

Peer Commentaries

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Bordag, Gor, and Opitz (2021) provide an extraordinarily useful model of the L2 lexicon, integrating numerous aspects of the lexicon. As they note, a model of the L2 lexicon can (and, in my view, should) account for L1 lexical representations as well as the ontogenesis of all lexical representations (regardless of the order in which languages are learned or the degree of proficiency in each language). There are many differences in the ultimate representations, which in their model are the ‘optima’, but all representations, whether, L1, L2, L3 etc. make use of the same processes and connections, albeit with a different quality of connections and different optima.

In this brief commentary I focus on two aspects mentioned as relevant to the OM, one of which has limited attention drawn to it (attrition) and the other, orthography, plays a central role, but has relied primarily on research with literate learners.

Attrition is not new in the L2 literature (see Cohen & Weltens, 1989 *Studies in Second Language Acquisition*, special issue), but it has not been fully incorporated into models/theories of language learning although connections between acquisition and loss have been made (cf. de Bot and Weltens (1995). As Bordag et al. acknowledge, attrition is an individual characteristic which may or may not occur. The connections that are formed during the process of L2 acquisition may be weakened for a variety of reasons (e.g., lack of continued exposure/use, general memory decay). Placing the construct of fuzziness at the core of the OM allows Bordag et al. to incorporate attrition as a relevant part of understanding the process of acquisition/loss across the lifespan of an individual. In their view “[t]he OM relates fuzziness to the concept of the optimum, which refers to the ultimate attainment of a representation..., i.e., the highest level of its acquisition, when the representation is properly encoded and *no longer fuzzy*” (Bordag et al., 2021; my emphasis). Questions remain which I hope future research will address. For example, if fuzziness is a component that helps explain the acquisition trajectory and if at a certain point a representation IS NO LONGER fuzzy, then what is it that triggers a decline in knowledge? Second, are optima different for comprehension and production and how does that relationship relate to attrition? And, finally, does working memory capacity relate to the weakening of interconnections? I ask these questions not only because of their importance to the OM, but also because I have long pondered my own attrition. How is it that many years ago, I had sufficient L2 knowledge of Italian to translate a book on automobile racing from English into Italian, but today my vocabulary knowledge of even day-to-day Italian is limited?

The second topic I address is orthography. Bordag et al. point to much research to support the important role of orthography in the formation of lexical representations. However, in the spirit of the recent emphasis of *SLA for all*, a project whose goal is to include research on a wide range of individuals, it is important to expand the database on which the OM is based. To date, most research has been based on convenience sampling which in essence means that most findings come from educated populations. This point is furthered by Andringa and Godfroid (2020): “[i]f the selection of participants is somehow biased, the reliability of researchers’ statements about the behavior under investigation is compromised.” Thus, we need to further consider a wide range of individuals and account for their development (or lack thereof).

Research is beginning to emerge with learners with limited education which, in many cases, means little experience with written texts and hence little orthography familiarity (cf. Tarone & Bigelow, 2007; Tarone, 2010). Although not specifically relevant to the lexicon, SLA studies of feedback suggest important differences between learners with greater and lesser amounts of literacy.

Mackey and Sachs (2012) conducted research with older learners (65–89) finding that following feedback language development occurred primarily in those with post-secondary education. Similarly, Bigelow, delMas, Hansen, and Tarone (2006) found differences in literacy levels that were related to differences in recall accuracy of feedback. These studies point to the importance of including literacy as a factor in all domains of L2 research.

Thus, there are individuals whose lexical representations may not have reached optima because they don’t have access to the orthography, but what are the consequences? Would

there be a greater likelihood of attrition? Similarly, what about individuals with specific learning difficulties (cf. Kormos, 2016)? In what ways is their L1 and/or L2 lexicon different? What predictions can be made for ultimate attainment and/or attrition? And similar questions can be asked about the sign language lexicon.

In conclusion, Bordag, Gor, and Opitz have provided us with a coherent model of lexical representation that covers many interrelated phenomena often considered separately. Their contribution helps our understanding of the interrelatedness of lexical development and decline. Further research using diverse populations will further that understanding.

COMPETING INTERESTS. Susan Gass declares none.

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