

Phonological and semantic effects modulated by orthography in blocked picture naming:

A cross-modality study on Mandarin Chinese word production



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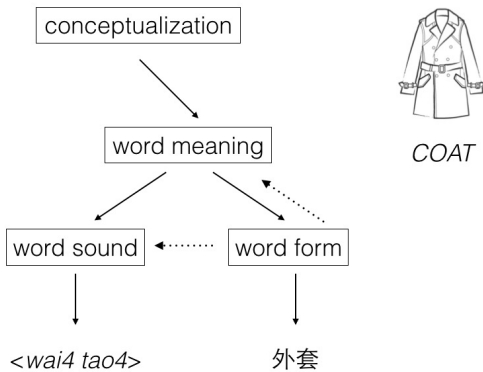
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Background & research questions

- Opaque Grapheme-to-Phoneme Correspondence (GPC) in logographic languages, e.g. Mandarin Chinese.
- Little is known whether both phonological and orthographic forms are activated during word production.
- Are orthographic representations activated in speaking and phonological representations activated in writing?
- i.e. is there any modality specific effect?

Language production



Method

Paradigm: masked-primed cyclic picture naming

Participants: native Mandarin Chinese speakers

Task:



Group A - naming aloud
Measurement:

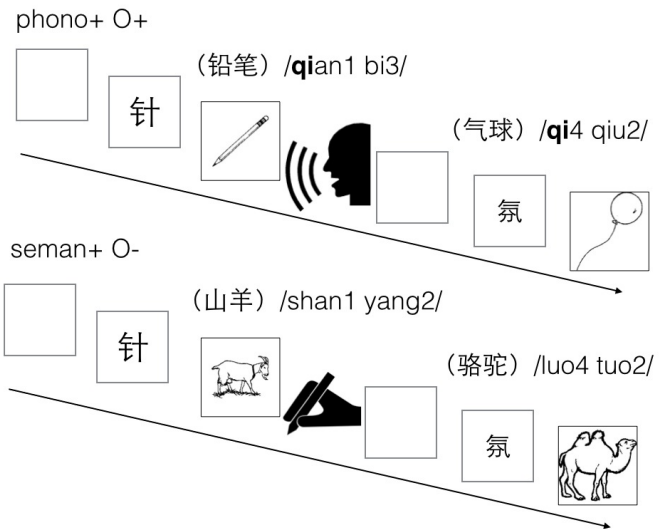
Primes: orthography relatedness
Blocks: phonological blocking
semantic blocking



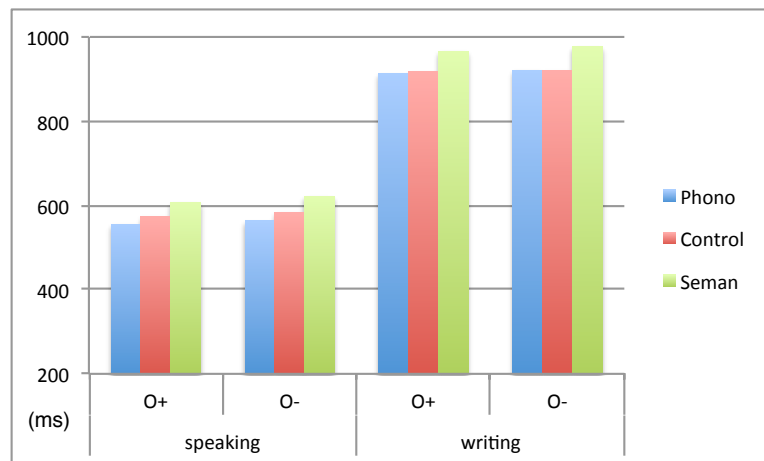
Group B - writing
Reaction times (RTs)

O+ VS O-
phono+ VS control
seman+ VS control

Experiment procedure



Results



For speaking (N=16) & writing (N=15) tasks,
RTs shorter in phonological blocks than control (phonological facilitation effect);
RTs in semantic blockings longer than control (semantic interference effect);
RTs in O+ trials are shorter than O- trials, showing that related orthography primes facilitate picture naming.

Conclusion

- Both orthographic and phonological representations are activated during speaking and writing.

