The Complex NP Constraint
(Subjacency)

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LSA Summer Institute 344:
Processing Accounts for Island Constraints
July 19, 2007
Today’s plan

• Ross (1967)
  – formulation
  – exceptions

• Parameterization of subjacency (complex NPs)

• Relevant factors in complex NPs
  – referentiality effects
  – intervention effects
  – lexical semantic effects
  – finiteness effects
Today’s plan

• Ross (1967)
  – formulation
The Complex NP Constraint

- Ross attributes the original insight to Klima, who had earlier proposed the following constraint
  - “Elements dominated by a sentence which is dominated by a noun phrase cannot be questioned or relativized.”

- Ross’s formulation
  - “No element contained in a sentence dominated by a noun phrase with a lexical head noun may be moved out of that noun phrase by a transformation.” (p. 70)
    [“with a lexical head” for now irrelevant reasons]
Today’s plan

• Ross (1967)
  – formulation
  – exceptions
(4.45a) The money which I have { hopes / a feeling } that the company will squander amounts to $400,000.

(443.a) ?The money which I am making the claim that the company squandered amounts to $400,000.

(443.b) *The money which I am discussing the claim that the company squandered amounts to $400,000.

(443.c) **The money which I am discussing Sarah’s claim that the company squandered amounts to $400,000.
Additional modulating factors

(4.45a) The money which I have { hopes / a feeling } that the company will squander amounts to $400,000.

(443.a) definiteness effects
(443.b) matrix predicate effects
(443.c) specifier effects
Empirical Overview

- distance effects
- referentiality effects
- intervention effects
- lexical semantic effects
- finiteness effects
- position effects
Prepositional adjunct curiosities

(4.16a) *Who does Phineas know a girl jealous of?
(416.b) *Who does Phineas know a girl behind?
(416.c) *Who does Phineas know a girl working with?

(4.78a) Which door did I give Tom a key { to / for } ?
(478.b) Which novelists does Harold have books by?
(478.c) ?Which cavern is Billy looking for a road into?

“…what their deep structures might be is at present an unsolved problem.” (p. 87)
[we will come back to this problem]
Today’s plan

• Ross (1967)
  – formulation
  – exceptions

• Parameterization of subjacency (complex NPs)
Extraction from Italian NP + S


“Notice that the process of relative clause formation in Italian crucially involves the movement of the relativized element: no resumptive pronoun is used in the construction, and the Complex NP Constraint is respected.”

(9a) *Questo incarico, [ che non sapevo
this burden that not l=knew
[ la novità che avrebbero affidato __ a te ]],…
the news that they=would=have entrusted to you
“This mission, which I didn’t hear the news that they would assign to you…” (p. 50)
Extraction from Italian NP + S


The head noun of the complex NP + S is definite (“la novità”) (remember this and we’ll come back to it next week) (it’s now next week)

(9a) *Questo incarico, [ che non sapevo

   this burden that not l=knew

   [ la novità che avrebbero __ a te ],…

   the news that they=would=have entrusted to you

   “This mission, which I didn’t hear the news that they would assign to you…” (p. 51)
Extraction from Danish relative clauses

Erteschik Shir (1973), On the Nature of Island Constraints

(1) Det hus er der en mand [som har købt].
   that house is there a man who has bought
   “That house there’s a man who has bought.”

(2) Det er den mand som der er mange
   that is that man that there are many
   [der kan lide].
   who can tolerate
   “It’s that man that there are many who like.”
Extraction from Danish relative clauses

Eerteschik Shir (1973), *On the Nature of Island Constraints*

(1) Det hus er der en mand [som har købt].

*that house is there a man who has bought*

“That house there’s a man who has bought.”

(20) Det hus kender jeg en mand [som har købt].

*that house know I a man who has bought*

“That house I know a man who has bought.”
Extraction from Danish relative clauses

Eerteschik Shir (1973), *On the Nature of Island Constraints*

“The examples show that the matrix must either be the existential operator ‘there is’ with an indefinite object...or expressions such as ‘we were’, ‘I know’, or ‘I have’...which can be regarded as being parallel.”  
(p. 36)
Extraction from English relative clauses


Thematic Constraint on Relative Clauses
A relative clause must be a statement about its head noun.

“...the more transparent the semantic content of the main clause is, the easier it is to relativize from a complex NP...”
Extraction from English relative clauses


(1-20a) This is the child who there is nobody [who is willing to accept ___].

(1-20b) ?This is the child who I know a family [which is willing to adopt __].

(1-20c) *This is the child who John married a girl [who dislikes ___].
Extraction from English relative clauses


(1-22a) ?Violence is something that I’ve never met an Englishman [who condones__ ].

(1-22b) ?Violence is something that SNEAD is the only Englishman [who condones__ ].

(1-22c) *Violence is something that Snead is an Englishman [who condones__ ].

(McCawley 1974)
Extraction from English relative clauses


(1-20a) This is the child who there is nobody
[who is willing to accept __ ].

(1-22a) ?Violence is something that I’ve never met an Englishman
[who condones__ ].

(1-22d) Then you look at what happens in languages that you know
and languages [ that you have a friend [ who knows __ ]].
(Charles Ferguson, lecture at University of Chicago, May 1971)
Extraction from English relative clauses


(1-20b)  ?This is the child who I know a family
          [which is willing to adopt __ ].

(1-20c)  *This is the child who John married a girl
          [who dislikes __ ].
Extraction from English relative clauses


“The contrast between the near grammaticality of 1-20a, 1-22a, 1-22d and the lower acceptability of 1-20b, 1-20c also requires special mention. The matrix clauses of the relative constructions in the former, namely, there is nobody, I’ve never met an Englishman, and you have a friend all represent the existence or absence of certain objects. The first is a pure existential sentence. The second two have as their subjects I and you, the most presupposed pronouns. The predicates of these three clauses give generic statements, and they do not refer to specific actions.” (p. 424)
Extraction from English relative clauses


(1-24a) *Violence is something that I met an Englishman [who condones__ ] yesterday.

(1-24b) *Violence is something that Jane married an Englishman [who condones__ ].

(1-24c) *Violence is something that Jane is scheduled to meet an Englishman [who condones__ ].
Extraction from English relative clauses


(1-24d) *Then you look at what happens in languages that you know and languages [ that you married a girl [ who knows __ ]].*

“The matrix clauses of the relative constructions in these sentences are no longer of the pure existential sentence type, and are not semantically transparent any more.” (p. 424)
Extraction from English relative clauses


“The above discussions point to the basically semantic nature of the phenomena that Ross tried to account for by the Complex NP Constraint. It seems that the phenomena can be reduced to the question of how easy or how difficult it is to interpret an NP within a complex NP as the theme of the entire sentence. The more transparent in meaning the main clause of the relative construction, the easier it is to interpret an NP in the complex NP as the theme of the entire sentence. The degree of transparency is determined by factors such as the degree to which the subject can be presupposed (I, you, people, etc.), the degree of genericness of the predicate (existential statements versus statements referring to specific actions, etc.).” (pp. 424-425)
Warren & Gibson (2002)

RC: The woman [ who {you/the boy} had accidentally pushed off the sidewalk ] got upset and decided to report the incident to the policeman standing nearby.

CC: The woman knew [ that {you/the boy} had accidentally pushed the girl ] but gave {you / him} a long lecture anyway.
Extraction from English relative clauses

Erteschik Shir (1973), *On the Nature of Island Constraints*

“It is interesting to note that the English equivalents of the Danish knot sentences formed from relative clauses are more acceptable than sentences in which extraction has occurred out of regular relative clauses.” (p. 42)

(45) *This is the kind of weather that there are many people who like.

(46) **This is the kind of weather that I know many people who like.

(46) ***This is the kind of weather that he made fun of many people who like.
Extraction from English relative clauses


“Interestingly enough, it turns out that the extraction facts for English are parallel to those in Danish.” (p. 58)

(21a) This is the kind of weather that there are many people who like.
(21b) ?This is the kind of weather that I know many people who like.
(21c) *This is the kind of weather that I am familiar with many people who like.
Extraction from Danish relative clauses

Erteschik Shir (1973), *On the Nature of Island Constraints*

(27) Det ______ mange [ der har gjort ].

\[ \text{that } \quad \text{many who have done} \]

\[ \text{“That } \quad \text{many who have done.”} \]

✓ there are, I know, I have seen / met / encountered / talked to

? I have gone to bed with / shared a room with / laughed at / played with

?? I have asked

* I have pointed at / worked with / taken care of / made fun of / killed / gone for a walk with
Extraction from Danish relative clauses

Erteschik Shir (1973), On the Nature of Island Constraints

(18) Det er der mange [der kan lide].

that are there many who can tolerate

“That there are many who like.”

Semantic dominance test: negation (the “lie test”)

(22) Bill said: “There are many people who like that.”

a. , which is a lie – there aren’t.

b. , which is a lie – many people don’t like that.
Semantic dominance

Erteschik Shir (1973), *On the Nature of Island Constraints*

“All these tests are congruent with the principle that it is only the dominant part of the sentence which it is natural to comment on.” (p. 6)

“A clause or phrase is *semantically dominant* if it is not presupposed and does not have contextual reference.” (p. 9)

“A presupposed complement is always *semantically subordinate*, since it must have contextual reference due to its being believed to be true by the speaker.” (pp. 1-2)
Condition on extraction

Erteschik Shir (1973), On the Nature of Island Constraints

“Extraction can occur only out of clauses or phrases which can be considered dominant in some context.” (p. 12)

“A clause or phrase is semantically dominant if it is not presupposed and does not have contextual reference.” (p. 9)
Semantic dominance


“A constituent c of a sentence S is dominant in S if and only if the speaker intends to direct the attention of his hearers to the intension of c [its semantic content], by uttering S.” (p. 43)

“It should be pointed out that c can be the entire S; i.e., it is possible for an entire sentence to be dominant.” (p. 43, fn. 6)
“The **potential** FOCUS DOMAIN of a sentence is that part of a sentence that is interpretable as being asserted.

TEST for being within the focal domain: propositions expressed within the potential focus domain can be understood to be negated by sentential negation.”

“We will refer to elements of a sentence that are neither the primary topic nor part of the focus-domain as **BACKGROUNDED** elements (corresponding roughly to the TAIL of Vallduví 1993).”

BACKGROUNDED elements: constituents that correspond neither to the primary topic nor to part of the potential focus domain.” (p. 130)
Backgrounding


“Elements that are part of presupposed clauses are backgrounded… We can see that the proposition conveyed by the relative clause is not part of the focus domain because it is not negated by sentential negation. As a presupposition, it is implied by both the positive and the negative form of the sentence.”

(2) I read the book [ that Maya loaned me __ ]. → Maya loaned me the book.

(3) I didn’t read the book [ that Maya loaned me __ ]. → Maya loaned me the book. (p. 130)
Extraction pragmatics for dummies

(1) You can extract out of *asserted* constituents.

(2) You can’t extract out of *presupposed* constituents.
Extraction from Danish relative clauses

Erteschik Shir (1973), *On the Nature of Island Constraints*

(27) Det ______ mange [ der har gjort ].
    that ______ many who have done
    “That ______ many who have done.”

✓ there are, I know, I have seen / met / encountered / talked to
?
I have gone to bed with / shared a room with / laughed at / played with

?? I have asked

* I have pointed at / worked with / taken care of / made fun of / killed / gone for a walk with
Extraction from Danish relative clauses

Erteschik Shir (1973), *On the Nature of Island Constraints*

(28) Bill said: “I have met many people who’ve done that.”
   a. , which is a lie – he hasn’t.
   b. , which is a lie – nobody has done that.

(29) Bill said: “I have asked many people who’ve done that.”
   a. , which is a lie – he hasn’t.
   b. ?? , which is a lie – nobody has done that.

(29) Bill said: “I have made fun of many people who’ve done that.”
   a. , which is a lie – he hasn’t.
   b. * , which is a lie – nobody has done that.
Extraction from Danish relative clauses


“What this series of tests illustrates is that in general relative clauses are used non-dominantly. The dominant part of the sentence is in the main clause. One could say, in general, that an important function of the relative clause is to introduce non-dominant material into the sentence. However, there is a subset of relative clauses in which the relative clause can be used dominantly as the tests…show, and it is exactly in those cases that extraction is possible in Danish. Moreover, where the tests indicate that it is more difficult to interpret the relative clause as being dominant, extraction is less acceptable in Danish.” (p. 57)
Extraction from English relative clauses


“It is easiest to interpret a relative clause as being dominant when the matrix consists of the existential operator… In that case it is impossible to interpret the matrix as being dominant because that would mean that the speaker is trying to draw the attention of the hearer to the statement that many people exist. The existential operator here merely serves to introduce the head of the relative clause about which something is being asserted. Any matrix which can be interpreted as serving this function, i.e., as introducing into the sentence the head of the relative clause, will also allow an interpretation where the relative clause is interpreted as being the dominant part of the sentence.” (p. 57)
Extraction from English relative clauses


“Conversely, the more complexity is introduced into the matrix, the more difficult it is to interpret this matrix in a manner analogous to the existential operator. It should be noted that not only must the matrix verb be relatively semantically empty, but the head of the relative clause must be indefinite (as with the existential operator) and the subject of the matrix must be first person. These factors further facilitate the interpretation of the matrix as an operator of introduction.” (p. 57)
Extraction from Danish relative clauses

Erteschik Shir (1973), *On the Nature of Island Constraints*

“The subset of Danish relative clauses from which extraction is possible differs from other relative clauses not only in that the matrix must be relatively simple, but also in the definiteness of the head of the relative clause.” (p. 39)
Extraction from Danish relative clauses

Erteschik Shir (1973), *On the Nature of Island Constraints*

(31) *Peter kender jeg manden [ der kan lide] .

*Peter know I man=the who can tolerate

“*Peter I know the man who likes.”

(32) Peter kender jeg en mand [ der kan lide] .

*Peter know I a man who can tolerate

“*Peter I know a man who likes.”
Ross (1967): NP + S complement

(4.45a)  The money which I have { hopes / a feeling } that the company will squander amounts to $400,000.

(443.a) ?The money which I am making the claim that the company squandered amounts to $400,000.
Ross (1967): NP + S complement

(4.45a) The money which I have \{ hopes / a feeling \}
that the company will squander amounts to $400,000.

(443.a) definiteness effects
Empirical Overview

- distance effects
- referentiality effects
- intervention effects
- lexical semantic effects
- finiteness effects
- position effects
definiteness vs. specificity?


Marit finner vi aldri den gutten som kan hamle opp med.  
*Marit find we never the boy that can handle up with “Marit we’ll never find the boy that can handle.”*

*Marit har vi endelig funnet den gutten som kan hamle  
Marit have we finally found the boy that can handle opp med.  
up with  
“Marit we’ve finally found the boy that can handle.”*
Extraction from Danish relative clauses

Erteschik Shir (1973), *On the Nature of Island Constraints*

“Still, there is one aspect of knot sentences formed from relative clauses which seems to be structural: namely, it is always the subject of the clause that is relativized, and that consequently, the extracted object is the direct or indirect object.” (p. 39)
Extraction from Danish relative clauses

Erteschik Shir (1973), *On the Nature of Island Constraints*

**Subject relativization, object extraction:**

(38) *Is findes der mange forretninger der sælger til børn.*

*ice exist there many stores that sell to children*

“There exist many stores that sell *ice cream* to children.”

**Object relativization, subject extraction:**

(41) *Den forretning findes der mange slags is der sælger til børn.*

*that store exist there many kinds ice that sell to kids*

“There exist many kinds of ice cream that *that store* sells to children.”
Extraction from Swedish complex NPs


**Extraction out of complex NP + S** (contrary to Italian)

(12) Den här artikeln finns det fakiskt en möjlighet [ att Dagens Nyheter tar in].

“This is the article that there’s a possibility [ the Daily News will accept __ ] .”
Extraction from Danish relative clauses

Erteschik Shir (1973), *On the Nature of Island Constraints*

“The subset of Danish relative clauses from which extraction is possible differs from other relative clauses not only in that the matrix must be relatively simple, but also in the definiteness of the head of the relative clause.” (p. 39)
Extraction from Swedish relative clauses


“Extractions out of relative clause are more restricted, but they do occur. It seems, however, that the constraints that govern extractability out of relative clauses cannot be stated in terms of structural properties alone. The possibilities to extract out of a relative clause depend mostly on the definiteness of the head noun but also on other factors.” (p. 95)
Extraction from Swedish relative clauses


“Other factors that influence the acceptability of such extractions are e.g. the discourse relevance of the extracted NP and semantic-pragmatic properties of the main verb. Such factors determine whether the sentence can be understood as ‘relevant information’ or not.” (p. 106, fn. 4)
Ross (1967): NP + S complement

(4.45a) The money which I have \{ hopes / a feeling \} that the company will squander amounts to $400,000.

(443.a) definiteness effects
(443.b) matrix predicate effects
Empirical Overview

- distance effects
- referentiality effects
- intervention effects
- lexical semantic effects
- finiteness effects
- position effects
Extraction from Swedish relative clauses


(13a) Johan känner jag ingen som tycker om.
    *Johan know I no one that likes*
    “John I know no one who likes.”

(13b) ?Johan känner jag en flicka som tycker om.
    *Johan know I a girl that likes*
    “John I know a girl who likes.”

(13c) *Johan känner jag flickan som tycker om.
    *Johan know I girl=the that likes*
    “John I know the girl who likes.”
Extraction from Swedish relative clauses


“It seems reasonable to assume that the main factor that influences judgments on extractability out of relative clauses is the specificity of the head noun since only non-specific and generic NPs seem to allow extractions in unspecified contexts.” (pp. 95-96)
Extraction from Swedish relative clauses


“Once the head noun is of the required type, it appears that the extraction site may be embedded further down inside the relative clause, without this affecting acceptability in any noticeable manner.” (p. 96)
Extractions from Swedish wh-islands


Extractions from embeddings underneath wh-islands (“Rizzi/Grimshaw extractions”) still seem acceptable

(7a) Yesterday I saw a movie that [ I think [ that John knows [ who directed __ ]]].
(7b) Yesterday I saw a movie that [ I wonder [ if anyone noticed [ that Greta Garbo was in __ ]]].
(7c) Yesterday I saw a movie that [ I wonder [ if anyone knows [ who directed __ ]]].
(7d) Yesterday I saw a movie that [ I wonder [ who remembers [ who directed __ ]]].
Extraction from Swedish relative clauses


(14) That’s the film star that I once met a guy [ who thought [ that I resembled __ ]].

(15) Director Bengtsson is someone that I know several people [ who would hesitate [ if you nominated __ as chairman ]].

(16) Which girl doesn’t there seem to be anyone [ who remembers [ who it was [ that was supposed to pick __ up ]]]?
Extraction from Swedish relative clauses


(14) That’s the film star that I once met a guy [ who thought [ I resembled __ ]].

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Extraction from Danish relative clauses

Erteschik Shir (1973), On the Nature of Island Constraints

Subject relativization, object extraction:
(38)  Is findes der mange forretninger der sälger til børn.
   ice exist there many stores that sell to children
   “There exist many stores that sell ice cream to children.”

Object relativization, subject extraction:
(41)  *Den forretning findes der mange slags is der sälger til børn.
   that store exist there many kinds ice that sell to kids
   “There exist many kinds of ice cream that that store sells to children.”
Extraction from English relative clauses


(9a) That’s one trick that I’ve known a lot of people [who’ve been taken in by __].

(9b) Isn’t that the song that Paul and Stevie were the only ones [who wanted to record __]?

(9c) This is a paper that we really need to find someone [who understands __].
Extraction from English wh-islands


(9d) This is the kind of crisis that you never know [ who’s manipulating __ for whose benefit ].

(9e) This is the kind of crisis that you never know [ whose spouse is manipulating __ for whose benefit ].

(9f) What kinds of gifts are there rules about [ who can give __ to whom? ]

(9g) These are the dialects that we want to find out [ who speaks __ to whom ].
Ross (1967): NP + S complement

(4.45a) The money which I have { hopes / a feeling } that the company will squander amounts to $400,000.

(443.a) definiteness effects
(443.b) matrix predicate effects
Extraction from Danish relative clauses

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Extraction from English relative clauses


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- position effects
Extraction from English relative clauses


McCawley (1981:108):
(10a) Then you look at what happens in languages that you know and languages that you have a friend [ who knows __ … ]
(10b) This is the one that Bob Wall was the only person [ who hadn’t read __ ].
(10c) Violence is something that there are many Americans [ who condone __ ].

Kuno (1976:423):
(10d) This is the child who there is nobody [ who is willing to accept __ ].
Extraction from Danish relative clauses

Erteschik Shir (1973), On the Nature of Island Constraints

“Still, there is one aspect of knot sentences formed from relative clauses which seems to be structural: namely, it is always the subject of the clause that is relativized, and that consequently, the extracted object is the direct or indirect object.” (p. 39)
Extraction from English relative clauses


(12a) *That’s one trick that I know a lot of people [that the police have taken in with __ ].
(12b) *Isn’t that the song that Paul and Stevie were the only ones [ that George would let record __ ]?
(12c) *This is a paper that we really need to find someone [ that we can intimidate with __ ].
Extraction from English relative clauses


McCawley (1981):
(13a) *Then you look at what happens in languages that you know and languages that you can identify a friend [as knowing __ ... ]
(13b) *Is this the one that Bob Wall was the only person [who Stan hadn’t talked to __ about __]?
(13c) *Violence is something that there are many Americans [who opinion polls identify as condoning __].

Kuno (1976):
(13d) *This is the child who there is no one [who the authorities can persuade to accept __].
Extraction from English relative clauses


McCawley (1981):
(13a) *Then you look at what happens in languages that you know and languages that [ you can identify a friend [ as knowing __ … ]]
(13b) *Is this the one that Bob Wall was the only person [ who Stan hadn’t talked to __ about __ ]?
(13c) *Violence is something that there are many Americans [ who [opinion polls identify [as condoning __ ]]].

Kuno (1976):
(13d) *This is the child who there is no one [who [ the authorities can persuade [to accept __ ]]].
A propos informativeness

Erteschik Shir (1973), *On the Nature of Island Constraints*

(46) This is the car that I don’t know how to fix __.
(47) Which car don’t you know how to fix __?
    ?? What don’t you know how to fix __?

“Since these facts seem to indicate that the rules cannot consistently be ordered according to inherent strength even within English, I shall for the time being ignore the fact that in a specific context one of the extraction rules will give a better result than the other.” (p. 26)
Informativeness and extraction from relative clauses


“It does seem, however, that extraction for most speakers of Danish is somewhat freer here than for most speakers of English and some explanation is called for. A clue to the solution of this problem may be found by examining the use of topicalization in both Danish and English. It is a well-known fact that many speakers of English do not use topicalized sentences and find them somewhat peculiar when uttered by others.” (p. 59)
Informativeness and extraction from relative clauses


“For those speakers for whom [topicalization is] normal (be they speakers of Danish or English), fronting occurs as a basic strategy which may facilitate (for these speakers) the perception of the connection between the extracted item and the locus of extraction as in the following figure:

(i) \( X \ldots [ \ldots Y \ldots ] \) (where \( X \) is the fronted item and \( Y \) is the locus of extraction)

The distance variable represented by (i) could be considered as a perceptual factor of performance which varies from speaker to speaker. The use of a process such as topicalization may strengthen this performance strategy for speakers.” (p. 60)
Informativeness and extraction from relative clauses


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Informativeness and extraction from relative clauses


“The comparison between English and Danish here should be read as a hint at the kind of explanation one might look for in trying to determine differences in the employment of syntactic strategies between speakers of a given language and between languages. This is by no means meant as a definitive solution, and it is hoped that further research will shed more light on this question.” (p. 60)
So is parameterization a total red herring?

Not entirely.
Extractions out of clauses embedded below relative clauses are difficult to get without extra measures (deleting complementizers, adding resumptives), but they’re apparently fine in Swedish
Recall that the following is apparently acceptable in Norwegian:
That’s the author that I can never remember [what wrote].
What I’d like to claim/be true

These purported cross-linguistic differences are a matter of degree, rather than categorical in nature. The contrasts seem to be sensitive to the same referential differences discussed earlier:

Extractions from island contexts fare best when

– the extracted element is heavy/referential and
– intervening material between filler and gap is “light”
Finiteness effects in relative clauses


• That’s the kid that I have a book [ to read __ out loud to __ ].
• That’s the kid that I have a book [ I can read __ out loud to __ ].
• That’s the kid that I have a book [ I read __ out loud to __ ].

• That’s the kid that I have a book [ for you to read __ out loud to __ ].
• That’s the kid that I have a book [ that you can read __ out loud to __ ].
• That’s the kid that I have a book [ that you read __ out loud to __ ].
Empirical Overview

- distance effects
- referentiality effects
- intervention effects
- lexical semantic effects
- finiteness effects
- position effects