# A Puzzle in Chinese Dative Shift

## Ruixi Ressy Ai
*Harvard University / Monterey Language Institute*
## Jidong Chen
*California State University at Fresno*

This paper investigates the possible alternations between Dative Constructions and Direct Object Constructions in Chinese.[1] It argues that the semantic constraint on such alternations as proposed by Pinker (1989), Gropen et al. (1989), and Rappaport Hovav & Levin (2008) has to be coupled with syntactic constraints associated with the subcategorization framework of the dative verb in the lexicon. While English dative verbs can subcategorize for theme, goal, or benefactive, potential dative verbs in Chinese can only subcategorize for theme or goal. The limited subcategorization framework of these dative verbs reveals that Chinese does have limited argument structure in the lexicon (contra Lin's 2001).

## 1. Introduction

Dative constructions normally involve an agent, a theme, a goal (1a) or a benefactive (1b). The goal and the benefactive are usually after the theme (1):

(1) Dative Construction (DC)
  a.  I sent    a post card    to John.
      <<u>agent</u>   theme          goal>

  b.  I bought    a post card    for John.
      <<u>agent</u>      theme         benefactive>

Sometimes, dative shift (DS) can take place in which the goal or the benefactive can be 'scrambled' to a position in front of the theme and the resulting construction behaves on a par with Double Object Constructions (DOC):

(2) Dative Shift (DS) → Double Object Construction (DOC)
  a.  I sent a post card to John.      → I sent John a post card.

  b.  I bought a post card for John.  → I bought John a post card.

---

[1] "Chinese" is used to refer to Mandarin Chinese in this paper.

Traditionally, a semantic constraint has been proposed on DS: DOC and DC alternation can take place only if there exists an intended (sometimes factual) caused possession between the theme argument and the goal/benefactive argument, i.e., the goal/benefactive argument must be the intended (sometimes the factual) possessor of the theme (Pinker, 1898; Gropen et al., 1989; Rappaport Hovav & Levin, 2008).

In our examples (1-2), goals and benefactives can be both interpreted as recipients. Hence, they are intended possessors of the theme, 'the post card'. In other words, John will end up with potentially or factually owning the post card. Since an intended caused possession between the theme argument, 'John', and the goal/benefactive argument, 'the post card', can be established, DS can take place in (1-2). In cases where the intended caused possession relationship cannot be formed, DS is unlikely to happen in (3-4):

(3) a. I sent the salesman to the devil.
    b.*I sent the devil the salesman.                    (Harley 2003: 37, ex. (14))

(4) a. I sent a post card to Paris.
    b.*I sent Paris a post card.

In (3), the intended caused possession cannot be established as in the idiomatic usage of 'to send somebody to the devil', there is no possession relationship between 'the devil' and that 'someone' such as 'the salesman'. Neither can the intended caused possession relationship be established in (4): the intended caused possessor is inanimate. Hence, it is not a legitimate possessor, which according to our world knowledge, must be minimally [+animate]. [2] The sentence (4b) cannot be grammatical unless you are talking about 'sending a post card to *Paris Hilton*, the great-granddaughter of Conrad Hilton who is the founder of the Hilton empire.

## 2. The Chinese Dative Shift Puzzle

Chinese, in contrast with English, allows verbs that select a goal to alternate between DC and DOC, as in (5a-b), but not a benefactive argument, as in (6a-b). The example (6b), if grammatical, can only be interpreted as "I bought a post card from Zhangsan", in which 'Zhangsan' becomes the source from whom I got the post card. If 'Zhangsan' is considered as the benefactive (i.e., as in (6a)), it is ungrammatical.

---

[2] There are exceptions in the generalization that the intended possessor must be animate, e.g., *give the house a coat of paint* and *give the page a number*. See Melntyre (2006) and Rappaport Hovav & Levin (2008) for further discussions.

(5) V + theme + goal: possible with DS[3]

  a. *Wo   song   le     yi-zhang   mingxinpian   gei Zhangsan.*
    I    send   perf.  one-CL   postcard     to  Zhangsan
    'I sent a postcard to Zhangsan.'

  b. *Wo   song   le     Zhangsan yi-zhang   mingxinpian.*
    I    send   perf.  Zhangsan one-CL    postcard
    'I sent Zhangsan a postcard.'

(6) V + theme + benefactive: impossible with DS

  a. *Wo   mai   le     yizhang    mingxinpian   gei Zhangsan.*
    I    buy   perf.  one-CL    postcard     for  Zhangsan
    'I bought a postcard for Zhangsan.'

  b. *\*Wo mai   le     Zhangsan yi-zhang   mingxinpian.*
    I    buy   perf.  Zhangsan one-CL    postcard
    Intended: 'I bought Zhangsan a postcard.'

In literature, two other interacting constraints have been proposed to account for certain impossibility of the alternation between DC and DOC (Arnold et al, 2000; Davidse, 1996; Givón 1984; Polinsky, 1996; Ransom, 1979; Snyder, 2003; Thompson, 1990, 1995; Wasow, 1997, 2002; Rappaport Hovav & Levin, 2008; inter alia). One is related to the information structure (7a) and the other concerns the prosodic Heaviness principle (7b):

(7) a. Information structure: Given material comes before new materials.
    b. Heaviness: Heavy material comes last.

Take (8a) for example. Since [+human] element is in general treated as 'given' in literature (it bears a closer relationship to us), the DOC construction in which 'Mailer' is put in front of the theme 'an idea for a book' is appropriate. The theme ('an idea for a book') is also 'heavier' than the goal ('Mailer'). Both (7a) and (7b) are satisfied. In contrast, the DC counterpart of (8a) as shown in (8b) is inappropriate. It violates both (7a) and (7b): the given material ('Mailer') does not come before new materials ('an idea for a book') and the heavy material ('an idea for a book') does not come last. The acceptability of (8b) can be significantly improved if we make the goal heavier as indicated in (8c):[4]

---

[3] The following acronyms are used in this paper: CL = classifier, perf. = perfective, Mod = modal particle.

[4] 'Every journalist' is a quantified [+human] element. It does not really count as purely 'given'. So (7a) can also be vacuously avoided in (8c).

(8) a. Nixon's behavior gave *Mailer* an idea for a book.

b. # Nixon's behavior gave an idea for a book *to Mailer*.

c. Nixon's behavior gave an idea for a book *to every journalist living in New York City in the 1970s.*

<div align="right">(Snyder 2003: 35, exx. (47a,b), (48))</div>

But in our Chinese examples, neither (7a) nor (7b) can be ultimately responsible for the ungrammaticality in (6b). Compare (5) and (6). The only difference between them is the verb (*song* 'to send' in (5) versus *mai* 'to buy' in (6)). If constraints in (7) are applied to (5) and (6), it is hard to explain why DS in (5) is acceptable while that in (6) is not as they can both equally satisfy or violate (7).

In this paper, we argue that the solution lies in the verb itself. We will address questions like 'what exactly is the difference between Chinese *mai* ('to buy') and English *buy*? Are they two totally different verbs or not', etc. We argue that the subcategorization framework in the lexicon is responsible for certain (im)possibility of DS and it can be cross-linguistically parameterized.

## 3. The Hypothesis

In general, we propose that the semantic constraint on the alternation of DC and DOC as proposed by Pinker (1989), Gropen et al. (1989) and Rappaport Hovav & Levin (2008) has to be coupled with syntactic constraints associated with the subcategorization framework of the dative verb in the lexicon. Take English dative verb *send* and *buy*, for example. Their subcategorization framework is shown in (9a) and (9b), respectively. They are both verbs (of the category V) that select two internal arguments (a theme and a goal/benefactive). Syntactically, these two arguments are realized as an NP (usu. the theme) and a PP (usu. the goal/benefactive). When projected into narrow syntax, the subcategorization will form a VP in which one internal argument (usu. the goal/benefactive PP) becomes the complement of the dative verb and the other (usu. the theme NP), the specifier of the VP:

(9) a. *send*: V, [ __ NP, PP]
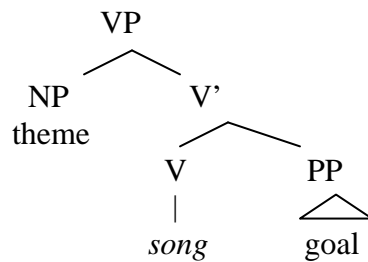   b. *buy*:  V, [ __ NP, PP]

   c.
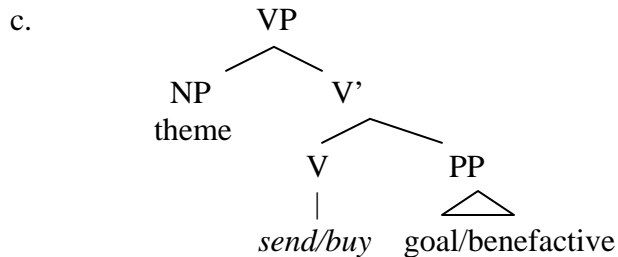
Since both the theme and the goal/benefactive are the core (internal) arguments of the dative verb (i.e., they are both subcategorized by the verb), it can be said that theme, goal and benefactive argument are all 'lexicalized' in English.

For the Chinese examples (5-6), we propose that *song* 'to send' behaves like English *send* and *buy* in that it selects two internal arguments: a theme and a goal, realized syntactically as an NP and a PP, respectively:

(10) Chinese dative verbs:

    a. *song* 'to send': V, [ __ NP, PP]

    b.

```
                    VP
                   /  \
                 NP     V'
                theme  /  \
                      V    PP
                      |    /\
                    song  goal
```
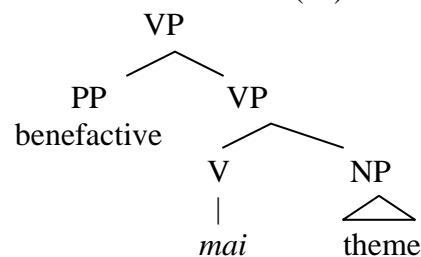
In other words, both theme and goal are lexicalized in Chinese. However, unlike English, we propose that benefactive is NOT lexicalized in Chinese. Under this proposal, Chinese verb *mai* 'to buy' does not really parallel with English *send* or even *buy*. Since benefactive is not subcategorized by verbs in Chinese, what looks like a dative verb is actually a surface illusion. Verbs like *mai* 'to buy' in Chinese only subcategorize for a theme. The benefactive is adjoined to VP later in syntactic derivation (as a syntactic adjunct):

(11) Chinese *mai* 'to buy'

    a. subcategorization framework:  *mai*: V, [ __ NP]

    b. The relevant structure for (6a)

```
                VP
               /  \
             PP     VP
         benefactive /  \
                    V    NP
                    |    /\
                  mai  theme
```

Under this analysis, *mai* 'to buy' in Chinese is not a genuine dative verb.

To account for the data in (5-6), we further propose that to allow for DS, the goal, the benefactive, and the theme argument in the DC all have to be within the relevant VP of the dative verb. This is a syntactic constraint. Essentially, it means that only argument

in one object position can alternate with another argument in a 'similar' object position: In English, both the goal and the benefactive in the DC are core (subcategorized) arguments of the verb within the relevant VP. Syntactically, they are both genuine objects (i.e., the indirect object) similar to the theme (i.e., the direct object). Hence, the theme and both the goal and the benefactive can alternate (i.e., to undergo DS). In Chinese, however, only the goal is a core (subcategorized) argument within the VP and the benefactive argument is adjoined to VP as an adjunct (not subcategorized by the verb in the lexicon). Therefore, the benefactive (as an adjunct) cannot alternate with the theme argument (the direct object), hence, the ungrammaticality of (6b).

More examples to support this argument are provided below:

(12) Goal is lexicalized in Chinese (genuine DC):
    a. *Wo    gei    le    yi-zhang  mingxinpian gei Zhangsan.*
       I     give    perf.   one-CL  postcard      to   Zhangsan
      'I gave a post card to Zhangsan.'

    b. *Wo ji    le    yi-ben  shu  gei  Zhangsan.*
      I  mail   perf.   one-CL book  to   Zhangsan
      'I mailed a book to Zhangsan.'

    c. *Wo    liu    le    yi-zhang  mingpian    gei Zhangsan.*
      I    leave  perf.  one-CL   business-card  to   Zhangsan
      'I left a business card to Zhangsan.'

(13) Dative shift (possible DOC with verbs encoding a lexicalized goal as in (12)):
    a. *Wo gei le    Zhangsan yi-zhang   mingxinpian.*
      I  give  perf. Zhangsan  one-CL    postcard
      'I gave Zhangsan a postcard.'

    b. *Wo ji    le    Zhangsan yi-ben  shu.*
      I  mail   perf.   Zhangsan one-CL book
      'I mailed Zhangsan a book.'

    c. *Wo liu    le Zhangsan    yi-zhang   mingpian.*
      I  leave  perf. Zhangsan    one-CL    business-card
      'I left Zhangsan (with) a business card.'

(14) Benefactive is not lexicalized in Chinese (putative DC):
    a. *Wo jian    le    yi-dong    fangzi gei Zhangsan.*
      I  build  perf.   one-CL    house  for Zhangsan
      'I built a house for Zhangsan.'

b. *Wo zuo    le    yi-jian   yifu   gei Zhangsan.*
   I  make   perf. one-CL   cloth  for Zhangsan
   'I made a piece of cloth for Zhangsan.'

c. *Wo    zhi le    yi-jian    maoyi    gei Zhangsan.*
   I      knit perf. one-CL    sweater    for Zhangsan
   'I knitted a sweater for Zhangsan.'

(15) Dative Shift (impossible DOCs):

a. *\*Wo    jian    le    Zhangsan yi-dong    fangzi.*
   I      build   perf.  Zhangsan one-CL    house
   Intended: 'I built Zhangsan a house.'

b. *\*Wo    zuo    le    Zhangsan yi-jian    yifu.*
   I      make   perf.  Zhangsan one-CL    cloth
   Intended: 'I made Zhangsan a piece of cloth.'

c. *\*Wo    zhi    le    Zhangsan yi-jian  maoyi.*
   I      knit   perf.  Zhangsan one-CL sweater
   Intended: 'I knitted Zhangsan a sweater.'

Examples (12-13) concerns the goal argument in Chinese. As (13) indicates, DS can take place. The benefactive argument (14), on the other hand, cannot allow for DS (15).[5]

## 4. Lin (2001) Revisited

Our analysis contrasts with Lin's (2001) proposal that Chinese does not have argument structure (subcategorization) in the lexicon. The dative and double object alternation shows that Chinese allows partial subcategorization in the lexicon.

---

[5] There might be slight difference in dialectical judgments in (12-15). Some bilateral verbs like *jie* 'to loan/lend' seems to be counter examples to our generalization:

a. *Wo jie le    100  kuai qian    gei Zhangsan.*
   I   lend perf. 100 Yuan money   to   Zhangsan
   'I lend 100 Yuan to Zhangsan.'

b. *Wo jie   le    Zhangsan 100  kuai  qian.*
   I    lend  perf  Zhangsan 100 Yuan money
   'I lend Zhangsan 100 Yuan.'

Although Zhangsan is treated as the recipient of the money and potentially, he can be the beneficiary. But this 'beneficiary' argument behaves more like a goal instead of a benefactive as the English translation in (a) indicates. If *jie* ('to loan/lend') is treated as a verb that selects a goal, it actually supports the generalization that goal and theme can alternate in Chinese while benefactive and theme cannot.

According to Lin (2001), objects in Chinese are non-selective: [6]

(16) The non-selectiveness of objects in Chinese (examples abridged from Lin 2001):

    a. *Laowang **fang** le yi-ben shu zai zhuo-shang.*   *(Theme) light v: $\varnothing$*
       Laowang put perf. one-CL book at table-on
       'Laowang put a book on the table.'

    b. *Zhexie shu zonggong **fang** le san-ge xiangzi.*   *(Instrument) light v: USE*
       These book altogether put perf. three-CL box
       'It takes three boxes altogether to put these books in.'

    c. *Zhexie shu **fang** wo-jia.*   *(Location) light v: $AT_1$*
       These book put my-home
       'These books [can be] kept in my house.'

    d. *Zhe-wan mian **fang** le zheng-de zaoshang.*   *(Time) light v: $AT_2$*
       This-bowl noodle put perf. whole morning
       'This bowl of noodle has been here for the whole morning.'

    e. *Zhexie shu bu-shi **fang** hao-kan de.*   *(Reason) light v: FOR*
       These book not-be put good-look Mod
       'These books are not there for good-looking.'

Thus, according to Lin (2001), verbs in Chinese like *fang* 'to put' do not have any sub-categorization framework in the lexicon. All the 'complements' are selected by various kinds of *light* verbs later in the overt syntax.[7] The 'subcategorization framework' of *fang* 'to put' is shown (17a) and selection of various arguments by various relevant light verbs is shown in (17b):

---

[6] We ignore the non-selectiveness of subjects in this paper.

[7] *Light verb* is defined along Bower (1993), Kratzer (1996), Hale and Keyser (1991, 1993, 1997, 1999), Huang (1994, 1997), Lin (2001) and Ai (2003), in which it is only phonetically light but semantically rich. Some examples are provided after each example in (16).

(17)  a. *fang* 'to put': V, [ __ ∅]

b.

$$vP$$

theme/instrument/      *v'*

location/time/reason

*v*      V

∅/USE/AT$_{1/2}$/FOR      |
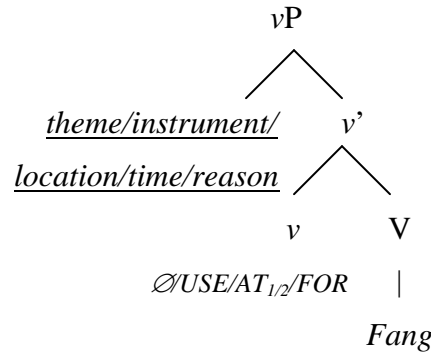
*Fang*

However, this seems to be over-generalized. Take *mai* as in (6) for example. Not all examples as indicated in (16) seem to be grammatical if we replace the verb *fang* 'to put' with *mai* 'to buy', shown in (18):

(18) a. *Laowang **mai** le   yi-ben shu   zai zhuo-shang.*     *(Theme)*
     Laowang   buy   perf. one-Cl   book   at   table-on
     'Laowang bought a book (and put it) on the table.'

b. \**Zhexie shu   zonggong **mai** le   san-ge   xiangzi.*   *(Instrument)*
     These   book   altogether buy   perf. three-CL box
     'It takes three boxes altogether to buy these books in.'

c. \**Zhexie shu   **mai**   wo-jia.*              *(Location)*
     These   book   buy   my-home
     'These books [can be] bought and kept in my house.'

d. ? *Zhe-wan     mian **mai** le   zheng-ge    zaoshang.* *(Time)*
     This-bowl     noodle buy   perf. whole-CL   morning
     'This bowl of noodle has been bought for the whole morning.'

e. ? *Zhexie shu   bu-shi **mai**   hao-kan   de.*         *(Reason)*
     These   book not-be   buy     good-look Mod
     'These books are not bought for good-looking.'

Thus, the non-selectiveness of objects in Chinese is actually verb-sensitive. In other words, the subcategorization framework in Chinese lexicon is not totally without control.

## 5. Concluding Remarks

       Through the discussion of DS in Chinese, we have argued that Chinese might have limited subcategorization framework in the lexicon. Furthermore, the puzzle of

Chinese DS has provided us with a perfect window to look further into the so-called 'lexicalization' parameter.[8] It seems that cross-linguistically, certain arguments can be lexicalized into the verb but not all arguments need to be lexicalized in a given language. English, for example, lexicalizes both the goal and the benefactive argument. Chinese, on the other hand, only lexicalizes the goal argument, but not the benefactive one. Under this argument, verbs in Chinese have to be individually treated. Minimally, the study of Chinese verbs has to be category-based.[9] It seems that there is no easy generalization that can cover all the verbs in Chinese.

## REFERENCES

Ai, Ruixi Ressy (2003). Eventuality in terms of richer and more rigid light verb syntax: some evidence from Chinese. In Aygen, G., Bowern, C. & Quinn C. (eds.), *The Proceedings of Dudley House Workshop on Light Verbs /Harvard Working Papers in Linguistic* 9, 51-75.

Arnold, Jennifer E.; Wasow, Thomas; Losongco, Anthony & Ginstrom, Ryan (2000). Heaviness vs. newness: The effects of structural complexity and discourse status on constituent ordering. *Language* 76, 28-55.

Bowers, John (1993). The syntax of predication. *Linguistic Inquiry* 24, 591-656.

Davidse, Kristin (1996). Functional dimensions of the dative in English. In William Van Belle & Willy Van Langendonck (eds.), *The Dative, Vol. 1: Descriptive Studies*, 289-338. Amsterdam: John Benjamins.

Givón, Talmy (1984). Direct object and dative shifting: Semantic and pragmatic case. In Frans Plank (ed.), *Objects: Towards a Theory of Grammatical Relations*, 151-182. London: Academic Press.

Gropen, Jess; Pinker, Steven; Hollander, Michelle; Goldberg, Richard & Wilson, Ronald (1989). The learnability and acquisition of the dative alternation in English. *Language* 65, 205-257.

Hale, Kenneth & Keyser, Samuel J. (1991). On the syntax of argument structure. *Lexicon Project Working Papers*. Center for Cognitive Science, MIT.

Hale, Kenneth & Keyser, Samuel J. (1993). On argument structure and the lexical expression of syntactic relations. In Kenneth Hale & Samuel J. Keyser (eds.), *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, 51-109. Cambridge, Mass: MIT Press.

---

[8] The term 'lexicalization'is not addressed in detail in this paper. For a comprehensive review and the possible way of parametrizing it, see Lin (2001).

[9] For a complete typology of dative verbs, see Rappaport Hovav & Levin (2008).

Hale, Kenneth & Keyser, Samuel J. (1997). On the complex nature of simple predicators. In Alex Alsina, Joan Bresnan & Peter Sells (eds.), *Complex Predicates*, 29-66. Stanford, CA.: CSLI Publications.

Hale, Kenneth & Keyser, Samuel J. (1999). A response to Fodor and Lepore, "Impossible words?" *Linguistic Inquiry* 30: 453-466.

Harley, Heidi (2003). Possession and the double object construction. In Pierre Pica & Johan Rooryck (eds.), *Linguistic Variation Yearbook* 2, 31-70. Amsterdam: John Benjamins.

Huang, C.-T. James (1994). On verb movement and some syntax-semantics mismatches in Chinese. *Chinese Languages and Linguistics* 2: 587-613.

Huang, C.-T. James (1997). On lexical structure and syntactic projection. In *Chinese Languages and Linguistics III: Morphology and Lexicon*, 45-89. Symposium Series of the Institute of History and Philology, Academia Sinica, No.2. Taipei, Taiwan.

Kratzer, Angelika (1996). Severing the external argument from its verb. In John Rooryck & Laurie Zaring (eds.), *Phrase Structure and the Lexicon*, 109-137. Dordrecht: Kluwer.

Lin, Tzong-Hong (2001). *Light Verb Syntax and the Theory of Phase Structure*, unpublished doctoral dissertation, University of California, Irvine, CA.

Melntyre, Andrew (2006). The interpretation of German datives and English *have*. In Daniel Hole, Andre Meinunger & Werner Abraham (eds.), *Datives and Other Cases: Between Argument Structure and Event Structure*, 185-211. Amsterdam: John Benjamins.

Pinker, Steven (1989). *Learnability and Cognition: The Acquisition of Argument Structure.* Cambridge, MA: MIT Press.

Polinsky, Maria (1996). A non-syntactic account of some asymmetries in the double object construction. In Jean-Pierre Koenig (ed.), *Discourse and Cognition: Bridging the Gap*, 403-422. Stanford, CA: CSLI Publications.

Ransom, Evelyn N. (1979). Definiteness and animacy constraints on passive and double-object constructions in English. *Glossa* 13, 215-240.

Rappaport Hovav, Malka & Levin, Beth (2008). The English dative alternation: The case for verb sensitivity. *Journal of Linguistics* 44, 129-167.

Snyder, Kieran Margaret (2003). *The Relationship between Form and Function in Ditransitive Constructions*, unpublished doctoral dissertation, University of Pennsylvania, Philadephia, PA.

Thompson, Sandra A. (1990). Information flow and dative shift in English discourse. In Jerold A. Edmondson, Crawford Feagin & Peter Mühlhäusler (eds.), *Development and Diversity: Language Variation across Time and Space*, 239-253. Dallas, TX: Summer Institute of Linguistics.

Thompson, Sandra A. (1995). The iconicity of 'dative shift' in English: Considerations from information flow in discourse. In Marge E. Landsberg (ed.), *Syntactic Iconicity and Linguistic Freezes*, 155-175. Berlin: Mouton de Gruyter.

Wasow, Thomas (1997). Remarks on grammatical weight. *Language Variation and Change* 9, 81-105.

Wasow, Thomas (2002). *Pastverbal Behavior*. Stanford, CA: CSLI Publication.