Scalar Implicatures: An experimental Study about comparing German native Speakers and Chinese Learners of German.

This study investigates *scalar implicatures* (SI), which describe the phenomenon that the use of a less informative term like *some* is inferred to mean the negation of a more informative term in the same linguistic scale, e.g. *all*. The Neo-Gricean (e.g. Horn, Levinson) Account predicts that the computing of SI is automatic and per default, while the Relevance Theory (e.g. Wilson, Sperber) assumes that this SI-process is effortful.

In recent studies, the *developmental effect*, which was found in comparisons between native adults and children (e.g. Noveck, 2001; Papafragou & Musolino, 2003; Teresa Guasti et al., 2005), supports the Relevance Theory, while the results from studies with nonnative speakers (e.g. Lin, 2016; Slabakova, 2010) are in favor of the Neo-Gricean prediction.

Addressing this problem, the experiment in this paper tested two groups of subjects: 15 German native speakers and 15 Chinese Learners of German (the DaF-Learners) on three scales in German: <alle, einige> (<all, some>), <muss, es kann sein> (<must, can>) and numerals. The questionnaire was created according to the *Within-design* and the *Latin Square*. All critical items were presented with context, and Felicity Judgment Task was used. The following example shows one of the 36 critical sentence-sets.

(1) Context: Von seiner Reise hat Herr Lange seinen Schwestern Seidetuch und seinen Brüdern Krawatten mitgebracht.

From his journey has Mr. Lange his sisters handkerchiefs and his brothers ties brought

'Through his journey, Mr. Lange has brought his sisters silk handkerchiefs and his brothers ties.'

Target-sentence: Alle/Einige Geschwister von Herr Lang haben Mitbringsel bekommen.

All/Some siblings of Mr. Lange have souvenir received

'All/Some Mr. Lang’s siblings have received souvenir.'

The main results in the study (see Figure 1) showed that: a. The DaF-Learners computed significantly less SI by reading the logically correct but pragmatically infelicitous sentences with *einige* (‘some’, *p*<.01) and *es kann sein* (‘can’, *p*<.01), which supports the Relevance Theory. b. Group and trigger only ceased to interact when it came to numerals (Interaction by <alle, einige> (‘<all, some>’); *p*<.01, by <muss, es kann sein> (‘<must, can>’); *p*<.01, by numerals: *p*>.5). This observation can either prove that not all scales are treated in the same way, or raise the question of whether the numerals are treated as SI-triggers. c. In this experiment, no significant correlation between the judgements and elements such as answer time, logical skill and learning time was observed. Moreover, possible improvements to the experiment and the role of the nonnative speakers in pragmatic researches were also briefly discussed.

![Figure 1](image-url)