Greater processing capacity leads to second language acquisition features

HELEN GOODLUCK

Meisel's thought provoking article makes the case that child second language acquisition (as opposed to child first and child bilingual acquisition) can be observed in learners as young as three years, perhaps younger. He suggests that the onset of acquisition as a second rather than first language may be related to neurological changes and to the inaccessibility of mechanisms used for data analysis by first language learners.

My purpose in this commentary is to suggest that a consideration of the nature of the human sentence processing mechanism may lead to a better understanding of how and why the child changes from a first to a second language learner. I have suggested elsewhere that the sentence processing mechanism may serve to guide the learner to a restricted set of possibilities in forming a grammar, potentially replacing dedicated acquisition principles, specifically the subset principle (Goodluck 2007). Newport (1990) has argued that 'less may be more' in first language acquisition – i.e. that a limited processing capacity may point the learner to details of the morphosyntactic system that allow to her to crack into the larger syntactic principles governing the language at hand. Potentially this gives us a way to understand the difficulties child second language learners have in coming to grips with gender; that is, difficulty with 'small' units may be a consequence of a growth in the quantitative power of the learner's processing mechanism, denying the learner a small but highly informative sampling of the data. The learner begins to take in larger chunks of input, leading to a reduced focus on the details of the system. A processing mechanism in which discourse and context enter the analysis of the input relatively late (Goodluck 2007) fits with Meisel's claim that such factors are relied on by second language learners, who will have gained the capacity to integrate such information into their sentence level analysis.

This leads to the prediction that as a learner's quantitative processing capacity increases, so will the second language features of the learner's system. I strongly oppose the suggestion that processing explanations of

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language development are simply fudge factors (Tomasello 2003: 186), provided that such explanations are embedded in coherent models of the processing mechanism. Such modelling has increasingly appealed to capacity factors, including working memory, in explaining processing difficulties (see, for example, Gibson 1998). But we are a long way from having the tools we need to measure capacity in young learners. Adaptations of working memory capacity have been developed and used with child learners (see Felser et al. 2003), but to my knowledge (and in my experience) such measures are not usable with children younger than five years. An effort to develop such measures is an imperative for language acquisition research. This is reinforced by the fact that an appeal to processing capacity can accommodate the individual variability in learners that Meisel points to as a factor to be juggled with. Quantitative processing capacity seems an obvious candidate for a source of differences between individuals, with the superficially paradoxical prediction that those learners with lesser capacity will emerge as those who display more first language acquisition features in their second language development.

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hg13@york.ac.uk
University of York