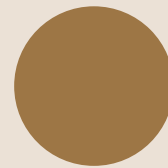


Poverty of the Stimulus (1.1 - 1.4)

Vicente Perez
Prof. Pearl
LSCI151C



What is PotS and why is it contentious? (1.1)

- PotS - a claim on whether something can be learned by children* given the noisiness (impoverished) of the data they work with.
- PotS is caused by unresolvable ambiguity brought on by insufficiencies in data.
- Despite ambiguity or noise present in data that children encounter, they acquire language regardless.
- So, then, how do they overcome this poverty?
- The "tears" of the debate regarding PotS
 - Children work off of prior knowledge or abilities.
 - What is the nature of these abilities?
 - Specifically, are they **linguistic-specific** or **domain-general**?
 - Other areas where tears come about

**typically-developing children*

Constrained Generalization and Induction (1.2)

- When acquiring language, children work via induction.
- Because of noise present in linguistic data, multiple internal hypotheses may appear to map compatibly onto the data.
- This introduces ambiguity that otherwise makes induction difficult without external help.
- Yet, children exhibit constrained generalization, allowing them to reliably choose the right representation!

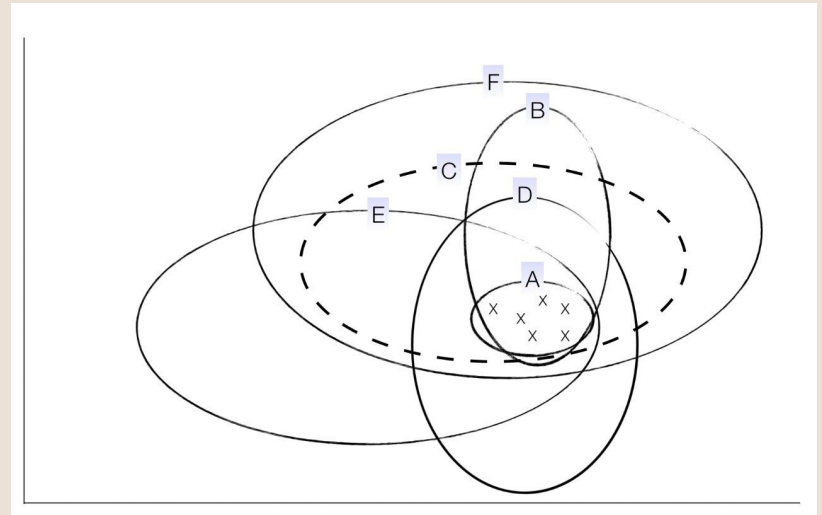


Fig. 1 from reading: representation of competing internal hypotheses and data



What this constrained generalization implies... (1.2)

- From this phenomena, we re-arrive at the idea that... :
 - When processing language, children are being assisted by something.
 - This something assists their inductive learning abilities.
 - This assisted induction allows them to select the right hypothesis reliably... in the absence of any external human helping.

Thoughts up to this section/reflection on prior reading

- This PotS reading reminded me of our prior reading on UG, where one of the Perusall comments (I forget the author) got me thinking about usage-based theorists.
- If, for them, there is no innate device in children's brains and language is constructed solely through interaction, what does that say about the PotS?
- With this in mind, would there be no PotS to speak of for a usage-based theory of language?
- If a usage-based theorist affirms PotS, how would they explain it?

Types of evidence that children use (1.2)

- Children use direct positive evidence to acquire language grammar, learning directly from what's said by others.
- **However**, they are *notoriously impervious* to negative evidence like explicit corrections from caretakers, often ignoring these.
- Reminded me of a video from LSCI 51 where a child was corrected multiple times but kept producing grammatically incorrect sentences!

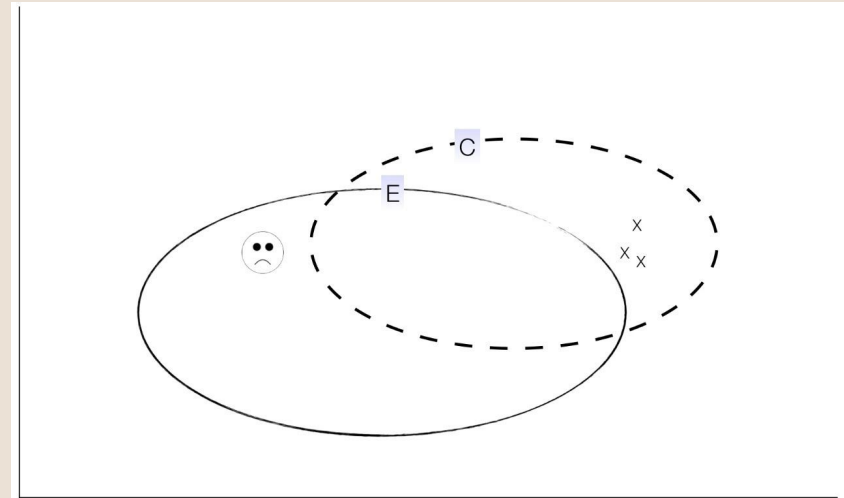


Fig 2. Positive and negative evidence in a hypothesis space, illustrating overlap.

Continued from last slide... (1.3)

- Despite multiform insufficiencies of data (negative evidence being ignored, echo questions, noise in speech, etc.), children still exhibit constrained generalization!
- Once again, this inevitably returns us to the same idea, that is: **children must have innate knowledge of how language works.**
- Now the question is: what is the nature of this innate knowledge?

The two camps (1.4)

Linguistic Nativism

- Associated w/ Noam Chomsky and his conception of Universal Grammar (LAD).
- Innate knowledge is language-specific, with specific abilities tailored for language learning only.
- Doesn't rule out domain-general abilities helping language acquisition, still affirms language-specific abilities.

What I subscribe to...



Non-linguistic Nativism

- Innate knowledge and abilities DO exist, but they are not tailored specifically for language.
- Domain-general: abilities applied to language learning *also* applied to other human abilities.
- EX: Simple counting/tallying, phoneme discrimination v. color discrimination

Thank you!!!

