or semantic clash. Taken together, the distribution pattern of DCL in SRCs and ORCs in Exp. 2 further supports the Audience Design Model.

4. Conclusion

In this study, we presented the results of a spoken corpus study and two word-based sentence production experiments designed to investigate two different issues related to the DCL-RC structure in Mandarin Chinese – DCL distribution pattern and language production models. The most important findings from the spoken corpus study and experiments are summarized in the following:

First, consistent with the earlier findings in the written corpora, DCL positions are asymmetrically correlated to RC types in the present study. That is, pre-RC DCL prefers to occur in SRCs, and post-RC DCL prefers ORCs.

Second, this correlation has been consistently replicated in the two on-line sentences production experiments.

Third, animacy configuration modulates DCL positioning in online RC productions in Mandarin Chinese.

In conclusion, the corpus and behavioral data can be consistently accounted for by the Audience Design Model of language production. That is, speakers tailor their utterance to help their audiences to anticipate intended structure, and to avoid potential ambiguity or lexical disruption in complex structures. The findings of this research will advance our understanding of the Chinese RC processing and the general mechanism that underlies language production.
Reference


