

Criteria for Scoring Alzheimer’s Study Coordinate Sentence Elicited Imitation Data

Background Information:

Coordinate sentences: the sentences in this prompt follow the pattern:

NP VP NP and (NP/PNoun/Null) VP NP.

That is to say, there are two clauses conjoined by “and.”

It is important to understand the distinction between *subjects* and *objects* in order to score accurately. For the purposes of this study, the subject is the noun phrase that performs or acts the action; the object is the noun phrase that is acted upon.

It is also important to understand the structure of the clauses in the prompts. Clause 1 (C1) consists the subject noun phrase (NP) verb phrase (VP) and object noun phrase (NP) before “and.” Clause 2 (C2) in this prompt has several different realizations. It can either have the same format as C1, which, again, is NP VP NP. An example of this is:

The postman sorted the mail and the postman delivered the package.
(S)NP VP (O)NP and (S)NP VP (O)NP

Alternately, the second clause could have a pronoun (*he* or *she*) in place of the subject NP.

The server provided the menu and she brought the appetizer.
(S)NP VP (O)NP and (S)NP VP (O)NP

Finally, the second clause may be “headless,” and have a null head instead of a noun nor a pronoun.

The mechanic replaced the transmission and repaired the suspension.
(S)NP VP (O)NP and VP (O)NP

If you have questions regarding any of the above, it is important that you speak to another lab member before proceeding with scoring!

General Scoring Criteria:

- Use a pencil (if scoring by hand).
- If the score is “0”, you may leave the column blank.
- All clause numbers (i.e. 1 or 2) refer to the clause’s position in the stimulus, not to its position in the utterance.
- Use the subject NP to identify clause number.

Repetitions:

- Only one attentive repetition is allowed.
- Restarts are allowed once.
- If the first time the participant produces only one or two words, ignore it; if the first time the subject produces a longer sequence, then that will be counted

Scoring:

The scoring sheet is broken down into three main sections: General, Lexical Changes and Morphological Changes. Each of the three will be explained in the following section. Numbers on this document correspond to the numbers of the columns on the scoring sheet. Additionally, at the bottom of the scoring sheet, you will see two tabs: +Sem and –Sem. These correspond to the +Sem and –Sem batteries of the Coordinate Sentence prompt. Certain cells have been grayed out—this means that we would never expect to see those errors in those sentences. This document should be referenced while scoring.

Section 1: General

1-5. Order

Some participants heard Battery A first; others heard Battery B first. In Column 0, mark either A or B, to reflect which battery was given first.

6. C/I: Correct or Incorrect (i.e., like or unlike stimulus)

1 = Mark 1 for correct.

A response is considered correct only if the subject has repeated the phrase exactly. Any deviation, even a phonetically similar one, will result in it being marked as wrong.

The following changes to a sentence may be ignored:

- change of determiner from indefinite to definite or vice versa
- replacing 'his' with 'her' or 'too' with 'also'
- mispronunciation of 'and' as 'an'
- Changing 'which' to 'that' or vice versa
- Inflection of a noun (filter → filters)
- if a change in lexical items that do not change the meaning substantially, and are phonetically similar, the sentence is correct. However, mark changes in both columns for phonological and semantics (ie: 'noted' and 'noticed;' 'elevator' and 'escalator')

Examples of Correct:

Target sentence: The perpetrator cherished the filter and noticed the stereo.

Subject utterance: The perpetrator cherished the filter and noticed the stereo.

Target sentence: The perpetrator cherished the filter and noticed the stereo.

Subject utterance: The perpetrators cherished the filter and noticed the stereo.

0 = Mark 0 for incorrect.

A response is considered incorrect if the subject makes changes to the target sentences that were not mentioned above. Any major structural or semantic change of the model sentence is scored as *incorrect*. Changes may involve omission, addition and/or substitution. For example:

- change in word order or inflection
- change to a word semantically or phonetically similar to the target word

- substantive change of lexical items, e.g., 'eat' for 'touch,' or 'he' for 'Bugs Bunny', name changes
- addition of material which changes the structure (or meaning) of sentence
- omission of subject
- no response or unintelligible response

For the remainder of the columns, use "1" to mark which changes have been made.

7. Unscorable

Mark "1" if the subject did not say the sentence or if s/he said it in an unintelligible way.

8. Researcher Error

Mark this column if the researcher makes an error in delivering the prompt.

9. Number of Attentive Administrations

Mark the number of times the researcher administered the sentence while the subject was paying attention. If the subject is clearly distracted, that does not count as an attentive administration.

The stimulus cannot be scored if there are more than two attentive administrations.

10-12. Structural Change

Columns 10, 11 and 12 allow you to mark if the participant altered the prompt in such a way that it is no longer a coordinate sentence. Usually, this will mean that "and" has been removed and/or replaced. Mark 10 with "1" if the sentence is now a Relative Clause (ex: *The babysitter, who emptied the bottle, prepared the formula.*).

Mark 11 if the sentence is now a Subordinate Clause (ex: *When the babysitter emptied the bottle, she prepared the formula.*).

If there has been a structural change that results in a different type of sentence, mark 12, "Other."

13-17. 1 Clause Only:

Use these columns if, and only if, the participant has reduced the prompt so that it now consists of only one clause (as opposed to two). ***If the subject says more than just the one clause but includes "and," mark it as having two clauses.**

Prompt: The server provided the menu and she brought the appetizer.

Participant Utterance: The server provided the menu and she the appetizer.

Mark as 2 clauses, with a verb removal.

Prompt: The server provided the menu and she brought the appetizer.

Participant Utterance: The provided the menu and she the appetizer.

Mark as 2 clauses, with a subject removal.

If the subject only says C1, mark Column 13; if the subject only says C2, mark Column 14. If the subject removes the "and" that coordinates the two sentences, mark Column 15. If the subject combines the two clauses into one clause, mark Column 16, Conflation.

Example:

Prompt: *The server provided the menu and she brought the appetizer.*

Participant Utterance: *The server brought the appetizer.*

Note that cases where C2 has a full noun phrase, it will be impossible to discern whether it is a conflation or just the participant producing only C2.

Example:

Prompt: *The student opened the backpack and the student erased the blackboard.*

Participant Utterance: *The student erased the blackboard.*

Although *erased the blackboard* clearly comes from C2, we cannot definitively say whether “the student” is from C1 or C2. For uniformity, treat such cases, if they arise, as a case of reduction to C2 (and mark Column 14).

If anything else occurs, mark Column 17, Other, and make a comment in the comments section.

18-20. 2 Clauses:

Columns 18 and 19 should be used to mark when the participant has switched either the VPs (Column 18) or Object NPs (Column 19) in C1 and C2.

Example:

Prompt: *The babysitter emptied the bottle and prepared the formula.*

Participant Utterance: *The babysitter prepared the bottle and emptied the formula.* (Mark Column 11)

Or *The babysitter emptied the formula and prepared the bottle.* (Mark Column 12)

If you notice any other changes that seem to involve both clauses, mark Column 20, Other, and leave a note in the comments section.

Section 2: Lexical changes.

21-63. Lexical Changes

Lexical Changes are broken up into two major groups—C1 and C2. It is easiest to consider first C1 and then C2 and handle them independently. Note: because the task instructions are to repeat the sentences back exactly, any deviation whatsoever from the original stimulus will cause the response to be marked as wrong (even phonetically or semantically similar substitutions).

21-42 = C1

21-28 = C1 Subject Noun

21, 22 = Removal. If the determiner is missing, mark column 21. If the noun (or pronoun) is removed, mark column 22.

Commented [MOU1]: 70?

23-28 = Changed. The NP can be changed to a new one (*babysitter>college professor*, column 23), to a phonetically similar one (*ocean>potion*, column 24), to a semantically similar one (*bucket>pail*, column 25), or to a redundant one (previously occurring in the battery or test, column 26). The NP can be changed to a pronoun (*he/she/it*, column 27) or an indefinite (*'something, someone'*, column 28). Only getting one part of a **compound** noun is a change to a new one (philosophy teacher → philosopher ; story teller → teller).

29-34 = C1 Verb

29 = Removed. If the verb is missing, mark this column.

30-34 = Changed. The VP can be changed to a different one (*ran>swam*, column 29), a phonetically similar one (*fly>flee*, column 30), a semantically similar one (*misplaced>lost*, column 32), a redundant one (column 33) or an indefinite (column 34).

Example:

Prompt: *The babysitter emptied the bottle and prepared the formula.*

Participant Utterance: *The babysitter emptied the bottle and something the formula.* (Mark Column 34)

35-42 = C1 Object Noun

35, 36 = Removed. If the determiner is missing, mark column 35. If the noun (or pronoun) is removed, mark column 36.

37-42 = Changed. The NP can be changed to a new one (*babysitter>college professor*, column 37), to a phonetically similar one (*ocean>potion*, column 38), to a semantically similar one (*pail>bucket*, column 39), or to a redundant one (previously occurring in the battery or test, column 40). The NP can be changed to a pronoun (*he/she/it*, column 41) or an indefinite (*'something, someone'*, column 42).

43-70 = C2

43-56 = C2 Subject Noun.

Because in C2, the Subject NP can be either a noun, a pronoun, or null, there are more possible changes that the participants can make.

43-48 = Insert. As demonstrated in the introduction, there are 2 sentences in the +Sem and 2 sentences in the -Sem conditions where the C2 subject position is empty. For these two sentences, the participant may make changes that are not possible in the other sentences (which is why those cells have been greyed out (with the dark grey color). The participant may insert a noun. If this is a noun different from C1's Subject NP, mark Column 43, New. If the subject inserts a phonetically similar NP, mark column 44. If the subject inserts a semantically

similar NP, mark column 45. If this noun repeats C1's Subject NP or some other noun said within a few sentences of it, mark Column 46, Redundant. The participant may also insert a pronoun (Column 47), or an Indefinite, such as *someone* (Column 48).

49, 50 = Removed. If the determiner is missing, mark column 49. If the noun (or pronoun) is removed, mark column 50. As stated previously, some cells are grayed out because it is impossible to remove a Subject NP if it is not there in the first place.

51-56 = Changed. As before, the NP can change to a different noun (column 51), to a phonetically similar one (column 52), to a semantically similar one (column 53), to a redundancy (column 49), to a Pronoun (column 50), or to an Indefinite (column 51). Some cells are grayed out because an NP cannot be changed if it does not exist in the first place.

57-62 = C2 Verb

57 = Removed. If the verb is missing, mark Column 57.

58-62 = Change. The VP can change to a different verb (column 58), to a phonetically similar one (column 59), to a semantically similar one (column 60) to a redundancy (column 61) or to an Indefinite (column 62).

63-70 = C2 Object Noun.

63, 64 = Removed. If the determiner is missing, mark column 63. If the noun (or pronoun) is removed, mark column 64.

65-70 = Change. The NP can change to a different noun (column 65), to a phonetically similar one (column 66), to a semantically similar one (column 67) to a redundancy (column 68), to a Pronoun (column 69), or to an Indefinite (column 70).

Example:

Prompt: *The babysitter emptied the bottle and prepared the formula.*

Participant Utterance: *The babysitter emptied the bottle and prepared the bottle.*
(Mark Column 68).

Section 3: Morphological Changes

71-84. Morphological changes

71-76 = Verb Inflection

71 = Commission. Mark if inflection is present, but in a different tense than in the prompt.

Example:

Prompt: *The plumber damaged the book and the plumber requested the apple.*
Participant Utterance: *The plumber damages the book and the plumber requested the apple.* (Mark Column 71)

72 = Omission. Mark if inflection is omitted.

Example:

Prompt: *The perpetrator cherished the filter and noted the stereo.*

Participant Utterance: *The perpetrator cherish the filter and noted the stereo.* (Mark Column 72)

73 = Auxiliary Added. Mark if the subject adds an auxiliary.

Example:

Prompt: *The postman sorted the mail and the postman delivered the package.*

Participant Utterance: *The postman was sorting the mail and the postman delivered the package.* (Mark Column 73)

74-76 = C2 (see C1 for examples)

74 = Commission

75 = Omission

76 = Auxiliary Added

77-84 = Determiner errors

Determiners are the words that precede nouns, such as *a*, *an* and *the*. *A* and *an* are considered “indefinite determiners” and *the* is a definite determiner. As you may have noticed, all of the determiners in our prompts are definite.

77-80 = Definite > Indefinite. These columns are to be marked if the definite determiner *the* is changed to *a/an*. There are four possible determiners—the one before the C1 Subject, the C1 Object, the C2 Subject and the C2 Object; changes to those four correspond to Columns 77, 78, 79 and 80. Some of the cells in Column 79 are greyed out. This is because there is no determiner before a Pronoun, or if there is no NP at all.

81-84 = Other. If any of the determiners are removed or changed in other ways not yet addressed, mark the appropriate column (81 for C1 Subject, 82 for C1 Object, 83 for C2 Subject, 84 for C2 Object).

Section 4: Comments

Please make any comments you have in this section, column 85.