Appendix 1
Analysis of Meaning Construction: Coding Manual[1]

Each think-aloud is segmented into distinguishable communication units. Each unit is a separately identifiable remark that expresses an idea about a thought or behavior. Because of the frequent pauses typical of the self-report activity, the researcher needs to exercise judgment in determining the boundaries of each particular remark; however, it is typically to be associated with the T-unit.

Each communication unit is categorized twice to permit analyses of (1) the reasoning operations and (2) the text unit. A communication unit is assigned (by identifying numbers) to each category on the basis of the decisions outlined below.

Reasoning Operations in Reading and Writing

The first decision is related to whether the particular comment is about reading or writing. For writing, the first digit is a 1, and for reading it is a 2. The second decision assigns the comment as to the particular reasoning operation:

.1 (Q) Questions — uncertainties and incomplete ideas that the reader or writer has at any point in the text; related to the genre, content, or text (no specified guess or expectation; moving in no specific direction).
Writing: "What will I write about?" "I don't know what I'm going to do." "Now I'm kind of wondering about where did it come from." "Let's see, what are some other things they have." (coded 1.1)
Reading: "I can't tell what it means." ". . . And I got sort of confused around there." "I was wondering how the prairie dogs saved the land." (coded 2.1)

.2 (H) Hypotheses (present) — plans, choices, or suppositions that the writer makes at the point of utterance, including choice of words or predictions that the reader makes concerning what the genre is about, what the function of a particular piece of text is, or the answer to a question, on the basis of that specific part of the text.
Writing: "When Jill was, let's say seven." "Maybe it goes into a knot." "If I should describe it or say it had a bad reputation." "I'm just going to say 'toffee'." (coded 1.2)
Reading: "They're probably big and stuff." "So maybe it's about a new kid coming to a new school." "I just found out that this could be an essay." (coded 2.2)

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1. These coding instructions, taken from Langer (1986b), include two of the seven dimensions in the full system of analysis. Interrater agreement in the categorization of single protocol comments averaged .84; interrater reliabilities for total protocol scores, as oppposed to the categorization of individual protocol comments, averaged .97.

.3 (H) Hypotheses (future) — plans that the writer makes about what will be "said" in succeeding parts of the text, including choice of words, or predictions that the reader makes about what will be "said" in succeeding parts of the text.

Writing: "I'm going to write about something exciting happening." "I think it will be a tall man." (coded 1.3)

Reading: "It'll probably tell what they're doing and stuff." "Maybe later on, the boys will realize she's ok." (coded 2.3)

.4 (H) Hypotheses (past) — plans that the writer makes about what might now be "said" in preceding parts of the text, including word choice or hunches that the reader has about past meanings.

Writing: "Maybe I should change Western to both kinds of saddles." "I might [now] describe the person in the shuttle or something." (coded 1.4)

Reading: "Maybe it meant like rain and stuff." (coded 2.4)

.5 (A) Assumptions — meanings that the writer assumes need no further explanation or elaboration, or meanings that the reader takes for granted without textual evidence.

Writing: "That sort of tells it all." "In a little short story, it's not enough really." (coded 1.5)

Reading: "There's nothing to think about." "Right there I knew it was a weapon." (coded 2.5)

.6 (S) Schemata — the ideas being developed or explained on the basis of the genre, content, or text.

Writing: "The hammerhead shark is the largest in the world." "She thought she had tied her shoe." "They have populations of really small cities." (coded 1.6)

Reading: "There are hardly any left." "This tells me the mole has weird ears." "A different school might be different from her school." (coded 2.6)

.7 (SP) Schemata personalized — personal experiences drawn upon by the writer or reader.

Writing: "Those were the kind I liked." "I practice a lot everyday." "Sports are my main interest." "I don't remember when I went to nursery school." (coded 1.7)

Reading: "I've never been sent to bed without dinner." "I can see this kid going to my teacher and saying hi." (coded 2.7)

.8 (SE) Schemata (or hypotheses) evaluated — evaluations and judgments being made about what is written or read.

Writing: "That's not right." "That sounds dumb." "They are different ideas." "Oh, I was wrong. . . ." (coded 1.8)

Reading: "That's funny." "That's not so." "It's pretty good." (coded 2.8)

.9 (SL) Schematic links — concept links that the writer or reader makes.

Writing: "The flying and jumping could go together to make a great big flying leap." (coded 1.9)

Reading: "They talked tough and acted tough and fought with him." (coded 2.9)

.10 (MC) Metacomments: content — comments about the writer's or reader's use or nonuse of particular content information.

Writing: "I decided not to use it." "No, I won't do that." "I might put these things in different words." (coded 1.10)

Reading: "I kept on reading [the ideas]." "That's the only thing I can think of." (coded 2.10)

.11 (MC) Metacomments: text — comments about the writer's or reader's use or nonuse of particular surface features of the text itself.

Writing: "Some of these sentences are short and choppy and some are long." "I might put these in different order." "I put we instead of when." "Put a comma there." (coded 1.11)

Reading: "The quotes mean she's talking." (coded 2.11)

.12 (E) Evidence — the information that the writer presents, the explanations that the writer provides, or the evidence that the writer develops to answer a question, carry out a hypothesis, or fill in the schemata; or information that the reader gathers or explanations the reader provides to answer a question or to confirm or disconfirm a hypothesis. Includes all direct or implied statements of causality.

Writing: ". . .Because you can get hurt on the right side." "Cause its expensive." "That's how I know how to spell penny loafers." (coded 1.12)

Reading: "You can tell he's the leader." "He's trying to make a fight." "Cause it says it was made by a small furry animal called a mole." (coded 2.12)

.13 (V) Validations — information, implied or direct, that the plan was fulfilled or a decision made.

Writing: "That's what it was." "Well, that's what they're like." "So he had a fight." "I decided not to." "All right, that's about it." (coded 1.13)

Reading: "So, the prairie dog was a hero." "I've seen it before." "OK, that tells me the same thing." "So the title doesn't fit really." (coded 2.13)

Text Unit

1. (L) Local — attention is focused on localized points within the text.
2. (G) Global — attention is focused on the overall message of the entire piece.