

Interconnectedness of Language and Culture: The Case of Non-Native Speakers of English in Estonia

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Abstract: It goes without saying that the notion of cognition has always performed the function of the bridge, erecting pathways for multicultural and multilingual society to interact, interpret and perceive information within innumerable communities. Every community consists of the arrays of long-established behavioural patterns, cultural paradigms and social norms that undergo constant alterations due to the swift pace of socio-cultural, global shifts within society. The rapports between culture and cognition have been observed, processed and analysed by many scientists and scholars. Anthony Marsella (1998) holds that we need a drastic rethinking of the fundamental paradigms of psychology, cultural perception and prejudices. [1] Bartlett (1932) discusses the extent of the ways in which cultural knowledge and incarnated schemas can affect the pattern and process of memory restructurisation [2]. J. Tanaka-Matsumi (2002) stresses the crucial necessity of attending to cultural variables in order to understand mental processes of an interlocutor [3], i.e., a particular view that is rooted in a specific cognitive model is able to distort the received information and deviate further cognition and interpretation in accordance to a preliminary entrenched paradigm. Cognition itself is embodied in multiple ways and, as a notion, it might be too subjective, fragile and resilient. Any individual can perceive and interpret one or another event with his or her own approaches, deducing and drawing conclusion basing on various factors, which are not always stable, but on the contrary, are swayed according to certain trends, superstitions, the range of one's knowledge, academic integrity and the inconspicuous and subconscious volition either to accept or deny the provided piece of information. The proposed study explores the interconnectedness of language and culture in the context of English acquisition by non-native speakers in Estonia. It delves into the process of language learning within a multilingual and multicultural society. The data collected through a questionnaire, developed as part of the PhD thesis *Cognitive Discourse: Cognitive Cultural Models in the Use of Language*, serves as the basis for analysing cognitive shifts, alterations and the expansion of mental spaces, event interpretation, and perception of utterances by Estonian non-native speakers of English.

Keywords: cognition, mental spaces, language acquisition, socio-cultural environment, perception, interpretation.

1. The Relationship Between Culture and Cognition

"What we are is very much a matter of what culture has made us", states the philosopher Daniel Dennett (1995). [4] Dennett delineates that people are affected in the myriad of ways by the culture in which they are embedded.

Any culture is a meticulous accumulation of innumerable, fundamental implications for human thought and demeanour.

Therefore, any behavioural deviation or, vice versa, striking conformity to certain abutments, is in other words, the testimony of culturally acquired role-models, beliefs, values, etc.

For instance, although language varies in its surface peculiarities in numerous cultures, this variety is underpinned by universal psychological mechanisms that generate further cultural cognition (Chomsky, 1975; Pinker, 1994). [5]

In juxtaposition to the weak version of cultural cognition, its adversary, i.e., the strong version, argues that not only the contents of cognition vary across cultures, but so does the core nature of cognitive processes. Within the cross-cultural vista of cognition, culture can be depicted as the drastic changer of the basic cognition. Merlin Donald (1991) suggests, "Cultures restructure the human mind, not only in terms of its specific contents, which are obviously culture bound, but also in terms of its fundamental neurological organization." [6]

In the context of Estonia, a nation characterized by rapid technological advancements and significant intercultural interactions, the relationship between culture and cognition offers a fertile ground for exploration. Because of its swift pace in terms of technological advancements and intercultural saturation, Estonia undergoes constant alterations within society, cultural blends, which in their turn modify the way people, especially younger generation, interpret and perceive transpiring events.

Research involving non-native speakers of English in Estonia reveals that language acquisition is not merely a linguistic process but also a cognitive one, which is deeply intertwined with cultural adaptation and the moulding of identity. The process of learning English as a second language involves cognitive shifts that are influenced by the learners' cultural backgrounds and the socio-cultural context of language use.

The concept of mental spaces provides an indispensable framework for understanding the cognitive processes involved in language acquisition, since mental spaces are cognitive constructs that individuals use to organize and interpret information. In a multicultural and multilingual context like Estonia, the mental spaces of non-native English speakers are shaped by both their native cultural experiences and their engagement with the English-speaking world. This dual influence leads to the creation of hybrid cognitive spaces that

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reflect the interplay between native and foreign cultural elements.

It may be reflected in cultural references in language use. For example, an Estonian speaker may attribute English vocabulary, with its cultural references or idiomatic expressions, while describing local traditions, therefore merging at least two mental spaces through multiple socio-cultural backgrounds.

In addition, it may be used in semantic interpretation of traditional expressions, i.e., idioms or phrasal verbs through the prism of multilingualism, creating hybrid phrases via blending mental spaces.

Merging mental spaces may also lead to a blended narrative and critical perception of the events or utterances by non-native English speakers, since the integration of the English language and cultural variables broadens one's horizons.

2. Cognitive Approach Towards Cultural Modelling

Culture is undeniably the umbrella term for the array of intertwined aspects, which are manifested as networks of ideas that are distributed among members of the society and require a rigorous approach towards modelling, interpretation and processing (Sieck, W. R., Rasmussen, L. J., & Smart, P. R., 2010). [7] In order to delve into the topic, it must be born in mind that cognitive cultural modelling implies a number of disciplines, which are holistically and reciprocally effective when blended in the outcome, i.e., responses, reasoning and thoughts. The final result involves such disciplines as: cognitive anthropology, cultural and cognitive psychology and naturalistic decision-making, which brings us to the brink of the interdisciplinary, cognitive approach towards, even singular, cultural modelling.

An inherent challenge in comprehending demeanour in other cultures implies the gathering, analysing and, consequently, manifesting relevant cultural concepts, stereotypes, beliefs, social models and values that serve as the impetus for the decision-making process and its further embodiment. Any person, as a whole, is comprised of innate values that were taught from his or her birth. With the course of time, these values may be either distorted or consolidated. Afterwards, the person shapes their own surrounding, more layers of perception, critical thinking, interpretation and cognition are added, thus creating an impregnable tower in terms of preliminary assumptions and universal cognition.

3. Culture as the Distributor of Knowledge

Within the framework of cultural anthropology, culture is defined as implying shared knowledge. One of narrowly-targeted approaches towards the study of cultural cognition was adapted by Sperber in *Explaining Culture* (1996). [8] He depicted culture in terms of "epidemiology", which, in order to establish disambiguation, involved distributions, i.e., conceptual, cultural, cognitive, etc. distributions of any property within a population. In this respect, epidemiology perceives culture in terms of the common spread of ideas throughout a nation, society, social groups, etc.

The launching ground for this concept lies within the initial recognition that individual minds contain boundless amounts of mental content. People use the word *idea* to attribute and encompass absolutely any content of the mind, involving conceptions of how things are or should be. These networks of fluctuating ideas are frequently referred to as folk theories or mental models [9] (Dedre Gentner, Albert L. Stevens, 1983). Such models comprise individual's explanations of how things operate and take place, eventually resulting in judgements and decisions that impact their demeanour.

Furthermore, the peculiar nature of an individual's mental models depends predominantly on his or her cultural and social backgrounds (Hirschfeld & Gelman, 1994). [10] Emphasizing individual's socio-cultural background, the "ideas" are directly tied to works in cognitive field and naturalistic decision-making, which in its turn, has always girdled mental models and their fundamental influence on real-world decision-making processes. A more meticulous observation of mental spaces and one's cognition within the scope of CL, clearly identifies the contents of cognition juxtaposing the cognitive processes. As it is self-explicatory, mental models reside within people's heads.

Therefore, every time an interaction takes place, people shape their environment, their mental models and their demeanour, leaving observable and constantly indistinguishable, "tangible" traces of mental artefacts, which dwell on a subconscious level and, on the contrary, less visible and ephemeral manifestations, such as speech and non-verbal gestures (Sperber, 1996).

Upon getting in contact with interlocutor's external traces, we generate associative concepts, thus producing mental models that bear certain resemblance within a specific context. These mental models may be permanently entrenched in a population, becoming "cultural", implying a wide range of applicability by other members of society across space and time. Cultural cognitive models incarnate these shared networks of ideas.

In order to find a practical application for all the theoretical information collected, I have compiled a questionnaire for non-native English speakers in Estonia. The questionnaire comprises 33 questions and 266 responses. However, in this particular article I will solely delineate only some, most relevant questions and responses.

4. Culture, Language and Cognition

The following set of questions was taken from the questionnaire in order to get sumptuous insights on the topic:

1. What is your mother tongue/first language?
2. How many languages do you speak?
3. Every new language you learned changed your view of certain culture.
4. Culture and its language are inseparable.
5. The environment I live in influences my cognition, perception of the world around, decision-making, etc.
6. Can another language change your cognition, behaviour, manners, etc.?

To specify the age range of respondents, it must be noted that the prevailing age group is 17-32 years.

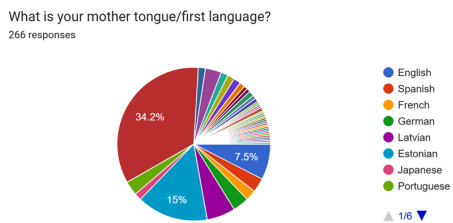


Fig. 1. What is your mother tongue/first language?

Estonia is an international intersection of neighbouring countries, i.e., Baltics and Scandinavia. It is apparent that, due to certain relocations, the ethnical composition is constantly expanding.

Nevertheless, the following responses can be emphasized:

1. Russian language is the mother tongue for 34.2% of the respondents.
2. Estonian language - for 15%.
3. Latvian language as the mother tongue amounts to 6%.

Taking into consideration that all respondents live in a multicultural and plurilingual society, it can be stated that every individual is within the scope of intertwining mental spaces, mental space framing and the convergence of mental spaces on a daily basis. It implies versatile cultural background, behavioural patterns, etc. Daily interaction within a multilingual and multicultural society shapes and restructures social, cultural and cognitive patterns of an individual, which can also take place involuntarily or subconsciously.

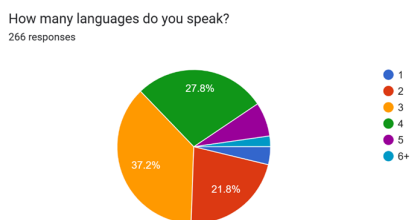


Fig. 2. How many languages do you speak?

The pie chart above displays the presence of a multilingual, and therefore multicultural environment. As it can be seen, most of the respondents use 3 languages (37.2%). The excessive number of respondents who speak 4 languages (27.8%) implies the myriad layers of cognition. It must be born in mind that when asked which languages they know, the overwhelming number of respondents marked English (97.4%).

It is substantial to delineate a few related terms. Firstly, the term *culture* correlates to mental models and other constituent elements of the mind (Berger & Heath, 2007). The latter elements are dissipated across nations over a period of time [11]. These mental constituents also involve demeanours, attitudes and other traces that foster the viability of widely shared ideas and concepts by establishing *habitats* for them.

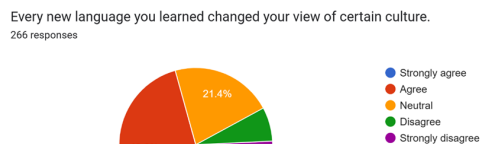


Fig. 3. Every new language you learned changed your view of certain culture

What concerns *cultural groups*, the term itself implies a set of people, who share networks of ideas. On the contrary, a *social group* includes people interacting with one another. By a mere deduction, it can be stated that the members of social groups, traditionally, were connected with one another in numerous spheres. Some of them are as follows: being neighbours, family friends and relatives, co-workers, being a participant at any arbitrary or annual event, etc. Such a stupendous overlap in experiences, undoubtedly leads to commonly shared ideas or standpoints within a vast number of domains. As both terms cannot exist independently from one another, there is almost no visible difference between people's social groups and cultural groups. Furthermore, people frequently identify themselves with a rapidly expanding array of groups and vary significantly in multiple aspects such as size, purpose, cosiness, etc.

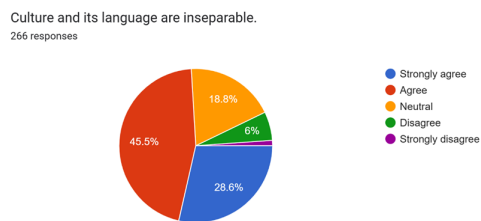


Fig. 4. Culture and its language are inseparable

Language is the most optimal lens to determine people's demeanour. In addition, culture simultaneously underlies and is defined by values people share inside their own culture and the values that are embedded within. Therefore, it can be deduced that both the language and the culture it is attributed to or spoken in, are the inseparable factors that cannot be disregarded when analysing individual's innate cognition and interpretation patterns.

The data suggests a strong overall consensus on the inseparability of language and culture, which is consistent with sociolinguistic theories positing that language functions as a cornerstone of cultural expression and socialization. The minority perspectives, however, highlight the complexity of this relationship in increasingly globalized and multilingual societies where language can be simultaneously pragmatic, entailing cultural functions.

It goes without saying that any cognition process entails psychological functions. With regard to culture and language shock, it can be presumed that a constant exposure to a rigid set of cultural experiences and behavioural embodiment will

undeniably affect the way individuals shape their attitudes and construct their responses within a particular social community and mental space, i.e., the more we experience, the more abundant and multifaceted and subtle our cognition and contemplation become, since any intercultural interaction systematically poses at least partly divergent, values, demeanour patterns and surrounding environment.

It can be firmly claimed that culture undoubtedly affects our cognition. The cognition relates to both innate and host cultures, societies, communities and individuals. "There is a well-developed literature suggesting that stable differences can be observed between East Asians and Westerners with respect to attention, contextual processing, categorization, and reasoning..." Denise C. Park, Chih-Mao Huang (2010) [12]. Taking our cultural identities into consideration, it is feasible to state that in accordance with a preliminary recumbent sent of values and attitudes every individual stipulates his or her own range of attitudes and language capacity in a specific occasion. With respect to a particular context, merging his or her own experiences and impressions, any person is entitled to coming up with a subjective reasoning. Some people may simply lack critical thinking to a require extent in order to conceive the focal concept or visa verse, one's saturated socio-cultural background allows viewing alterations, contexts, interlocutors or events through a prism of intersecting ratiocination.

By analysing cultural and cognitive frameworks via regularities, it is feasible to predict the key focus of an individual, therefore anticipating or leading a person to a specific response. If we are considering face-to-face communication, then it must also be clarified that not only verbal comprising elements play a crucial role, but non-verbal communication is also a substantial part of this psycholinguistic equation. Also, all constituent elements must be taken into consideration. For example, person's age and his social background, which might have undergone certain alteration throughout lifetime.

The above-depicted chart demonstrates the unswerving number of responses stating that both culture and its language are inseparable notions, which is probably underlined by the fact that the set of imbued cultural paradigms and language peculiarities cannot be eradicated or altered to the extent of a complete shift in perception and interpretation. The variations in responses point to the dynamic nature of language use and cultural identity in contemporary society, suggesting areas for further research on how globalization and multilingualism impact the traditional link between language and culture.

The data predominantly supports the view that the environment plays a paramount role in shaping cognitive processes, perceptions, and decision-making. This aligns with contemporary cognitive science research that underscores the significance of environmental interactions in cognitive development. The minority perspectives, however, highlight the complexity of this relationship and the probable impact of other factors, e.g., personal agency, innate predisposition, etc.

The chart reflects a solid consensus on the environmental impact on cognition. The responses suggest that individuals recognize the dynamic interplay between their cognitive

processes and the environmental context in which they live, supporting a holistic understanding of cognition as both context-dependent and adaptive.

The environment I live in influences my cognition, perception of the world around, decision-making, etc.
266 responses

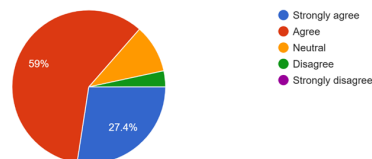


Fig. 5. The environment I live in influences my cognition, perception of the world around, decision-making, etc.

Can another language change your cognition, behaviour, manners, etc?
266 responses

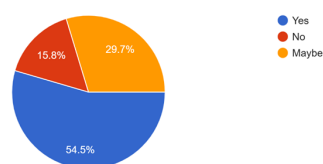


Fig. 6. Can another language change your cognition, behaviour, manners, etc.?

The data highlight a predominant belief in the transformative power of language on cognitive and behavioural processes (54.5%), resonating with theories in psycholinguistics and sociolinguistics that explore how language shapes thought and social interaction. The notable proportion of "maybe" responses (29.7%) indicates a nuanced understanding, reflecting the complexity of this relationship and the need for further empirical exploration.

The chart reflects a strong inclination toward the view that language can influence cognition, demeanour, and social manners. This supports the theoretical framework that regards language as a pivotal factor in cognitive development and social adaptation, emphasizing the need to consider linguistic diversity in studies of cognitive and behavioural sciences.

To sum up, it can be claimed that the interconnectedness of language and culture in case of non-native speakers of English in Estonia plays an integral role in cultural modelling of a younger generation, language acquisition, the expansion of mental spaces and their subsequent alterations, perception and interpretation of utterances, socio-cultural fluctuations, etc. Nevertheless, since the scope cannot be fully stipulated, I can state that the further research will imply a profound study to gather sufficient data to come up with proofs and examples.

As an ESL teacher, I firmly believe that any language, regardless of one's socio-cultural and academic backgrounds, is an invaluable and indispensable asset to cognitive bridging, the expansion of linguistic capacity and cultural modelling. A language amends the way certain stereotypes are perceived, which alleviates the interpretation of the information one has to process. The English language, in particular, has prolifically boosted students' cognitive capabilities, expanding initial

stages of language processing, critical thinking. However, it must be clarified that the following, localised and topic-oriented research is going to unveil the required data in order to compile a list of proofs.

The acquisition of the English language created convergent mental spaces, which in their turn constructed multi-layered domains from a previously embedded patterns and paradigms, socio-cultural impositions, framing a blend, infiltrating absolutely nouveau regularities and cognitive models. Notwithstanding, the above displayed information is a cumulative reasoning which is based on my professional career as an ESL teacher and lecturer. In this specific case, I can claim that personally, I could trace the cognitive shifts in terms of critical thinking and interpretation of events, which has been harnessed by my students over the years. What concerns a target-oriented study, it is required to conduct some research in order to delineate regularities and peculiar patterns of cognitive shifts, socio-cultural interaction and the convergence of mental spaces of non-native speakers of English in Estonia.

Interconnectedness of Language and Culture: The Case of Non-Native Speakers of English in Estonia can be used as a basis for further research within the scope of Cognitive Linguistics, Sociolinguistics and Cultural Linguistics, which will alleviate the analysis of cognitive shifts, mental space framing within an intercultural society, and the convergence of

multilingual and multifaceted mental spaces, as well as might be integrated into the framework of language teaching and its acquisition, since the holistic theoretical framework of cultural modelling and cognition has a universal applicability.

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