**Is there a Firewall between Declarative Knowledge and Procedural Knowledge of the Functional Morphology: A Response to Paradis**

In my article “The Bottleneck of Second Language Acquisition” published in*Foreign Language Teaching and Research*, 46, 4, 543-559, I argued that practice is important for learning second languages and especially their functional morphology, and I am very glad to read that Michel Paradis and I completely agree on that point. What is a remaining bone of contention is the so-called “interface issue”, or whether explicit (conscious) knowledge acquired through our declarative memory can turn into implicit (unconscious) language knowledge, manipulated by our procedural memory. This well-known debate has been going on at least since Krashen’s (1981, 1982) Monitor Model. Krashen argued that explicit rule learning could never be transformed into implicit knowledge, which is at the same time readily accessible for communication but acquired through practice. Instead, if fluent use of a structure that was originally learned explicitly is attested, this would be evidence of that structure having also been acquired independently of the initial, explicit learning process. In short, there is a firewall between explicit rule learning and implicit language knowledge. Schwartz (1986, 1993), following Krashen, contends that mental representations are not amenable to manipulation from the outside. Instruction cannot directly cause mental representation to develop. Universal Grammar cannot operate on information *about* language but only on *comprehensible* data, that is, data for which the form-meaning connection is internally established. Such data are only derived implicitly from meaningful interaction with the second language and its speakers, but do not come from classroom instruction. Professor Paradis’ views also fall into this strong non-interface position (for example, Paradis 2004: 35), together with the scholars he cites in his comment, as well as Bialystok, Ullman and others.

 On the other side of the barricade, Sharwood Smith (1981) argues that through practice, learners can eventually turn an explicit rule into implicit knowledge of how to use the form. In other words, there is no firewall between the two. Learners given intensive practice on specific grammar points increase in speed and accuracy on these rules, developing the ability to automatically access knowledge that used to be accessed slowly and with difficulty (DeKeyser, 1997, 2000). DeKeyser has even suggested that this may be the only way for adults to eventually develop implicit competence. The Noticing Hypothesis (Schmidt 1990, Schmidt and Frota 1986), suggesting that we cannot learn what we have not noticed and advocating for the crucial role of awareness, also falls into this position.

 Intermediate positions have been articulated as well. One such view is Ellis’s (1993) “weak interface” position, arguing that explicit teaching of linguistic form can eventually help learners notice gaps between their current grammar and the input they are exposed to. VanPatten’s (1996, 2002) Input Processing and Processing Instruction can be seen in the same light. Processing Instruction is openly intended to give learners explicit knowledge of some aspect of grammar so that they can attend to the form-meaning mapping that they may have missed. The Focus on Form teaching technique (Long and Robinson 1998) and the Interaction approach (Gass 1997) are all in consort with this kind of theoretical position. Sharwood Smith and Truscott (2014), especially chapter 9, summarizes these issues with a detailed theoretical and evidence-based discussion. The gist of their treatment is that explicit instruction can indirectly affect acquisition by providing better information on the form-meaning mapping (SS&T 2014:306):

 “[I]f instruction can help in the construction of representations that accurately capture this [form-meaning mapping] information, it could help in development of the language module. Instruction in this sense seeks to give learners metalinguistic knowledge not for direct application to performance but rather as a means of helping them to better understand the input they receive, in the hope that the ultimate result will be better development of the language module.”

 Within generative SLA research, White (1987) argued for a tightening of Krashen’s views that would make them better based on linguistic theory and more psychologically real. She showed how grammar restructuring can arise from the internal grammar of the learner itself, and not only from the clash between understood meaning and actual context (say, for acquiring the passive construction). White (1991, 1992) also contended that explicit input may in fact contribute to underlying competence, particularly when the positive (implicit) input does not provide enough evidence, or provides misleading evidence, for a certain property to be acquired. Recently, such views and practical, applied research have been gaining in importance (Long and Rothman 2013, Rothman 2010, Slabakova 2008, Whong 2011, chapters in Whong, Gil and Marsden 2013, VanPatten and Rothman 2014). Let me take here as an example a study whose findings are directly relevant to this debate. Slabakova (2002) argued that explicit instruction may shape grammar knowledge in some cases. A number of constructions in a parametric cluster (verb-particle, double object, resultatives, N-N compounding) had to be preempted by the learners in that study; that is, they had to learn that the whole cluster of constructions, available in their native English, was unavailable in the L2 Spanish. Ten of the 26 advanced subjects were able to successfully reset the whole parameter based on explicit instruction for only two of the four constructions in the cluster. This fact suggests that it is not impossible for negative evidence (in this case, explicit instruction on ungrammaticality) to be utilized in grammar reorganization.

 The rationale of this intermediate, or weak interface view, is that when a learner is instructed on and practices grammar, specifically functional morphology, in appropriate, varied and unambiguous contexts in a classroom, her input is adjusted in such a way that she is implicitly acquiring all of its underlying grammatical features. When she is prompted to notice some otherwise elusive property through explicit instruction, she may use this piece of knowledge consciously until it becomes procedural, then automatic, and enters grammatical competence. A further example of this process comes from Sharwood Smith and Truscott (2014: 3005-6). The researchers maintain that adjusting the auditory structure of learners teaches them phonological awareness. For instance, in teaching English to Chinese native speakers, emphasizing and pointing to the –*ed* functional morpheme will be profitable for grammar acquisition because Chinese words do not normally have final consonant clusters of the sort that –*ed* creates in many verbal forms. When learners hear the affix better, they will better attend to it in the input. Such an explicit adjustment can be beneficial to growing the language competence.

 In such rare cases where positive input alone cannot do the job, as in the White (1991) and the Slabakova (2002) studies mentioned above, instruction may be no more than a nudge in the right direction: the implicit (unconscious) grammar-building processes will do the rest. It is important to maintain and to remember that, when we SLA researchers speak of learning paradigms and noticing grammatical morphemes, these are only indirect pushes, or shortcuts, to internalization, processing and building of mental representations. Language acquisition is a predominantly, even overwhelmingly, unconscious process, and Michel Paradis and I certainly agree on this point.

DeKeyser, R. 1997. Beyond Explicit Rule Learning. *Studies in Second Language Acquisition* 19, 195-221.

DeKeyser, R. 2000. The robustness of critical period effects in second language acquisition. *Studies in Second Language Acquisition* 22, 499 – 533.

Ellis, R. 1993. The structural syllabus and second language acquisition. *TESOL Quarterly* 27, 91–113.

Gass, S. M. 1997. *Input, interaction, and the second language learner*. Mahwah, NJ: Erlbaum

Krashen, S. 1981. *Second Language Acquisition and Second Language Learning*. Oxford, UK: Pergamon.

Krashen, S. 1982. *Principles and Practice in Second Language Acquisition*. Oxford, UK: Pergamon.

Long, D. and J. Rothman. 2013. Generative approaches and the Competing Systems Hypothesis: Formal acquisition to practical application. In. J. Schweiter (ed.) Theoretical and pedagogical innovations in SLA and bilingualism, pp. 63-83. Amsterdam/Philadelphia: John Benjamins.

Long, M. H. and Robinson, P. 1998. Focus on form: Theory, research, and practice. In Doughty, C. and Williams, J. (Eds.) Focus on form in classroom second language acquisition. Cambridge University Press, pp. 15–41.

Rothman, J. 2010. Theoretical linguistics meets pedagogical practice: Pronominal subject use in Spanish as a second language (L2) as an example. *Hispania*, 93(1), 52-65.

Schmidt, R. and Frota, S. N. 1986. ‘Developing basic conversational ability in a second language: A case study of an adult learner of Portuguese’, in Day,R.R. (ed.) Talking to learn: Conversation in second language acquisition. Rowley, MA: Newbury, pp. 237–326

Schmidt, R.W. 1990. ‘The role of consciousness in second language learning’, Applied Linguistics 11: 129–58

Schwartz, B. 1993. On explicit and negative data effecting and affecting competence and linguistic behavior. *Studies in Second Language Acquisition* 15: 147–63.

Schwartz, B. D. 1986. The epistemological status of second language acquisition. *Second Language Research* 2: 120–59

Sharwood Smith, M and J. Truscott. 2014. *The Multilingual Mind: A Modular Processing Perspective*. Cambridge: Cambridge University Press.

Slabakova, R. 2002. The Compounding Parameter in second language acquisition. *Studies in Second Language Acquisition* *24*, 507-540.

Slabakova, R. 2008. *Meaning in the second language*. Berlin: Mouton de Gruyter

VanPatten, B. and J. Rothman. 2014. Against “rules”. In Alessandro Benati, C. Laval, and Maria Arche (Eds.) *The Grammar dimension in instructed SLA: Theory, Research, and Practice*, pp. 15-35. London: Bloomsbury Press.

VanPatten, B. 1996. *Input processing and grammar instruction in second language acquisition*. Norwood, NJ: Ablex

VanPatten, B. 2002. ‘Processing instruction: An update’, *Language Learning* 52: 755–803

White, L. 1987. Against comprehensible input: The Input Hypothesis and the development of second-language competence. *Applied Linguistics* 8 2 95-110.

White, L. 1991. ‘Adverb placement in second language acquisition: Some effects of positive and negative evidence in the classroom’, *Second Language Research* 7, 133–61.

White, L. 1992. On triggering data in L2 acquisition: A reply to Schwartz & Gubala-Ryzak. *Second Language Research* 8, 120–37.

Whong M., K.-H. Gil and H. Marsden (eds). 2013. *Universal Grammar and the Second Language Classroom*. Dordrecht: Springer.

Whong, M. 2011. *Language teaching: Linguistic theory in practice*. Edinburgh University Press