

Thursday 11 September
9h30 -10h30
Agora Room

Timing in child language acquisition

Petra Schulz
Goethe University Frankfurt

There is a consensus that children are well equipped for the task of language acquisition, enabling them to master many developmental milestones at an impressively young age in their first language(s). The quest to explain this fascinating capacity of the human mind has led to a research focus on early acquisition (for an overview see Guasti 2016), with a wealth of evidence showing that many aspects of language are indeed acquired early (e.g., Perkins & Lidz 2023). However, the view that “by age 3 or 4, children have effectively become adults” (Crain & Thornton 2012: 185) is at odds with empirical findings (see Schulz 2007 for German, Tolchinsky & Berman 2023 for a general overview).

Some areas of language develop beyond age 4, involving not just vocabulary but also grammar — a point first highlighted in Carol Chomsky’s influential 1969 book *The Acquisition of Syntax in Children from 5 to 10*. Following recent terminology (Schulz & Grimm 2019, Tsimpli 2014), I define late acquired phenomena as those acquired after the age of 4. These include a range of phenomena such as pronominal reference (e.g., Rinke & Flores 2018), counterfactuals (Gómez-Sánchez et al. 2020), and syntactic ambiguity (Trueswell et al. 1999).

Timing is often assumed to be mediated by linguistic complexity, with more complex items being acquired later than less complex ones (e.g., Pérez-Leroux et al. 2022, Rinke et al. 2024, Schulz & Grimm, 2019; Tsimpli 2014). However, complexity is notoriously hard to define (Newmeyer & Preston 2014), and such explanations often risk circularity. At the same time, non-linguistic factors, namely frequency (e.g., Ambridge et al. 2015) and cognitive maturity (e.g., Gathercole et al. 2004), are assumed to be involved in lateness. In my talk, I will draw on three different phenomena from my recent work on German to explore the factor timing in language acquisition:

- Relative clauses: subject, object and passive subject relative clause variants (Sanfelici & Schulz 2021, Schulz 2024, see also Yatsushiro & Sauerland 2019)
- Temporal connectives: non-iconic and iconic *before* and *after* (Makrodimitris & Schulz 2021, 2025, in press, Schulz 2024)
- Sentential Negation: early and late (Lago et al., 2025, Weicker & Schulz 2025)

I will discuss what these late phenomena may have in common and what underlying factor(s) may cause their lateness. More specifically, I will show for each phenomenon that specific variants are particularly difficult and argue that their lateness is caused by linguistic factors. In contrast, frequency in the input and cognitive factors such as conceptual complexity or working memory fail to explain the specific patterns of mastery in relative clauses, temporal connectives, and negation.

Clarifying the role of timing in child language acquisition will deepen our understanding of the nature of the complexity underlying late-acquired linguistic phenomena and enable predictions about the cross-linguistic robustness of such lateness.

References

- Ambridge, B., Kidd, E., Rowland, C. F. & Theakston, A. L. (2015). The ubiquity of frequency effects in first language acquisition. *Journal of Child Language*, 42(2), 239–273. <https://doi.org/10.1017/S030500091400049X>
- Chomsky, C. (1969). *The acquisition of syntax in children from 5 to 10*. M.I.T. Press.
- Crain, S. & Thornton, R. (2012). Syntax acquisition. *WIREs Cognitive Science*, 3(2), 129–279. <https://doi.org/10.1002/wcs.1158>
- Gathercole, S. E., Pickering, S. J., Ambridge, B. & Wearing, H. (2004). The structure of working memory from 4 to 15 years of age. *Developmental Psychology*, 40(2), 177–190. <https://doi.org/10.1037/0012-1649.40.2.177>
- Gómez-Sánchez, J., Ruiz-Ballesteros, J. A. & Moreno-Ríos, S. (2020). How children and adults keep track of real information when thinking counterfactually. *PLoS ONE*, 15(12): e0242967. <https://doi.org/10.1371/journal.pone.0242967>.
- Guasti, M. T. (2016). *Language acquisition: The growth of grammar* (2nd ed.). MIT Press.
- Lago, A., Schulz, P., Rinke, E., Oltrogge, E., Dudschig, C. & Kaup, B. (2025). Insensitivity to truth-value in negated sentences: does linear distance matter? *Proceedings of the Experiments in Linguistic Meaning conference (ELM 3)*, 214–223. Linguistic Association of America. <https://doi.org/10.3765/elm.3.5797>

- Makrodimitris, C. & Schulz, P. (2021). Iconic sentences are not always easier: evidence from bilingual Greek-German children. In D. Dionne & L.-A. Vidal Covas (Eds.), *Proceedings of the 45th annual Boston University Conference on Language Development* (pp. 528-541). Somerville, MA: Cascadia Press. <http://www.lingref.com/buclid/45/BUCLD45-40.pdf>
- Makrodimitris, C. & Schulz, P. (2025). Comprehension of complex sentences containing temporal connectives: How children are led down the event-semantic kindergarten-path. *Journal of Child Language*, 52(3), 615-647. <https://doi.org/10.1017/S0305000924000205>
- Makrodimitris, C. & Schulz, P. (in press). Age of onset does not matter for bilingual children's understanding of late-acquired phenomena: The case of temporal connectives. *Linguistic Approaches to Bilingualism*.
- Newmeyer, F. J. & Preston, L. B. (Eds.). (2014). *Measuring grammatical complexity*. Oxford University Press.
- Pérez-Leroux, A., Roberge, Y., Lowles, A. & Schulz, P. (2022). Structural diversity does not affect the development of recursivity: The case of possession in German. *Language Acquisition*, 29(1), 54–78. <https://doi.org/10.1080/10489223.2021.1965606>
- Perkins, L. & Lidz, J. (2023). Syntax in infancy. In J. Sprouse (Ed.), *Experimental approaches to syntax* (pp. 137–170). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780198797722.013.6>
- Rinke, E. & Flores, C. (2018). Another look at the interpretation of overt and null pronominal subjects in bilingual language acquisition: Heritage Portuguese in contact with German and Spanish. *Glossa: A Journal of General Linguistics*, 3(1), 68. <https://doi.org/10.5334/gjgl.535>
- Rinke, E., Flores, C. & Torregrossa, J. (2024). How different types of complexity can account for difficult structures in bilingual and monolingual language acquisition. In M. Polinsky & M. T. Putnam (Eds.), *Formal approaches to complexity in heritage language grammars* (pp. 43–71). Language Science Press. <https://zenodo.org/record/12090434>
- Sanfelici, E. & Schulz, P. (2021). Can frequency account for the grammatical choices of children and adults in nominal modification contexts? Evidence from elicited production and child-directed speech. *Languages*, 6, 35. <https://doi.org/10.3390/languages6010035>
- Schulz, P. (2007). Erstspracherwerb Deutsch: Sprachliche Fähigkeiten von Eins bis Zehn. In U. Graf & E. Moser Opitz (Eds.), *Diagnostik und Förderung im Elementarbereich und Grundschulunterricht* (pp. 67–86). Schneider Hohengehren. [First language acquisition: language abilities from age 1 to 10]
- Schulz, P. (2024). What object relatives and temporal connectives have in common: Notes on two late acquired phenomena and the causes of lateness. In A. Sevcenco, I. Stoica, I. Stoicescu, M. Tănase-Dogaru, A. Tigău, & V. Tomescu (Eds.), *Exploring linguistic landscapes: A Festschrift for Larisa Avram & Andrei Avram* (pp. 225–241). Bucharest University Press.
- Schulz, P. & Grimm, A. (2019). The age factor revisited: Timing in acquisition interacts with age of onset in bilingual acquisition. *Frontiers in Psychology*, 9, 2732. <https://doi.org/10.3389/fpsyg.2018.02732>
- Tolchinsky, D. & Berman, R. A. (2023). *Growing into language: Developmental trajectories and neural underpinnings*. Oxford University Press.
- Trueswell J.C., Sekerina, I., Hill, N.M. & Logrip, M.L. (1999). The kindergarten-path effect: Studying on-line sentence processing in young children. *Cognition*, 73(2), 89–134. [https://doi.org/10.1016/S0010-0277\(99\)00032-3](https://doi.org/10.1016/S0010-0277(99)00032-3)
- Tsimpli, I. M. (2014). Early, late or very late? Timing acquisition and bilingualism. *Linguistic Approaches to Bilingualism*, 4(3), 283–313. <https://doi.org/10.1075/lab.4.3.01tsi>
- Weicker, M. & Schulz, P. (2025, March). Does position of negation mediate the difficulty of interpreting negatives? Evidence from child German. Talk presented at *Generative Linguistics in the Old World (GLOW) 47, Workshop on Negation*, Göttingen/Frankfurt.
- Yatsushiro, K. & Sauerland, U. (2019). How to be brief: Children's and adults' application of Grice's brevity maxim in production. *Languages*, 4(1), 18.