

Chinese analytic causative constructions with *shi* (使), *ling* (令), *jiao1* (叫) and *jiao2* (教): Diachronic variation across seven centuries

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In line with recent developments in Cognitive Sociolinguistics (c.f. Kristiansen & Dirven 2008; Geeraerts et al. 2010; Reif et al. 2013; Kristiansen et al. 2021), this study investigates the diachronic variation of Chinese analytic causative constructions by examining the language internal and external factors affecting the choice of the most frequently used causative markers *shi* (使), *ling* (令), *jiao1* (叫) and *jiao2* (教) from the 14th to the 20th century (e.g. (1)).

(1)	这	使/令/叫/教	我	想起	了	他。
	<i>Zhe</i>	<i>shi/ling/jiao1/jiao2</i>	<i>wo</i>	<i>xiangqi</i>	<i>le</i>	<i>ta</i>
	This	make	me	think of	PFV	him
	CAUSER	CAUSATIVE MARKER	CAUSEE	EFFECTED PREDICATE		
	'This made me think of him.'					

Factors affecting the choice of causative markers have been extensively studied in various languages, such as Dutch (e.g. Levshina et al. 2013; Speelman & Geeraerts 2009), English (e.g. Gilquin 2010; Stefanowitsch 2001) and contemporary Chinese (e.g. Liesenfeld et al. 2022; Tian et al. 2022). Yet the choice of causative markers in historical Chinese has not been well studied. Methodologically speaking, previous research on causative constructions in historical Chinese largely involves introspection or small-scale corpus-illustrated description (e.g. Cao 2011; Xu 2003). Yet the empirical tradition of Cognitive Sociolinguistics necessitates a usage-based and quantitative approach.

For the current study, we rest on the Corpus of Historical Chinese (Zhan et al. 2009) and restrict ourselves to a subset of the corpus by selecting data from the 14th to the 20th century. All the observations with *shi*, *ling*, *jiao1* and *jiao2* are automatically retrieved from the subcorpus, and then they are manually checked to avoid spurious hits. The valid observations are annotated manually for nine variables (cf. Tian et al. 2022).

We first explored the data using hierarchical cluster analysis, Multidimensional Scaling analysis and Multiple Correspondence Analysis (zooming in on patterns all three methods agree upon), which identified the characterizing features of *shi*, *ling*, *jiao1* and *jiao2* and visualized the development path of these markers across seven centuries. Then we used (multinomial and binomial) logistic regression modelling to verify whether the results of the exploratory methods can be corroborated by confirmatory methods.

The analyses revealed the context features constraining the choice of *shi*, *ling*, *jiao1* and *jiao2*, among which the syntactic form of the causee, the semantic class of the effected predicate and the mood of the whole clause showed the largest influence. We also found that *ling* tends to be used in the [*ling* + *ren* + emotion] construction after the 17th century, which corroborates previous findings of *ling* in contemporary Chinese (Niu, 2007; Tian et al., 2022). Our analyses also revealed the usage similarity between *jiao1* and *jiao2*, which may have led to the decline of *jiao2* as a Causative Marker in contemporary Chinese.

The findings not only extend our knowledge on analytic causative constructions in historical Chinese, but also provide diachronic clues that account for synchronic variation. Methodologically, this study adopted a usage-based, quantitative approach and illustrated how language internal and external (e.g., time, genre) features can be examined in a systematic way under the framework of Cognitive Sociolinguistics.

References

- Cao, J. 2011. “使令句” 从上古汉语到中古汉语的变化. [The change of *shi/ling* causative construction from Old Chinese to Middle Chinese]. *Yuyan Kexue* (6): 602-617.
- Geeraerts, D., G. Kristiansen & Y. Peirsman (Eds.). 2010. *Advances in Cognitive Sociolinguistics*. Walter de Gruyter.
- Gilquin, G. 2010. *Corpus, Cognition and Causative Constructions*. (Studies in Corpus Linguistics, 39).

- Amsterdam: John Benjamins Publishing Company.
- Kristiansen, G. & R. Dirven (Eds.). 2008. *Cognitive Sociolinguistics: Language Variation, Cultural Models, Social Systems*. Walter de Gruyter.
- Kristiansen, G., K. Franco, S. De Pascale, L. Rosseel & W. Zhang (Eds.). 2021. *Cognitive Sociolinguistics Revisited*. (Applications of Cognitive Linguistics [ACL], 48). Berlin/Boston: De Gruyter Mouton.
- Levshina, N., D. Geeraerts & D. Speelman. 2013. Towards a 3D-Grammar: Interaction of linguistic and extralinguistic factors in the use of Dutch causative constructions. *Journal of Pragmatics* (52): 34–48.
- Liesenfeld, A., M. Liu & C. Huang. 2022. Profiling the Chinese causative construction with rang (讓), shi (使) and ling (令) using frame semantic features. *Corpus Linguistics and Linguistic Theory* (18): 263–306.
- Niu, S. 2007. 普通话致使词的三个语法化阶段 [Three grammaticalization phrases of Mandarin causative verbs]. *Shehui Kexuejia*, 3, 206–209.
- Reif, M., J. A. Robinson & M. Pütz (Eds.). 2013. *Variation in Language and Language Use: Sociolinguistic, Socio-cultural and Cognitive Perspectives*. Frankfurt/M.: Peter Lang.
- Speelman, D. & D. Geeraerts. 2009. Causes for Causatives: The case of Dutch doen and laten. *Causal Categories in Discourse and Cognition*, 173–204. Berlin: Mouton de Gruyter.
- Stefanowitsch, A. 2001. *Constructing Causation: A Construction Grammar Approach to Analytic Causatives*. Rice University PhD dissertation.
- Tian, X., W. Zhang & D. Speelman. 2022. Lectal variation in Chinese analytic causative constructions: What trees can and cannot tell us. In D. Tay & M. X. Pan (Eds.), *Data Analytics in Cognitive Linguistics*, 137–168. Berlin/Boston: De Gruyter Mouton.
- Xu, D. 2003. “使”字句的演变——兼谈“使”的语法化. [The grammaticalization of *shi*-construction and the evolution of *shi*]. In Wu (Ed.). *Yufahua yu Yufa Tansuo*. Beijing: The Commercial Press.
- Zhan, W., R. Guo, B. Chang, Y. Chen, & L. Chen. 2019. 北京大学 CCL 语料库的研制 [The Building of the CCL Corpus: Its Design and Implementation]. *Yuliaoku Yuyanxue* (6): 58–68, 96.