

*Apt to change: The problematic of language awareness
and language aptitude in age-related research*

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Abstract

Language awareness and language aptitude often crop up in discussion of various second language acquisition phenomena, including age-related phenomena. There is a troublesome and ongoing definitional and theoretical problem in this connection: Different researchers have different perspectives on what is to be included in the respective notions; on how do to measure language awareness, on the one hand, and language aptitude, on the other; and on how or whether to differentiate the two constructs in terms of innateness versus experience. This article begins by addressing the entire problematic of the conceptualization of language awareness and language aptitude. The language awareness/aptitude issue features in the maturational debate in connection with two claims. First, it is discussed in relation to the view that second-language (L2) learning of older individuals is explicit (whereas that of younger individuals is implicit). Second, it is referred to in regard to the notion that there are older L2 learners who appear to be able to “beat” the critical period thanks to high levels of language aptitude. The article critically explores both these propositions and concludes that neither is particularly safe, especially given the uncertain state of the relevant research context.

Keywords: language awareness, language aptitude, explicit learning, implicit learning, critical period

1. Introduction

The constructs *language awareness* and *language aptitude* are very frequently referred to in current discussion of a range of second language acquisition phenomena. They surface in the context of age-related research, and particularly in regard to the critical period debate, under at least two headings. First, they feature in discussion of the proposition that older L2 learners proceed explicitly, whereas younger L2 learners proceed implicitly. Second, they connect to the notion that those older L2 learners who appear not to be subject to maturational constraints, or not so subject to maturational constraints, are able to “beat” the critical period, or to diminish its effects, thanks to high levels of language ability and language awareness.

The present article begins with a discussion of the ways in which the concepts of language awareness and language aptitude are understood. There is, in fact, a constant definitional problem in this connection, in the sense that different researchers have different perspectives on what is to be included in (and excluded from) these respective notions. Overlapping with this is the problem of measurement: How do we quantitatively gauge language awareness, on the one hand, and language aptitude, on the other? Another problem, perhaps the most important problem, relates to differentiation between awareness and aptitude in terms of the role of experience and training. Whereas language awareness is usually thought of as the fruit of particular kinds of language experience, language aptitude has traditionally been put in the category of individual trait, part of what a given learner brings innately to the task of language learning. It appears that this view of the matter may be over-simplistic as aptitude seems to be at least to some extent trainable, at least in some degree in fact, to flow from increasing language awareness. The article will go on to relate the concepts in question to the above claims, which will be explored and appraised.

2. Language awareness/aptitude: Definitions, measurement and differentiation

With regard to views of the notion of language awareness, we could do worse than start at the Association for Language Awareness website, where language awareness is defined as “explicit knowledge about language, and conscious perception and sensitivity in language learning, language teaching and language use” (Language awareness defined, n.d.). For James (1996, pp. 139-140), one of the founders of the language awareness movement in Britain, and a celebrated language awareness “activist,” *language awareness* signifies metacognitions about language in general, some component of language or a specific language in which one already has some skilled control and a coherent set of intuitions.

Van Lier is another name worth a mention in this connection. He, for his part, has consistently seen language awareness as “a crucial aspect of language learning” (1996, p. 12), his perspective on the matter being that “to learn something new one must first notice it . . . pointing one’s perceptual powers in the right direction and making ‘mental energy’ available for processing.”

Interestingly, these kinds of characterization overlap with traditional definitions of “verbal aptitude,” which relate to, for example, being sensitive to the meanings of words and the ideas associated with them (Verbal aptitude, n.d.). They also relate, to take another instance, to some elements of language aptitude as operationalized by Carroll (1981) for the Modern Language Aptitude Test (MLAT), which include, for example, the capacity of an individual to pick out grammatical functions and generalize patterns from one sentence to another. The link between language awareness and language aptitude, one should note, has long been referred to in the language awareness literature (e.g., Hawkins, 1999; Mariani, 1992).

Turning now specifically to the related question of measurement, obviously if predictions about the impact of language awareness and language aptitude are to be explored meaningfully with appropriate rigour, their measurement requires an approach which covers the relevant constructs and commands consensual respect. The difficulty with the concept of language awareness is that there has really been no attempt to test it rigorously. Thus, for example, regarding language awareness in teachers, the literature is full of statements to the effect that “a linguistically-aware teacher will be in a strong and secure position to accomplish various tasks – preparing lessons; evaluating, adapting, and writing materials; understanding, interpreting, and ultimately designing a syllabus or curriculum; testing and assessing learners’ performance; and contributing to . . . language work across the curriculum” (Wright & Bolitho, 1993, p. 292; cf. Andrews, 2007). The problem lies in identifying such teachers in a manner that is agreed on and reliable.

With regard to L2 learner language awareness, various devices have been suggested for testing various aspects of this: tests of mother tongue grammar awareness (e.g., Hassanzadeh & Nabifar, 2011), tests of cognate awareness (e.g., Malabonga, Kenyon, Carlo, August, & Louguit, 2008), tests of phonological awareness (Venkata-giri & Levis, 2007), and so on. There are some tests which purport to test language awareness in a more comprehensive kind of way, for example the tests developed by Pinto and Titone (1995; cf. Pinto, Titone, & Trusso, 1999), which have been deployed, for instance, by Lasagabaster (2001). These tests are comprised of series of components. For example, the second of them, MAT-2 (the one used by Lasagabaster) is composed of four parts: a grammatical synonymy test, a semantico-grammatical acceptability test, an ambiguity test, and a phonemic segmentation test. How far

this batch of tests represents a consensual view of the language awareness construct is impossible to say.

With regard to the instruments deployed in recent language aptitude research in the context of age-related studies, these have tended either simply to make use of parts of Carroll's Modern Language Aptitude Tests (e.g., Carroll, 1973; Carroll & Sapon, 1959; see e.g., Muñoz, 2014) or to utilize Meara's LLAMA suite of Language Aptitude Tests (Meara, 2005; see e.g., Abrahamsson & Hyltenstam, 2008; Granena, 2013), which is, according to their creator, "largely based on the MLAT tests . . . adapted to a more snazzy presentation style" (Meara, n.d.). The MLAT tests have thus been widely used, and essentially they are still being used. Some would say they have proved their value, but it is worth pointing out that they fall within the ambit of Stansfield's critique of language aptitude tests which he made in 1989, and which, to my knowledge, has never been satisfactorily answered:

The aptitude tests currently in use . . . do not take into account new insights . . . on the human learning process in general and on the language learning process in particular. Nor do they take into account . . . the relation of attitudes, motivation, personality, and other emotional characteristics and predispositions to second language learning. (Stansfield, 1989, pp. 3-4; cf. Parry & Stansfield, 1990)

Also worthy of note in this context of laying out the deficiencies of the MLAT are the reviews by Sawyer and Ranta (2001) and Skehan (2002, 2012).

The main point to emerge from the above discussion is disappointingly simple, clear and stark. It can be summed up thus. It is not at all evident that instruments purporting to measure language awareness and language aptitude respectively consensually cover the constructs in question, nor that they genuinely measure consistently different constructs. We now turn more broadly to the point of the differentiation of the two constructs in terms of the role of experience.

Contrary to the traditional view of language aptitude, there are increasingly indications and claims that aptitude is not innate and unalterable, or not *just* something which is innate and unalterable. The indications are that, at least to an extent, the awareness that derives from experience and training impacts on it, or may indeed be consubstantial with it (cf. Robinson, 2002). For example, the metalinguistic awareness that has been observed to be one of the fruits of the experience of multilinguality seems to very much associated with certain cognitive advantages, in other words with particular kinds of language aptitude. Jessner (2006), in her exploration of this topic, very definitely, posits a strong connection between the aptitude exhibited by multilinguals under certain circumstances and their heightened experience-induced language awareness: "The cognitive advantages which have

been seen to develop in multilinguals have been related to an enhanced level on metalinguistic awareness" (p. 65; cf. Jessner, 2014).

Schmidt's work on "noticing," which is comparable to Van Lier's (1996) conception, also makes the connection between awareness and aptitude, namely aptitude to learn: "Attention and noticing . . . are crucial concepts for understanding second and foreign language learning. As Baars (1997) puts it, 'paying attention – becoming conscious of some material – seems to be the sovereign remedy for learning anything. . .'" (Schmidt, 2012, p. 44). On this view, awareness is an important dimension of the capacity to learn not just language but whatever presents itself as requiring mastering.

Kormos (2013) sums up the way thinking on this matter is moving with admirable succinctness:

Although language-learning aptitude might seem to be a relatively stable individual characteristic when compared with other factors, such as motivational orientation and action control mechanisms, there seems to be some converging evidence that certain components of aptitude . . . might improve in the course of language learning. (pp. 145-146)

She goes on to refer to the cognitive advantages of bilingualism and multilingualism (citing Bialystok & Majumder, 1998), concluding that "previous language-learning experience and knowledge of their languages might be an important dimension of ultimate attainment" (p. 146). She sees this as happening "both directly and indirectly, through the mediation of aptitude constructs."

A particular instance of the notion that aptitude results from experience relates to the case of working memory (cf. Chan, Skehan, & Gong, 2011), which is thought of as a mechanism responsible for the temporary manipulation and maintenance of relevant information during cognitive operations such as language comprehension. Working memory capacity has been shown to have an impact on language learning (see e.g., Wen, 2012), and thus, although its scope extends well beyond the language learning area, a high working memory capacity can be thought of as contributing to an aptitude for learning languages. It is indeed included by a number of researchers as a component of language aptitude (see, e.g., DeKeyser & Koeth, 2011; Ellis & Shintani, 2013; Wen & Skehan, 2011).

As Mitchell, Myles, and Marsden (2013) point out, working memory "has traditionally been thought of as a 'trait' – a relatively fixed capacity that increases in a predictable, maturationally constrained way as children grow" (p. 155). As has already been indicated, there is robust evidence that higher working memory capacity is associated with higher language learning performance. Given this, the trait view of working memory seems in tune with the trait conception of language aptitude and seems to point to the integration of higher

working memory capacity into the trait understanding of language aptitude. In recent years, however, the view has been formed that working memory is, in fact, amenable to modification through relevant experience and training (Eysenck, 2012; Holmes, Gathercole, & Dunning, 2009; Klingberg, 2010).

In relation to situations where more than one language is involved, Morales, Calvo, and Bialystok (2013) found that children with experience of bilingualism performed better than monolingual children on working memory tasks. Indeed, the more complex the tasks the better their performance. The results of this study suggest to the researchers that bilingualism not only improves working memory in an isolated way, but affects the global development of executive functions. Another study (Gass & Lee, 2011) reveals that two different L2 groups at different stages in their university L2 study (first and third year respectively) evinced significantly different L2 working memory scores, which, again, points to a shaping, changing role for experience with regard to working memory capacity. Earlier MacDonald and Christiansen (2002) had illustrated that there is a correlation between working memory capacity, practice and experience.

Thus, while high working memory capacity has been seen as compatible with the trait view of language aptitude, current research is increasingly portraying it as a fruit of training and experience. This dimension of aptitude is coming to be viewed in a rather similar way to some other dimensions of the traditional language aptitude package and to those linguistic attributes which have been traditionally been described as dimensions of language awareness (cf. also Dörnyei, 2009; Skehan, 1989; Sparks, 2012; Sparks & Ganschow, 1991). All in all, it is clear that the language awareness/language aptitude discussion requires a great deal more research and reflection at a definitional and theoretical level than it to date has been accorded. We have seen that the interaction between the concepts and realities of language “aptitude” and language “awareness” is such that we are obliged to see them as at least related, with more than a degree of intimacy. A particular question, in the light, for example, of recent research on working memory, is the extent to which language aptitude is innate and to what degree the result of experience. It is not impossible that language “aptitude” and language “awareness” will turn out to be to a large extent coterminous.

3. Language awareness/aptitude and the question of maturational constraints

Moving now to the topic of language awareness/aptitude and maturational constraints, some research findings have been interpreted as suggesting that different mechanisms subserve language learning in later years and that evidence relating to language aptitude may be relevant to this notion. Thus, some years ago Harley and Hart (1997) found that the early beginners' L2 outcomes

“were much more likely to be associated with a memory measure than with a measure of language ability” (p. 395), whereas the reverse was true of the later beginners. These researchers were not inclined to interpret their findings in terms of a strong maturational constraint or critical period line. They pointed rather to the possible influence of the different instructional styles experienced by younger and older learners.

DeKeyser, on the other hand, discussing similar results which he himself obtained, *does* relate them to the critical period hypothesis. In his much-cited (2000) study, the adult beginners who scored within the range of the child beginners purportedly manifested high levels of verbal analytical ability, an ability which seemed to play no role in the performance of the child beginners. One might perhaps note Ortega’s (2009, p. 158) methodological point that the younger beginners presented very little variation in their linguistic performance, and hence correlations with anything at all were unlikely. DeKeyser (2000, 2003a, 2003b, 2006, 2012), however, interprets the differences he found between younger and older L2 beginners as important and as deriving precisely from the effects of the critical period for language. His reading of them is that maturational constraints apply only to *implicit* language learning mechanisms.

A further possibility is that such results reflect general cognitive changes which impact on language learning but on other areas of development, too. In fact, this is not necessarily an idea that DeKeyser would find objectionable (DeKeyser, 2003b), but he would presumably want to insist on a radical, “elbow-shaped” development (which is not the usual way with age-related cognitive development). We might note, before leaving DeKeyser’s claim, that the very notion of implicit learning is far from universally accepted. Shanks (2005, p. 216), for example, comments that “it has yet to be proved beyond reasonable doubt that there exists a form of learning that proceeds both unintentionally and unconsciously.” One can also refer back in this context to the remarks cited from Van Lier’s and Schmidt’s commentaries.

Interestingly, recent work by Granena and Long (2013) takes issue with DeKeyser’s (2000) conclusions. On the basis that they found no evidence of a role for aptitude in respect of morphology or syntax, but only in respect of lexis and collocations, they conclude that “adult naturalistic acquirers need not have a high level of language aptitude to reach near-native L2 abilities” (p. 336). Actually, the above account is less than accurate, because aptitude also emerged in Granena and Long’s results as a relevant factor in relation to pronunciation. Granena and Long explain this away in terms of the means used to measure pronunciation proficiency, a monitorable reading-aloud task. Their claim is that the more analytic acquirers would have been able to monitor their pronunciation while reading. Clearly, more research on this topic is required, to say the least of the matter (as

Granena and Long allow), but these seem to be challenging findings for the suggestion that only more apt L2 acquirers can resist the depredations of age.

We turn now to Abrahamsson and Hyltenstam's (2008) conclusions, based on their report of having found high levels of language aptitude to be associated with late L2 learners of Swedish judged to be native-like by native speakers of Swedish. Their claim is that a high degree of language aptitude is the absolutely indispensable prerequisite for native-like attainment in late second language acquisition, and they suggest that the possession of such aptitude by a few individuals "does not justify a rejection of the [critical period hypothesis]" (p. 503). They propose a research agenda which would look into

the way in which natively-like late learners attain their natively-likeness – for example, through the use of unique psychological processes and an unusual sensitivity to language structure or even through continued access to the innate, implicit language acquisition mechanism that, for some reason, has remained unaffected by maturation. (p. 503)

They make the prediction that

no adult learners should be found who are entirely natively-like in the L2 without having a high level of language aptitude and – we may add – without having worked professionally and successfully with the target language for a significant period of their lives. (pp. 503-504)

This latter point is interesting in that it could readily be related to what was said earlier about L2 language aptitude being (at least in part) a fruit of L2 experience and awareness, even though Abrahamsson and Hyltenstam's general line seems to be more in accord with the trait conception of language aptitude.

With regard to the detail of the above claim, it is perhaps worth commenting on the notion of the innateness of language. This constitutes an underlying axiom in respect of one aspect of Abrahamsson and Hyltenstam's claim, whereas in fact, certainly in the sense in which it appears to be deployed by Abrahamsson and Hyltenstam, it can hardly be regarded as empirically proven (cf. Sampson, 2005). On the other hand, the suggestion that highly successful late L2 learners (indeed all highly successful L2 learners) require considerable amounts of input and experience in the target language is not at all controversial, although it would clearly be unwarranted to suggest that only cases of native-like late learners *without* such abundant input and experience could be considered candidates for casting doubt on the critical period hypothesis.

In relation to the question of language aptitude, there is certainly evidence that this may play a role in successful second language acquisition (but cf. Granena & Long's earlier-cited finding). Bylund and colleagues (Bylund, 2009;

Bylund, Abrahamsson, & Hyltenstam, 2010) have also proposed that high levels of language aptitude may act as a prophylactic against language attrition. Clearly, one may be sympathetic to this proposition without necessarily accepting the above authors' claim that there is a critical period for attrition ending at puberty. In order to test detailed predictions in these matters with appropriate rigour, however, as has been argued earlier, one would need a more satisfactory definition of the construct of language aptitude than the fact of doing well on a specific language aptitude test.

The widely shared intuition of language professionals is that language aptitude (admittedly rather variously and/or vaguely understood) is likely to contribute to successful L2 attainment at any age. It is noteworthy that Abrahamsson and Hyltemstam (2008) themselves find "small yet significant aptitude effects in child SLA" (p. 481). It is of interest to refer in this connection to a very recent study conducted by Muñoz (2014), which used a version of the MLAT adapted for children and validated for Spanish (MLAT-ES). Muñoz found a significant, but moderate, correlational relationship between young learners' MLAT-ES scores and their outcomes on a speaking test. She found stronger correlations, however, in respect of other domains of proficiency: "Learners' aptitude seems less strongly associated to speaking than to reading, listening, and writing (accuracy particularly), in order of increasing strength" (p. 62). Whatever about the details, it is clear that aptitude as measured by the MLAT seems to emerge as a factor amongst younger learners.

To repeat the point yet again, however, the construct of language aptitude needs a more satisfactory characterization than simply a given score on a given test. In the present context, more to the point, though, is that the exclusion as counter-examples to the critical period hypothesis of cases of high-attaining adult beginners who are claimed to be possessed of a good measure of language aptitude radically changes the whole critical period concept. In the biological sciences, a critical period is conceived of as species-wide, as transcending individual attributes (with the exception, perhaps, of cases of very highly exceptional outliers, which is not what has been under discussion here).

4. Concluding remarks

In sum, before discussion of the interaction in SLA research between the language awareness/aptitude question and the critical period question is likely to shed any real light, a great deal more work will need to be done at the definitional level, at the level of measurement of the phenomena which are supposed to be in question and at the level of differentiation of the phenomena concerned. Such issues

will require some serious theoretical contemplation and also the development at the methodological level of a transparently motivated *modus operandi*.

A very great deal more clarity will be required about (at least) the following:

- the interaction between the conceptualization and the concrete manifestations of language awareness and language aptitude;
- the relationship between language awareness/aptitude and experience, on the one hand, and innateness, on the other;
- the precise nature of implicit learning (if it, in fact, exists);
- the theoretical implications of special pleading in relation to the claim that successful late L2 learners who are highly aware/apt are able to resist maturational constraints.

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