

The acquisition path of expressing social meaning in the grammar of requests – From modality to sentence mood

Background. The question of how humans process social information is one of the biggest topics in cognitive science (Frith & Frith 2023). This paper focuses on the morphosyntactic reflexes of processing social information by looking at how requests are performed depending on different social scenarios and by taking into account the acquisition path of expressing social meaning. There is a long tradition to investigate the variety of requesting forms in different languages (see Blum-Kulka et al. 1989), but what kind of role this variation plays in an acquisitional perspective is mostly investigated with a focus on functional typologies and competencies (Cameron-Faulkner 2014; Zufferey 2016)—not with a focus on morphosyntactic form (see Kilani-Schoch 2021 for a recent exception). Most of the work on requests focused on direct vs. indirect requests (imperatives vs. interrogatives for requests), and, in the latter case, on conventionalized indirect requesting forms, such as *Can you VP?*. In our study, we dive deeper into the morphosyntactic properties of requests and explore the variation of elicited utterances along the two different dimensions of sentence mood (declarative, imperative, and interrogative) and modality (the use of modal verbs). Furthermore, we investigated whether speakers using modal verbs employed subject-internal (*Can I have ...*) or subject-external modality (*Can you give ...*).

Methods. We conducted a free-production task on German requesting forms with 57 adults (mean age 24.0) and 54 children (21 kindergarten/mean age 4.8; 33 school/mean age 8.6). We elicited utterances they would use to request something from an addressee in different social situations (varying SOCIAL DISTANCE to the addressee **X** and URGENCY of the request; see [1] and [2]; for the children, small dolls were used to represent the different addresses, see Fig.1). We explored the variation of the elicited utterances along the dimensions of sentence mood (DECL, IMP, INT), the use of modal verbs, and the source of modality (subject-internal/ subject-external).

Results. Adults most frequently use interrogatives (88.0%) when performing requests. Modal verbs are only used in 31.3% of the cases. Of these modal verbs, 82.2% had a subject-external source of modality. Results of a binomial mixed effects model on the INT responses in R (fixed factor SOCIAL DISTANCE, by-participant and by-item intercepts as random factors) show that talking to a fellow student ($\beta = 1.86$, $SE = 0.96$, $t = 1.93$, $p = .054$) or a stranger ($\beta = 2.3$, $SE = 1.01$, $t = 2.32$, $p = .02$) led to more interrogatives than talking to the sister (see Fig. 2). **Children** most frequently use interrogatives when making requests (92.6%). In 83.0%, children use modal verbs. Of these modal verbs, only 31.6% feature a subject-external source of modality. Kindergarten children and schoolchildren do not differ in their use of interrogatives (92.1% vs. 92.9%). However, kindergarten children tend to use more modal verbs (85.7%) than schoolchildren (77.8%), and kindergarten children use subject-external sources of modality less frequently than schoolchildren (18.9% vs. 40.5%; $\beta = 2.51$, $SE = 0.74$, $t = 3.42$, $p < .001$). When using modal verbs, both kindergarten children and schoolchildren vary their source of modality when talking to addressees with varying SOCIAL DISTANCE (more subject-external modality when talking to a friend than when talking to mommy/a stranger; see Fig. 3 for kindergarten children; Fig. 4 for schoolchildren). **Acquisition path:** While the use of modal verbs decreases with age (Fig. 5), the use of subject-external modality increases with age (Fig. 6).

Discussion. URGENCY had no effect on forming requests. SOCIAL DISTANCE had an impact on the linguistic forms used, but in different ways for adults and children: Adults varied their use of sentence mood (more interrogatives when talking to a family member); children varied the modality sources (more subject-external modality when talking to a friend). Acquisition path: The use of modals decreases, while the use of subject-external modality increases. This dovetails with (i) adults use sentence mood to distinguish social scenarios, not modality, (ii) pronoun use (*you* vs. *I*) relates to development of ToM skills (Hendriks 2023).



Fig.1: Dolls, representing the different addressees (A =mommy, B = friend, C = stranger).

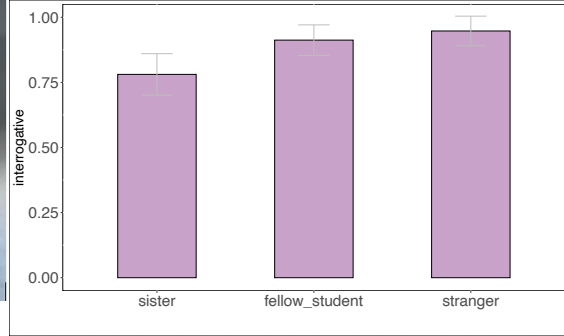


Fig.2: Use of interrogatives in adults with varying social distance to the addressee.

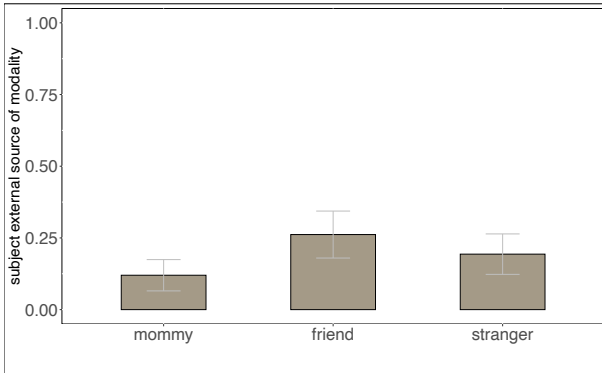


Fig.3: Frequency of subject-external sources of modality in kindergarten children with varying social distance to the addressee.

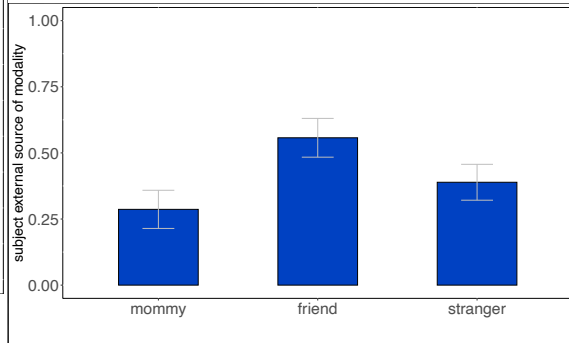


Fig.4: Frequency of subject-external sources of modality in schoolchildren with varying social distance to the addressee.

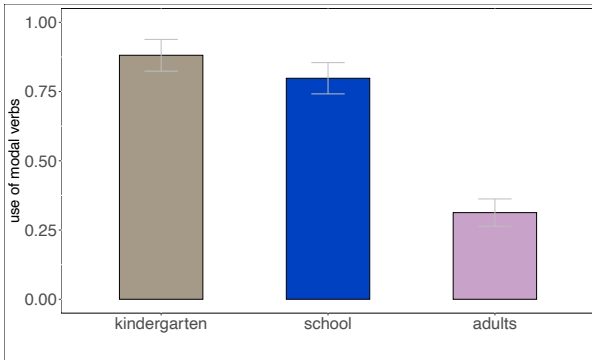


Fig.5: Decreasing use of modal verbs with increasing age (based on the three groups kindergarten children, schoolchildren, and adults).

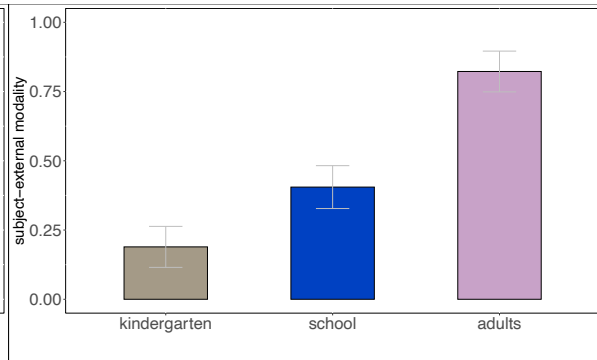


Fig.6: Increasing use of subject-external sources of modality with increasing age (based on the three groups kindergarten children, schoolchildren, and adults).

LOW URGENCY (original materials in German)

(1) 'You have a cold, and you've got a runny nose. What do you say to X to get a tissue?'

HIGH URGENCY (original materials in German)

(2) 'You have a cold, and you've got a runny nose. You've already been trying hard to get a tissue, but no one is reacting. You're approaching X again. What do you say to X to get a tissue?'

X = sister/mommy; fellow student/friend; stranger