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KARIN AND SOFIA IN BILINGUAL-LAND

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1. Introduction

The paper presents the process of acquisition and development of the phonological and intonational structures of (European) Portuguese and Swedish in two bilingually raised girls. The analysis is based on data collected from birth by tape-recordings, video tapes and transcriptions made of the children's utterances on different occasions, either elicited or during spontaneous play. Most of the data are on Karin, aged 3;5 at the time of writing, supplemented by data on her baby sister Sofia, now aged 1;7. Discussion of the data involves the issue of bilingual awareness, as presented in recent literature.

The abbreviations Sw and Ptg are used to indicate Swedish or Portuguese utterances, respectively, and IPA symbols and conventions are used in the transcriptions.

2. Background

Both Karin and Sofia were born in Sweden, their mother being Portuguese and their father Swedish. From (and before) their birth, each parent spoke only their native language to the children, though both could already speak the other's language. With one exception that will be mentioned below, no other member of the Swedish family or friends can speak Portuguese, and no other member of the Portuguese family or friends can speak Swedish. The family lived in Sweden up to when Karin was 2;0 and Sofia 7 weeks, and moved then to Portugal to the Lisbon area.

When in Sweden, the parents spoke Portuguese to each other in the presence of the children and when in Portugal they spoke Swedish, in order to motivate the children for the "minority" language in each environment. When in Sweden, Karin had contact with Portuguese speakers through holidays in Portugal or guests to the home. In Portugal, the contact with Swedish came from the large Swedish colony living in the same area, from the Swedish school where Karin attends kindergarten or from holidays in Sweden. In all these contacts, the principle one person-one language could be easily maintained.

Karin and Sofia were passively bilingual at ages 0;8 and 0;10, respectively, imitating the sound of a clock or pointing at an object when asked to do so in both languages. Karin was able to express her realization of two surrounding languages at 2;2, when she spontaneously said to her mother who was helping her put on her socks: Ptg "Meia. O Papá diz 'strumpa'". (Sock. Daddy says 'strumpa'). From age 2;4, she understands and actively uses Ptg "Papá diz?" and Sw "Säger mamma?" (How does Daddy/Mummy say?) when wanting to know the equivalent of one word in the other language.

Karin is now 3;5 and in the phase where each person is consistently associated with one language, corresponding to Volterra & Taeschner's (1978) stage 3. She insistently asks for confirmation of the language to which one person, especially new acquaintances, must belong. This seems vital both for her linguistic as well as psychological adjustment to the newcomer. She actively uses either Swedish or Portuguese without hesitation in these contacts, and she showed discomfort only when a few of the Swedes living in Portugal, having greeted her parents in Swedish and being therefore labelled as such, proceeded to greet her in Portuguese. Her reaction was one of bashfulness and amazement, refusing to answer until the person had repeatedly addressed her in Swedish.

3. Phonological and intonational development

The acquisition of language of both children seems in general to follow the pattern described in the literature, as in Oller (1980). Concerning specific acquisition of Portuguese or Swedish, there are, to my knowledge, no studies on language acquisition in Portuguese. As regards Swedish, I will base some remarks on the study by Roug et al. (1989), particularly in what concerns some differences in the babbling of Karin and Sofia compared with the data on the Swedish monolingual children presented in their study.

Reduplicated nasal utterances are reported as almost non-existent in Roug et al.'s data, though they report that utterances with unrounded, often nasalized central vowels characterize their babbling stage I (between ages 0;2 and 0;3). By 0;3 Sofia's favourite self-lullaby was [ɐ̃ɐ̃] on a descending minor-third, and she had many [ʔɐ̃ʔɐ̃ʔɐ̃] utterances. Karin had [hɐ̃hɐ̃hɐ̃] series by 0;4. From around 0;8, both children babbled utterances like [ŋaŋaŋa] and [mɐ̃mɐ̃mɐ̃] (the latter being the Portuguese baby-word for "Mummy"). A later acquisition is the phoneme /ɲ/, at 0;11 for Karin and 0;10 for Sofia.

As regards place of articulation, Roug et al. report a minority of palatal and uvular articulations in their data. Uvular trills (trill being also a minority manner of articulation in their data) and palatal /ʎ/ are frequent in both Karin and Sofia's data. Sofia babbled [ʎ] from 6 weeks and [R] from 4 weeks, with or without onset plosive, for example [gʎaa], [kRRR] and sometimes the two together, [RRRʎaaa]. Karin had [gʎ], [bʎ] and [aRRR] from 7 weeks.

Oller (1980) mentions no convincing evidence of systematic babbling differences that could be attributed to language experience during the first year of life. Boysson-Bardies et al. (1984) showed, however, that the babbling of infants from different linguistic backgrounds can, at age 0;8, be identified by adults as belonging to different languages. Her study was based on the hypothesis that constraints from the structure of the target language are influential in babbling, and she concludes that these constraints are the only conceivable source of differences in the babbling of infants from different linguistic backgrounds. In Karin and Sofia's data we find, on the one hand, /R/, /ʎ/, /ɲ/ and nasal vowels, which are phonemes of Portuguese non-existent in Swedish,

and on the other hand, /ç/, /h/, /ŋ/ and /ɧ/, phonemes of Swedish non-existent in Portuguese. Both Karin and Sofia seem thus to have babbled most of the sounds that they heard around them, regardless of which language they belong to, which I believe is only proof of their normal audio-articulatory development.

Later, in the "gibberish" phase (Oller 1980), around the end of the first year, both girls would maintain "gibberish dialogues" where, in particular, the rhythmical and intonational patterns of either Portuguese or Swedish were clearly patent. At the one-word stage, both children seem to learn each word of each language with the appropriate tone and accent, which makes it clear for the listener which language they are using at any time. At age 1;9, when talked to in Swedish and not knowing one particular word, Karin would either point at a relevant object saying the Swedish word "den" (that one), or hum a Swedish double tone instead of using a Portuguese word that she knew. That is, she would try to replace the missing word with its probable Swedish intonation pattern. It may be interesting to note that Karin seems to be very sensitive to particular language features, since as early as 0;4 she stared in amazement at her mother when she spoke Swedish to guests, being used to hearing Portuguese from her the whole day. In addition, the adoption of body posture and gestures adequate to each language, and of what could be termed the "widened pharynx" versus the "locked jaw" articulatory setting of Swedish and Portuguese, respectively, are now most clearly visible in her speech. She has also acquired idiomatic articulatory and intonational devices in both languages, such as Ptg [m] on a high-rising tune to require repetition of an utterance, or the phatic ingressive Sw [hɑʔ].

Karin showed what might be termed phoneme awareness at 2;9, when she corrected her mother's pronunciation of the back vowel /ɑ/ in the Swedish name Karl, taking the wrongly pronounced vowel out of its phonological context and saying, in Portuguese, "Não é '<u>a</u>', mamã, é '<u>ɑ</u>'." (It is not 'a', mummy, it's 'ɑ'). By then, she had great interest in letters and in the alphabet, her favourite drawings being hooks and lines drawn tightly together in parallel lines. By 3;2 she could say words beginning with different letters in both languages.

4. Bilingual awareness versus communicative strategies

Karin and Sofia seem to accept both inputs as separate systems from a very early age. This is suggested by their first words - "first words" being here meant as words used with a purpose, words that can be interpreted as having a meaning in the context in which they are used. Karin's first words at age 0;11 are pronounced either with a clear Portuguese accent or with a clear Swedish accent. This includes pairs of words which are phonologically very similar, like Ptg "dá" [da] (give me) and Sw "där" [dæ] (there) which, in addition, were always pronounced on a rising tune and on a high falling-tune respectively. The same is true for Sofia at 0;10, the Portuguese word being used on high-level or rising tune, often reduplicated. Both children used such words indiscriminately with

both parents (instead of the corresponding Sw "får jag" or Ptg "ali"). Since the two words are phonologically very similar, I take it that the way both children found to differentiate them, apart from segmental pronunciation, was through intonation. In other words, they seem to try to achieve maximal phonetic differentiation of two otherwise rather similar words.

A similar strategy is later demonstrated by Karin in the words for "banana", pronounced Ptg [bɐ'nɐnɐ], Sw [ba'nan]. Some authors (Lindholm & Padilla 1978, Grosjean 1982) have claimed that the most difficult words to learn correctly by a bilingual child are those that are phonetically very similar in both languages, giving rise to the easy way out of using one in both languages. Karin's strategy seems to be the opposite, in that at 1;8 she began pronouncing the Portuguese word ['nɐnɐ] and the Swedish [nɐ'nu], using the back vowel /u/ to approximate the resonance of Sw /ɑ/, and with differentiated stress pattern. By then she used the right word with the right parent.

The fact that both children begin by using one word from each language to mean different things may suggest that they view both words as being part of one system only, as is claimed by Volterra & Taeschner (1978), but does not necessarily constitute clear evidence of that. I think it more reasonable to assume, with Grosjean (1982), that this use is due to difficulty of pronunciation of the corresponding words in the other language. It may in fact simply be the case that their vocal tracts were, at the time, not mature enough to pronounce the respective translations in each language, which are phonologically more elaborate. The separate use to which the easier words of each language are put might also suggest the beginning of awareness of two surrounding languages. I base this assumption on the fact that both children clearly understood the corresponding words in the other language, which implies passive knowledge of them. Knowing the two alternatives, the decision, then, between using one pronounceable or one unpronounceable word cannot be very difficult.

Another reason for the children's first indiscriminate use of words from both languages with either parent may lie in a strategy to make themselves understood within their articulatory limits, regardless of language used. The words that they used in this way are what we might term highly situation-bound, in the sense that, as I believe, any speaker of any language would understand their meaning. One further reason may lie in their assumption that both parents understand the two languages, something they had plenty of evidence for. The children's strategy seems to imply that, in case of communicative emergency, use whatever means there are at your disposal and hope for the best: if the purpose is to communicate, all means are allowed. This is in fact rather similar to the mostly successful attempts at communicating in foreign countries by monolingual speakers. Children as well as adults know, or at least expect, that the message will somehow get through.

When articulatory or cognitive progress takes place in one of the languages, however, there does not seem to occur any systematic resource to that language to the detriment of the other. On the

contrary, each new acquisition in whatever language is used to push the other forward, by exploring and testing its possibilities: at 2;4 Karin began to use possessives and deictics for "me, my, mine" and at 2;9 she acquired post-vocalic /s/ and /ʃ/ in non-sentence final position seemingly at the same time in both languages. It is as if there were some process of internal comparison of the two languages, and internal translation of single items or structures cannot take place without some awareness of the two languages as separate systems. This process is often successful, leading to correct output, though it may sometimes lead to errors, but the active testing of possibilities is always there. Mixing occurred nevertheless on very few occasions around 3;0, without apparent reason, when Karin already knew and used the corresponding item or structure in the other language. Two examples are phrases like Ptg "o castanho ursinho" (the brown teddy-bear), with the words in the right language but word-order borrowed from Swedish, or a Swedish sentence, pronounced on one intonation group, where she used a Portuguese noun (underlined), with double tone and correct grammatical placement of the Swedish definite article: "Jag vill ha docen" (Let me have the jam). Since we cannot account for these examples of mixing in terms of ignorance of the corresponding items or structures, they might instead constitute evidence that by then the system of each language was beginning to stabilize, in the same sense that monolingual children will first learn the correct form of, say, irregular past tenses as wholes and then use forms like "drinked" when the regular past tense rule is learned. This by the way is also apparent in Karin's current regularization of irregular verbs and plurals in both languages.

The use to which mixing has been put in the literature is rather contradictory. Mixing is used by Vihman (1985) in support of her claim of one underlying system and by Lindholm & Padilla (1978) to reinforce their hypothesis of early linguistic differentiation. Perhaps we should try and relate mixing with the whole of the child's language capacity, at all levels, phonological, morphological, syntactical and lexical, taking into account both production and comprehension. As regards the correct structuring of different levels of language, along the above examples of mixing and during the same period, Karin provided evidence for two clearly separated phonological systems: when telling her father that she had been with a Portuguese lady named Liosette, [liu'zɛt], she pronounced her name with a clear /l/, intervocalic /s/ and on a double-tone and, at Christmas in Sweden, she told her mother the name of the Swedish drink "julmust", [ˇjʉlmʊst], that she pronounces correctly in Swedish, as [jul'muʃt], with single accent, /u/ vowels, dark /l/ and post-vocalic /ʃ/, both words correctly pronounced according to Swedish and Portuguese phonology, respectively. As regards production versus comprehension, Vihman (1985:316) posits as likely the existence of two receptive stores in a rudimentary form at the earliest stage, with the argument that comprehension progressed rapidly in her child's both languages. One might then admit that two productive stores also exist in a similar rudimentary form, with the argument that as soon as productive capacity enables new levels of physiological or cognitive sophistication, differentiation in production will occur. I would tend to agree with Genesee's (1989) argument that in this sense the processes of bilingual acqui-

sition do not essentially differ from those in monolingual acquisition. Genesee adds that children learning two languages simultaneously may be expected to mix aspects of their languages because of acquisitional strategies that are independent of language representation *per se*. The fact remains that we simply do not know what children are aiming at or trying to sort out when mixing occurs, or for that matter what causes mixing. They do have two languages to relate their experience of the world to, but the expected fact that they will draw knowledge from both in order to communicate does not in itself constitute evidence that they do not and cannot distinguish the two inputs as belonging to two separate systems.

5. Conclusions

According to Arnberg (1985:7), the process of language separation in bilingual children is dramatically accelerated after "the point of 'insight' or bilingual awareness". In Karin's data, the first proof of bilingual awareness occurred at 1;10, when she spontaneously acted as an interpreter between her mother and her Swedish grandmother. From then on she may be said to have realized both that her world was divided into two languages and two groups of people that spoke and understood each, and that she herself must clearly be used as a bridge to cover the gap between them, when two people of each different world meet in her presence. Further evidence for awareness of the two languages lies in her refusal to accept Portuguese from a Swede when talking directly to her. I compare this to her anger when the parents deliberately imitated her baby pronunciation of words. That is, she consistently refuses what she feels as wrong as far as linguistic input is concerned.

One reason for early bilingual awareness may lie in the careful separation of languages by the parents and the environment from birth. A mixed input is mentioned by Genesee (1989) as a non-negligible factor in the mixing of children's utterances. Together with this, the response Karin got from monolingual Swedes or Portuguese did further disencourage mixing, since they either misunderstood or did not understand her. Karin realized soon that communication would simply break down if she used the wrong language: as early as from 1;9 she would address each parent in the right language, in spite of knowing that they could speak both.

At the phonological level, Karin (as well as Sofia) made such a clear differentiation of the languages that I would suggest that they started out working their way up two differentiated language systems from the very outset. Phonemic as well as accentual and intonational differences seem to be crucial in the acquisition of the first words in two languages.

It seems further that Karin's growing confidence and new acquired devices in one of the languages helps her progress in the other. She transposes each new acquisition in one language, at all levels, into the other, apparently to test her linguistic competence in the two language systems available to her. Karin's attitude towards her bilingualism is one of enjoyment and curiosity: she clearly draws great amusement from the results of this process of trial

and error, expressed in endless word or sound play.

As far as my observations have led me to conclude, it is not the burden of two linguistic systems to be sorted out that is imposed on Karin, but rather the case that she burdens each system by actively testing its possibilities to the limit, in order to learn its constraints. The question is not so much whether mixing, apparent confusion and setbacks are the lot of children working their way up linguistic competence in two languages but rather, as Humpty-Dumpty would put it, which is to be master.

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