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POLYGLOTS' MULTISENSORY LANGUAGE LEARNING BEHAVIOUR AND ITS APPLICATION IN TEACHING LANGUAGES

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Abstract. *The article describes the study of Hebrew by Alexander Arguelles, one of the outstanding polyglots of our time. The monitoring results demonstrate that the polyglot himself is not always aware of his effective strategies of learning the language. For example, the active use of sensory-motor input of new language information was identified as one of the unconscious language acquisition strategies.*

Keywords: *polyglot, polyglottery, language learning, multisensory strategies, language input, functional gestures, brain-compatible learning, Alexander Arguelles, Hebrew*

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It seems obvious that the most reliable sources of information on polyglottery are the memoirs and books written by polyglots. In this paper, I will argue that the 3rd person perspective on the issue of polyglottery is no less useful because it reveals some strategies that manifest themselves unconsciously and thus are hidden from polyglots themselves.

As an example, I would like to discuss the process of monitoring the well-known American polyglot, Alexander Arguelles, held with his full consent and approval. The material was collected over three months of daily online observations (from January 1, 2014, to April 10, 2014) while Arguelles was studying Hebrew from scratch as his new language number 48.

Alexander Arguelles's main assertion about the source of his extraordinary skills in language learning is about the extreme efficiency of his time management and organization of classes. He claims that he never uses the associating strategy, which is popular among many other language learners.

For example, the Canadian polyglot Powell Janulus developed his own version of this method, calling it the abbreviation "AH SO!" For him, the mnemonic image of a foreign word to be remembered must contain:

A – actions. It should be a moving picture, a kind of small inner cartoon.

H – hyperbolization. Exaggeration can be expressed by a variety of means: in increasing the size, changing the proportions, especially bright color, replacing a single object with a set that fills the entire field of view, etc.

S – substitution (replacement). This is a fundamentally important point. The sounding of a new word in a foreign language is replaced by more or less similar sounds of well-known words (more often words of the native language), while a catch for memory is the visualization of their meanings. Often these words are combined in some funny or absurd situation on the principle of a rebus, "recreating" the sound of a foreign word.

O – outrageous. Which means provocation, violation of the norm in everything. An excessively stupid, ridiculous, sexually colored association is remembered much better than a neutral one.

This strategy is especially good for memorizing long, non-obvious words expressing abstract concepts in this rebus way. In this regard, I like the very interpretation of the abbreviation "AH SO!": "Oh, so, word! You do not want to be remembered in a natural way in the context! Well, then I will still remember you, using a funny association!" [3, p. 208–210]. The Ukrainian polyglot Valery Kurinsky in his book, *Avtodidaktika*, describes a similar mnemonic process as "association up to a smile" [2].

As I have already mentioned, unlike many other polyglots, Alexander Arguelles claims that he does not use mnemonic techniques when memorizing words or grammatical structures, with the exception of etymological links. However, what he did not notice and what was obvious for the observer in the process of monitoring him learning Hebrew, were, among many other things, his sensory strategies of language data input. Observing Arguelles for more than 100 days convinced me that the principle of multisensory memorizing was of crucial importance for him [4].

When he works with the French textbook, Assimil, he memorizes the constructions from parallel texts. A combination of sound, meaning and graphics, superimposed on intensive multiple articulation with acceleration and rhythmic walking, is sufficient for memorization. However, the strategy changes when Arguelles moves to a different type of textbook. After the initial stage Assimil, he moved on to a more complicated course of Hebrew where parallel texts were not used. There, at the beginning of each lesson, new words were introduced with their explanations in German. At that point, Alexander's strategy of material input became different. Quite unaware of it now, he accompanied the words by gestures. This prompted me to conduct an experiment in the format of a guessing game.

Not having the text before me, I did not know the translation but I wrote down how the words sounded in Hebrew and marked the gestures that accompanied them. In the subsequent correspondence, I checked their meaning with Alexander. It turned out that those gestures were always either iconic or functional. Here are some examples.

Numbers – to memorize them Alexander used gestures, which obviously were universal for all languages he knew:

akhat – אַחַת – thumb – ***1*** (f),
shtaim – שְׁתַּיִם – index finger – ***2*** (f),
shalosh – שָׁלוֹשׁ – middle finger – ***3*** (f),
arba – אַרְבַּע – ring-finger – ***4*** (f),
khamesh – חֲמֵשׁ – palm – ***5*** (f),
shesh – שֵׁשׁ – palm and thumb – ***6*** (f).

At some point in the next lesson, the movements again started resembling counting. It turned out that these gestures denoted hundreds:

may-ah – מֵאָה – open palm moves downwards – ***100*** (f),
ma-ta-eem – מַאתַיִם – open palm moves to the right – ***200***,
shalosh meot – שְׁלוֹשׁ מֵאוֹת – the palm with three fingers open moves towards himself – ***300***,
khamesh meot – חֲמֵשׁ מֵאוֹת – open palm moves towards himself – ***500***,
elef – אֶלֶף – both open palms move downwards – ***1000***.

Prepositions and spatial adverbs were also recognizable by iconic gestures:

al – עַל – palms lie side by side on the table – preposition "on",
all yad – עַל יַד – palms slide on the table to the sides – "next to", "nearby",

rakhok – רָחוֹק – the palm is stretched far forward – "far", "wide".

Nouns are transferred either by functional gestures, or by iconic ones:

yayin– יַיִן – as if drinking – "wine",

marak – מָרָק – as if eating – "soup",

bakbuk– בקבוק – as if holding something cylindrical in his hand – "bottle",

mana – מנה – circular finger movement over the surface of the table – "serving, portion, dish",

agvania – עַגְבָּנִיָה – as if holding something round in the palms of his hands – "tomato",

regel – רֶגֶל – hand points to his leg – "leg", "foot".

Verbs and thematically related nouns are coded with similar functional gestures depicting the situation:

omer, omeret – אוֹמֵר אוֹמֶרֶת – index finger moves forward from his lips – "I am speaking" (m., f.),

seekhah – שִׂיחָה – index fingers approach from both sides to the corners of his lips – "conversation".

Gestures can also have a more complex metonymic character:

na'ar – נַעַר – palm moves horizontally down – "young", "youth",

k'far – כְּפָר – the fists firmly rest on the table on both sides of the body – "village",

teavon – תאבון – palm on the stomach, satisfied facial expression – "appetite".

Spatial coding of pronouns. It is important that the forms of the feminine and masculine gender are clearly contrasted with their left or right arrangement relative to the body:

yesh li – יֵשׁ לִי – his thumb points toward him – "I have",

yesh l'khah – יֵשׁ לְךָ – his thumb points forward – "you have",

yesh lo – יֵשׁ לוֹ (**m**. s.) – his thumb points to the right – "he has",

yesh lah – יֵשׁ לָהּ (**f**. s.) – his thumb points to the left –"she has",

ayn lo – אֵין לוֹ (**m**. s.) – his thumb points to the right – "he doesn't have",

ayn lah – אֵין לָהּ (**f**. s.) – his thumb points to the left –"she doesn't have".

In repeated readings, only some weak reflexes of these movements could be noticed, which, apparently, served as reminders.

Thus, the combination of audio input with a sensory-motor illustration of meaning, not noticed by Arguelles himself but clearly represented in his linguodidactic behaviour, is obvious. Alexander Arguelles's memorizing strategy thus confirmed some basic principles of the "brain compatible learning", formulated in the book by Lynn Dhority & Eric Jensen, *Joyful Fluency: Brain-Compatible Second Language Acquisition* [1, p. 3]:

– "The brain can grow new connections at any age.
– Emotions are critical to learning.
– Information is stored in multiple memory pathways.
– The mind-body connection is inseparable.
– Patterns drive understanding.
– The brain thrives on meaning.
– Much learning is subconscious".

The importance of multi-sensory language input is confirmed by observations of neurophysiologists that motor skills and, above all, hand and finger movements, are coordinated by the same part of the brain as movements of speech organs (Field 4 according to Brodman). See Fig. 1 representing the so-called "cortical homunculus" introduced by Wilder Penfield: a distorted representation of the human body based on a neurological "map" of the areas and proportions of the human brain dedicated to processing sensory and motor functions for different parts of the body [5].

That means that not only the stimulation of the corresponding part of the brain (primary motor cortex) occurs but also the linkage of this articulatory-motor reaction with the lexical and grammatical semantics of the linguistic form.

Experimenting with how people of different perceptual types memorize the vocabulary, I was repeatedly convinced that the combination of auditory and sensory representation of meaning is usually better rooted in memory than the correlation between how the word sounds and looks in the mother tongue and in the foreign language.

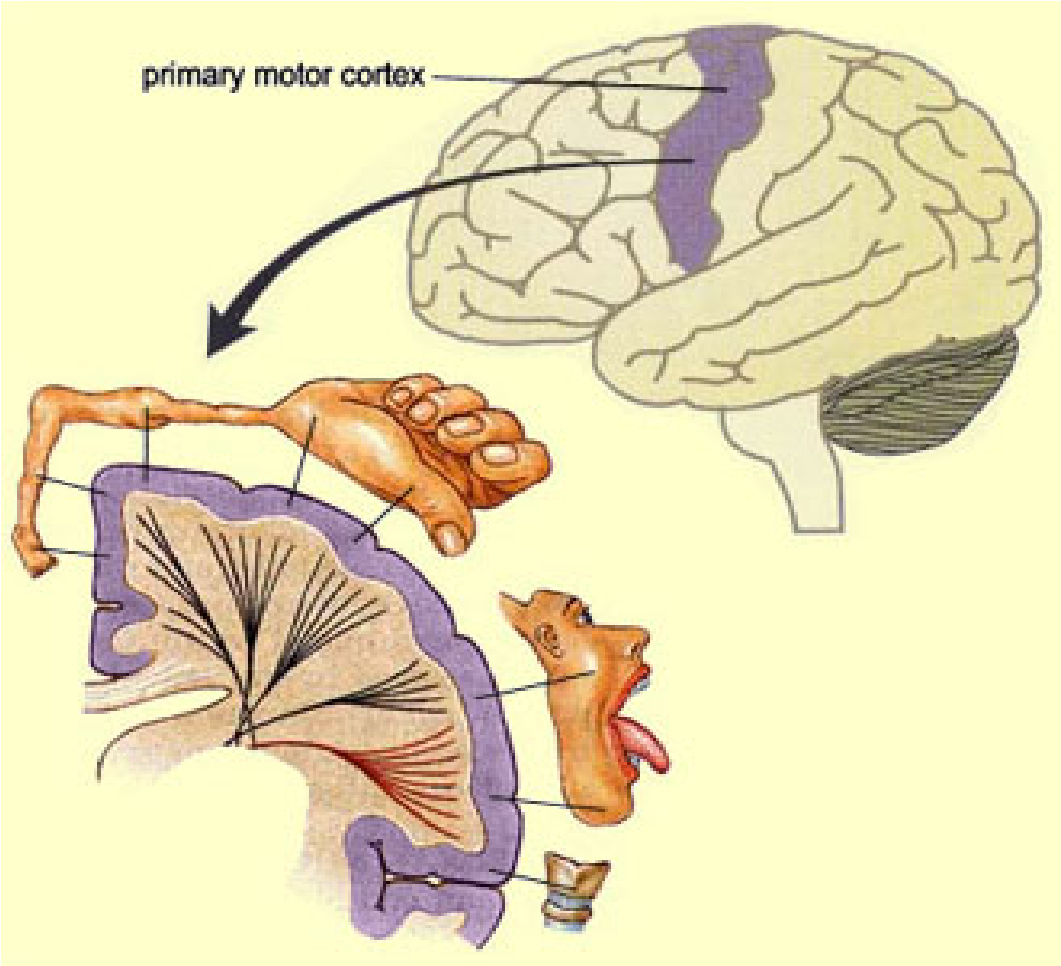

Figure 1. Primary motor cortex. Cortical sensory homunculus [5].

These results confirm observations that sensory loaded vocabulary is more naturally recalled when switching from language to language because sensing the meaning of a word becomes a common denominator, and "sound shells" of words in various languages can easily be imposed on it.

References

1. Dhority, L. & Jensen, E. *Joyful Fluency: Brain-Compatible Second Language Acquisition.* Thousand Oaks: Corwin Press, 1998. 148 p.
2. Kurinsky, V. *Avtodidaktika* [Autodidactics]. Moscow: Avtodidakt, 1994. 391 p.
3. Nikulicheva, D. *Kak Naiti Svoy Put' k Inostrannym Iazykam: Lingvisticheskie i Psikhologicheskie Strategii Poliglotov* [How to Find Your Way to Foreign Languages: Polyglots' Linguistic and Psychological Strategies]. Moscow: Flinta-Nauka, 2009. 304 p.
4. Nikulicheva, D. Izuchenie lingvodidakticheskikh strategiy poliglotov – k razrabotke teorii poliglotii i praktiki ee primeneniia [Studying language learning strategies of polyglots: the theory of polyglottery and its practical application]. *Journal of Psycholinguistics,* 2018, 2 (36). P. 70–83.
5. The Motor Cortex. *The Brain from Top to Bottom,* thebrain.mcgill.ca/flash/i/i_06/i_06_cr/i_06_cr_mou/i_06_cr_mou.html (accessed 8 September 2021).

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