How were Chinese characters made? (thanks to Mai for these great examples of the iconicity of Chinese characters!)

- Mountain

- Rain - from clouds

Some findings in the Scale Model Task (come to class to see actual real live children on video doing this task!)

- 2.5-year-olds fail.
- 3-year-olds succeed.
- 2.5-year-olds succeed if told model is shrunk version of the room in which they will search (“shrinking machine”).
- Overall, children are more likely to succeed if the model is more similar (identical) to the room in which they perform the search.
Piaget on Scale Model Task

• 2-year-olds are only beginning to develop symbolic representations. By the age of 3 this ability allows them to see the model as a representation of the real room.

• Younger children can succeed in the “shrunken-room” experiment because it turns the problem into a completely concrete one -- there are no representations, no symbols, only “one” room.

• The similarity of the model to the real room helps children succeed in the task because at this stage children are still influenced by perceptual features -- their representation of the model is not abstract enough.

Information Processing on Scale Model Task

• Succeeding at the task requires maintaining two different representations of the same object at the same time.

• 2.5-year-olds fail at the task because they lack the cognitive resources (memory, attention, or executive control) to maintain these two representations.

• The “shrinking-room” room experiment requires less resources -- one representation of the room is enough.

• Similarity between the model and the actual room makes the task easier because it helps children do the mapping between things in the model and things in the room, since children are often affected by perceptual similarity in analogy tasks.

Sociocultural Theories

• Child as social being.
  - Cognitive development occurs through interactions between child and other people.
  - Cognitive development occurs within a broad cultural context which includes cultural tools.
  - Children are teachers and learners, products of their cultures.
  - Change occurs through:
    - Guided Participation
    - Intersubjectivity (Joint Attention, Social Referencing)
    - Social Scaffolding

Information Processing on Scale Model Task

• The idea of using a model to represent a physical entity is a product of culture. Models are cultural tools.

• Children learn to use models to represent real places by interacting with others who use models in that way. Younger children fail because of lack of experience.

• Younger children succeed in the shrinking room because the model is not being used as such. There is no cultural tool being used.

• (a bit of a stretch) The greater similarity in the rooms help children with intersubjectivity, when the experimenter says it is in “the same place”, it is easier for them to understand what the experimenter means.