(1) Early morphological segmentation: contradictory findings
- Must the word be actually suffixed (*cleaner* priming CLEAN): "semantically transparent"
- or is being partitionable into stem and suffix enough (*corner* priming CORN): "semantically opaque"?
- We've seen a couple of papers so far whose models connect *cleaner* to *clean*, but not *corner* to *corn* (Giraudo & Grainger 2000 and Marslen-Wilson et al. 1994)
- In earlier cross-modal priming studies, a semantic relationship is required (*corner* won't prime CORN)
- In earlier masked-priming studies, transparent and opaque primes facilitate about the same amount, but not more than form primes
  - studies that include comparison to form primes (*brother* - BROTH) find that the opaque primes aren't different from the form primes or from the transparent primes
  - So *corner* could be facilitating CORN in the same way *brother* facilitates BROTH.

(2) Previous issues with items
- Rastle & al. claim that these prior results, including their own, are troubled by inconsistencies or dubious choices in what counts as what category
  - do opaque cases need etymological justification (*witness*) or not (*corner*)?
  - are form-related controls allowed to have an apparent suffix (*corner*) or not (*brothel*)?
    - if the system just spots tokens of real morphemes, *corner* will muddy the control results
- Longtin, Segui, & Halle 2003 find that transparent and opaque (etymologically related or not) do prime more than form-related (French)
  - but problems balancing target frequency, prime-target form overlap, and length across conditions

(3) Items in this study (English)
- Transparent (*cleaner*-CLEAN)
- Opaque/spurious (*corner*-CORN)
  - A concern: also contained items like *department*-DEPART, where although *depart* isn't transparently contained in the prime, *-ment* is (a department is the right kind of abstract noun to end in *–ment*). Cf. no semantic basis for *–er* in *corner*
  - If we end up finding no difference between transparent and opaque, could that be because the opaque ones are a mix of semi-transparent and opaque?
- Form (*brothel*-BROTH, where crucially *–el* is not an English suffix)
  - though in some cases the pseudosuffix was a rare but real suffix (*-n*, as in *silver-n*), or the word ends in a real suffix but the remainder isn't the prime, nor is it a real stem (*fuselage*-FUSE)
- Unrelated control: always suffixed words

(4) Experiment and results
- Masked priming—42 msec (shorter than some others we've seen)—with lexical decision
- Transparent and Opaque were both significantly different from Form, but not from each other.
 - Focus on the last line—what matters is the difference between related and control.

Table 2
**Mean Latencies (in Milliseconds), Error Data (%Error),
and Priming Effects**

| | Condition | | | | | |
| | Transparent | | Opaque | | Form | |
Relatedness	M	%Error	M	%Error	M	%Error
Related primed	570	2.7	598	8.6	635	14.1
Control primed	597	4.5	620	10.6	639	17.1
Priming effect	27	1.8	22	2.0	4	3.0

Rastle et al., p. 1093

(5) Discussion

- "These results point [...] to a rapid process of morphological segmentation that operates on any printed word that contains a stem and an affix, irrespective of semantic transparency" (p. 1093)
  - o or just "that contains an affix"? can't tell from experiments where target is just stem
- Recall Giraudo & Grainger 2000's two models (G&G argue for supralexical)—the model proposed here is like the sublexical model, with –*tié* also having a node on the same level as *ami*.
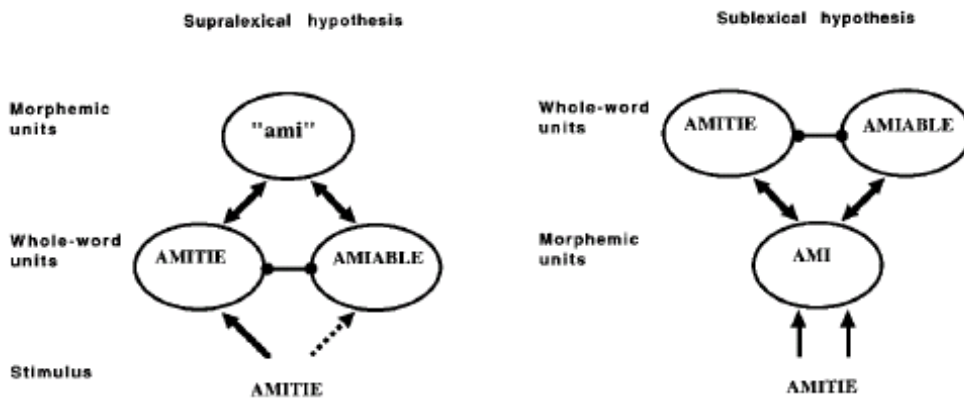
G&G p. 32

  - o What's the problem with accounting for the Rastle & al. results in a supralexical model?
  - o Any ideas about what a die-hard supralexicalist could reply?
  - o Rastle & al. don't address G&G's results (frequency of suffixed prime matters for faciliation). Any ideas for what a diehard early-affix-stripping proponent would say about those results?

(6) Extra bit

- Gets into some discussion of how, if you wanted a distributed-connectionist model with no nodes for morphemes, form-based affix detection could be learned by looking at junctural phonotactics

References

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