Coding the recall has two stages, a propositional analysis and a calculation of measures.

## 1. Propositional analysis

First, divide the recall up into a list of **propositions**. Propositional analysis was developed by Kintsch (1974) to represent the underlying meaning of written text. The text is divided into separate propositions. A proposition is defined as a predicate plus a series of ordered arguments. A **predicate** is a verb, adjective or other term that describes the qualities of or relations between one or more **arguments**, which are always nouns. The entire proposition is written as

PREDICATE, ARGUMENT, ARGUMENT

For example, the sentence

"Rachel went to the supermarket"

would be written as the proposition

GO, RACHEL, SUPERMARKET

where the verb 'to go' (the predicate) takes two arguments, the subject (Rachel) and where she is going (the supermarket). As a general rule the tense of the sentence is ignored.

Some sentences have propositions with only one arguments, such as for adjectives:

"Rachel went to the big supermarket"

GO, RACHEL, SUPERMARKET
BIG, SUPERMARKET

Other propositions take more than two arguments:

"Rachel gave the cashier some money and the cashier gave Rachel her change."

GIVE, RACHEL, CASHIER, MONEY
GIVE, CASHIER, RACHEL, CHANGE

where the verb 'to give' needs three arguments, a giver, a recipient and the thing that is given. Spelling and grammar is unimportant, as long as the text is understandable. Finally, every proposition is numbered, and propositions can refer to other propositions by using this number. For example:

"Rachel watched the clerk pack the bags"

1. PACK, CLERK, BAGS
2. WATCH, RACHEL, 1


## 2.      Calculating the measures

Once the recalled text is divided into propositions, count the total number of propositions. This is the measure of **recall quantity**.

Then, compare the propositions in the recall with the propositions in the original (F0) material. Count the number of propositions that occur in both the original and the recall. This is the measure of **recall accuracy**.

When comparing with the original, accept any plausible synonyms. For example, the items that are bought at the supermarket are variously described as 'food', 'shopping', 'groceries' and 'things': all of these would be acceptable substitutes for 'items', as long as they generally mean 'things that are bought at the supermarket'. The order in which propositions appear does not matter.


Alex Mesoudi, August 2007