**Modified FTT/PTT Phase 3 Scoring Manual**

***(Adapted by Cha & Robinaugh, Version 8/31/2018)***

Adapted From:

Levine, B., Svoboda, E., Hay, J., Winocur, G., & Moscovitch, M. (2002). Aging and autobiographical memory: dissociating episodic from semantic retrieval. Psychology and Aging, 17, 677-689.

**Overview**

The Experimental Recombination Paradigm Scoring Manual quantifies elements of future event simulations. The coding for each event will proceed in four steps.

**Step 1:** Isolate and define the imagined future event.

**Step 2:** Separate text segments for each imagined event into *internal* and *external* details.

**Step 3:** Assign a *detail category* to each of the internal details.

**Step 1: Identify the imagined event**

**Isolating and defining the event**

To begin, read through the full event description and the cue that the subject was given in order to identify the central event the subject is recalling or imagining and briefly describe the event on the top line of the scoring sheet. In many instances, this will be highly similar or identical to the cue the subject was given (i.e., the event they were asked to recall or imagine).

Although the task instructions request specific events, many subjects give more than one event or events that are difficult to define (i.e., non-specific events). It is therefore necessary to be clear what the event is before any scoring takes place. This is particularly important when categorizing segments, as segments that are not part of the central event (i.e., external details) are tallied separately from those that are part of the event (i.e., internal details).

An event is singular (i.e., not repeated) and specific to a particular time. The event should be restricted in time (i.e., less than 1 day and typically only a few hours or minutes). If an event extends over days or weeks (e.g., a vacation), the scorer must restrict scoring to the best time-restricted event available. The event must be something in which the subject themselves is present.

An event may have other small events contained within (e.g., time spent at two different stores on an afternoon of shopping) but should be a cohesive whole. That is, the smaller contained events should be connected. For example, the subject may have lunch with Susan, get on a train with Susan once they leave the restaurant, and spend the rest of the afternoon shopping with Susan all as part of the event “Spending the afternoon with Susan.”

Events should be considered distinct if there is a gap in which it is unclear how one event would lead to another (e.g., if the subject first described being at lunch with Susan but later described being at the club with Susan), if there are sufficient differences between the two events that they can no longer be considered part of a broader whole (e.g., if the subject had lunch with Susan but then went hiking with Michael), or if the events take place on different days (e.g., lunch with Susan on Saturday and then seeing a movie with Susan on Sunday).

If there are multiple events, the central event is the one for which the subject provides the most detail.

**Step 2: Text Segmentation and Primary Categorization**

#### Text segmentation

A segment, or detail, is an information bit; it is a unique occurrence, observation, fact, statement, or thought. This will usually be a grammatical clause -- a sentence or part of a sentence that independently conveys information (i.e., a subject and a predicate.)

A single clause may contain more than one detail. For each clause, consider whether its constituent parts convey additional information. That is, if the segments are divided, does each segment stand on its own as providing an information bit. If so, the parts can be separated and scored as separate segments.

Anytime the subject provides information beyond the basic “singular subject + predicate” unit, each additional piece of information should be considered a text segment. For example, specifying multiple subjects (e.g., My brother and I sat down), multiple verbs (e.g., We swam and ran in the race) or multiple objects (e.g., I ate a hamburger and fries) would each warrant distinct text segments (i.e., for “my brother”, “[we] ran]”, and “fries”).

**Examples:**

1. “I get a banana and chips”

* Two text segments: “I get a banana |and chips.”

1. “I sit down with my mom and my sister.

* Two text segments: ”I sit down with my mom | and my sister”

1. “He had an old, brown fedora”

* Three text segments: “He had [a fedora] |an old, | brown”

#### Primary Text Categorization

The main categorical distinction for details is whether the detail is **internal** or **external** to the event.

**Internal Details:** Internal details are text segments that provide information about the central event, (as identified above in Step 1). These details will typically include information about what happens in the event (e.g., “Don is cooking dinner”), when the event takes place (e.g., “at 6:00 PM”), where the event takes places (e.g., “on his porch), or about what the subject is thinking (e.g., “I am thinking about how good the food will be), feeling (e.g., “I am really excited), or perceiving in the event (e.g., “the food smells really good”). Internal details should be highlighted in green.

**External Details:** External details are segments that are not part of the central event. They may either refer to non-central events or to general semantic information that is not specific to the main event (e.g., “Don is a great cook”; “Sometimes Don cooks out on his porch”, “I’ve always really liked hamburgers off the grill”). External details should be highlighted in red.

#### Primary Text Categorization (continued)

**\*Repetition:** A detail is a repetition if it repeats a prior information-containing detail (internal or external). It does not have to be a verbatim repetition nor does it need to refer only to what was said immediately prior. What characterizes a repetition is the lack of any new information beyond what was said in a prior detail for that event description. Repetitions should be highlighted in grey, and marked as [R].

**Examples:**

* 1. **“**I’m really excited to see the movie” … [later in event description]… “So yeah, I’m just really excited to see it”
* “So yeah, I’m just really excited to see it” is a repetition even though it comes later in the event description because it adds no new information.
  1. “I hoped for the best. I kept my fingers crossed.”
* “I kept my fingers crossed” is a repetition despite not being a verbatim reiteration of the previous statement because it adds no new information.

**\*Corrective information:** If the subject corrects themselves the correct version should be coded as internal or external as appropriate. The incorrect version should not be counted in the detail counts and should be highlighted in grey and marked as [NR].

**Example:**

1. “I added a little black and sugar to the coffee. I mean cream and sugar”

* “I added a little cream and sugar to the coffee” should be coded as internal and counted as 3 internal event details (i.e.,[ I added cream to the coffee] | [and sugar] | [a little]). “Black and sugar” should be highlighted in grey and excluded from the internal and external detail counts.

\***Nonsense words or phrases:** If the subject makes an utterance (e.g. “umms” or “uhhs”) or uses a phrase that contains no information (e.g., “we’ll do something” or “so yeah, that is that”), it should be considered a nonsense word or phrase, highlighted in grey, and excluded from the internal/external detail counts. To allow for efficient coding, if the utterance comes as a brief interjection in an otherwise complete internal or external text segment, it does not need to be coded separately. For example, the phrases “I will eat uh... an apple” or “Umm... I went to the store” can simply be coded single internal event details. Longer utterances that are distinguishable from an internal or external detail segment, such as “um...uh...yeah... " should be coded in grey and marked as [NR]. In either case, nonsense words, phrases, or utterances should never count toward the internal or external detail segment counts.

**Example:**

1. “We go behind my house | which is where it is”

* The phrase “which is where it is” in this context does not convey information.

\***Speaking to the experimenter:** If the subject (a) comments on the task (e.g., “this is really hard”; “how many more do I have to do?”), or (b) speaks to the experimenter (e.g., “you know what I mean”), those segments should not be included in the detail counts and should be highlighted in grey, marked as [NR].

\***Reading aloud event cue:** If the subject reads aloud the event cue AND that event cue matches the actual central event, the content of the event cue should be coded as internal details. If the subject repeats the event cue BUT that event cue is ultimately different from the central event you identified based on their description, the event cue should be coded in grey and mark as [NR]. You may mark it as a single NR.

\***Cut off text:** If the subject’s audio recording is cut off mid-sentence or phrase, and it alone does not carry meaning/significance (e.g., “So then…”), code in grey and mark as [NR]. If there is enough text to assign a secondary text categorization, code the incomplete sentence/phrase as an internal detail.

**Distinguishing Between Internal and External Details**

In some cases it can be difficult to distinguish internal from external details. Below, there are several common situations that arise in which it is unclear whether the detail is internal or external.

**Describing other people’s thoughts, feelings and comments**: When subjects imagine a future event, they describe other people’s thoughts and feelings along with their own. These should be coded as internal if they reflect what the individual is thinking or feeling during the central event. They should be coded as external if they reflect thoughts the individual will have in general.

**Examples:**

1. “We’re at the store and **my mom is hungry** so she picks up a bag of chips.”

* **Internal Detail.**  Here, the subject is providing us with information about what her mother is thinking/feeling during the central event.

1. “So I go to meet my mom. **My mom never liked Jim** and sometimes we argue about how I’m still struggling with the loss so I’m feeling a little tense.”

* **External Detail.** In this case, the subject is giving information about what her mother feels in general (i.e., not about what her mother will be thinking or feeling in the imagined future event).

**Information about time**: Subjects often give information about the length of time they would spend doing something (e.g., how long it will take to get somewhere). Time information should be coded as internal if it provides information about the central event. Time information should be code as external if it provides general or semantic information that (although potentially related to the event) does not provide direct information about the event itself.

**Examples:**

1. “I love going to see movies. My house is only about an 8 minute walk from my house so I get to see movies a lot”

* **External Detail.**  Here, the subject is providing us with general semantic information about herself and the location of her house, not about the particular event that she is describing.

1. “We are going to walk to the movie theatre. It’s only about an 8 minute walk from my house so we get there pretty quickly.”

* **Internal Detail.** In this case, the subject is giving information that directly related to the central event, providing information about how long they will be walking to the movie theatre.

**List of possible scenarios (may/maybe/might statements):** When subjects are asked imagine a future event, they may enumerate possible scenarios with or without specifying which of these events they are anticipating would actually occur. If these different possibilities are about the central event, then each should be counted as an internal detail. Similarly some subjects will use the words “maybe” or “might” to describe what they are imagining (e.g., “and maybe I’ll get heartburn so I’ll take out my antacids”). These should be counted as internal details.

**Additional Notes and Conventions**

**Identifying unique segments.** If you remain unsure whether a given clause or phrase contains more than one detail, it may help to consider whether you could accurately complete the secondary text categorization for each of the potentially distinct details. If so, it is likely that these do indeed convey distinct information and should be considered distinct details. In general, it is better to split the text segments into separate details if you think they could reasonably be considered to provide distinct information.

**Distinguishing Between Internal and External Details.** If you remain unsure whether the event is internal or external, the rule of thumb in these cases is to give the subject the benefit of the doubt. If a detail could reasonably be internal, it is scored as such. Importantly, this rule should not be applied to all details that could possibly be internal; only those that could reasonably be internal and for which you are unsure about how to categorize.

**Step 3: Secondary Text Categorization**

The third step is to place each of the internal details into one of 5 specific categories: 1) Event Details, 2) Place Details, 3) Time Details, 4) Perceptual Details, 5) Emotion/Thought Details. If the detail does not fall into one of these five categories, it should not be considered an internal detail.

**Event Details:** Overall, event details describe the unfolding of the story. They are usually happenings (e.g., "I fell down"), but also include who was there (1 point per name/person up to a maximum of 5), reactions/emotions in others, the weather, one’s clothing, physical occurrences and actions of others.

**Notes:**

* 1. If an item qualifies to be in another category (e.g., perceptual richness), then **priority is given to that more specific category.** An item cannot be scored as an event detail if it is in another category.
  2. Anything that the subject says should be coded as an event detail, regardless of the content of what they said. For example, “I will tell my friend that I love her beautiful blue dress” should be coded as a single event detail.
  3. Adjectives and adverbs that cannot be assigned another category (e.g., perceptual or emotion/thought detail) should be considered event details.

**Examples:**

1. **“**We’ll be going to Harvard Street and it will be raining”

* **2 Event Details.** “We’ll be going to Harvard St.| it will be raining”.

1. “I will go to dinner with Susan”

* **2 Event Details**. ”I went to dinner |with Susan”

1. “Elly, Rich, Heidi, Phil, Dianne, Shirley, and I will discuss the plan.”

* **6 Event Details.** “Elly | Rich | Heidi | Phil | Shirley | -Dianne- | and I will discuss the plan for the day.” Although 7 details are given, you should only give up to 5 points for naming distinct people who are present. The narrator/research participant does not count toward the 5 person limit.

**Place Details:** Any information that involves localization in space, including countries, bodies of water, provinces, cities, streets, buildings, rooms, and locations within a room.

***Notes:***

* 1. One's own orientation in space ("I was to the right of Edgar") is considered a perceptual detail and not a place detail
  2. Each piece of information provided about the place should be coded as a separate event detail even if the additional could be assumed (e.g., Harvard square in Cambridge) should be coded as two places detail (Harvard square | in Cambridge).

**Examples:**

1. **“**We’ll be going to the Duck Pond in the Boston Gardens”

* **2 Place Details.** “We’ll be going to the Duck Pond| in the Boston Gardens”.

**Time Details:** Life epoch ("My twenties"), year, season, month, date, day of week, time of day, or clock time.

**Notes:**

* 1. *Duration information ("We will be there for 20 minutes") is scored a perceptual detail.*
  2. Details that provides information about when in time a particular event occurred (e.g., “When we get there”) are scored as time details.

**Examples:**

1. **“**When we arrive at Shake Shack, we will be in line for about 20 minutes”

* **1 Time Detail** (“When we arrive at Shake Shack”). In addition, there is 1 event detail (“we will wait in line”), and 1 perceptual detail (“for about 20 minutes”)

**Perceptual Details:**Perceptual details include auditory, olfactory, tactile/pain, taste, visual (object details, colors), spatial-temporal (allocentric-egocentric space, body position and duration).

**Notes:**

1. In the case of objects, it can be difficult to distinguish between a perceptual and an event detail. **Objects that are directly involved in the unfolding of an event are considered event details** ("We lit the candles") whereas **objects that are part of the perceptual landscape are considered perceptual details** ("There were lit candles everywhere"). Broadly, if the subject is interacting with or possessing the object (e.g.,” I will have my phone in my pocket”), it should be considered an event detail.

**Examples:**

1. **“**The wind is cold but I’m not worried because I have my purple chapstick.”

* **2 Perceptual Details** (“The wind is cold” and “purple [chapstick]”). In addition, there is 1 emotion/thought detail (“but I’m not worried”) and 1 event detail (“because I have my [purple] chapstick”).

**Emotion/Thought Details:** Any detail that pertains to the mental state of the subject at the time of the event. These include feeling states, thoughts, opinions, expectations, or beliefs.

**Notes:**

1. **Thoughts expressed in retrospect** (at the time of the interview- "I find out later I am wrong" or “I won’t realize that until later”) are tallied as external.
2. **Beliefs or opinions that are long-standing** (not specific to the event - "I never believe in ghosts") are also external and are scored as semantic details.
3. **Inferences about other people's mental state** ("She is sad") are considered event details, unless these inferences reflect the subjects' own mental state at the time ("I think he is angry with me"), in which case they are internal thought details.
4. If the subject reports that **“we” are thinking/feeling something**, the details should be coded as emotion/thought details