

Supplemental Material S1. Coding and computation for clausal density

The sample below demonstrates the coding and computation for clausal density. It was produced by a child at the age of 9 years, 9 months. Although we transcribed and coded the data based on the SALT conventions (Miller et al., 2016), we do not apply the SALT conventions here for the ease of interpretation.

In this sample, there are 30 C-units. C-unit #30, however, is not included for analysis because it has no verbs. There are two types of codes. The first type of code is the clausal density (CD) code (e.g., [CD-1], [CD-2], etc.). The number within the clausal density code indicates the number of clauses that the C-unit contains, including main clauses, finite dependent clauses, and nonfinite dependent clauses. A [CD-1] code means that the C-unit has one clause, a [CD-2] code means that the C-unit has two clauses, and so on. C-unit #30 is marked as [CD-X] because it is excluded for analysis.

The second type of code is the clause type code. For the finite dependent clauses, we use the following codes: [ADV] for adverbial clauses, [NOM] for nominal clauses, and [REL] for relative clauses. For the nonfinite dependent clauses, we use the following codes: [TOIC] for *to*-infinitive clauses, [BIC] for bare/unmarked infinitive clauses, [GC] for gerund clauses, [INGC] for present participle clauses, and [EDC] for past participle clauses.

Using the "Code Summary" function in SALT, we obtain the frequency count for the clausal density codes and for the clause type codes. In this sample, there are 14 [CD-1] codes, 11 [CD-2] codes, and 4 [CD-3] codes. Thus, there are 48 clauses in total (i.e., $14 \times 1 + 11 \times 2 + 4 \times 3 = 48$). The number of C-units that are included for analysis is 29 (i.e., $14 + 11 + 4$). The resulting clausal density score is 1.66 ($48/29$). In additions, there are 3 [ADV] codes, 10 [NOM] clauses, 5 [TOIC] codes, and 3 [INGC] codes. That is, the child produced 3 adverbial clauses, 10 nominal clauses, 5 *to*-infinitive clauses, and 3 present participle clauses in this story. She, however, did not use any relative clauses, unmarked infinitive clauses, gerund clauses, or past participle clauses in this story.

(Story A3 from a child at 9;9; C = Child)

1. C there is an elephant and a giraffe at the swimming pool [CD-1].
2. C and the giraffe has a toy airplane [CD-1].
3. C and the giraffe is playing with the airplane, spinning [INGC] it around [CD-2].
4. C and the elephant is asking him if she could play with it [NOM] [CD-2].
5. C the elephant takes it away from the giraffe [CD-1].
6. C and the giraffe is saying "no give it back" [NOM] [CD-2].
7. C "Please give it back" [CD-1]!
8. C and the elephant accidentally drops it in the water [CD-1].
9. C and the giraffe is looking surprised [CD-1].
10. C and then it starts to sink [TOIC] [CD-2].
11. C (and the) and the elephant is looking like she never did anything [NOM] [CD-2].
12. C and the giraffe is getting mad at her saying [INGC] why did you take it away [NOM] [CD-3]?
13. C then the lifeguard comes [CD-1].
14. C and the giraffe tells him what happened [NOM] [CD-2].
15. C and : he is standing by the pool seeing [INGC] how they could get it out [NOM] [CD-3].

16. C and then the elephant tells him that she accidentally dropped it in the pool [NOM] [CD-2].
17. C and it is sinking even more [CD-1].
18. C then the lifeguard tries to get [TOIC] it out [CD-2].
19. C and he is on his hands and knees on the pool and trying to go [TOIC] over to get [TOIC] it [CD-3].
20. C then the lifeguard tells them there is nothing we could do [NOM] [CD-2].
21. C it is too far out [CD-1].
22. C and the elephant and the giraffe are sad [CD-1].
23. C and the giraffe is crying [CD-1].
24. C then the elephant's mom comes and has a net and tells the kids that she will get the airplane out [NOM] [CD-2].
25. C and she takes the net and tries to scoop [TOIC] it out of the water [CD-2].
26. C and she got it out with the net [CD-1].
27. C and the giraffe thanks her very much [CD-1].
28. C and then the giraffe plays with it [CD-1].
29. C and he says to the elephant you could[modal] only play with it if you could not put it in the water [ADV] [NOM] [CD-3].
30. C The end [CD-X].

Reference

Miller, J., Andriacchi, K., & Nockerts, A. (2016). *Assessing language production using SALT software: A clinician's guide to language sample analysis* (2nd ed.). SALT Software.