

VALENTINA TÖRÖK – ÜLRIKE JESSNER

University of Innsbruck
valentina.toeroek@uibk.ac.at
ulrike.jessner@uibk.ac.at

Valentina Török–Ulrike Jessner: Multilingual awareness in Ln (foreign language) learners’ strategies and processing

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Multilingual awareness in Ln (foreign language) learners’ strategies and processing

Der vorliegende Artikel soll einen Überblick über die aktuelle Forschungslage im Bereich der Zweitspracherwerbsforschung (SLA) und Drittspracherwerbsforschung (TLA) bieten. Der Schwerpunkt liegt hierbei auf mehrsprachigem Bewusstsein als emergente Eigenschaft mehrsprachiger Systeme. Als systemtheoretischer Hintergrund dient hierzu das *Dynamic Model of Multilingualism* (Herdina & Jessner, 2002). Als Bestätigung dieser emergenter Eigenschaften komplexer Systeme bei mehrsprachigen strategischen kognitiven Prozessen beim Verstehen einer bis dahin unbekannt Sprache dienen die Ergebnisse zweier an der Universität Innsbruck durchgeführten Langzeitstudien zum Thema Sprachbewusstsein im Zusammenhang mit Sprachverlust. Alle TeilnehmerInnen benützten Kompensationsstrategien und bewiesen einen hohen Grad an Kreativität in ihren Problemlösungsstrategien. Ferner konnte ein Unterschied in der Anzahl an verwendeten Strategien zwischen mehr und weniger erfahrenen mehrsprachigen ProbandInnen festgestellt werden. Die angeführten Beispiele beweisen somit MLA (metalinguistic awareness) sowie XLA (crosslinguistic awareness), sowie CLIN (crosslinguistic interaction) der ProbandInnen.

1. Introduction

Research in the last decades has shown a special focus on language acquisition and simultaneously this triggered an increased interest in strategic new information processing within both second (SLA) and third language acquisition (TLA). Ever since Bialystok in the late 1980s showed that speakers of more than one language show a heightened cognitive advantage, it has become obvious that these individuals also show a higher capacity in problem solving.

Research on TLA and multilingualism has progressively intensified during the last fifteen years, and in particular the research on multilingual learners has generated consistent evidence that both metacognitive and metalinguistic awareness(es) are crucial for the enhancement of language learning strategies in multilingual learners / users (Jessner, 2006; Moore, 2006). For example, Kemp (2001) and Klein (1995) demonstrated that multilingual learners are more efficient in decoding the grammatical structure of another language by using more grammar learning strategies.

This paper, which is embedded in a holistic systemic approach epitomised by the dynamic systems and complexity theory (DST/DCT) perspective, as

introduced by Herdina and Jessner (2002) in their *Dynamic Model of Multilingualism* (DMM), will discuss findings from two recent longitudinal projects carried out at the University of Innsbruck and will particularly focus on the findings regarding the strategies applied in crosslinguistic interaction, as well as the interconnectedness of strategies in TLA and the implication of multilingual awareness implied hereby.

As a starting point, the paper first concentrates on the focal point of the research projects, namely multilingual awareness as an emergent property of a multilingual system. In support of the crucial role that multilingual awareness plays in the complex processing mechanisms found in third/Ln language learning and use, this paper will present both a short overview of some preliminary results and original examples of multilingual awareness in Ln learners' strategies and processing when dealing with an unknown language.

2. Multilingual awareness – the most important emergent property in a multilingual meta system

Research on TLA has shown that the multilingual system gives proof of many new emergent properties (very different to SLA indeed) of which multilingual awareness is considered one the most prominent. Thus, multilingual awareness is not only a meta emergent property which develops with multilingual skills, but rather more an “ability to focus attention on language as an object in itself or to think abstractly about language, and, consequently, to play with or manipulate language” (Jessner, 2006: 42).

In the early 1960s, Peal and Lambert published a study which made the correlation of processing more than one language and the coinciding enhancement in cognitive development evident. The study ascribed the success of the bilingual learners over their monolingual peers to higher levels of cognitive flexibility. In the fields of both SLA and TLA research this led to a deeper interest in cognitive advantages associated with foreign language learning (Jessner, 2008: 277). Metalinguistic knowledge and the awareness of this knowledge shapes further (foreign) language learning, and was later termed multilingual awareness (see Jessner, 2006; 2008). A lot of evidence for multilingual / MLA stems from a number of studies within the TLA research in bilingual children and learning of artificial language in expert language learners.

This is why metalinguistic or rather multilingual awareness has a twofold purpose in foreign language learning: on the one side it improves through additional language learning and on the other side it expedites the learning process itself within new linguistic systems (e.g. Bialystok, 2001; Jessner, 2006). Thus it becomes obvious that multilingual awareness is not only an emergent property of a multilingual system, but rather the most central driving force behind the cognitive and multilingual development (Herdina–Jessner, 2002: 116).

3. Metalinguistic awareness or how prior language acquisition and knowledge of different linguistic systems facilitate further language learning and processing

Further proof of advantages of bilingual speakers over their multilingual peers has been given in many different educational studies of which Bialystok's work has to be mentioned as most substantial. Even though Bialystok and her collaborators found out that there are no universal advantages for bilinguals (e.g. 2001, 2005, 2009), they nevertheless found out that high levels of proficiency in both languages lead to advantages within tasks requiring more analytic linguistic knowledge. This was also confirmed by Mohanty's 1994 study on the Kond tribal children in India.

Many studies have given proof that metalinguistic awareness plays an important role in successful further language learning, while speeding up the acquisition process. Not only did these studies confirm a higher level of metalinguistic awareness within multilinguals and therefore a more practiced perception and understanding of metalanguage, but they showed that more experienced language learners have a heightened perception of explicit language features and information and the organisation of their language systems (Bialystok 1991, Thomas 1992, Jessner 2006). This is the reason why this unequivocal knowledge of systemic processes not only accelerates the acquisition process of further languages, but also facilitates the analytic skills used to decode a new language in a more structured system (Thomas 1992, Herdina–Jessner 2002, Jessner 2006).

Nayak et al (1990: 242) state that their study on more experienced language learners showed evidence which “suggest[s] that more experienced language learners show greater plasticity in restructuring their mental representations of the rules governing linguistic input”. This means that metalinguistic awareness as a consequence of prior knowledge and language learning experience offers a wide range of resources regarding different linguistic structures, configurations and organisation, which enables the foreign language learner to have a heightened perception and cognitive flexibility when encountering a new, unknown language system (Jessner 2006).

This has been confirmed by many empirical studies (McLaughlin–Nayak, 1989; Nation–McLaughlin, 1986; Nayak et al., 1990) which showed that acquiring an additional language activates the underlying key features and skills of language learning which enable the experienced language learners to resort to a greater variety of resources, which therefore makes them more proficient and flexible in this task. As suggested by the DMM (Herdina–Jessner, 2002) and Jessner (2006: 67–8), multilanguage aptitude and MLA in multilingual foreign language acquisition are not only related concepts, but under certain circumstances could be interpreted as identical concepts.

4. MLA, XLA and CLIN

Multilingual or metalinguistic awareness in TLA is understood as the awareness not only of the different language systems within the multilingual, but rather as that of the interrelationship of these systems, their interaction and interwovenness within this complex construct. It is presupposed that having acquired different language systems involves different kinds of expertise, whereas there are different levels of awareness.

Having explicit knowledge of more than one language system is a different knowledge to that of the interaction between these systems. According to James (1996: 138), this knowledge is rooted in the procedural level of the Ln performance, when e.g. the elements from the L1/Ln are transferred to the target language, or at the cognitive level of intuition, which James describes as *cross-linguistic intuition*. Knowledge can also be held at the explicit (declarative) level of metacognition, which James (1996: 139) refers to as *crosslinguistic awareness* (XLA).

In her 2006 study, Jessner writes that XLA “in multilingual production is described as (a) tacit awareness shown by the use of cognates in the supporter languages (mainly in the use of combined strategies) and (b) explicit awareness in the case of switches that are introduced by meta-language.” In a further study, Jessner (2005) found that both the use of metalinguistic knowledge and also the application of metalanguage influence multilingual processing. This was supported by her student Graus in her study on crosslinguistic lexical influence from English (L2) on Italian (L3) in spontaneous written production (Jessner et al., 2016).

Seeking and identifying crosslinguistic equivalents is evidenced by the search for similarities. This cognitive process is one of the most prominent ones within multilingual / metalinguistic thinking going on throughout L3 processing and production, therefore referring to the relationship between metalinguistic awareness and crosslinguistic interaction (CLIN), and thus indicating its dynamic context, which sheds light on key variables that form part of the M-factor, as described beneath (see also Jessner, 2008: 279).

Even though XLA and MLA may seem difficult to separate in some cases, especially due to the fact that they are in constant interaction within the dynamic system. Yet, there is a difference between the levels of awareness, which additionally affect and shape the organization of the multilingual mental lexicon as they show influence on the activation of the individual languages in multilingual production (Jessner, 2006: 116). Whereas crosslinguistic awareness can be defined as the awareness (tacit and explicit) of the interaction between the languages in a multilingual’s mind, metalinguistic awareness adds to crosslinguistic awareness in so far as it makes objectification possible (see Jessner, Megens and Graus, 2016).

This is why multilingual awareness can be perceived as the most prominent emergent properties of a complex multilingual system, or as Schmidt puts it, the way to efficient language learning lays in ‘noticing’ and ‘understanding’, whereas noticing implicates a conscious perception of a linguistic entity as such and is therefore described as ‘item learning’. Understanding, in contrast, implicates the perception and identification of a general rule or a pattern and therefore represents a profounder level of processing which can be described as ‘system learning’ (Schmidt 1995: 29–30).

5. The M(ultilingual)-factor and the dynamic interaction of the multilingual systems: Ln acquisition and processing

Herdina & Jessner (2002) were the first to define the M(ultilingualism)-factor as an emergent property of the dynamic multilingual system, which not only contributes to the catalytic or accelerating effects in TLA, but also individually, lastingly and continually shapes the system itself. This is why it is easy to understand why the multilingual system is in constant change, enabling the multilingual learner to acquire and develop skills and abilities / proficiencies in ways which a monolingual learner cannot.

These skills are manifold, and range from those solely related to language and its typology to those which are not necessarily related to language and include sociocognitive skills used in language learning, language management and maintenance. As mentioned above, this is predominantly traceable in the case of typologically related languages, where a qualitative change (catalytic effect) in further language learning has been detected in more experienced language learners. As many studies have revealed, these skills in experienced multilingual language learners at the same time show an amplified level of metalinguistic / multilingual awareness, which represents the key underlying emergent property of the multilingual’s cognitive system. The heightened level of MLA not only facilitates the interaction within the complex, dynamic systems, but it also makes it possible in the first place.

This complex, dynamic system in TLA represents a multilingual metasystem which is the result of a bi- / multilingual norm, contrary to SLA where the learner refers to a monolingual norm based on the acquisition of the first language (Herdina–Jessner, 2002: 131). Here the sensitivity to initial conditions become apparent. This notion was first mentioned by Lorenz (1972), who used the so-called *butterfly effect* or sensitive dependence on initial conditions in order to describe the unpredictability of chaotic / dynamic systems. In the DMM (Herdina–Jessner, 2002) the M-effect, which refers to this qualitative change in Ln learning / TLA, is implicated within a complex multilingual system.

Herdina and Jessner argue that the multilingual system is not only in constant change, but that the complexity of the dynamics can only be explained using a holistic approach, which is a vital condition of a DCT approach. Using this

approach, the emergent properties of the multilingual system (skills and abilities developed by multilingual users which are not to be found in monolinguals, obviously) have to be focused on as does the interdependence of all parts of the system (Herdina–Jessner, 2002). The DCT perspective not only emphasizes the importance of a definition of multilingual proficiency based on a holistic understanding of the diverse components of the construct, but also stresses the interrelation between neuro-, socio- and psycholinguistic aspects of multilingualism (Jessner–Török, 2017).

6. Strategic processing within multilingual complex system

As already mentioned, developing appropriate strategies facilitates not only successful further language learning, but also heightens the proficiency and enhances the cognitive development of experienced language learners (McLaughlin, 1990, Jessner 2006). This was confirmed by studies within SLA and TLA research carried out under various circumstances and in many different settings and backgrounds, which found out “that the number of language learning strategies available to a learner was dependent on prior linguistic experience and the proficiency levels in the individual languages” (Jessner, 2006: 127, see also Mißler, 1999; O’Laoire, 2001.).

Given the fact that the domain of strategic processing in (predominantly) bilinguals is a vastly researched field within SLA research, strategic processing within highly experienced multilinguals still represents a somewhat underexamined domain. Whereas there are a number of studies comparing bi- and monolinguals’ application of language learning strategies to novel language learning, studies comparing monolinguals’ and multilinguals’ language learning strategic processing are rather scarce. Given the complexity and dynamics of the topic, it is obvious why there is not so much literature on experienced multilingual strategic processing within novel language learning.

One of the latest studies dealing with experienced multilingual language learners was reported on by Dahm (2015). She describes a strategy study which was carried out as part of a large-scale classroom investigation within PAUL sessions (Pluralistic Approach to Unknown Languages), in which the students were confronted with three unknown languages: Dutch, Italian and Finnish. The three study sessions were carried out consecutively and were based on metasemantic, metasyntactic, and metaphonological tasks. The results of the study showed that this very inventive multilingual strategy training influences the speakers’ strategy use. The choice of strategy was found to mainly depend on the perceived linguistic distance between the multilinguals’ source and the respective target language. The study showed that there was a further difference in the application of different strategies. The most utilised strategies were those of comparison and translation on the one hand, whereas on the other the least applied strategy turned out to be that of inferencing.

The findings of this study offer further insight into crosslinguistic interaction in third language acquisition regarding the implementation of metalinguistic and metacognitive strategies in further language learning, thus emphasizing the demand for implementing strategy training into language teaching classes. As this case points out, there is particular need for strategy training in teaching L2 English, with the aim of profiting from the transferability of strategies and increase of creative transfer (see also Jessner et al., 2016).

O' Laoire (2001) investigated the strategy use of Irish learners of German and French and in this study he described how the learners who were bilingual in English and Irish made more use of strategies than the learners who were dominant in English. The following study carried out again by O' Laoire (2004) on the same population revealed that the metalinguistic awareness/knowledge, which was conferred on learners of L3/L4 by the study of Irish, was considerable even in the context of underachievement. These findings were also confirmed years before by Yelland et al. (1993), who reported on the metalinguistic benefits of restricted contact with a second language with regard to reading acquisition.

In order to analyse how learners evaluate their own multilingualism, Hufeisen (1998) carried out an investigation where she also assessed how the multilinguals view the interaction of all of their languages, and whether they think that their different languages helped or hindered them when speaking, listening, understanding or writing in their different (foreign) languages. This investigation revealed that the application and use of different strategies was regarded as the most significant assistance in learning a new language and that multilingual foreign language learners applied these for various types of tasks in both their foreign language comprehension and production.

Mißler (1999) carried out a large-scale study based on a German version of the Strategy Inventory for Language Learning (SILL) developed by Oxford (1990). The research focused on multilingual language learners and their application of language learning strategies. At the time of the study these students already acquired previous linguistic knowledge in an average of four languages before they started learning the target language. The results revealed that strategy use not only depended on individual factors, but that the quantity of strategies used increased with the novel language learning experience.

This was further explicated by Müller-Lancé (2003a, 2003b), who developed a strategy model of multilingual learning. His emphasizes the importance of the monitoring function within inferencing processes, which therefore directly affects the success of strategies.

In 2006 Jessner carried out a study which demonstrated the simultaneous activation of the languages in the multilingual foreign language learner's repertoire while searching for words. Her work confirmed the findings of

Kellerman and Bialystok (1997), who found that multilingual foreign language users apply communication strategies which are associated with the metalinguistic aspects of the processes of control and analysis. Monitoring functions such as e.g. error detection and error correction are included in these processes and in case that there is a linguistic discrepancy, these two processes become unbalanced. This is why multilingual foreign language learners resort to strategic behaviour in order to repair errors in communication, either consciously or unconsciously (Faerch–Kasper, 1983: 36), i.e. intentionally or non-intentionally (Poulisse–Bongaerts, 1994).

Another study regarding strategic processing in multilinguals was carried by Kemp (2007), who investigated 144 bi- i.e. multilingual foreign language learners and their application of grammar learning strategies on novel language learning. The participants of the study had learnt or were learning between two and 12 languages (indigenous, foreign, heritage or dead languages). The findings revealed that the greater the number of languages a multilingual foreign language learner knew, the greater the quantity and frequency of the applied grammar strategies was. This was also confirmed by the study participants themselves, especially regarding the number of grammar learning strategies that they themselves reported using. Kemp also found that this growing trend was fostered by knowing more than three languages.

Regarding strategy use and application, the findings of the longitudinal LAILA study carried out in Tyrol showed that the application of multilingual compensatory strategies revealed a close relationship between crosslinguistic interaction and linguistic awareness (see Jessner et al., 2016). The participants of the study applied various types of strategic processing: German-based strategies, Italian-based strategies, and strategies in which the subjects utilized both of these languages in order to find the right word in English. Regarding their function, strategies used in order to compensate for lexical insecurity or a complete deficiency in the target language were used alongside compensatory strategies applied in order to find lexical alternatives. Simplification, facilitation, and avoidance strategies were also detected as part of the strategic processing.

7. Examples of multilingual awareness within strategic processing in multilinguals: decoding an unknown language - more experienced versus less experienced multilingual language learners

As mentioned above, determining multilingual awareness within SLA and TLA research has gained more and more attention during the last decades, even though this has turned out to be a rather demanding task.

In a large-scale study on linguistic awareness in language attrition carried out in Austria and northern Italy at the University of Innsbruck by the DyME-research group (<http://www.uibk.ac.at/anglistik/dyme>), the subjects were given a text in a hitherto unknown language to them (Romanian). Think-aloud protocols

(TAP) were used to get deeper insights into the processing and production mechanisms applied by the multilingual students. At the time of the study, the Tyrolean (Austrian) students had learned at least three languages (German / English / Latin and / or Italian or French / Spanish, plus additional extracurricular ones) during their school career.

First random sample insights (138 participants from 707) show that the test results differ immensely within more experienced (those living in a multilingual society) and less experienced (those living in a predominantly monolingual society) multilinguals.

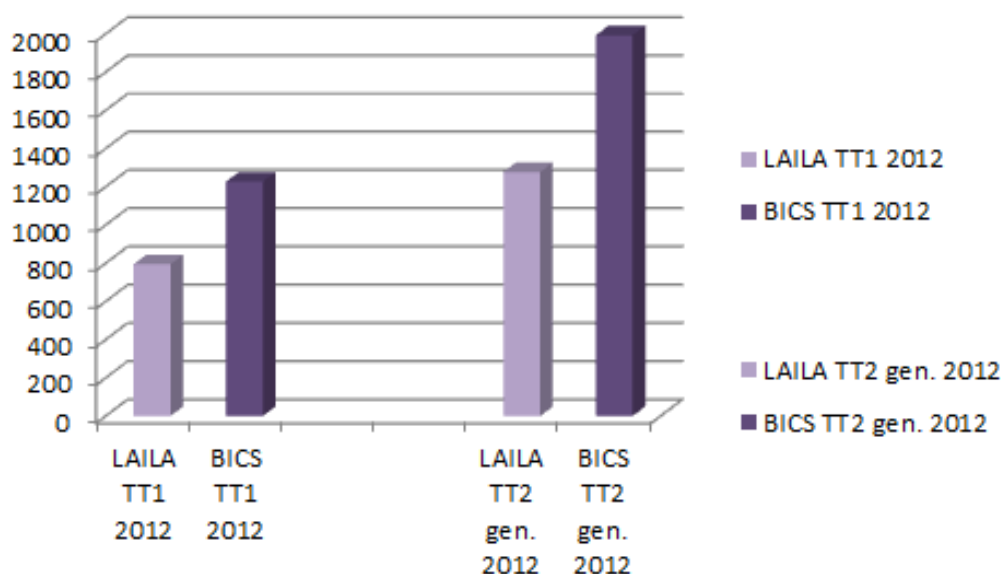


Figure 1. Quantity of applied strategies LAILA versus LAILA-BICS

Even though it is arguable whether the amount of applied strategies offers proof of differences in application between more and less experienced language learners, there is certainly a significant tendency, which is depicted in the graph above. Figure 1 shows the quantity of applied strategies in both first and second test times, demonstrating that more experienced multilinguals are used to more complex problem solving and therefore apply more strategies.

The examples from the LAILA and LAILA-BICS studies given beneath give extensive proof of the emergent properties within the strategic processing when dealing with an unknown foreign language in a multilingual complex system. These examples evidence the study participants' both MLA and crosslinguistic awareness (XLA) / knowledge and interaction (CLIN) based on language typology and grammatical awareness as well as language transfer endorsed by the use of supporter languages such as German, English, French, Italian and Spanish, as well as Latin. At the same time the participants needed to make use of their world knowledge while trying to figure out the meaning of the text. The following TAP-examples give proof that the students made use of compensatory

strategies and showed a high degree of creativity in their problem-solving techniques. The main part of the translations added after the examples are translations from German to English. Original words in English are marked with capitals. The Romanian words (or morphemes) mentioned are underlined and the MLA / XLA statements are in italics.

PAR BI-176 T1 Hotel: Ok. (.) Ja, das ist wahrscheinlich Einzahl, weil ich kann nichts pro... ähm... Setzt ich grammatikalisch zusammen aus... aha. Was wird **ale sein? Und wieso ist der Rest eigentlich fett gedruckt? Ähm... **bancilor principal**... ähm... (.) setzt sich zusammen aus... #Mal einem Hauptwort, wahrscheinlich, plus ähm... ach so... (.) Hauptwort, schreibe #Substantiv hin, weil Hauptwort ist ein dummes Wort. Ähm... #Ah ja, plus Adjektiv... #weil's näher das Substantiv spezifiziert... und **ale**... könnte theoretisch ein #Prädikat sein.... Oder... oder auch sch... ein sonstiges Partikel... ähm... ich schreibe mal irgendwie... ich schreibe alles hin. (.) Ähm... (.) erinnert mich an...# Italienisch, Französisch, (.) und an Latein. (.)*

Translation:

PAR BI-176 T1 Hotel: OK. (.) Yes, this is probably singular, because I cannot pro ... um ... grammatically it consists of ... aha. What could ale be? And why is the rest actually in bold? Ahm ... **bancilor principal ... uhm ... (.) is composed of ... well a noun, probably, plus um ... oh yeah ... (.) #a noun, I am going to write #substantive here because the word noun [Ger. Hauptwort] is a stupid word. Ahm ... ah yes, plus an #adjective ... #because it specifies the noun in more detail ... and **ale** ... could theoretically be a #predicate Or ... or else ... another particle ... er ... I am going to write...I am going to write everything down ... (.) Um ... it reminds me of ... #Italian, French, (.) and Latin. (.)*

This example demonstrates how an experienced language learner analyses a novel linguistic system on the basis of her previous language learning knowledge and experience. Here we can see that the subject's answers root in a profound knowledge not only of the adequate terminology, but also of the structural setting of an Indogermanic language.

PAR LA-191 T1 Hotel: Ahm (.) auf der anderen Seite könnte es auch so was heißen wie (.) Platz oder so, aber für das könnte ich, also da fällt mir kein Vergleich ein [liest / murmelt, räuspert sich], ja (.) #was mir noch einfällt ist, komischerweise, dass mir die Endung –or an den lateinischen Komparativ erinnert. #Beziehungsweise, ahm überhaupt, es gibt auf Latein ja auch ein paar Nomen, die ahm im Nominativ auf –or enden, während man das im Französischen eigentlich (.) nicht kennt. #Das Gegenteil (.) ja vielleicht sekundär (.) ja, **secundari, oder so was in der Art.*

Translation:

PAR LA-191 T1 Hotel: Um (.) on the other hand it could mean something like (.) place or something like that, but for that matter I could, I mean I cannot think of a comparison [reads / mutters, clears her throat], yes (.) #what I can think of, strangely, is that it reminds me of the ending –or, the Latin comparative ending. #for example, um generally, there are also a few nouns in Latin which in the nominative end on -or, whereas in French this does not really exist (.) the opposite (.) #yes maybe secondary (.) yes, **secundari, or something like that.*

This example shows another participant's analytic skills on the basis of already acquired linguistic systems and their interaction based on relatedness and similarity. It is interesting that this subject first goes back to her structurally most fundamental language Latin, and then relates it to French, which, even though very much related to Latin, shows a contrastive structural condition in the given linguistic situation.

PAR LA-053 T2 Hotel: **un buffet bogat, also wahrscheinlich geht es um ein #Buffet, **bogat** heißt sicher, ist sicher irgendein Eigenschaftswort das das sich aufs Buffet bezieht. #Also kommt das Eigenschaftswort nach dem Nomen, wie im Spanischen oft, oder im Französischen;*

Translation:

PAR LA-053_T2_Hotel: **un buffet bogat, so probably this is about a #buffet, **bogat** #probably means, is certainly an adjective which then refers to the buffet. #So the adjective comes after the noun, as often in Spanish, or in French;*

This example shows a grammatical analysis carried out within the strategic processing which facilitates understanding and decoding of an unknown novel linguistic system. The subject relates the given problem to structurally similar linguistic situations from her multilingual repertoire, comparing it to two other known linguistic systems.

All the given examples evidence the study participants' multilingual and crosslinguistic awareness, as well as crosslinguistic interaction based on a thorough systemic (in these cases predominantly structural and grammatical) understanding.

The following examples give further evidence on both MLA, XLA, CLIN within the phenomenon of transfer between the already existent linguistic systems in the interaction with the novel and unknown situation:

*PAR LA-049 T1 Hotel: *Und jetzt weiß ich immer noch nicht, wo das Restaurant ist, abgesehen davon, dass es eine wunderbare **impresionant**, @eng#impression, @fr#impressionnant...@ger#eindrucksvoll...@ger#Impression #hat ja also eine eindrucksvolle Panoramaaussicht ähm **lasati-va**, oder dass es, vielleicht, dass es im, im elften Stock ist, **nivelul**, vielleicht @fr#niveau, @eng#level, @ger#Stock (.) also ich bleibe dabei, dass es im elften Stock ist.*

Translation:

*PAR LA-049 T1 Hotel: *And now I still do not know where the restaurant is, apart from being a wonderful **impresionant**, @eng#impression, @fr#impressionnant ... @ger#eindrucksvoll... @ger#Impression #it has yes such an impressive panoramic view um **lasati-va**, or maybe it is on the eleventh floor, **nivelul**, vielleicht @fr#niveau, @eng#level, @ger#Stock (.) so I'll stick with the eleventh floor.*

This TAP example shows the association flow through the subject's multilingual repertoire from one language to the other until the adequate answer is found. It is interesting to see that different terms trigger different languages, so in order to decode the unknown language the subject first turns to her L2 English, then her L3 French and then translates the word into her L1 German, at the same time giving an internationalism in German for that very term, then again turning to "eindrucksvoll", which seems more fitting in this context. The second term, nivelul, yet first triggers the subject's L3 French, then going to her L2 English (ad hoc choosing the word *level* which is semantically obviously related with the word *floor*) in order to finally translate the term with her L1 German word *Stock* (notice here how the participant avoids using the German word *Niveau*, the false friend of *floor*)

*PAR LA-132 T1 Hotel: *Accomodare (.) @ger#ausgestattet (.)@eng#accomodation*

Translation:

*PAR LA-132 T1 Hotel: *Accomodare (.)@ger#ausgestattet (.) @eng#accomodation*

In this example we can see the complexity within multilingual strategic application, which in spontaneous language production and processing situations such as the TAP can also lead to difficulty in disentangling the adequate word, as already mentioned in the DMM in relation to the problem of the competing systems (Herdina & Jessner, 2002; also Jessner, 2006). Here the participant goes from the unknown word *accomodare* to a semantically related, yet in this

context not adequate L1 German term *ausgestattet*, and then associating the unknown word to a term from her L2 system English, which again is semantically related, yet again not the most adequate term in this case.

PAR LA-202 T1 Hotel: also #es schaut da mal ein bisschen so Spanisch aus von dem jetzt her also #es ist nicht Spanisch ist schon klar, aber vielleicht Portugiesisch obwohl da ah okay #also des Hotel liegt in Sibiului also **estes situat @spa#esta situado @eng#situation also @ger#es ist und **este** heißt @ger#befindet sich so wie **estat centrum** #ist also sozusagen das Zentrum Sibiului (.) ähm das **hotel cele de spatii de acomodare dotate cu tehnologie** @ger#von der letzten Generation strukturiert sich okay [nuschelt] hm **duble matri** @lat#matrimonium @lat_expl.#Latein hm @ger#Heirat dann **acessible** okay @eng#accessible @ger#erreichbar 20 Minuten vom internationalen @ger#Flughafen **aeroport** darauf nicht **la gare** @fra#Französisch, die Autogarage ähm (.) das Restaurant befindet sich das Restaurant das beeindruckt ein mal mit dem ersten in der Gegend auch beim Panorama von Sibiului eben und wie sieht das aus mit dem @ger#Frühstück **la micul dejun te** @fra#petit dejeuner @ger#des Frühstück es ist ein großes Buffet zum Trinken wo es verschiedene Sachen gibt **gusturi** @ger#Geschmack gut **satisface** @eng#satisfied hm #das ist genießen ja also i glaub #des müsste gutes Frühstück sein*

Translation:

PAR LA-202 T1 Hotel: So #it looks a bit like Spanish from the now so #it is not Spanish is already clear, but maybe Portuguese though since ah okay #so the hotel is located in Sibiului so **estes situat @spa#esta situado @eng#situation so @ger#es ist and **este** means @ger# befindet sich as well as **estat centrum** #is so to say the centre of Sibiului (...) um the **hotel cele de spatii de acomodare dotate cu tehnologie** @ger# von der letzten Generation strukturiert sich okay [muttert] hm **duble matri** @lat#matrimonium @lat_expl.#Latin hm @ger# Heirat then **acessible** okay @eng#accessible @ger#erreichbar 20 minutes from the international @ger#Flughafen **aeroport** not on **la gare** @fra#French, the autogarage uhm (.) the restaurant is the restaurant which is impressive with the first in the area also with the panorama view of Sibiului and what does it say about the breakfast @ger#Frühstück **la micul dejun te** @fra#petit dejeuner @ger#des Frühstück there is a big buffet to drink where there are different things **gusturi** @ger#Geschmack good **satisface** @eng#satisfied hm #that means to enjoy yes so I also think that #this would have to be a good breakfast*

This last example shows how TAP looks like when there is a novel linguistic system involved and all the lexis from all the previously learned Lns is implicated. Once again it is interesting to see that different words and constructs

trigger different Lns. Here we can see that the unknown language of the participant takes her from her L5 Spanish, over her L2 English, L1 German, to her L4 Latin and L3 French.

8. Conclusion: limitations and future outlook

The LAILA and LAILA-BICS studies show that there is a lot of necessity for further investigation within TLA research and particularly on strategic processing within experienced multilingual language learners, given the fact that research within SLA does not offer an accurate framework for this kind of studies and therefore cannot be applied to highly complex and dynamic systems as those of multilinguals.

The findings analysed above show strong tendencies in strategy application, quantity and use, where it becomes obvious that there is indeed a difference between more and less experienced language learners in their strategic processing when encountering a novel and unknown linguistic system. The strategies applied evidently differ from mono- and bi-, but to a certain extent also to less experienced multilingual language learners not only in terms of quantity, but also very much in their quality, therefore demonstrating the realm of the M-factor. The relationship between MLA, XLA and CLIN should be mentioned here, particularly that involving “cognitive flexibility, which, as the most important prerequisite mental ability, underlies the heightened creativity in multilingual language users and therefore enhances not only multilingual awareness but also provides more evidence of the M-factor” (Jessner and Török, 2017).

The examples and findings of this paper also give further proof of experienced multilingual language learners’ cognitive flexibility and creativity, as already hitherto demonstrated in a large number of studies carried out on bilingual language learners, showing more that “bilinguals are more divergent, creative, original and flexible learners who are more fluent and elaborate” (see also Jessner and Török, 2017).

Even though research on strategies used by multilingual speakers is rather challenging, it offers deeper insights into their origin and nature. Nevertheless, in order to holistically grasp how a multilingual mind works, research on these speakers should be approached from a DCT perspective, thus embracing the true complexity and dynamics of multilingual learning and development as it is - a whole which is much more than the sum of its parts (Herdina–Jessner, 2002; Jessner, 2006).

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