R-morpheme as the realization of the boundary-crossing concept in child and adult German

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Keywords: boundary-crossing concept, motion events, child language acquisition of German

- 1. Introduction The R-morpheme in German has been treated as an epenthetic /r/ which is inserted between an R-pronoun (see Riemsdijk (1978) for R-pronouns in Dutch; Müller (2000), and Hein & Barnickel (2018) for R-pronouns in German), and a preposition that starts with a vowel. According to that assumption, da/wo-r-über 'there/where-R-over' would be an instance where an epenthetic /r/ is used. However, I substantiate the claim that the primary function of this morpheme is something other than being an epenthetic sound. Firstly, spatial adverbs like raus 'out', rüber 'over', rauf 'onto', runter 'down', and rein 'into' do not show a preceding sound, and thus, the R-morpheme does not function as an epenthetic sound in those cases at least. What I claim is that the R-morpheme in German encodes the boundary-crossing concept as per Slobin & Hoiting (1994)'s 'boundary-crossing constraint'. Compare (1) and (2), where the same compound verb eingehen 'go in' is used. Since the arriving event in (1) does not involve crossing of a spatial boundary, the realization of the R-morpheme leads to ungrammaticality. By contrast, because there is a boundary-crossing information that is conveyed in (2) (i.e., the Figure enters a room), which is also not conflated elsewhere, the realization of the R-morpheme becomes compulsory.
- (1) Sobald Ihre Zahlung bei uns (*r-)ein-gegangen ist, erhalten Sie per Email eine Bestätigung. when your payment at us R-in-gone is receive you per email one confirmation 'You will receive notification by email as soon as your payment arrives at us.'
- (2) Ich bin *(**r**-)ein-gegangen und habe mir das Feuerwerk vom Fenster aus angesehen.

 I am R-in-gone and have me the firework from window from watched 'I went in and watched the fireworks from the window.'

This study takes the R-morpheme as a satellite, à la Talmy (1991)'s two-way typology, realizing the boundary-crossing concept in the complex path concept. By reporting from satellite use by children and adults in the production of self-initiated motion events in German, the present study sets off to test whether children are disposed to establish a one-to-one correspondence between the boundary-crossing concept and its realization (i.e., the R-morpheme).

- **2. Method** Self initiated motion events (N = 959), were extracted from the CHILDES (MacWhinney, 2000) German-Bamberg/Frogs (Berman & Slobin, 1994) corpus. This corpus consists of oral narratives of the Frog Story (Mayer, 1969) by monolingual adults (N = 10; M = 20), and monolingual children (N = 33) in German. Child subjects' ages ranged from 3;3 to 9;11. Child age groups involved 3-year-olds (N = 12; M = 3.7), 5-year-olds (N = 11; M = 5.4), and 9-year-olds (N = 10; M = 9.6). In each self-initiated motion event, each path expressed outside the verb root was coded either as including the R-morpheme or not. The percentage of the R-morpheme used as a path device was calculated for each subject.
- **3. Results** A simple linear regression was calculated to test if age in months significantly predicted the percentages of R-morpheme used as a path device with self-initiated motion events by all subjects. A negative correlation (r = -0.72) (see Figure 1), and a significant regression equation was found (F(1, 41) = 45.37, p = 3.898e-08) with an R^2 of .5253 and with a slope of -0.25. There was no use of this morpheme by children that was ungrammatical. Even though there was variation amongst child groups, only one of the 3-year-olds produced fewer of the R-morpheme compared to the highest-performing adult.
- **4. Discussion** The results showing a significant and negative correlation between age in months and the percentages of the R-morpheme in German revealed that, compared to adults, especially younger children have a bias towards realizing this concept into language. While adults in German prefer to use path devices where the boundary-crossing is implied (or conflated) but not overtly realized, children are prone to providing 1-to-1 correspondence between the boundary-crossing concept and the R-morpheme. This interpretation of the results is adopted from Guasti et al. (2022), according to whom children may produce more linguistic material than it is compressed by adults.

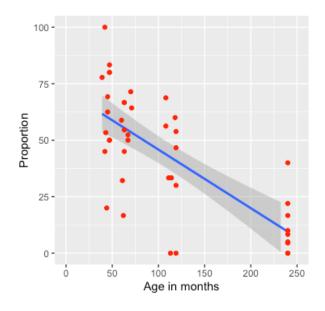


Fig. 1: Proportion of R-morpheme over time

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