Comments on Graesser, Singer, and Trabasso

- What is a *constructionist theory*?

"*According to constructionist theories, readers construct a mental model or a situational model. …*"

"*The central idea in the constructionist theory of Graesser et al. (1994) is that reading is considered as a search for meaning. The readers' goal and knowledge guide the reading process. Readers try to construct a meaning representation that is coherent both at the local and at the global level. They try to explain the actions, events, and states mentioned in the text; i.e., readers try to answer 'why' questions with respect to the text. According to this theory, inferences concerning causal antecedents and superordinate goals are made because they explain actions in the text, whereas inferences about causal consequence and subordinate goals and states are not made because they do not contribute to the explanation. Currently, there is some debate on these claims of constructionist theory. What is undisputed is that the reader's knowledge is an important factor in controlling inferences. Even local inferences are not made if they do not address information that is part of the reader's knowledge (Noordman and Vonk 1992).*" source

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- The importance of, acknowledged omission of, and commentary on idiosyncratic reader goals (and background knowledge, etc)

- How do inferences from reading relate to categorization?

- A computational model is not reported -- what specific domains manifest in specific texts and genres might be good candidates in which to build computational models (e.g., I Googled 'computational models of suspense understanding and found [this paper on Dramatis](#).

- The role of visualization and imagery during reading of narrative (and expository) texts seems important for building a situation model, for example, and this may have implications for validity of verbal testing

- A continuum (and/or probability distribution) between online and offline (e.g., what is a reader stops and pauses.

- A continuum between narrative text and expository text (e.g., Moby Dick by Herman Melville)

On the surface, Moby Dick is as much or more "expository" than it is "narrative", but it becomes evident rather quickly that it is metaphorical at all levels, and a reader goal is to find metaphors (this seems a combination of genre-specific, idiosyncratic, and global coherence)

"*And yet still further pondering- while I jerked him now and then from between the whale and ship, which would threaten to jam him- still further pondering, I say, I saw that this situation of mine was the precise situation of every mortal that breathes;*"
https://etc.usf.edu/lit2go/42/moby-dick/753/chapter-72-the-monkey-rope/

"*Yes, we were now in that enchanted calm which they say lurks at the heart of every commotion. ... *"

"*... however it may have been, these smaller whales- now and then visiting our becalmed boat from the margin of the lake- evinced a wondrous fearlessness and confidence, ... Like household dogs they came snuffing round us, right up to our gunwales, and touching them; till it almost seemed that some spell had suddenly domesticated them. Queequeg patted their foreheads; Starbuck scratched their backs with his lance; but fearful of the consequences, for the time refrained from darting it.*"

"*But far beneath this wondrous world upon the surface, another and still stranger world met our eyes as we gazed over the side. For, suspended in those watery vaults, floated the forms of the nursing mothers of the whales, and those that by their enormous girth seemed shortly to become mothers. The lake, as I have hinted, was to a considerable depth exceedingly transparent; and as human infants while suckling will calmly and fixedly gaze away from the breast, as if leading two different lives at the time; and while yet drawing mortal nourishment, be still spiritually feasting upon some unearthly reminiscence;- even so did the young of these whales seem looking up towards us, but not at us, as if we were but a bit of Gulfweed in their new-born sight.*"
https://etc.usf.edu/lit2go/42/moby-dick/768/chapter-87-the-grand-armada/

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"I believe that the Graesser's view on inference in narratives could provide valuable insights into assessing the interestingness of text." -- EM

"I thought Constructionist's prediction that states "Readers do not normally construct … inferences that track the spatial locations of objects within a spatial region"[372] was a very bold claim to make. … I tend to generate most of the things I read in text into an imagery that can be virtually seen." -- SJ

"Graesser suggests that comprehension includes construction of a "multi-level representation of the text" with inferences drawn at each level, a synthesis of distinct ideas in the text, question asking, question answering, paraphrasing, and summary generation. In order to make the inferences categorizations are requisite." – BJ
See Stepp and Michalski on clustering that is informed by background knowledge

"The mechanism of search-after-meaning explains why human require reading incomprehensible or complicated text slowly and coherent text quickly, reminding me of the entry-level shift presented by Palmeri and Cottrell (2009). While lack of data may be problematic, categorical learners would likely benefit from the ability to utilize different cognitive processes and respond to local and global cues." -- MB

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"I thought it may be interesting to explore comprehension under the goal of problem-solving given a math problem and to what extent Graesser's findings apply to this domain." -- KL

"My question is whether readers who have needed to make traditionally offline inferences online will begin doing so automatically without prompting in most cases. As an example, would someone who sufficiently often needs to keep track of troop movements …" -- KM

"I am interested in learning more about how working memory manages conflicting knowledge. For example, when reading the text "How Leisure Came" on page 375, … My initial inferences of the story do not match the authors' inferences listed in Table 1 (p. 375). The theme "haste makes waste" did not come across to me as a compelling moral lesson,…" -- NH

"Are differences in inferences across individuals wrong, or are they simply different? Though this question is most likely out of the scope of this article, it becomes incredibly important when comprehending narrative texts that are more complex and culturally-relevant …" -- CK

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"Many individuals, … might make certain classes of inference--e.g. state inferences, such as the appearance of the room characters are standing in, or the fact dragons have scales [389]--by producing a mental picture of the object of interest. … I see no reason why such inferences-as-pictures should result in a priming effect on verbal tasks, …" -- KK

"The priority placed by these studies on verbalized dialogue seems to neglect those who read and think through visual mental imagery. Translating such mental imagery into a vocal response could take greater time and lead to selection of study results primarily to those who do not think in such a way, if they exist. … I believe that one example where visual mental imagery is capable of providing detailed information to perhaps a level even greater than non-visual methods is the use of memory palaces." -- DL

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"Are differences in inferences across individuals wrong, or are they simply different? Though this question is most likely out of the scope of this article, it becomes incredibly important when comprehending narrative texts that are more complex and culturally-relevant ... Additionally, it would be interesting to see if Graesser et al's constructive inference model extends to narrative comprehension in alternative stimuli. " -- CK

"The authors found that the "answer time for the test question was faster in the causal condition than in the temporal condition," and that this suggests that readers build structures to understand causality while reading, which allows them to answer the question more quickly after the causal pair than after the temporal pair, where these structures are not necessarily built on-line during reading (Graesser 387)." -- MS

A key phrase made in the paper is "... should be generated on-line because they explain why characters perform intentional actions... should not be generated because they do not explain why actions occur... merely elaborate the details about how actions are executed" (Graesser et al, page 390). This phrase encapsulates one of the main assumptions made in the Theory, an assumption that the authors spend a good portion of the paper motivating: "Comprehenders attempt to explain why episodes in the text occur..." -- HM

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"Attention, or the goal, and condition then form the overall context. This hypothesis would extend the idea that goals direct the inference process to include the possibility that overlearned background knowledge, the condition, accounts for the inferences readers tend to draw on-line. As a test it seems beneficial to investigate outliers such as subjects from varying backgrounds…" -- JR

"Linking these themes from the article together, an intriguing question is where and how these inferences exist in the brain. Though I have no knowledge of the cognitive processes involved in the generation of speech, it seems to me that the processes concerned with speech and those concerned with inferences may be interconnected in some way. If these inferences are generated in the working memory, then it might be interesting to consider how these inferences affect the generation of future inferences." -- DS

What is a relation between this shortest of short stories and Graesser, Singer, and Trabasso?

On Exactitude in Science
Jorge Luis Borges, Collected Fictions, translated by Andrew Hurley.

…In that Empire, the Art of Cartography attained such Perfection that the map of a single Province occupied the entirety of a City, and the map of the Empire, the entirety of a Province. In time, those Unconscionable Maps no longer satisfied, and the Cartographers Guilds struck a Map of the Empire whose size was that of the Empire, and which coincided point for point with it. The following Generations, who were not so fond of the Study of Cartography as their Forebears had been, saw that that vast Map was Useless, and not without some Pitilessness was it, that they delivered it up to the Inclemencies of Sun and Winters. In the Deserts of the West, still today, there are Tattered Ruins of that Map, inhabited by Animals and Beggars; in all the Land there is no other Relic of the Disciplines of Geography.

—Suarez Miranda,Viajes devarones prudentes, Libro IV,Cap. XLV, Lerida, 1658

And I loved [this commentary in the Paris Review](#).