Repetitive Synchronous Imitation

A new tool for looking at timing
Repetitive Synchronous Imitation (RSI)
Origins of RSI

• Language teaching: Swedish prosody to L2 learners

• Developed by Gabor Harrar, at the Finnish Institute in Stockholm University

• Particularly effective at teaching pitch accent
Oh boy, oh boy, a new toy!
Rhythmic Expectation

• Allow subjects to set the silent interval between phrases

• Ss instructed to choose an interval they would like if they had to speak along with the target

• Compare the intervals they choose with those generated by free production
Joe books very few judges
Correlations between own productions and RSI settings

Foot, "Play in the street up ahead"

$r = .80$

Foot, "Charlie, did you think to measure the tree?"

$r = .38$

Foot, "Joe books very few judges"

$r = .84$

Foot, "Here I was, in Miami and Illinois"

$r = -.18$
Initial observations

- Correlations, where present, reflect temporal expectation

- Expectations are high when a single syntactic unit is repeated (Not just a mean value)

- Expectations are less evident when the repeating unit is composite

- Foot+silence is a better indicator of expectation than silence alone
Other Potential Uses?

* Considerably more effective than mimicry
* Timing (rate, proportional timing changes)
* Intonation and Tone modification

What are the limits to intentional voice modulation?
CHAINS: CHaracterising INdividual Speakers

- 3 Corpora: each with parallel speaking conditions:
  - Reading alone
  - Reading with altered speech
  - Speakers modify speech towards a known target

- Q: what remains invariant despite intentional modification?
3 Corpora

- Regular read speech +
- Synchronous Speech
- Mimicry
- Repetitive Synchronous Imitation
For Discussion

- What might one do with this tool??