Number marking in Maltese nouns: effects of frequency and structure

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How are complex word forms stored and processed in the mental lexicon? According to the dual-mechanism theory some words are stored and processed holistically, while other word forms are built via regular rule application (Clahsen et al., 1992; Kim et al., 1991; Pinker & Prince, 1988). The single-mechanism theory, on the other hand, assumes that all word forms are stored and processed in the same way, there is one single route from stored forms to surface word forms (Nakisa et al., 2001; Rumelhart & McClelland, 1986; Skousen, 1992).

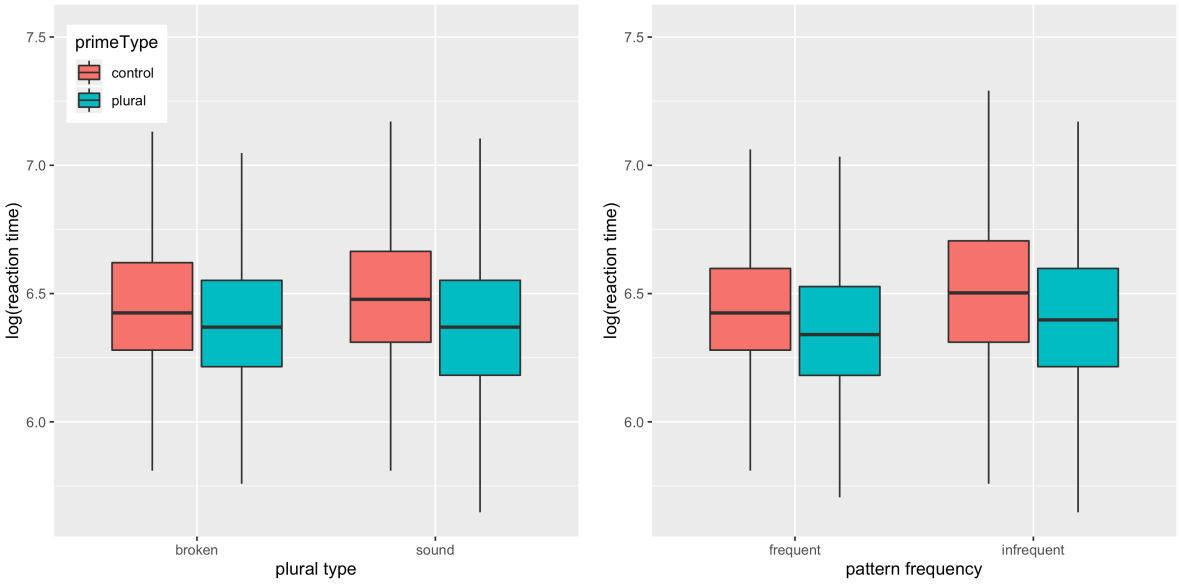
The dual-mechanism account explicitly distinguishes between regular and irregular word forms – a distinction that appears challenging in the light of the fact that irregular patterns are not arbitrarily built but show a shared structure (Albright & Hayes, 2003; Seidenberg & Plaut, 2014).

Languages like Maltese, a Semitic language spoken in Malta, provide an interesting testing ground for these theories since Maltese shows a split morphological system that distinguishes between a great number of different sound plurals (concatenative), e.g. *omm* - *ommijiet* 'mothers', and a great number of different broken plurals (non-concatenative), e.g. *kelb* - *klieb* 'dogs'.

In this talk, we want to contribute to the debate by presenting the results of a cross-modal priming experiment on frequent and infrequent Maltese plural nouns.

The results of our study do not show a significant difference in reaction times for sound and broken plurals. This is visible in the left panel of figure 1 below (see the green boxes):

Figure 1: *Effect of prime and plural type on reaction times (left); Effect of frequency of patterns and prime on reaction times (right). Figure taken from Nieder et al. (in press).*



Instead, in line with the results of Nieder et al. (2020), pattern frequency played and important role for the processing of both Maltese plural types. This is visible in the right panel of

figure 1. In addition, we find a different priming effect for sound than for broken plurals that is a result of the phonological overlap of sound singulars with their corresponding plural forms.

We conclude that our findings support a single mechanism of morphological processing for both broken and sound plurals in Maltese.

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