

Brown, Neath and Chater Article
Summary of 11/16/09

1. Focus is on access to information indexed along continuous dimensions
 - a. Problem is discriminating from other items close to it along dimension(s)
 - b. Search for *scientific laws* that are scale invariant except at extremes
2. Notion is that accessing information with a temporal dimension is just like accessing any other kinds of information with continuous dimensions, except that time is scaled logarithmically going back in time so that more recent items are more distinct than earlier ones
 - a. Same law holds whether a priori think of knowledge as being in short term or long term memory; i.e., it is a discrimination process at all time scales.
 - i. *Scale similarity*
 - ii. Raises question as to whether need distinct mechanisms/models, although have not yet addressed all data taken to imply separate
 - b. All memory loss is due to interference rather than trace decay
 - i. But with interference increasing as you move further back in time
3. Time is measured backwards from point of retrieval
4. Confusability between items is given by temporal ratios at time of recall
 - a. Retrievability of an item is a function of the sum of its confusability with (primarily) its close neighbors
5. Bowed serial position curves (p. 543) arise from discriminability from neighbors
 - a. First item has fewer neighbors and is more discriminable
 - b. Later items are "farther apart" because of logarithmic scaling
 - c. Contrasts with tradition notion of primacy effect from LTM and recency effect from STM
 - d. Similar curves are found in other discrimination domains and can be manipulated by changed distinctiveness of items
 - i. *Isolation effects*
 - e. Quality of recall affected by ratio of interpresentation times to lag since presentation
6. Two equivalent(?) equations
 - a. $\text{Similarity} = \exp(-c|M_i - M_j|^c)$
 - b. $\text{Confusability} = (M_i/M_j)^c$