Early successive bilingualism: Disentangling the relevant factors

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Meisel's article provides a novel outlook on the much debated issue of age effects in second language acquisition. Presupposing the existence of a critical period, he seeks to delineate the boundary between first (L1) and second (L2) acquisition. More specifically, his goal is to determine "the approximate age range as of which age of acquisition is likely to lead to similarities between the [child] learner's language and adult L2 acquisition, while distinguishing both from (2)L1" (section 1., paragraph 3). Furthermore, he seeks to establish what the "problem areas" are for L2 children (section 3.2. and section 3.3., paragraph 1).

Reviewing data from children who are first exposed to their L2 between the ages of 3 and 5, he observes that development in syntax for this group is relatively unproblematic (p.18), and this holds for a number of target language (TL) properties, including VO/OV, V2 placement, subject-verb agreement and interrogatives (Haznedar 2003, Blom & Polisenskà 2006, Hulk & Cornips 2006a, Rothweiler 2006, Thoma & Tracy 2006, Bonnesen 2007). Meisel concludes that none of these studies "supports the claim that syntactic development in early child L2 learners resembles adult L2 acquisition" (section 3.2., paragraph 4).[1] This contrasts, however, with the domain of inflectional morphology (or at least parts thereof), where, according to Meisel, child L2 acquisition *does* resemble adult L2 acquisition. More specifically, in this domain, Meisel argues, the dividing line between L1 acquisition − be that monolingual or bilingual − on the one hand, and L2 acquisition − be that child or adult − on the other, lies around age 4.

Meisel's article raises many interesting issues which would serve as suitable starting points for further research. However, before such re-

1. It is not clear to us to what extent some of these TL properties, e.g. subject-verb agreement, can be categorised as (exclusively) syntactic phenomena, but for the sake of the argument, we follow Meisel's classification. We return later to the question of who is denoted by "early child L2 learners".

Zeitschrift für Sprachwissenschaft 28 (2009), 69−77 0721-9067/2009/028−0069
DOI 10.1515/ZFSW.2009.008

search can take place, several aspects of his proposal need to be explicated in more detail. In this commentary, we will limit ourselves to what we consider the two most important of such issues, namely (i) how to define child L2 acquisition, and more specifically, how this relates, on the one hand, to the maturational changes Meisel assumes to take place in the brain in early childhood, and on the other hand, (ii) to factors involving the quantity of the input and L1 transfer.

If there is indeed a critical period for L2 acquisition, it is likely, as Meisel notes, to involve a gradual offset. As noted above, it is determining the start of this offset which serves as the article's goal. In order to achieve this goal, as in most critical period studies, groups of learners with different ages of onset are compared and contrasted with each other to ascertain the differences and similarities between groups. As noted in Unsworth & Blom (under review), deciding which learners belong to which group depends to a large extent on the research question in hand. Given that determining where the offset lies for a critical period essentially involves assigning learners to different groups or acquisitional types, however, an investigation of this type can easily run the risk of becoming circular. Nevertheless, it is of course necessary to start with at least a working definition for each group.

A generally accepted definition in the literature on child L2 acquisition is a learner whose age of first exposure lies between the ages of 4 and 7 (see Schwartz 2004 for motivation). Bilingual L1 acquisition is defined as the acquisition of two languages from birth or shortly thereafter (e.g. De Houwer 1995). How to classify the children who fall in-between these two groups, i.e. children whose age of first exposure lies somewhere between the ages of, say, 1 and 4 − who we will refer to as *early successive bilinguals* − is not clear. Indeed, this seems, at least in the first part of his paper, to be the focus of Meisel's article, that is, do early successive bilinguals, and in particular children first exposed to their L2 between the ages of 3 and 4, pattern like (2)L1 children or L2 children? Later in the article, these children are classed as L2 children, which could be interpreted as laying the boundary between (2)L1 and L2 acquisition at around age 3. This is consistent with what Meisel has claimed elsewhere (Meisel 2008), but it is not clear how it fits in with his claims made here about a critical period around age 4.

Indeed, there appear to be a number of inconsistencies in this paper concerning the relevant age ranges. In his review of some of the neurolinguistic literature, Meisel notes that critical periods not only occur at age 4, but also at age 6−7. It is not clear how the existence of this second critical period fits with the claim that L2 children, according to Meisel (2008) children with age of first exposure between 4 and 8, are similar to L2 adults. Later on, he goes on to state that "crucial changes in the

language making capacity occur well before age 6" (section 3.2., paragraph 4). Furthermore, data in a study on the same German/French population as reported on here show that it is the child with youngest age of onset (Nadja; age of onset at 2;9) who is amongst those making the most errors, errors which, according to Meisel, should align her with L2 adults. In short, whilst we concur with Meisel that boundaries between groups, if they exist, are likely to be fuzzy, without a clear – albeit preliminary – definition of who should be classified as L2 children, it will prove difficult to test his (and others') claims.

The children in the Hamburg corpus on which Meisel reports were first exposed to their L2 between the ages of around 3 to 4. It is not clear that these are in fact the (only) children one should test to determine whether the start of the gradual offset is around this age. In a study on the acquisition of finiteness and subject clitics in French in the same population, Meisel (2008) notes that "assuming that the age range between approximately 3 and 4 years indeed represents a period of significant changes, we have not found a clear effect of age within this age range, i.e. age of onset between age 2;11 and 3;07" (Meisel 2008: 55). Such a finding may indeed be quite expected: if this is the period in which such changes should occur, this group will contain both children who fall within the critical period and those who fall just outside it (depending on the child's own maturational schedule). Of course, it is necessary to examine the linguistic development of this group, but it may be more informative to at first compare children who clearly fall on either side of what might be the crucial age, that is, early successive bilinguals with age of onset between 1 and 3 years, on the one hand, and L2 children with age of onset between, say, 5 and 7 year, on the other. If the start of the gradual offset of a critical period for the "Language Making Capacity" lies around age 4, we should see clear differences between these two groups (assuming that as many factors as possible, such as methodology, L1/L2 pair, socio-economic background, quantity and quality of input, are held constant).[2]

Meisel assumes that between age 3 and 4 the human brain undergoes changes brought about by neurological maturation and that these changes make language acquisition after this point crucially different from acquisition at an earlier age. Although he rightly states that evidence for such changes should ultimately come from neurological research, in this paper he uses spontaneous production data for this purpose, and more specifically, the types of errors which learners make in

2. The Early Child Bilingualism project at Utrecht University, the Meertens Institute and the University of Amsterdam (2008–2012), in collaboration with the University of Edinburgh and the University of Thessaloniki, is carrying out such a comparison.

their acquisition of the TL, in this case French. This link between neurological maturation and linguistic development as determined by spontaneous production data is reminiscent of discussions in the 1980s and 1990s, when researchers suggested that the acquisition of certain TL phenomena was dependent on the maturation of particular grammatical principles (e.g. Rizzi 1993/1994). Central to such proposals is the prediction that children before the maturational point in question should lack the relevant linguistic knowledge, whereas those beyond that point should possess it, and crucially, this should hold cross-linguistically. This prediction turned out to be not so straightforward since it appeared that other factors, both internal and external, interact with the maturation factor, and these may make it more difficult to detect age effects on linguistic development. It is important to also take these other factors into account in the debate lead by Meisel in relation to bilingual acquisition, where factors such as length of exposure and the amount of day-to-day input to which a child is exposed interact with factors relating to age, a point to which we return momentarily.

When we try to identify grammatical factors characteristic of child L2 acquisition (as defined above), we have to take into account, on the one hand, any differences in how the TL property in question is acquired by L1 children in the various languages and, on the other, the role of the other language. As will be discussed momentarily, the latter can lead to cross-linguistic influence or transfer, and the first can make the acquisition of a particular TL property a "problem area" (section 3.3., paragraph 1) in one language, but not in another. When we compare for example the acquisition of grammatical gender in Italian and in Dutch monolingual children (e.g. Kupisch et al. 2002, van der Velde 2003), we see that in Italian, the acquisition of gender is early, rapid and error-free, whereas in Dutch, it is late (i. e. not completed before age 6 at the earliest), slow and involves overgeneralization errors (in one direction only). These differences can be explained by language-internal factors: Italian gender-marking in the DP is very transparent, that is, gender is realised morphologically in noun endings, on indefinite, definite, demonstrative and other determiners, and on attributive adjectives. In Dutch, however, gender is not a very salient property of the DP: it is morphologically visible on definite singular determiners, but not on indefinite determiners or on plural definite determiners, and it is only marked on adjectives for singular, indefinite, neuter nouns. Moreover, neuter gender nouns outnumber common gender nouns by 2:1 (Van Berkum 1996). It therefore comes as no surprise that, just like (2)L1 children and L2 adults, L2 children struggle with the acquisition of gender in Dutch (Blom et al. 2007, Cornips & Hulk 2008, Unsworth 2008). More importantly, this observation cannot designate gender as a "problem area" in

child L2 acquisition, since the problems are plausibly related to the language-internal properties of Dutch. More generally, before one can conclude that non-TL production on the part of early successive bilingual or L2 children is due to maturational factors, it is essential to take into account the age of acquisition for the TL property in question in L1 acquisition.

Another caveat concerning Meisel's general claim that gender is a "problem area" in child L2 acquisition has to do with the quantity and quality of input to which children are exposed in the family as well as in the linguistic community, at both the local and national levels. This is of particular concern when considering (very) early successive bilingual acquisition and trying to establish the exact age of first exposure. Furthermore, it may also be a factor in explaining differences observed between different learner populations. For example, the problems experienced by Moroccan Arabic- and Turkish-speaking children in their acquisition of Dutch gender may – at least in part – be due to the gender errors they hear in the non-TL input they are exposed to from older members of their local communities who learned Dutch as adults (Hulk & Cornips 2006b), whereas this cannot be the case for the English-speaking children in Unsworth's (2008) study, who were not exposed to this type of input. Such differences may also exist between the L1 Turkish early successive bilingual children in Pfaff's (1992) study, when compared with the L1 German children acquiring French at the French lycée in Hamburg. In other words, the gender problems in German observed by Pfaff cannot necessarily be used as an argument supporting the gender problems in French observed by Meisel (as Meisel seems to suggest in section 3.4.): both the internal (language) factor and the external (learning context/input) factor have to be taken into account (see Cornips & Hulk 2008 for relevant discussion).[3]

It is of course also plausible that any differences in external factors such as social settings may lead to different results for the acquisition of one and the same TL property. It is also possible that these differences may lie in the different language combinations involved. Contrary to what Meisel claims, other studies (Rothweiler 2006, Thoma & Tracy 2006) have observed that children with comparable ages of onset to those discussed by Meisel consistently pattern similarly to (2)L1 children, in morphology as well as in syntax. It is possible that these differing results may be due to the language combinations involved: the children in

3. Note incidentally that if Meisel's conjecture about gender being a "problem area" for child L2 acquisition is correct, and that the relevant maturational changes take place between ages 3 and 4, other factors must be involved in the Pfaff study because the age of onset for these children is around 2;0.

Meisel's study are German learners of French, whereas those in Rothweiler's and Thoma and Tracy's studies are Turkish learners of German.

This brings us to the issue of L1 transfer. One of the clear differences between early successive bilinguals and monolingual L1 children, and one which *a priori* lines them up with L2 children and adults, is their knowledge of (at least parts of) another language at the onset of acquisition of the second. The existence of L1 transfer in adult L2 acquisition is widely attested (see White 2003 for review), and several studies have also observed L1 transfer in child L2 acquisition (e.g. Haznedar 1997, Haberzettl 1999, Whong-Barr & Schwartz 2002, Unsworth 2005, Zdorenko & Paradis 2008). For example, Unsworth (2005) observes that like their adult counterparts, in the early stages of development English-speaking children acquiring Dutch (from the ages of between 4 and 7) transfer the VO order of their L1, producing utterances such as (1).

(1) *Ernie gaat niet natekenen de giraffe*
Ernie goes not copy the giraffe
'Ernie's not going to copy the giraffe.'

Such orders are never observed in (monolingual) L1 acquisition.

The extent to which Meisel considers L1 transfer to characterise early successive bilingual / child L2 acquisition is unclear. He claims (section 2.2., paragraph 11) that properties acquired very early in (2)L1 acquisition may cause problems if the L2 differs from the L1; gender, he claims, may be one such property (section 3.4., paragraph 4; but see discussion above). Even though the early successive bilingual children in his study have a gender-marking language as their L1 (German), they still experience considerable difficulties in their L2 (French), presumably because gender-marking works differently in these two languages. Reporting on the same German/French children elsewhere, however, Meisel (2008: 53) claims that "although gender errors occur frequently in these data, they cannot be explained as resulting from transfer". He further notes that there is not "a single example of transfer of German V2 or OV order in this corpus" (Meisel 2008: 53). This is noteworthy because, as a property which is acquired very early, OV/VO should, according to logic given above, cause problems for the L2ers, and indeed, the data from Unsworth (2005) indicate that L2 children do in fact transfer this property. Whether the apparent lack of transfer in the children in Meisel's study is the result of their younger age of onset (or of their being beyond the relevant stage of development) would require a systematic and carefully controlled study of the type outlined above.

Meisel's focus is on the qualitative aspects of linguistic development, and more specifically, on the type of errors which children do or do not

make (cf. Gilkerson 2005 for a similar approach to cross-group comparisons, Blom et al. 2007). We agree that a combined approach examining qualitative and quantitative aspects of children's linguistic development is likely to be most informative. In investigating children's errors, however, it is important to distinguish developmental errors from errors due to L1 transfer. Meisel notes that when different types of learner make the same type or error (or share the same "construction type"), this might "reveal shared acquisition mechanisms" (section 3.1., paragraph 5). Here and throughout the paper, he seems to imply that when different types of learners make *different* errors, this constitutes evidence for different acquisition mechanisms. As Schwartz (1992) points out, however, this logic does not necessarily follow because when these differences are between L1 and L2 learners, they could be due to L1 transfer in the latter group. In other words, differences in error types between L1 and L2 learners do not *have* to reflect different knowledge types. For example, the English-speaking children (and adults) in Unsworth's (2005) study make word order errors such as those in (1) which clearly result from L1 transfer. At a later stage in development, however, they make different errors, producing non-scrambled orders (but with OV word order) where scrambled orders are required in the TL grammar. Crucially, these are exactly the same developmental errors as those made by L1 children, which, on the logic outlined above, suggests that all three groups − L1 children, L2 children and L2 adults − share the same acquisition mechanisms. Unsworth's (2005) findings, amongst others, clearly demonstrate the need to distinguish between different error types in L2 acquisition if these are to be used to make claims about the underlying knowledge of different learner groups. As a final methodological point on this issue, it should be noted that careful thought should be given to the TL properties under consideration in any such comparative learner group study because for certain L1/L2 combinations, transfer and developmental errors may be identical and the results of such a comparison therefore uninformative (see Unsworth & Blom under review for relevant discussion).

To sum up, then, Meisel has identified early successive bilingualism as an important area of research when determining the role of maturation on the human genetic endowment for language acquisition. However, his article also highlights the necessity for us as researchers to first carefully consider which phenomena we expect to be vulnerable to critical age effects, whether such effects should hold for all languages, and to carefully consider the comparability of children with different L1/L2 combinations and in different learning contexts. From a methodological point of view, his paper underlines the need to carefully control for the (possible) role of external as well as internal factors, and to adopt a clearly

defined − albeit preliminary − definition for the learner populations in question in order to guide our research programmes and ensure that they are as fruitful as possible.

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