Recap

- Yonelinas familiarity-recollection model
- Variable recollection model

Do you need two processes?

- Occam's Razor…
- What would you need to show in order to be convinced?

Remember-Know Judgements

- **Remember:** items you remember studying ("recollect")

- **Know:** items that seem so familiar you know they were on the list, even though you can't remember studying them ("familiar")

- **New:** items that were not on the list

Tulving, 1985

Remember-Know Judgements

- You can dissociate remember vs. know judgements: their response rates decline at different rates with forgetting

- Remember judgements decrease faster than know responses during an extended delay between study and test

Remember-Know Judgements

- Remember and know judgements also change at different rates when the **modality** of the study and test presentation changes:
    - Present words visually; test either visually or auditorily
        - R responses to 10% of targets in all conditions
        - Visual test: 52% K responses to targets
        - Audio test: 27% K responses to targets
- Argument for a 2 process model (like familiarity-recollection or variable-recollection)?

Other ways of implementing two processes?

- You could have a single strength but two decision thresholds

- Variability (in increment strength) could have two levels

- Trial-by-trial switching

- How do you know you've found the right implementation?

Familiarity can be misleading

- Factors other than prior exposure can influence familiarity

- Example: something can be familiar because it resembles (but doesn’t exactly match) a studied item

Familiarity and fluency

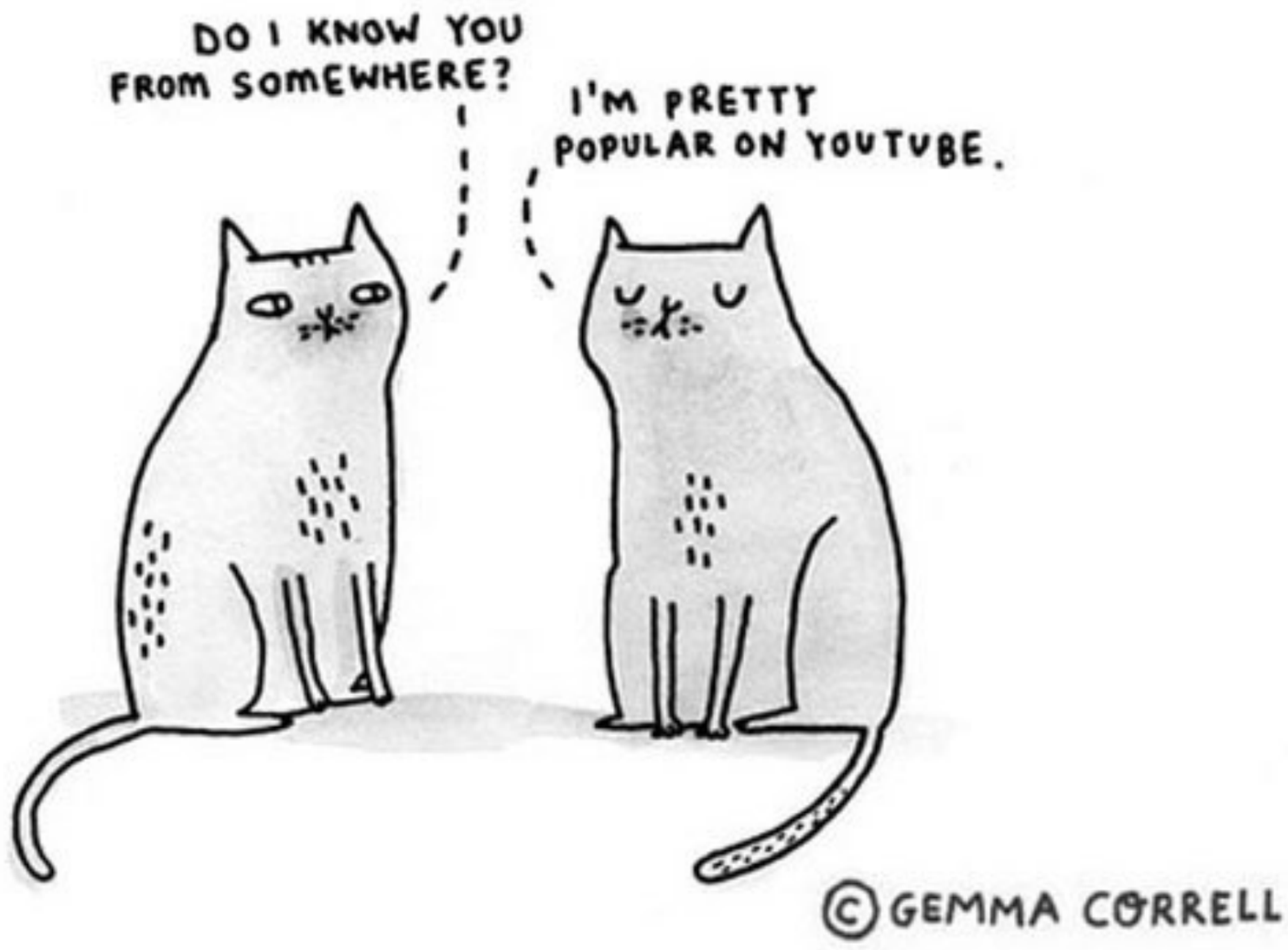
- Some theorists have argued that familiarity is an attribution we make based on **fluent processing**

- Idea: familiar stimuli tend to be processed more fluently than unfamiliar stimuli

- Heuristic: if a stimulus is processed fluently, it's probably familiar

- **This heuristic can be fooled!** If we manipulate fluency of processing without changing familiarity, we can get people to think something is familiar even if it isn't…

The false fame illusion



Jacoby et al. 1989

Cryptomnesia

("hidden memory")

Kelley et al., 1988

Cryptomnesia

("hidden memory")

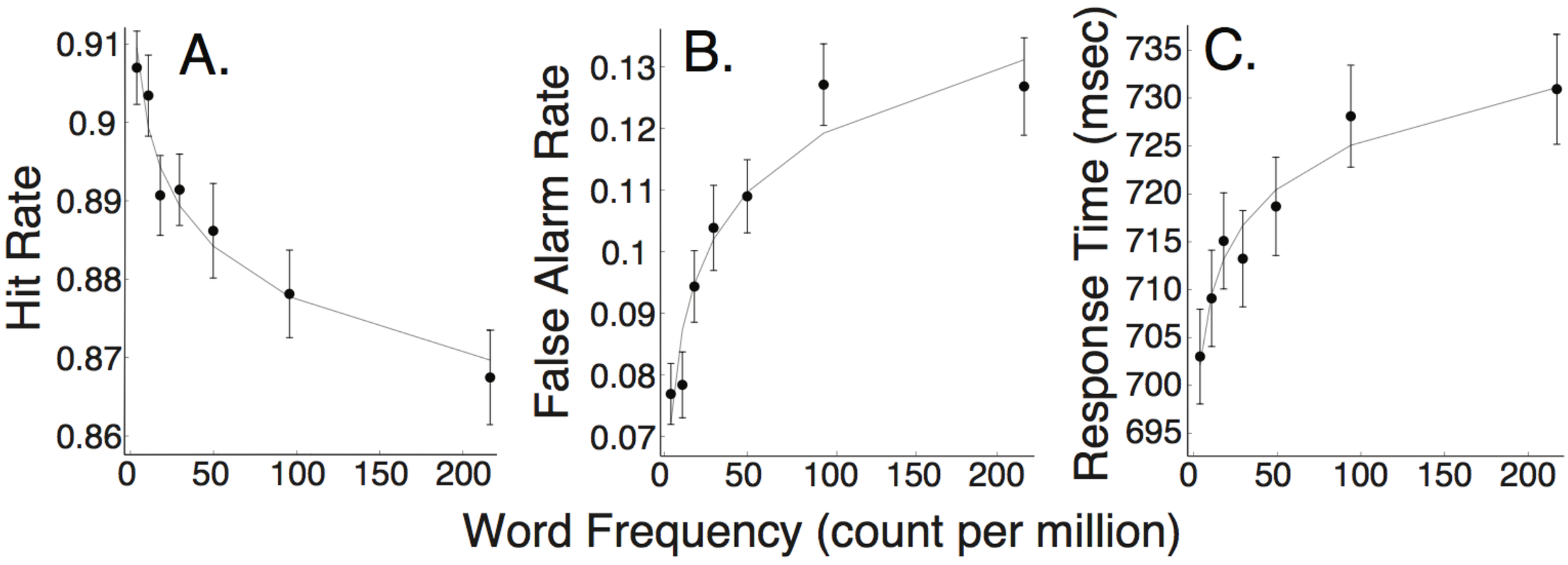
"Nature may be so perverse as to make it likely that one will present a stolen idea as being his or her own to the very person from whom it was stolen."

Jacoby et al., 1989

The word frequency effect

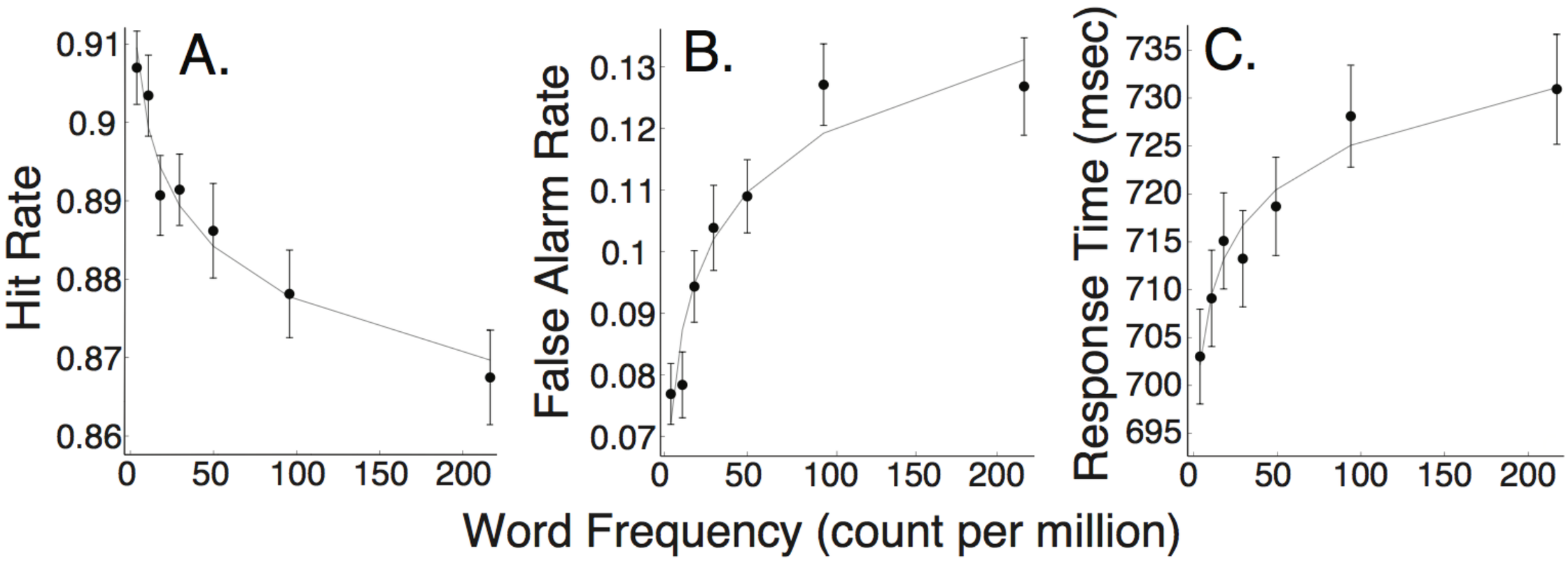
Low (1/million)	Medium (50/million)	High (500/million)
Boorish	Chain	Hand
Encroach	Institute	Water
Harpsichord	Latin	School

Word frequency effects



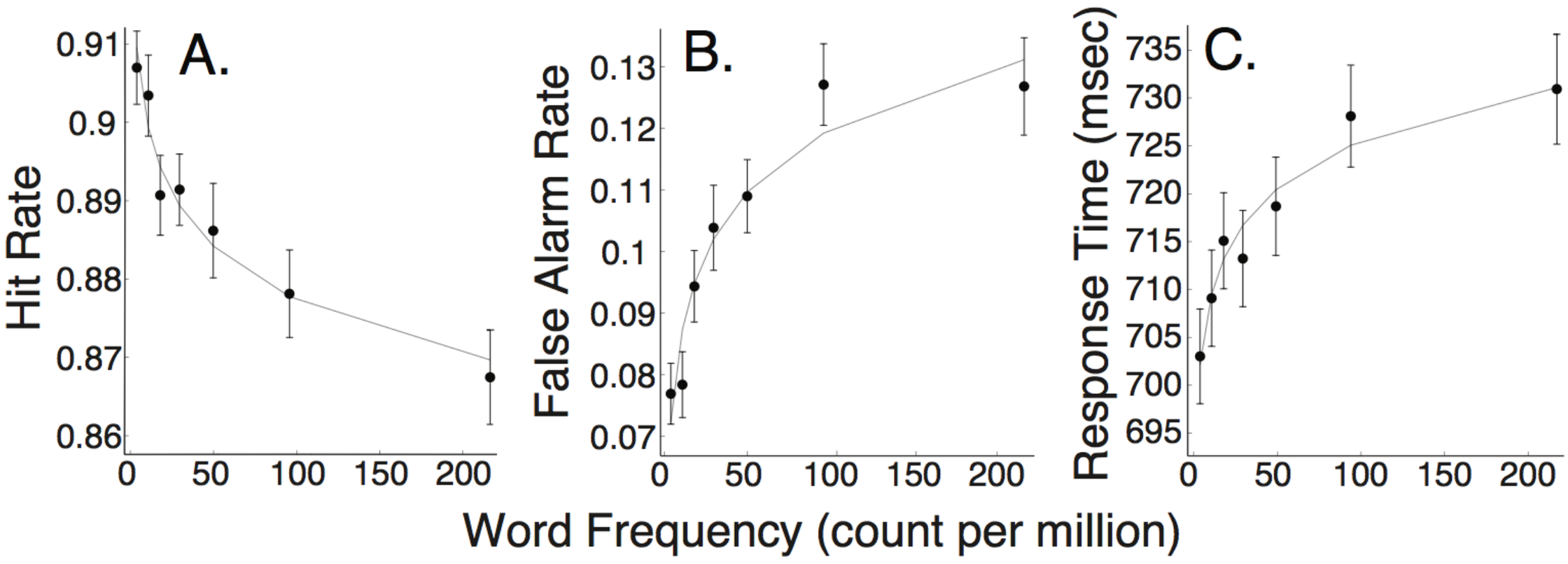
More frequently used English words have (A) lower hit rates and (B) higher false alarm rates. They also have (C) longer response times.

Mirror effect: word frequency has the opposite effect on hit rates and false alarm rates



More frequently used English words have (A) lower hit rates and (B) higher false alarm rates. They also have (C) longer response times.

A challenge to strength theory?



More frequently used English words have (A) lower hit rates and (B) higher false alarm rates. They also have (C) longer response times.

Other findings

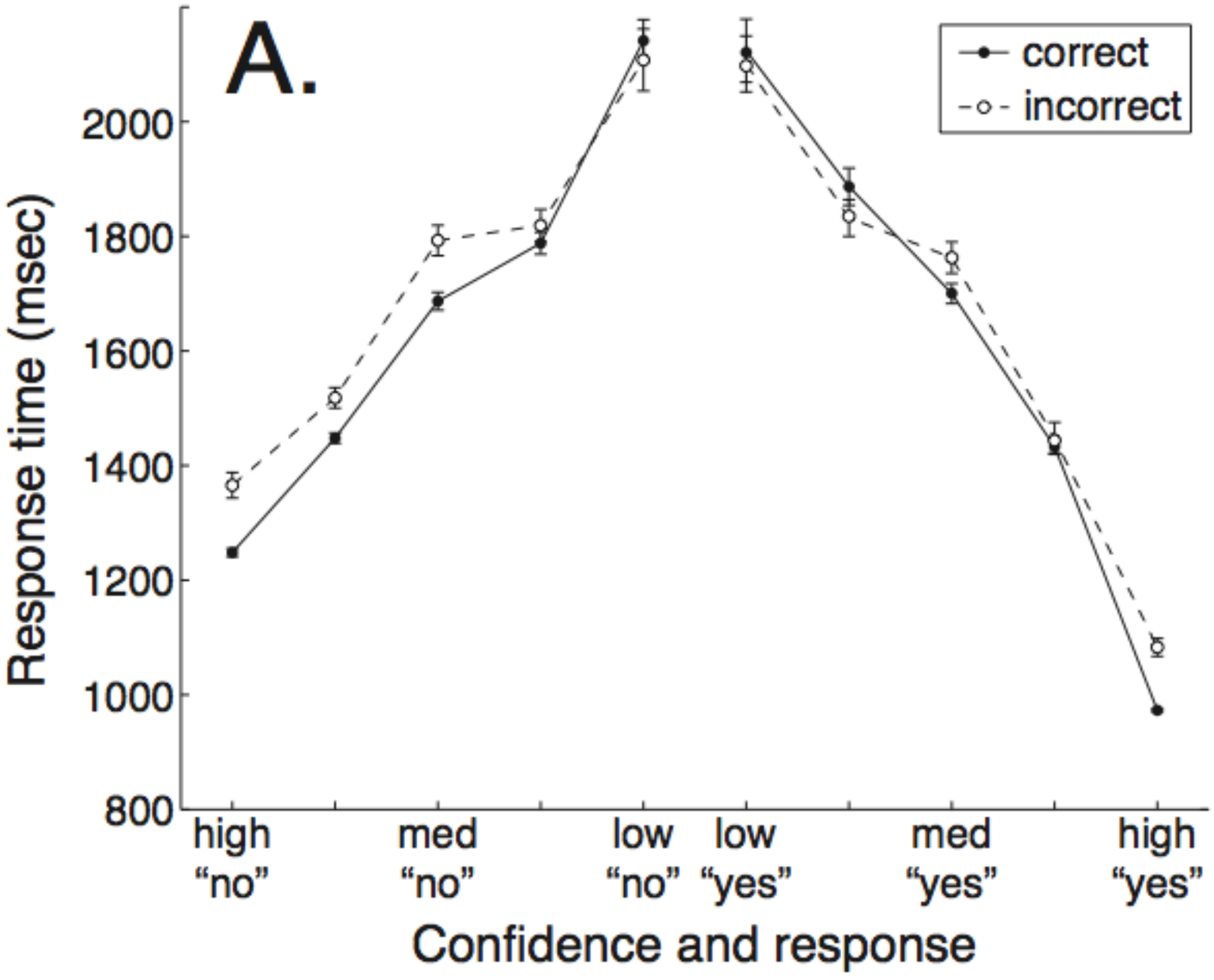
- Repetition: items repeated more are recognized better (and faster)

- Recency: items seen more recently are recognized better (and faster)

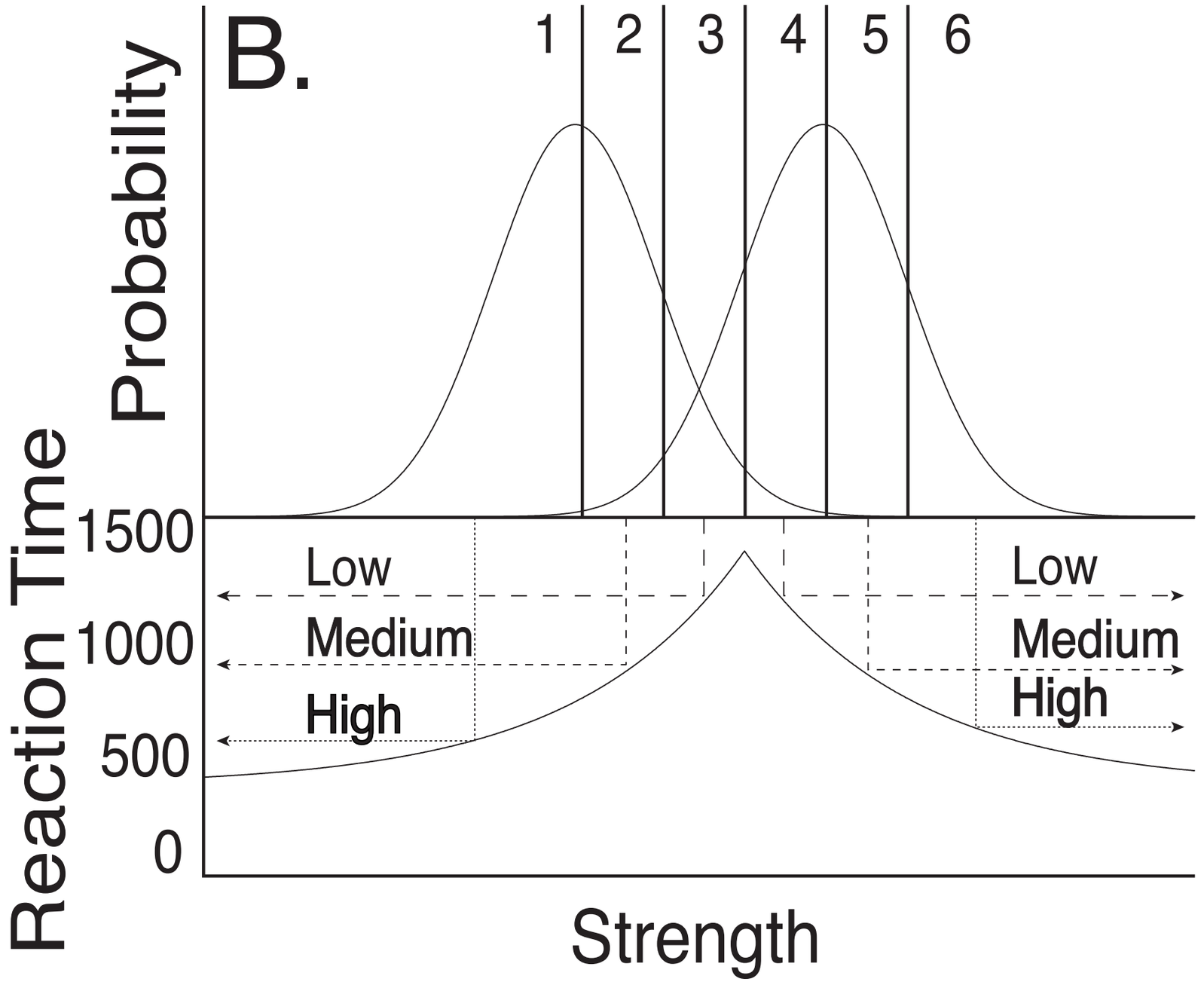
- List length: longer lists lead to more mistakes (fewer hits and more false alarms).

- **Reaction time:** the more confident, the lower the reaction time

The RT-confidence relation



The RT-distance relation



Interim summary

- We've considered experiments with long lists of words with many targets and lures
- We've measured hits, misses, false alarms, and correct rejections
- Let's consider a variation on this theme…

The Sternberg Paradigm:

AKA “The ‘other’ recognition memory experiment”