Comparing L1 and L2 phraseological processing

free combinations, collocations and idioms

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Comparing L1 and L2 Phraseological Processing: Free Combinations, Collocations and Idioms

Testing Predictions of the Phraseological Continuum Model

Introduction

In the literature on the processing of multi-word units, idioms are a well-researched area. For less semantically opaque word combinations, however, there is to date relatively little work done. This study aims to fill this gap by investigating how both L1 and L2 speakers of English process three phraseological types: 'collocations', 'free combinations' and 'idioms'. The study draws on a descriptive theoretical approach to word combinations called the Continuum Model (Howarth, 1998). In this model, combinations vary in semantic transparency, from the most transparent category – 'free combinations' – through an intermediate type – 'collocations' – to the least transparent categories – 'figurative idioms' and 'pure idioms', respectively.

Free Combi-nations	Restricted Collocations	Figurative Idioms	Pure Idioms
pay a bill	*pay a visit*	*pay the price*	*pay the piper*

Figure 1. A phraseological continuum model (Howarth, 1998).

Methods and Materials

Items

Verb + noun combinations were created for four critical conditions, controlling for word and phrase frequency, length, and cognates:

16 free combinations FC (*write a letter*)
16 collocations   CO (*pay a visit*)
16 idioms   ID (*bury the hatchet*)
48 baseline items   BL (*feed a stone*)

Methods and Materials (con'd)

Participants

All participants were students of English at university level (NNS in Sweden, NS in the UK).

	N	Mean age (SD)	M/F	Mean AoA (SD)	Mean vocabulary Size
NNS of English (L1 Swedish)	21	22.8 (3.8)	10/11	6.7 (1.8)	7968 (1613)
NS of English	30	22.3 (4.6)	4/26	n.a.	n.a.

Table 1. Participant information

Procedure

A Semantic Judgement Task was used in which participants were asked whether each presented word combination was "meaningful and natural" to them in English (see Figure 2). The experiment was administered in a lab setting using DMDX software.

write a letter

3. Item displayed (0-4000 ms)

2. Blank screen (65 ms)

########
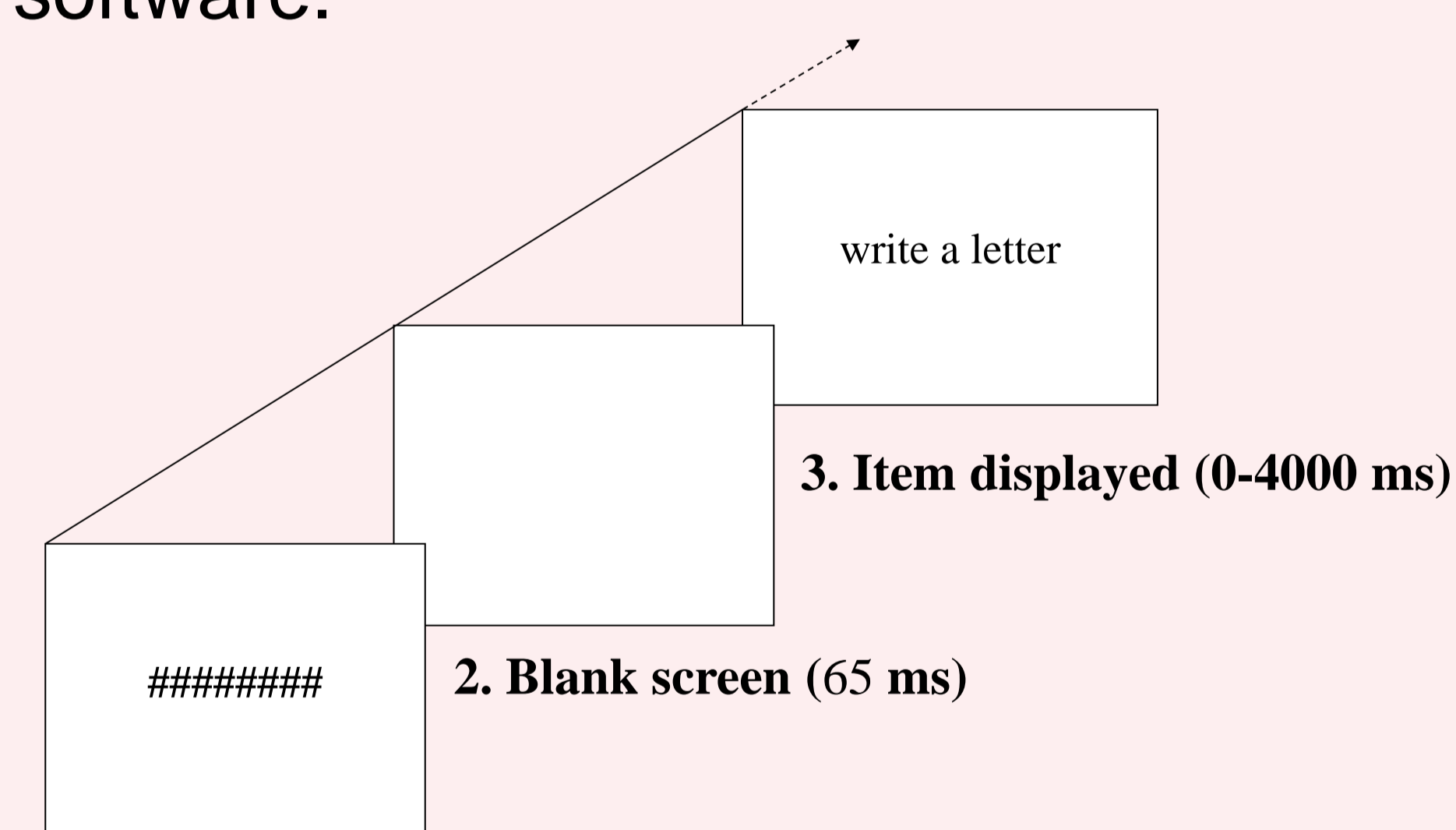
1. Eye fixation (250 ms)

Figure 2. The item trial presentation sequence.

After the experiment, participants were asked to rate their familiarity with the items. Reaction time (RT) and error rate (ER) were analysed using linear mixed effects models in the lme4 package in R, and a backwards stepwise procedure was used to eliminate variables that did not contribute to the fit of the respective model.

Results

Figure (RT plot): NNS RT, NS RT across FC, CO, ID, BL; y-axis RT (ms) 900–1800.
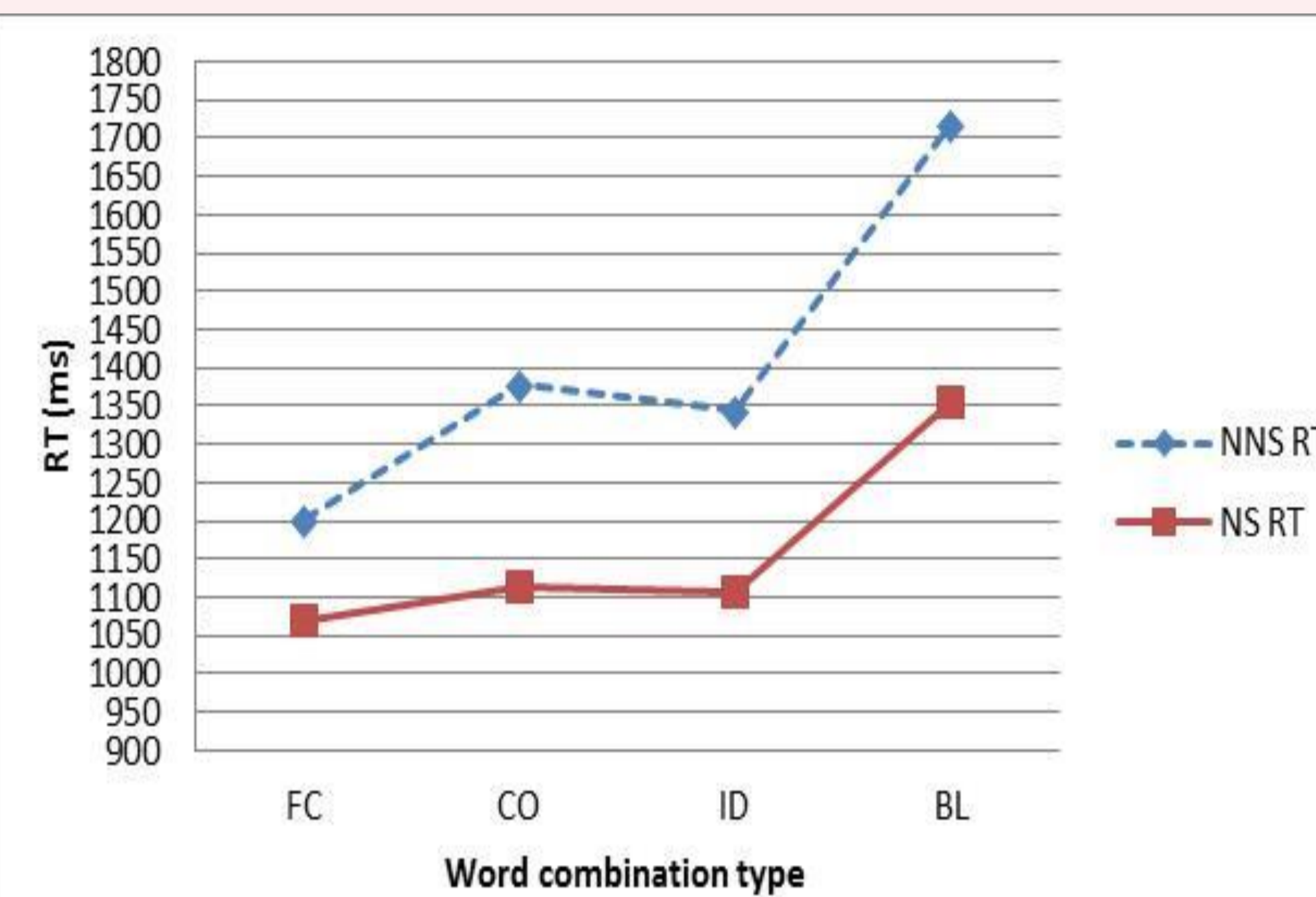
Main contrasts:	t	p
NS FC – CO	1.32	.190
NS FC – ID	-1.08	.283
NS CO – ID	0.23	.817
NNS FC-CO	2.75	.007**
NNS FC-ID	2.34	.021**
NNS CO-ID	0.40	.694

-NS faster than NNS for all types.
-For both groups, all types different from Baseline.

Covariates:		
Phrase length	2.35	.021*
Phrase familiarity	2.87	.004**

No interactions for Phrase familiarity x Group or Phrase familiarity x Group x Type .

Figure (ER plot): NNS ER, NS ER across FC, CO, ID, BL; y-axis ER (%) 0%–20%.
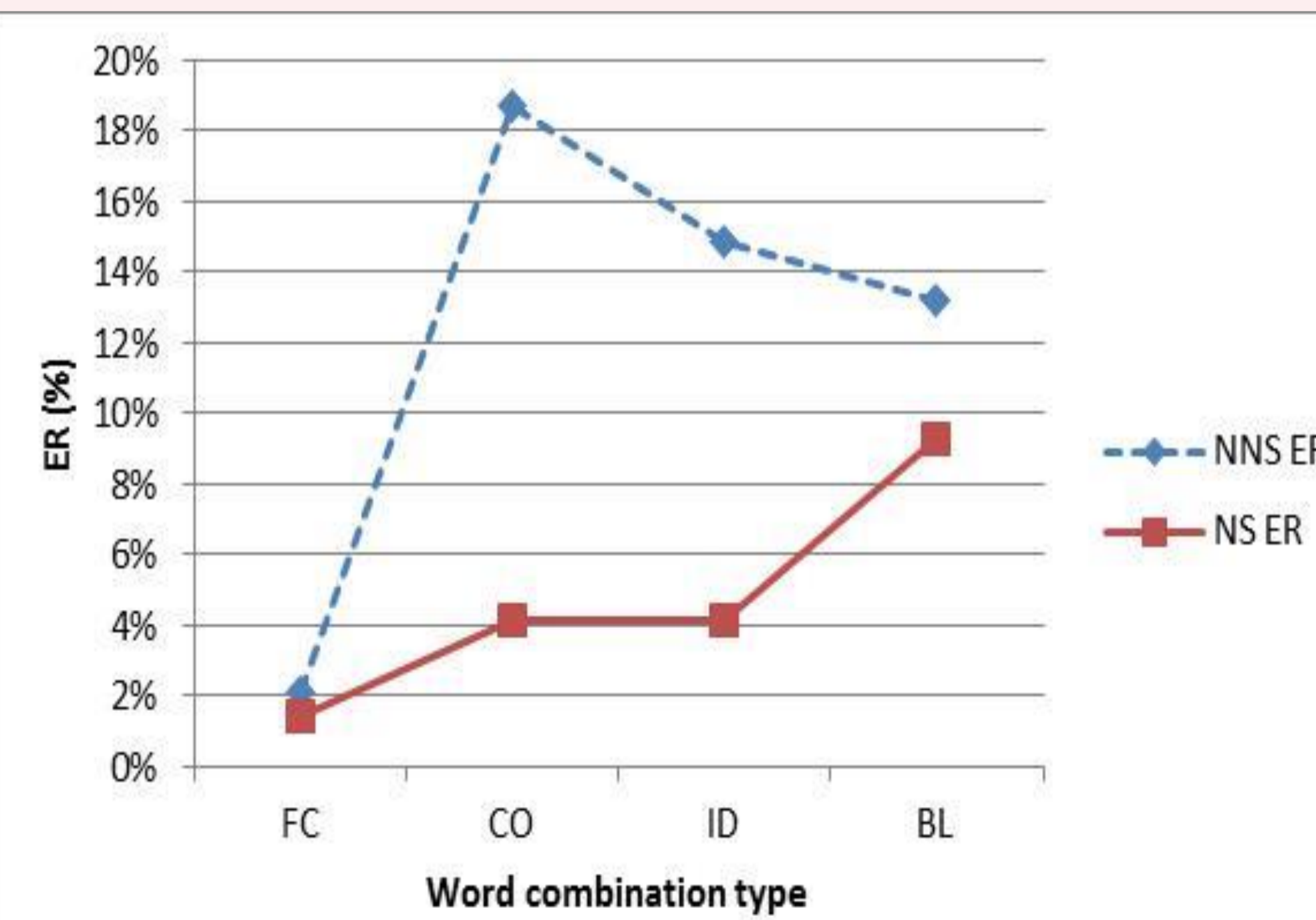
Discussion

For native speakers (NS), there were no significant differences for how they processed free combinations, collocations and idioms. No idiom superiority effect was observed, but all types were familiar phrases, matched for frequency, and the decontextualized presentation mode, with no bias for a figurative reading of idioms, may decrease potential differences. Familiarity was a strong predictor of processing time (cf. Tabossi, Fanari & Wolf (2009).

Significant differences were found for how L2 learners (NNS) processed free combinations in comparison with collocations and idioms (RTs and ERs), but no significant difference between collocations and idioms.

-> Partial replication of results in Gyllstad & Wolter (2016)
-> FCs were slightly better known
-> More compositional analysis mode?

Overall, the results only lend partial support to the typology of word combinations in the descriptive phraseological continuum model. The distinction is more pronounced for non-native speakers than for native speakers.

References

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