Introduction

Object relative clauses are generally more difficult to process than subject relative clauses
- The lady that visited the banker enjoyed the dinner very much.
- The lady that the banker visited enjoyed the dinner very much.

Difficulty is reduced/eliminated when the embedded NP is pronominal (e.g., Gordon et al., 2001; Reali & Christiansen, in press; Warren & Gibson, 2002)

1st person pronoun reverses SR bias
- The lady that visited me enjoyed the meal.
- The lady that I visited enjoyed the meal.

2nd person pronoun reverses SR bias
- The consultant that called you emphasized the need for additional funding.
- The consultant that you called emphasized the need for additional funding.

3rd person pronoun reverses SR bias
- According to the Taylors, the landlord that telephoned them offered a nice apartment.
- According to the Taylors, the landlord that they telephoned offered a nice apartment.

Frequency?

Reali and Christiansen (in press) argue for a frequency-based account:
- In general, subject relative clauses are much more frequent than object relative clauses
- But, object relative clauses are more frequent when the embedded NP is pronominal
- Pronominal object relative advantage is due to the higher frequency of that + pronoun + verb chunks than that + verb + pronoun chunks

Pronominal object relative clauses are most common in spoken English, especially when the relative clause modifies the subject of the sentence.

Object relative clauses in discourse

Fox and Thompson (1990) argue for a discourse explanation of the prevalence of pronominal object relative clauses in spoken English:
- Referents need to be relevant/grounded to the listener at the point they are introduced
- Inanimate subject of sentence less likely to be grounded (since humans normally discuss themselves)
- Relative clauses are used to make the modified noun phrase relevant by relating it back to a given discourse referent
- Nearly always done via pronoun
- Results in pronominal relative clauses
- Usually referring back to a human (since humans normally discuss themselves)
- Combination of inanimate modified NP and animate embedded NP/ronominal results in object relative clauses

Examples from Switchboard
...the types of music that I don’t like are opera and, uh, screaming heavy metal.
...some of the Nautilus equipment that I started seeing at the one that we used to go to was really interesting.
...and at the same time, the budget he sent to Congress has tax and fee increases

Hypothesis

If Object relative clauses are typically used for grounding the modified NP in the discourse context
And
Subject relative clauses are typically used for other purposes such as supplying additional information about the modified NP
Then
Object relative clauses will incur more of a processing penalty when the embedded NP is not grounded than subject relative clauses – such as in processing relative clauses with full NPs and no preceding context
Object relative clauses will be easier to process when the embedded NP refers back to the contextual topic – such as in the Reali and Christiansen experiments where the referent of the embedded pronoun is either explicitly mentioned (e.g., Taylors) or is easily invoked (e.g., you, I)

Experimental Design

- Participant-paced moving window paradigm
- 2x2 design
- Subject vs. object relative clause
- Appropriate discourse context vs. neutral discourse context
- Sample items
- Appropriate discourse context
  - The banker was friendly. The lady that visited the banker enjoyed the meal.
  - The banker was friendly. The lady that the banker visited enjoyed the meal.
- Neutral context
  - There was a dinner party Saturday night. The lady that visited the banker enjoyed the meal.
  - There was a dinner party Saturday night. The lady that the banker visited enjoyed the meal.

Conclusions

- Providing an appropriate discourse context can eliminate the processing difficulty found in the relative clause region of sentences containing object relative clauses (the same region where Reali & Christiansen found the advantage for pronominal object relative clauses)
- The pronominal relative clause effect may be in part due to the better fit between the typical discourse use of object relatives and experimental contexts in which they appeared
- The typical difficulties found in processing object relative clauses may be in part due to the comparative un-naturalness of the experimental contexts in which they appear
- Subject relative clauses, which typically serve different discourse functions than object relative clauses, may not be affected in the same way