Results and Discussion Diachronic embeddings, which are trained for the purpose of tracing the change of word rep
Collocational-based Approach The results of the vnc periodization are plotted as dendrograms in fig:collogram$_VNC$
In fig:collogram$_VNC, the correlation between the Qing dynasty and 1980s shows a drastically decreasing trend compared$
[H] 0.3 [width=]figures$_new/VNC_lanbox/pre_collocate_df_VNC_cor.pdf Pre-collograms$ 0.3 [width=]figures$_new/VN$
[H] [width=0.75keepaspectratio]figures$_new/VNC_lanbox/screeplot_collocate.pdf Screeplot for VNC periodization of co$
[ ] Once one is accustomed to luxury, it is difficult to do otherwise. That's why it is rarely seen that fortune
Word-level Embeddings Evaluation on Analogical Reasoning Analogical thinking and context-dependent evidence la
In this study, the training of word-level embeddings is examined based on the analogical reasoning task and the CA
By solving the pair-based 3CosAdd and 3CosMul objectives levy2014linguistic proposed in equ:3cosadd and equ:3co

where $\cos(u, v) = \frac{u \cdot v}{u \cdot v}$

However, it has not yet been feasible to extract semantic relations with set-based objectives like 3CosAvg, for the m
Evaluation on Stability Following the evaluation of analogical reasoning for the diachronic word-level embeddings t
[H] [width=0.95keepaspectratio]figures$_new/bootstrap_for_stability/stability.pdf Mean stability over iterations based on$
Consequently, the analysis of nearest neighbors and their similarity scores can be compared between the fixed and
[H] [width=0.85keepaspectratio]figures$_new/bootstrap_for_stability/jaccard_similarity_grey.pdf Mean of Jaccard simila$
Nearest neighbors of The deployment of the trained diachronic word-level embeddings to Google's TensorBoard pr

Tang (dark blue); Song (red); Yuan (pink); Ming (sky blue); Qing (green); 1980s (brown); 2010s (mustard). Snapshot

Tang (dark blue); Song (red); Yuan (pink); Ming (sky blue); Qing (green); 1980s (brown); 2010s (mustard). Snapshot
[H] [height=0.475width=0.95keepaspectratio]figures$_new/from_old/jia_neighboring_words Neighboring words of projec$
After word-level embeddings from the Tang to Qing dynasty are generated, 20 words with the highest cosine simila
In general, it is found that word-level embeddings yield a set of neighboring words with meanings that are close to

]tabs/jia$_cat_neighbor_df_premodern.csv dynasty =, keyword =, , , , , , , , , , , , , , , , , , , ,$

]tabs/jia$_cat_neighbor_df_modern.csv keyword =, , , , , , , , , , , , , , , , , , , ,$
The list of nearest neighboring words of can be interpreted from two perspectives. Firstly, considering that the wor
From another perspective, it is clear that word vectors are able to capture the cultural aspect of in pre-modern Chi
In view of the distinct difference of the neighboring words in the 1980s, the word-segmented embeddings are also tr
Besides, terms of commercial properties are spurring in the list of the most similar words to in the 1980s, and the n
Following antoniak2018evaluating, the semantic change of the keyword is further analyzed in the bootstrap settings
In the 1980s, the single-character neighboring words are much more unstable than the segmented counterparts, as i

[H] [height=0.85keepaspectratio]figures$_n ew/bootstrap_f or_s tability/neighbor_m ean_a nd_s d_g rey.pdf Nearestneighborsof$

[H] [height=0.85keepaspectratio]figures$_{n}ew/bootstrap_{f}or_{s}tability/neighbor_{r}ank_{c}hange.pdfNearestneighborsofwit$
Sense-level Embeddings Although the application of word-level embeddings grows increasingly popular to , it has b
[H] [width=0.95]figures$_{n}ew/diachronic_{s}ense_{m}odeling/_{z}h.pngDiachronicinteractionsofsenses$
The extraction of contextualized embeddings allows for a sketch of usage distribution displayed by proportion and i
Firstly, Sense 1 and Sense 3 have the highest proportions in the 1980s. This prevalence follows a rapid growth in th
The fluctuation of Sense 3 might be a result of the distinguishment of this sense from a similar one, Sense 2, as exe
[_1] My ancestorsYuan [_1*] I, your servant, hold the clothes together to make it a long oneMing
In modern Chinese, Sense 7, 8, 9 are profession-related senses, as in [ ]měishēngjiābel canto singer, [ ] [ ]qiáojiā hà
[_7] Doctors' acne spot treatments.Qing [_7] Oftentimes, historians are rather thought of as writers
On top of that, regarding the proportion of usage, Sense 10, 11, and 12 consistently rank the lowest in pre-modern
[_10] …Apart from choosing one good brand…1980sasbc [_11]Yet it is claimed that there are up to t
Sense-level embeddings are capable of capturing fine-grained senses and their evolution, yet the contextual informat
The polysemy of a lexical item is addressed by constructing multiple contextualized token embeddings. Shades of m
The results indicate that enjoy far global distance but low local distance, and suddenly rises during 1980s.
Discussion Following hamilton2016law, in which the evaluation is based on examples from previous works on seman
For example, chǐtooth used to carry the meaning 'age ( )' and 'being of equal rank ( )' because age determination
[H] [width=0.75keepaspectratio]figures$_{n}ew/measures/dist_{h}ist_{w}5.pdfDistributionofdegreeofsemanticchangeforgl$
The meanings are based on , , , as well as and (both published by).
frequency data is derived from [2] and [3], which are the metadata from the 70-million-word Ancient C
The case study of is based on the assumption that the time-sliced corpus might reflect the similar and different des
Because the corpus contains multiple versions of a document, some orthographically-similar characters rank top in
As for the word , the closest neighbors include (48), (47), (39), (36), (36), (35), and (14), filtering out (1). Co
The semantic history of linguistic units or expressions are far more unpredictable than data that contain seasonalit

[H] [width=0.95height=0.95keepaspectratio]figures$_n ew/measures/dist_b oxplot.pdf Distribution of degree of semantic

[H] 0.3 [width=]figures$_new/measures/VNC_measure_dist_w1_first_embed.pdf * 1, ws = 1$ 0.3 [width=]figures$_new/me$

0.3 [width=]figures$_new/measures/VNC_measure_dist_w5_first_embed.pdf * 1, ws = 5$ 0.3 [width=]figures$_new/measu$

0.3 [width=]figures$_new/measures/VNC_measure_dist_w10_first_embed.pdf * 1, ws = 10$ 0.3 [width=]figures$_new/mea$
VNC periodization of global and local measures
[H] [width=0.95]figures$_new/measures/screeplot.pdf$