The plausibility of wholesale vs. property-by-property transfer in L3 acquisition

Marit Westergaard UiT The Arctic University of Norway NTNU Norwegian University of Science and Technology

This is the postprint version of this article, to be published as:

Westergaard, Marit. 2021. The plausibility of wholesale vs. property-by-property transfer in L3 acquisition. A commentary to Bonnie Schwartz & Rex Sprouse, "The Full Transfer/Full Access model and L3 cognitive states." *Linguistic Approaches to Bilingualism*.

Address for correspondence

Marit Westergaard The Arctic University of Norway 9037 Tromsø Norway marit.westergaard@uit.no https://orcid.org/0000-0003-2702-9615

The plausibility of wholesale vs. property-by-property transfer in L3 acquisition

Marit Westergaard UiT The Arctic University of Norway NTNU Norwegian University of Science and Technology

In Schwartz and Sprouse's keynote "The Full Transfer/Full Access model and L3 cognitive states" (henceforth S&S), the authors discuss the concept of Full Transfer from their own work on L2 acquisition in the 1990s in relation to new developments in L3/Ln acquisition. They claim that Full Transfer must be understood as Wholesale Transfer (WT) and argue against what they refer to as Piecemeal Transfer (PT). In their definition of WT as "transfer of a substantial part of or even all of the abstract properties of one of the previously acquired grammars as a block" (p. 2), they seem to introduce a new concept of "substantial parts" as different from the whole grammar, but unfortunately they do not elaborate on the nature and size of such parts. Towards the end of the paper, they sketch some interesting avenues for L3 research involving different language combinations, but the ongoing work referred to has not yet provided any evidence that may distinguish between WT and PT.

Despite these novel ideas, the paper does not seem to be completely up to speed with current models of L3 acquisition. It starts out by making a division into four WT and three PT models based on an outdated classification in García Mayo and Rothman (2012), although the only model advocating transfer as wholesale copying is the Typological Primacy Model (TPM, e.g., Rothman, 2015). For example, the L2 Status Factor only claims that the L2 is privileged for transfer, especially at early stages, not that the L2 grammar is copied in one fell swoop onto the L3 (e.g., Bardel & Falk, 2012). Furthermore, according to S&S, the TPM argues that language selection for WT depends on which of the previously acquired languages is "(psycho)typologically" closer to the L3, although this idea was abandoned in Rothman (2015) and replaced by the four-level hierarchy. And when criticizing the Linguistic Proximity Model (LPM), which argues for crosslinguistic influence from both previously acquired languages, S&S claim that the learning-by-parsing maxim cannot account for the data presented in Westergaard et al. (2017), since learners are never exposed to ungrammatical L3 input, meaning that L3 word orders that are different from the previously acquired languages cannot be parsed using those previous grammars. While this may seem like a problem at first sight, it is important to note that the LPM argues that processing is also involved when speakers create a linguistic representation for production, and that in cases where the L3 representation is lacking (or too weak), learners will resort to previously acquired grammars (Westergaard, 2019, p. 11). Furthermore, the Westergaard et al. (2017) study that they refer to is an Acceptability Judgement Task, in which the participants are in fact exposed to ungrammatical input.

On a more theoretical level, S&S also find the logic of the LPM "highly suspect" since "[j]ust because an L3 group's performance falls in between that of two L2 groups whose L1s diverge on Property P, that certainly does not warrant the conclusion that transfer from both languages has occurred" (p. 8). The rationale for these claims seems to be that "transfer of a property that yields the well-formedness of one structure should lead to ceiling-like acceptance of that structure ..., and transfer of the complement property ... should likewise lead to ceiling-like acceptance of that structure." However, the LPM does not predict such outcomes, as it argues for L3 acquisition as a step-wise process, where initial representations are weak and then gradually strengthened. Moreover, the expectation that the result of transfer should be 100%

overlap between the L3 and the source language would be equally problematic for the concept of WT, since S&S themselves "recognize that much of the L3 data ... may look like they have properties from both the L1 and the L2-Interlanguage" (p. 16). Their own logic seems to hinge on a distinction between transfer (of linguistic representations, i.e., copying in the terminology of the TPM) and crosslinguistic influence (a more transient processing phenomenon), making it possible to argue that influence from one language is the result of transfer, while influence from the other is an effect of crosslinguistic influence (or 'crosslinguistic effects' (CLE), in the terminology of Rothman et al., 2019). However, this distinction has a weak theoretical foundation: Just because one accepts the generative division between I-language and Elanguage, it does not necessarily follow that there must be two different types of crosslinguistic influence (see e.g., Sharwood-Smith, 2020; Westergaard, 2019; see also Lewis & Phillips, 2015).

There is also meagre empirical support for such a distinction. The only evidence cited by S&S is a study by Puig-Mayenco and Rothman (2020) showing that Catalan/Spanish learners of L3 English are influenced by their Catalan grammar when interpreting sentences with Negative Quantifiers and Negative Polarity Items, a result which S&S claim "constitutes unambiguous evidence for Wholesale Transfer in the very (very!) early stages of L3 acquisition" (p. 13). Influence from the same language on a couple of related phenomena can hardly be evidence that the whole grammar of that language has been copied onto the L3, and in fact, the authors of the study do not argue for WT based on these results. Instead their argument is that *ab initio* learners should be distinguished from somewhat later learners, even at the same level of proficiency, since the latter learner type in fact displays more influence from Spanish in this case. In an attempt to provide some hard evidence for representational transfer, Rothman et al. (2015) outlined an ERP study predicting a P600 component as a reaction to ungrammatical stimuli in an artificial mini-language as an L3. However, when this experiment was actually carried out, the results showed no such effect, as reported in Alonso et al. (2020).

In their argumentation for WT, S&S frequently cite their own seminal article (Schwartz & Sprouse, 1996). For example, they argue that "*it does not seem plausible*, in cognitive terms, that ... structures could be 'excerpted' ... from the L1 grammar", and further that "*it is difficult to imagine* what sort of cognitive mechanism would be involved in ... using [a] ... subsystem as the basis for a new cognitive state" (p. 66, my emphasis). This may have been difficult to imagine in 1996, but decades of work on the psycholinguistics of (simultaneous and successive) bilingualism has shown that both languages of a bilingual are always active (e.g., Blumenfeld & Marian, 2013), and that the L1 and L2 share the same processing networks (e.g., Del Maschio & Abutalebi, 2019). Thus, the two (or more) languages constantly interact in the minds of bi- and multilingual speakers, and the one(s) not in use must be inhibited or deactivated. This substantial interaction provides ample occasions for crosslinguistic influence, which over time may lead to representational changes in one (or both/all) of the grammars.

Furthermore, the rationale for WT presented in S&S seems completely vacuous. Again, they cite their work from 25 years ago and claim that "the reason 'everything transfers' in L2 acquisition is because 'everything' ... is necessary for there to be a natural-language grammar" (Schwartz & Sprouse, 1996, pp. 68-69). But over the last few decades, a number of (generative) studies on microvariation have shown that closely related grammars (e.g., different dialects) may differ in a single property, without consequences for other properties, even those that were assumed to belong to the same parameter in traditional generative theory. It might also be worth some reflection that the TPM in fact allows for initial surface influence as well as secondary transfer to take place property by property (before and after WT) and also leaves open the

possibility that L4 acquisition may proceed property by property (Rothman et al., 2019). Thus, it cannot be that transfer always operates on complete grammars. Moreover, the error-driven revision that is argued by S&S to follow WT in the L3 acquisition process must take place in a step-wise fashion; thus, it must be possible for the grammar to restructure into new 'cognitive states' based on changes in individual properties or subsystems.

S&S also criticize PT models for being unconstrained and again argue that "none of the Piecemeal Transfer models broaches how, if at all, constraints can enter the L3-Interlanguage system if this system is built up bit by bit, especially if it is built up only or primarily in response to PLD" (p. 9). Again, they misrepresent the models and fail to acknowledge that the LPM argues for *Full Transfer Potential*, i.e., that the complete grammar(s) of previously acquired languages remain active and available for crosslinguistic influence. In fact, their own idea of allowing the transferred language to act "as a *filter* for parsing L3-input" (p. 9) resonates with the Double Filter discussed in Westergaard et al. (2017).

In sum, the argumentation for WT seems to boil down to what S&S think is "plausible". But given current knowledge of the multilingual mind, it is a pertinent question why it is plausible that the parser should create a complete copy of one of the previously acquired languages at the initial stages – i.e., make a "Big Decision" in S&S's terminology. The rationale for this provided by the TPM is economy, a concept that S&S do not discuss at all. But if economy is the motivation, then one may wonder why making a literal copy is more economical than doing nothing and simply accessing the previously acquired grammars that are always available for crosslinguistic influence anyway.

Funding

The author recognizes support from the Research Council of Norway for the project Microvariation in Multilingual Acquisition and Attrition Situations (MiMS), project number 250857.

References

- Alonso, J. G., Bañón, J. A., DeLuca, V., Miller, D., Soares, S. M. P., Puig-Mayenco, E., Slaats, S., & Rothman, J. (2020). Event related potentials at initial exposure in third language acquisition: Implications from an artificial mini-grammar study. *Journal of Neurolinguistics*, 56, 100939.
- Bardel, C., & Falk, Y. (2012). Behind the L2 Status Factor: A neurolinguistic framework for L3 research. In J. Cabrelli Amaro, S. Flynn & J. Rothman (Eds.) *Third Language Acquisition in Adulthood* (pp. 61-78). Philadelphia: John Benjamins.
- Blumenfeld, H., & Marian, V. (2013). Parallel language activation and cognitive control during spoken word recognition in bilinguals. *Journal of Cognitive Psychology*, *25*, 547–67.
- Del Maschio, N., & Abutalebi, J. (2019). Language organization in the bilingual and multilingual brain. *The Handbook of the Neuroscience of Multilingualism* (pp. 199-213). Chichester: Wiley.
- García Mayo, M., & Rothman, J. (2012). L3 morphosyntax in the generative tradition. In J. Cabrelli Amaro, S. Flynn & J. Rothman (Eds.) *Third Language Acquisition in Adulthood* (pp. 9-32). Philadelphia: John Benjamins.
- Lewis, S., & Phillips, C. (2015). Aligning grammatical theories and language processing models. *Journal of Psycholinguistic Research*, 44, 27–46.
- Puig-Mayenco, E., & Rothman, J. (2020). Low proficiency does not mean *ab initio*: A methodological footnote for linguistic transfer studies. *Language Acquisition*, 27, 217–26.

- Rothman, J. (2015). Linguistic and cognitive motivations for the typological primacy model (TPM) of third language (L3) transfer: Timing of acquisition and proficiency considered. *Bilingualism: Language and Cognition*, 18, 179–90.
- Rothman, J., Bañón, J. A., & Alonso, J. G. (2015). Neurolinguistic measures of typological effects in multilingual transfer: Introducing an ERP methodology. *Frontiers in Psychology*, *6*, 1087.
- Rothman, J., Alonso, J. G., & Puig-Mayenco, E. (2019). *Third language acquisition and linguistic transfer*. Cambridge: Cambridge University Press.
- Schwartz, B., & Sprouse, R. (1996). L2 cognitive states and the full transfer/full access model. *Second Language Research*, *12*, 40–72.
- Sharwood-Smith, M. (2020). Language transfer: a useful or pernicious concept? Second Language Research.
- Westergaard, M., Mitrofanova, N., Mykhaylyk, R., & Rodina, Y. (2017) Crosslinguistic influence in the acquisition of a third language: The Linguistic Proximity Model. *International Journal of Bilingualism*, 21, 666–682.
- Westergaard, M. (2019). Microvariation in multilingual situations: The importance of property-by-property acquisition. *Second Language Research*.