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THE ROLE OF THE AFFECTIVE DIMENSION IN SHAPING FOREIGN LANGUAGE LEARNERS' CONCEPTUAL SYSTEM

Abstract

The role of affective factors in the process of foreign language learning and teaching is undeniable. Still, despite growing interest in the role of attitudinal variables in foreign language training, the problem has not been much researched from the perspective of multidimensional cognition. Thus, the focus of the article is the architecture of foreign language learners' cognition situated within a multimodal framework and shaped by particular socio-linguistic experience. It is postulated that the conceptual system of a foreign language learner is unique in being highly susceptible to processing in terms of affective parameters. This hypothesis is corroborated by the results of a pilot study which show that concrete words in the conceptual systems of foreign language learners are associated with affect more than in the case of native speakers.

Keywords: affective factors, foreign language learners, multimodal and multilingual cognition

Słowa kluczowe: czynniki afektywne, uczący się języka obcego, multimodalny a wielojęzyczny umysł

1. Introduction

The role of affective factors in the process of foreign language learning and teaching is undeniable. As Horwitz (2007: ix) states, "at this moment in language

teaching history, the role of affective variables and the necessity of focusing on the emotional states of learners are readily acknowledged by the language teaching community". Henter (2014: 374) adds that the affective element underpinning the teaching-learning process typically subsumes anxiety, motivation and attitude. Interestingly, the category of *attitude* seems to be the focus of research on affective factors, with as many as 1490 articles published in 7 major on-line international data bases between 2002 and 2012 (Henter, 2014). Most of these scientific reports show how attitude is formed and/or can be trained and highlight the axiological component of the process. In other words, an individual facing a new learning situation is said to undergo a number of value-loaded reactions to unusual conditions or objects, i.e. a foreign language.

Despite growing interest in the role of attitudinal variables in foreign language training, it has been researched rather narrowly, predominantly in tandem with motivation (Oroujlou, Vahedi, 2011). Thus, other combinations still remain open to exploration and a particularly attractive one seems an interplay between cognition, attitude and language.

Undoubtedly, "we have [...] come a long way from the early years of language aptitude research when the likelihood for success in language learning was conceived of primarily in cognitive terms" (Horwitz, 2007: ix). Still, the link between the *rational* and the *emotional* remains "one of the greatest puzzles of human nature" (Forgas, 2008: 1) and becomes even more enigmatic if linguistic factors are allowed into play. On the one hand, it is generally acknowledged that "the learner's different competences are closely related to individual characteristics of a cognitive, affective and linguistic nature" (Council of Europe, 2001: 160), putting, as it were, the three categories of variables into one box. On the other hand, however, careful demarcation lines are drawn between cognitive and emotional (Council of Europe, 2001: 55), as well as linguistic and affective (Council of Europe, 2001: 7). Consequently, the cognition-language-affect nexus calls for an integrative perspective which would reconciliate the three dimensions in a systematic and motivated way (for an overview of unifying approaches and models see Bąk, 2016).

This paper is set within an integrative framework of multimodal cognition (Barsalou, 1999, 2008, 2016) against which multilingual conceptual systems of classroom learners of English are characterized. On the basis of existing empirical literature and related theoretical considerations it is assumed that non-native users of English who are trained in institutional settings develop conceptual systems which are more prone to processing (in terms of) abstract categories than those of native speakers.[1] This difference, largely motivated by particular

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[1] Susceptibility to abstraction and abstracting is understood as both the ability to form higher-order categories from a variety of exemplars and the capacity to process terms

linguistic experience(s) of foreign language learners, is taken to impact the way attitudinal dimensions are developed in multilingual minds. To be more specific, it is hypothesized that foreign learners of English tend to associate concrete words with affect more than native users. This hypothesis is verified through a qualitative pilot study whose results suggest that conceptual systems of non-native speakers are influenced by affect to a degree not compatible with the extent to which attitudinal elements are present in the minds of native language users.[2]

2. Multimodal cognition

Defining cognition, Barsalou (2016) emphasises the complexity of human conceptual systems which involve not only "traditional" cognitive processes, e.g. learning or understanding, but also a number of ecologies, including sensory and motor elements, the sociocultural milieu and the physical environment. In other words, knowledge is multimodal and incorporates "components from vision, audition, action, space, affect, language, etc., and [...] retrieving a memory involves simulating its multimodal components together" (Barsalou, 2008: 623). Viewing the mind as embodied entails that cognition can be shaped by a variety of contextual factors and thus can behave as a dynamical system. In other words, the claim is that cognition can be situated within the framework of complexity theory, with two main perspectives adopted. The first one, propagated by, for instance, Gibbs and Cameron (2007), stipulates that the mind functions without a firm representational system, while the other, discussed by Kövecses (2015), assumes some stability within the conceptual system. Importantly, whether steady or momentary, conceptual systems of monolinguals are consistently taken as modal – emerging from and/or reflecting their multisensory experience – although particular configurations of cognitive dimensions are probably unique. Gibbs and Colston (2012: 263-164) list a number of factors which influence meaning interpretation and these include: age, gender, occupation, culture, bodily action, cognitive differences, personality, political, social and geographical backgrounds. Thus, while the mind rests on universally-available cognitive operations, e.g. framing, abstracting or metaphorizing, they "are not employed in the same way by all groups or individuals" (Kövecses, 2015: 26) due to varying (degrees of) contextual pressures.

A contextual force of special interest in this paper is language (experience) and its impact on multimodal cognition. To begin with, Barsalou (1999)

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whose referents are not only diverse but also scarce. Hence both *animal* and *democracy* are understood here as abstract, which is in line with a conflated approach to abstraction/abstractness (Borghi, Binkofski, 2014: 6).

[2] Unless specified otherwise, native speakers are taken as monolinguals throughout the paper.

postulates that all concepts, including linguistic representations, are embodied in that they are grounded in perceptual, action and emotional experience and hence their processing involves constructing multimodal simulations. However, as well as a set of representations, language can also be viewed as (a kind of) experience shaping the mind in a particular way. The Words as Social Tools (WAT) approach (Borghi, Binkofski, 2014) stipulates that linguistic experience is gathered and schematized in the conceptual system in the form of acoustic properties, labels or explanations. Moreover, these language-based representations are shown as crucial for processing abstract terms, e.g. *furniture* or *freedom*. One reason for this tendency may be that abstract words typically lack tangible referents and/or relate to miscellaneous situations. In the case of the word *freedom*, for instance, simulations may range from dancing in the meadow to escaping from a totalitarian system. To unify these experiences, elaborate explanations are often needed or indeed they may be the only kind of interpretations available to those, for example, who do not have any relevant perceptual or motor experience at all related to words such as *culture* or *democracy*. In the same vein, Prinz (2012) claims that *democracy* is understood through a network of related words, which constitutes the bulk of its meaning. In other words, abstract terms are grounded in both sensorimotor and linguistic experience but their acquisition and processing depend more on the latter (Borghi, Binkofski, 2014: 52).

The importance of language for abstract concepts coincides with the role attitude (affect) plays in their development. According to the WAT proposal (Borghi, Binkofski, 2014: 64), abstract concepts activate more situations, more linguistic information and more emotions compared to concrete concepts, which depend more on sensorimotor simulations, while the affective embodiment account (Vigliocco et al., 2009; Kousta et al., 2011) suggests that abstract words depend more on emotional information and concrete ones rely primarily on sensorimotor simulations, and both evoke linguistic information to some degree.

To sum up, results of current research into multimodal cognition (of native speakers) point to interdependence between language, attitude and abstraction and signal that their magnitude(s) may change and/or vary. Thus, it is intriguing to see what the language-affect-abstraction nexus looks like in the case of multilingual minds, i.e. conceptual systems shaped by "additional" linguistic experience.

3. Multilingual cognition

The conceptual system is made up of "an aggregated memory of aspects of experience that have repeatedly received attention in the past", and includes

"perceptual, motor, affective, introspective, social, linguistic and other information" (Lynott, Connell, 2010: 2). This cognitive-experiential pool is structured to reflect and/or meet particular conditions, such as the number of languages acquired and the way they have been learnt. In the same vein, Hall, Cheng, and Carlson (2006: 230) argue that although monolingual users employ socio-cognitive mechanisms similar to those of multilinguals, there are crucial differences in their knowledge systems which result from "the amount and quality of exposure to variable linguistic forms, and, more generally, the unique social contexts and [...] communicative activities". In other words, while cognitive architectures are built on universal processes, e.g. abstracting or metaphorizing, differential contextual forces lead to asymmetries in the way a conceptual system is shaped. Therefore, although there are a number of cognitive mechanisms all humans share (see Tomasello, 2003 for a discussion), some of them may be more prominent in certain groups because of the experience they have had. In the case of multilinguals, the ability to abstract appears to be particularly well-developed.

To begin with, Fodor, Fox and Thompson (2003: 122) argue that speakers of many languages develop "a minimally sorted and organized set of memories of what [they] have heard and repeated over a lifetime of language use, a set of forms, patterns, and practices that have arisen to serve the most recurrent functions that speakers find need to fulfil". This "minimally-sorted", or abstract, assembly takes the form of linguistic representations, e.g. labels or explanations, which, as shown above, are closely linked to the affective dimension. Furthermore, Höder (2017: 15) argues that users of more than one language form diaconstructions – conventionalized and highly schematic patterns generalizing over structural elements of all languages or varieties available to an individual speaker and/or shared by a specific community. These abstract assemblies resemble parametric concepts, i.e. schematic representations encoded by language (Evans, 2016: 6), akin to Johnson's (1987) image schemas, e.g. CONTAINER or UP-DOWN. Importantly, image schematic concepts are axiologically loaded through the PLUS-MINUS parameter which, according to Krzeszowski (1993), is responsible for associating, for instance, UP-based language with positive values (e.g. *be on cloud nine*) and DOWN-based expressions with negative emotions (e.g. *fall into depression*). It should be emphasized that, as argued, for instance, by Rybarczyk (2015), the attitudinal dimension permeates not only lexical (words, idioms) but also grammatical (demonstratives or possessives) categories.

The conceptual system of multilingual speakers can emerge from lifelike social experience or classroom interactions.[3] What constitutes an important

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[3] This is not to say that the two environments cannot interact. However, for expository reasons, they will be kept apart here.

difference between the two settings is the quality of linguistic experience they provide. In the case of the former, language is embedded within a rich social context, typically linked to a number of modalities. In the case of the latter, however, the context is not only impoverished but also dominated by the teacher and/or the language system. Consequently, foreign language learners' knowledge is primarily shaped through linguistic experience in the classroom, much of which involves "studying the linguistic code itself rather than just emerging in lifelike social experience" (Kecskes, 2014: 101), and most of which focuses on the structure of the language to such an extent that the communicative aspect is lost (Bąk, 2016). Moreover, as Borghi and Binkofski (2014: 20-21) argue, linguistic explanations provided by teachers can be crucial for the development of the learner's conceptual system since educators' accounts or clarifications appear to decisively shape students' minds. However, in order to capture these "testimonies", foreign language learners need to develop skills which will enable them to follow such (often metalinguistic) definitions.

Foreign language learners rehearse explanations provided by their teachers – the important others in the classroom, interact with co-learners in the environment which differs from the rich socio-cultural milieus in which their first languages have evolved, and concentrate on the language system rather than language use. Their cognitive architectures develop to meet these specific contextual needs and consequently seem particularly prone to abstraction. In other words, while, as argued above, the multilingual mind is generally geared to process in terms of schematic representations, multilinguals who are educated rather than raised in a language appear to be even more likely to employ abstract categories to process the impoverished, and often metalinguistic, input encountered in the classroom.

Linguistic representations, often schematic in nature, populate multilingual minds. Given the link between abstract categories and affect, it can be expected that attitudinal elements will be highly prominent in the conceptual systems of non-native speakers who developed their L2 in the classroom – an environment which fosters processing in terms of the abstract – possibly leading to asymmetries between axiologically-loaded and value-neutral representations.

To begin with, Langlotz (2015: 114) states that "[t]he constant and productive manipulation of linguistic structures in specific task-domains [...] has the power to re-shape and re-organize the mental representations that are associated with them". In other words, if concepts are primarily developed via socio-culturally impoverished linguistic experience, as is the case with foreign language learners, schematic linguistic representations are likely to influence other elements in a given frame, e.g. perceptual or motor, since, as Borghi and Binkofski (2014: 53) put it, "language use does [...] introduce modifications

and changes in previously formed and more ancient structures, as those of the motor system." Moreover, Boroditsky (2001) demonstrates that a foreign language, with its set of new concepts or foci, is particularly likely to upset the cognitive status quo. For instance, English speakers who start to talk about time as Chinese people do, i.e. with reference to the UP-DOWN schema, change the way they represent time and tend to conceptualize earlier times as up and later days as down, i.e. in a Chinese rather than an English way.

Learners from formal classrooms rarely "confront the affective variables that are built heavily into social and interpersonal functions of their L2" (Collentine, Freed, 2004: 155). Still, non-native multilinguals encounter their own attitudinal elements through classroom interactions or teacher explanations. These affective dimensions are not only unique in being linked to schematic linguistic representations but also likely to decisively influence the conceptual system of a foreign language learner. To be more specific, in view of a firm interconnection between abstraction and affect and a tendency for (later) linguistic representations to modify (earlier) non-linguistic ones, it is predicted that foreign language learners will be particularly prone to processing in terms of attitudinal dimensions, i.e. that their conceptual systems will be more permeated by evaluation than in the case of native speakers.

Results of current research into language-affect interactions in multilingual minds point to two important findings which both substantiate some of the claims so far and open avenues for further investigation. Firstly, Jończyk (2016) felicitously demonstrates the uniqueness of affective experiences in L2 in that they are more detached (schematic) than in the case of L1. Building on evidence from clinical and introspective contexts, the linguist argues for a minimal role of multimodal cognition in developing affective meanings in L2. In other words, while simulations are guaranteed a role in developing and interpreting (potentially) value-loaded terms in L2, they are shown to be nothing like the full-blown experiences associated with functioning in L1. Secondly and relatedly, Bąk (2016) points to the grammar-oriented classroom as a setting in which non-native speakers have to develop their own understandings of emotions conveyed through spoken language. Detached, as it were, from the rich socio-cultural contexts typical of being reared in a language, learners of English predictably fail to recognize many instances of emotional prosody natural to native speakers. Still, foreign language learners forge their own patterns of affect, often quite dissimilar from those conveyed by native users.

Studies into relations between affect and multilingual conceptual systems of foreign language learners consistently highlight qualitative differences between native and non-native minds. Crucially, multilingual cognition appears to be more schematic, or detached, particularly if shaped in a foreign

language classroom. As a consequence, the affective dimension is less full-blown in the case of non-native than native speakers, which is related to differences in the way each group develops and/or interprets attitudinal elements. Importantly, these discrepancies have so far been discussed on the basis of (contextualized) words which are naturally linked to emotions, e.g. *happiness, sadness* (Bąk, 2016) or *devastated, friendly* (Jończyk, 2016). However, as postulated throughout this article, having a highly schematic, or abstract, mind means an overall higher (than expected) susceptibility to processing in terms of attitudinal elements. In order to test this prediction, concrete words, i.e. terms not expected by the embodied abstract semantics hypothesis (Kousta et al., 2011) to noticeably evoke affective meanings in the case of monolinguals, need to be inspected with a view to discovering whether non-native speakers of English employ more evaluations when processing them. Therefore, a study was designed to collect relevant data from native and non-native users and analyse them for the presence of particular dimensions – perceptual, motor, sociocultural, linguistic and affective. Details are presented below.

4. The design of the study

In order to test the claim that conceptual systems of foreign language learners are influenced by affect to a degree not compatible with the extent to which attitudinal elements are present in the minds of native language users, a qualitative pilot study was conducted at a Polish university in September 2018. It involved 2 groups of participants: 15 native speakers of English and 15 non-native users of the language.

The native cohort consisted of 8 males and 7 females, aged between 20 and 22. As shown by the results of a questionnaire prepared to define their language experience and proficiency,[4] these participants spent all their lives in Great Britain, used only English in family, professional and social contexts and declared strong affiliation with the British culture. None of them mentioned significant exposure to other languages and cultures. The native informants were all drafted from students participating in a double-diploma programme at the Faculty of Economics.

The non-native participants, 9 women and 6 men between 20 and 21 years of age, came from Turkey (3), Germany (4), Italy (3), France (2) and Croatia (3). They all declared no history of living in an English-speaking country. As indicated by the results of a questionnaire,[5] apart from their respective

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[4] The questionnaire was based on the Language Experience and Proficiency Questionnaire (Marian et al., 2007).
[5] The questionnaire was based on the Language History Questionnaire (Li et al., 2014).

native languages and English, 8 participants had some proficiency in another language, mostly in the context of Internet interactions and/or reading. On the basis of the questionnaire and results of a language proficiency test which they had to take before entering the university, the non-native participants' level of English was identified as C1, according to the CEFR.

The two groups were gathered in the Erasmus Office and asked to take part in a "vocabulary exercise". It was explained to them that the results of this task would be used for future research and they all gave their consent. They were also informed that data from the two questionnaires, which they had completed 2 days beforehand, would be also referred to in the study.

The participants' task was to write sentences with the word *chair*. This particular unit was chosen for its obvious relation to the physical domain/sensorimotor dimensions of experience and less expected associations with abstract/linguistic or affective elements. Despite its rather concrete associations, *chair*, in accordance with the hypothesis formulated above, was predicted to induce contexts encompassing abstract (linguistic and/or affective) aspects in the case of foreign language learners rather than with native speakers of English. Answers from each group are given below, accompanied by the conceptual dimensions they are taken to reflect.

5. Results

Set 1 (foreign language learners)

1. In my room there is a chair full of clothes. (sensorimotor)
2. The legs of this chair have been broken. (sensorimotor)
3. Take a chair and come here. (sensorimotor)
4. Ellen moved in recently and she had only one chair and a lamp in her new house. (sensorimotor)
5. When we were having dinner, we found out that one friend was without a chair. (sensorimotor/social)
6. The newly-wed couple living next door came this morning to ask for a chair. (sensorimotor/social)
7. He needed to borrow a chair for the party. (sensorimotor/social)
8. The legs of a chair can be used for self-defense. (sensorimotor/social)
9. That is my favorite chair. (affective)
10. It happened last night that my cat just put her claws in my favorite chair. (affective/sensorimotor)
11. I prefer sitting on a sofa to sitting on a chair. (sensorimotor/affective)
12. A chair is simply good for me. (affective)

13. Everybody loves chairs. (affective)
14. The world would be different if the chair wasn't invented. (social/affective)
15. Chair is a part of chairman. (linguistic)

Set 2 (native language speakers)

1. There was a chair on a small platform in front of the screen. (sensorimotor)
2. I slumped into a chair and remained motionless for a while. (sensorimotor)
3. He swung one leg over the chair. (sensorimotor)
4. We'll need a table and four *chairs* for the dining room. (sensorimotor)
5. I am sitting perfectly straight, with my back against the chair. (sensorimotor)
6. He sat down, pushing his back into his chair. (sensorimotor)
7. Peter's huge belly filled the chair. (sensorimotor)
8. I was the first to rise from my chair. (sensorimotor)
9. She suddenly materialized beside my chair. (sensorimotor)
10. Her knees were weak, and she sat down on a chair. (sensorimotor)
11. He leaned back in his chair and gave her an angry look. (sensorimotor, affective)
12. Why are you kicking my best chair? (sensorimotor, affective)
13. It was hard for me to squeeze into a chair with wooden arms. (sensorimotor, affective)
14. He is now *chair* of the English department. (social)
15. The party's chair should be changed. (social)

The rationale behind attributing particular conceptual dimensions to the examples above was based on meanings transpiring from the linguistic contexts. For instance, words such as *favourite, prefer* or *like* were associated with evaluation while verbs like *come, take* or *sit* were taken to refer to the physical domain. Furthermore, if *chair* co-occurred with *friend, party*, or words implying community, e.g. *neighbour,* or interaction, e.g. *self-defence*, the social dimension was postulated. The social domain was also assigned to examples in which *chair* was used to mean *president*. Finally, the context closest to the noun *chair* was considered more prominent and thus consistently given as the first attribute in brackets.

6. Discussion

As announced above, the study was set up as a qualitative analysis of conceptualization patterns of native speakers and learners of English with reference to the degree each was permeated by the affective element. Having adopted

the notion of a pattern as its methodological pivot, the study situated itself within a family of usage-feature approaches (see for instance Dobrovol'skij, Piirainen, 2005; Janda, Solovyev, 2009; Glynn, 2011; Strugielska, 2012), based on the premise that syntagmatic contexts of a word could provide insight into conceptual structures behind it (Hampe, 2005: 104). Thus, analysing linguistic contexts of the word *chair* should be seen as an attempt to establish its meaning profile(s), or a set of cognitive models activated from a particular perspective (Evans, 2006: 496). In fact, the two perspectives employed in the study, i.e. native and non-native, were expected to lead to a split between interpretations of the noun *chair*, assumed to result from differently-shaped conceptual systems of native speakers and foreign language learners. In the case of the latter, meaning profiles were supposed to reflect cognitive reliance on attitudinal dimensions.

To begin with, foreign language learners' conceptualizations of the noun *chair* display far more variation than those of native speakers. In the case of the former, as many as 7 different combinations of elements can be noticed, i.e. sensorimotor-social (4), sensorimotor (4), affective (3), sensorimotor-affective (1), affective-sensorimotor (1), social-affective (1) and linguistic (1). The dominant pattern is between sensorimotor and sensorimotor-social, followed by affective. Importantly, the attitudinal variable appears as many as 6 times in the responses.

Native users' interpretations were arranged into 3 classes: sensorimotor (10), sensorimotor-affective (3), and social (2). Evidently, the perceptual-motor dimension dominates their conceptualizations, with some impact of the affective and social factors and none of the linguistic element.

The above tendencies in the data prompt the following observations. Firstly, there is a considerable qualitative difference between the two sets of answers in that foreign language learners' conceptualizations are more varied and less clear-cut than those of native speakers. This varied information is, nevertheless, anchored in two fairly independent elements: sensorimotor and affective, each occurring, 4 and 3 times respectively, as the only context determinant in the first set above. On the other hand, native speakers' answers are rooted in sensorimotor and social elements, each of which appears autonomously in the data. Thus, while the sensorimotor aspect is what native and non-native users of English share, since both groups evoked this dimension in their conceptualizations, the social element appears far more prominent in the case of the former and the affective one permeates the interpretations of the latter. Finally, when two-element semantic profiles are also taken into account, the sensorimotor element occurs 10 times with foreign language learners and 13 with native users, the social aspect is present 5 times in the case of the former and 2 with the latter, the affective dimension emanates from 6 learners' and 3 native speakers' responses, while the linguistic variable occurs only with the former

group. All in all, then, i.e. considering qualitative and quantitative asymmetries, a foreign language learner's mind reflects the sensorimotor-affective-socio-linguistic arrangement while a native speaker's conceptual system seems sensorimotor-socio-affective in nature. The discussion is summarized in Table 1.

Conceptual dimension	Foreign language learners	Native language speakers
sensorimotor	4	10
sensorimotor-affective	1	3
sensorimotor-social	4	0
social	0	2
social-affective	1	0
affective	3	0
affective-sensorimotor	1	0
linguistic	1	0

Table 1: Conceptual dimensions of foreign language learners and native speakers.

7. Conclusion

The role of affect in shaping native and non-native minds is different, which is only to be expected since they are exposed to dissimilar (linguistic) experience.

Foreign language learners seem equipped with cognitive systems which both reflect and support their thinking for/and functioning in a multilingual environment of today. Their minds are particularly suited to cope with the often abstract linguistic input and/since their ability to schematize is highly developed. Since abstract concepts tend to co-occur with affective elements, foreign language learners' minds rest, to a considerable extent, on attitudinal/evaluative dimensions. In other words, the conceptual system of a foreign language learner is unique in that it is particularly susceptible to processing in terms of affective variables.

Naturally, the above claims can be taken only tentatively and obviously far more research is needed to support them. Still, the tendencies described and partly confirmed in this paper are promising in that they not only show the uniqueness of foreign language learners' conceptual systems but also decisively place affective components within them.

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