Appendix 1

Brackets show pairs per cell. Long distance movement chains are underlined.

|  |  |  |  |
| --- | --- | --- | --- |
| Syntactic structure | Further characteristics, and examples | Syntactic structure | Examples |
| Subject Relatives | *Presentational, with pronouns (5 pairs)*  There's **the horse** that pulled *him* | Object relatives | There's the *horse* that **he** pulled **t** |
|  | *Presentational, full NPs (5 pairs)*  There's **the child** that hugged the *mother* |  | There's the *mother* that the **child** hugged **t** |
|  | *Presentational, adjs. in VP (5 pairs)*  There's **the boy** that painted the nice friendly *girl* |  | There's the *girl* that the nice friendly **boy** painted **t** |
|  | *Presentational, multiple padding in VP (5 pairs)*  There's the **bear** that sometimes tried to tickle the cheeky little *monkey* |  | There's the *monkey* that the cheeky little **bear** sometimes tried to tickle **t** |
|  | *Embedded (4 pairs)*  The **child** that woke the *mother* was very friendly |  | The *mother* that the **child** woke **t** was very friendly |
|  | *Embedded with adjs. in rel. clause (6 pairs)*  The **cat** that woke the nice old *dog* was very grumpy |  | The *dog* that the nice old **cat** woke **t** was very grumpy |
| Subject Questions | *With pronouns (5 pairs)*  Which **monkey** is tickling *him*? | Object questions | Which *monkey* is **he** tickling **t**? |
|  | *With full NPs (5 pairs)*  Which **child** is splashing the *mother*? |  | Which *mother* is the **child** splashing **t**? |
|  | *With adjs. in VP (5 pairs)*  Which **hippo** is following the big friendly *elephant*? |  | Which *elephant* is the big friendly **hippo** following **t**? |
|  | *With adverb, control verb and adjs. in VP (5 pairs)*  Which **cow** was always trying to kick the nasty old *horse*? |  | Which *horse* was the nasty old **cow** always trying to kick **t**? |

Appendix 2

Scoring Protocols

**(A) Examples demonstrating the operation of the LDm**

(SUB = substitution, OM = omission, ADD = addition)

1. *Which pig is the cheeky little monkey rescuing?* 🡪

*Which pig is rescuing the cheeky little monkey?*

= 2 errors (OM of *rescuing*, ADD of *rescuing* before *the*)

1. *That s the doctor that kissed her* 🡪

*the doctor he kiss her*

= 4 errors (OM of *that*, OM of *s*, SUB *that* 🡪 *he*, OM *of –ed)*

1. *The dog that the nice old cat woke was very grumpy* 🡪

*The cat woke was very grumpy*

*=* 5 errors (SUB *dog 🡪 cat*, OM of *that the nice old*)

**(B) Scoring protocol for elicitation task**

|  |  |
| --- | --- |
| 1 point scored for each essential morphemes | |
| *Relative clauses*  (1) Any complementiser, allowing for dialect  (2) A new verb, not in the prompt  (3) An appropriate NP argument | *Passive*  (1) Auxiliary *be*  (2) A new verb, i.e. not in the prompt  (3) Preposition *by*  (4) Appropriate NP argument |
| 1 point subtracted for each structural error | |
| (1) Word order errors, e.g. VS (-1 point) | (1) Word order errors, e.g. SV (-1 point)  (2) Incorrect morphology on participle, e.g. *taked* |

Appendix 3

Probability plot

using nbvargr programme by Phillip Ender in STATA



Model fit statisticsa

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Package | Regression | AICb | Log-Likelihoodc | Log-Likelihood test (against previous model) |
| lme4 | Linear | 24,005 | -11,991.5 |  |
| glmmADMB | Poisson | 18,492.2 | -9,237.1 |  |
|  | Poisson with zero-inflation | 18,395.7 | -9,187.9 | df = 1, Deviance = 98.52, p < 0.001\*\*\* |
|  | Negative binomial | 18,051.1 | -9,015.53 | df = 0, Dev. = 344.66,  p < 0.001\*\*\* |
|  | Negative binomial with zero-inflation | 18,044.3 | -9,011.17 | df = 1, Dev. = 8.72,  p = 0.003\*\* |

1. All models employed maximal random effects; (1 + Canonicity|Paticipnt) + (1|item)
2. Aikake Information Criterion – lower values show better model fit
3. Higher values (closer to zero) show better model fit