

Mapping of the Mind: A Questionnaire-Based Study of Mental Spaces and Identity Construction in Multilingual Speakers

Alexander Zalan

Daugavpils University, Latvia

Abstract: It goes without saying that any language undergoes myriad alterations through its existence. Due to an array of historical, socio-cultural and lexical shifts, languages are caught in a crossfire of constant modifications, simplification and conformity. 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. On the contrary, it must be noted that possible incongruities or similarities may either occur cross-culturally or can take place within the same culture. Subsequently, the dilemma of the cross-cultural variables and their effect on people's demeanour, cognition and interpretation was always a rife topic. However, it is infeasible to neglect the extent of the role that culture plays in human development, one cannot exclude the swiftness or altering distinctions, conformities and obsolete patterns in any culture, which in the long run brings one to the brink of interculturality. Taking contemporary cultural cognition into consideration, it is possible to state that the distinctions between cultures are simultaneously weak and strong. The weakness of cross-cultural relationships and cognition concedes that the contents of cognition are frequently variable across different cultures, nevertheless, the processes that underlie these variations are themselves cross-culturally static. 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). 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." Consequently, cultural cognition and the following response are highly variable and are intrinsically dependent not only on subjectivity, but also on the omnipresent, societally overwhelming cultural norms that serve as a benchmark of sensitivity and regularities. The latter leads to an acknowledgment that any cognitive process implies cultural and academic backgrounds, as well as (cross) cultural demeanour model, which in its turn encompasses the array of subjectivity and objectivity, and the expansion of thought in accordance with intellectual integrity and wavering patterns. It means that any cognitive process is a fragile vessel, which may simultaneously ooze patterns, thus changing the initial image, or on the other hand, may blend new paradigms, thus establishing cognitive compatibility with previously accepted norms. Due to its topicality, it is a meticulous work to delineate the paramount importance of cultural and cross-cultural cognition in the moulding of social constraints and possible variables and their correlation. In addition, it poses the issue of the possibility of establishing a universal approach or schema of branches of cultural cognition and their possible deviations or alterations in accordance with the previous, present and potential knowledge and the expansion of thought.

Keywords: Mental spaces, cognition, multilingualism, interpretation, perception, mapping, cognitive convergence.

INTRODUCTION

Mental spaces

Mental spaces are embodied as partial assemblies that are mentally erected during our cognition processes and speech, thus promoting our local understanding and action (Fauconnier, G., 1985).¹ These fluctuating spaces are comprised of frames and cognitive models. Fauconnier argues that mental spaces are linked to a long-term schematic knowledge, e.g., going up or down the street on the sidewalk, or to a long-term specific knowledge, which entails less currently substantial notions, i.e., memories, recollections and reminiscences.

The long-term schematic knowledge involves you, some vivid event that imprinted itself in your memory and other scrutinous details. This mental space can be activated in a variety of ways and for multiple purposes. Any mental space, despite its validity can be hypothetically amended within one's mind. In other words, one may contemplate

on what could have taken place if he or she had not attended a party or had not gone to that concert, consequently theorizing counterfactual occasions and feasible outcomes. Therefore, any mental space can be distorted to the innumerable arrays of possibilities.

According to the above-presented information, it can be stated that mental spaces are constructed and modified and ideas within a discourse unsheathe and are entwined within one another by a multitude of mappings. Fauconnier emphasizes the following:

- Identity mapping;
- Analogy mapping.

He has hypothesized that at the neural level, mental spaces are nothing but sets of activated neural assemblies and the link between the constituent elements conforms to coactivation-bindings. What concerns this particular view, it can be claimed that mental spaces operate in

¹ Fauconnier, G.: Mental Spaces, 1985

working, brisk memory, but they are partly comprised of vigilant structures that are found in a long-term memory.

It is a general peculiarity of mental space configurations that denotes connections by tying the constituent elements across spaces with no implication that these elements share the same distinguishing features or properties. In order to demonstrate contrastive differences between such

ubiquitous spaces, the author of the thesis has come up with two graphic representations, which will shed light on some pervasive and more stringent differences within one mental space, which implies a specific period in time, encompassing memory, assumptions, specific locations and interrelations within the space, which are subsequently framed.

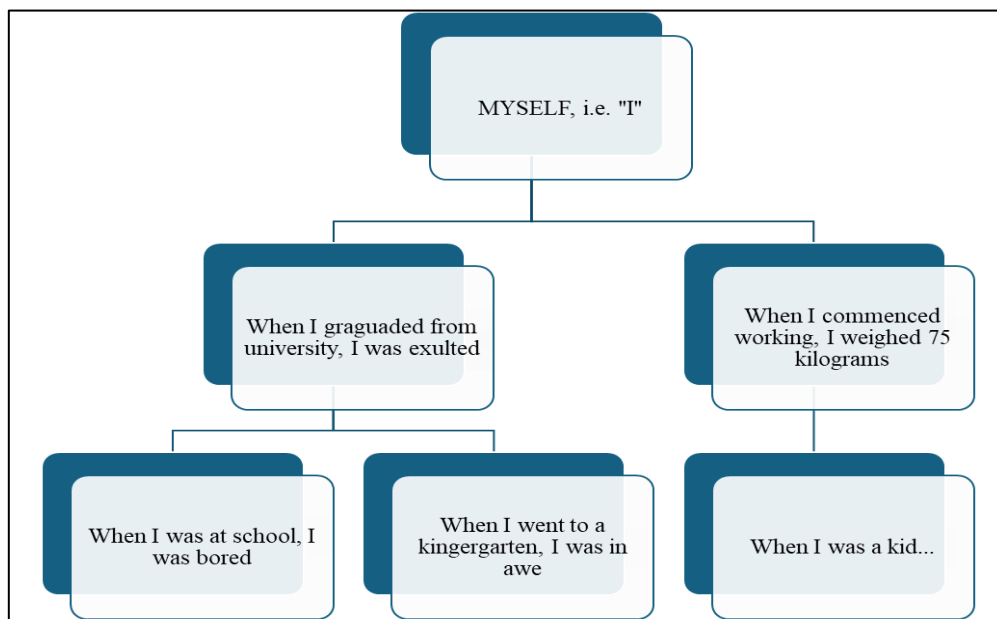


Figure 1: Identity connection

In accordance to an above-displayed figure, it is feasible to assume that, when a person builds up a sentence, i.e., a cognitive chain of events, emotions, etc. he or she, undeniably, prompts to establish an identity connector between “himself” in the past and a contemporary, augmented version of “himself” at the current time.

What concerns the framing of mental spaces, all constituent elements are to be organized as a package of already known data. When everything in the chain is meticulously aligned and all the elements are inert, it is characterized as a frame (Fauconnier, 1985). The following figure will demonstrate more location-specific framing, which cannot be altered or distorted due to certain constituent elements. In this scenario, we will consider a long-entrenched habit and its established bounds.

Mental spaces, i.e., mental domains are constructed out of the array of more vivid and less implicit aspects, i.e., habits, preferences, etc. which are highly dependent on the entourage of the event that is, as it is shown in the figure above, subsequently framed. In order to thoroughly

analyse the framing process, let us consider “my mother purchases”. In this particular frame there is a set of conceptual domains, i.e., the concept of eating, drinking, buying and selling at public places. A secluded mental domain can be built up out of knowledge of several individual domains. The very concept of someone’s mother making a purchase annually can be saturated by adding other frames, thus expanding the scope of the domain. E.g., it is feasible to add other people or public entertainment, taking into consideration a specific time of the year, or adherence to an annual routine. However, there is another approach to enacting mental spaces, e.g., immediate experience or response. In other words, if someone sees my mom purchasing cake at Arthur’s, his mental domain is generated this very instant, i.e., someone’s mom is purchasing cakes. This particular example of an immediate experience is an involuntary invitation to blend your mental space with another one, being subconsciously inconspicuous, since this specific morning or afternoon is your specific place and time within mutual mental spaces at Arthur’s.

While unfolding a full discourse, an embellished array of mental spaces is typically set up with reciprocal connections and abrupt shifts of standpoints of concentration from one space to another. As it has been mentioned before, mental spaces are built up, with the probability of future alterations, in working memory. Nevertheless, a mental space can also become embedded in a long-term memory. For example, we are capable of activating mental spaces that are entrenched within. There are some inviolable mental spaces that may be generated instantly, e. g., the solar system or the Eiffel Tower. Such mental spaces intersect and overlap, evoking the range of possible variations, references or incarnations when being activated. Fauconnier states that every mental space may have its own scales, image-schemas, crucial relations or force-dynamic patterns.

LANGUAGE AND COGNITION

It goes without saying that one must discern such notions as *language* and *cognition*. At the dawn of what many consider the cognitive revolution, there were divided opinions on the relationships between these notions and their co-existence. In the late 1950's, two distinct ideas on the language and mind were traversing the world (Catherine L. Harris, 2006).²

Undoubtedly, it was Noam Chomsky's field of generative linguistics, which due to rather inert, underlying philosophy, remained almost unchanged through the years. His core idea was the grasp of language abilities as akin to a mental organ. According to his standpoint, children were born with a *language acquisition device* and with particular linguistic knowledge (N. Chomsky, 1960's, 2006).³ This knowledge girdled the concepts of noun, verb, grammatical subject, and other structures constraining grammatical rules. In other words, Chomsky argues that children must acquire languages without any prior imposed constraints and delve into the process without problem-solving skills, while simultaneously, pave the way by extracting rules, piling them in their own way and face the problem with their own set of yet rich expectations.

² Catherine L. Harris: *Language and Cognition*, 2006

³ Noam Chomsky: *Language and Mind* (3rd edition), 1960's, 2006

Throughout decades, there were innumerable revelations and subsequent revolutions within the field of cognition and linguistics. At the brink of the 21st century, the main touchstone concerned the rapports between language and cognition and whether the grammatical structure or vocabulary of any language impacted the thought process. Proceeding years were full of controversies on the question of similarities between language and cognition and human abilities.

The language-cognitive rapports seem to best capture the idea of simultaneous differences and similarities. However, both notions develop over the human's lifespan, basing on such aspects as environmental and socio-cultural constraints (Catherine L. Harris, 2006). Contemporary approaches to human cognition, thinking processes, language cognition, perception and interpretation depict culture as solid interdisciplinarity to overall understanding of reasoning, which brings us to conclusion that any theory, be it temporary or commonly endorsed, has been unprecedentedly affected by rapid alterations within the socio-cultural framework, which is relentlessly swaying in unpredictable directions. In this respect, it is of paramount necessity to delve into the very essentials of language and cognition, in order to encompass the cultural vastness.

COGNITIVE APPROACH IN DISCOURSE ANALYSIS

Cognitive linguistics, unequivocally, is the study of how languages relate to the human mind. The defining notion within this framework is the so-called cognitive commitment, introduced by Lakoff R.T. (1990).⁴

Lakoff states that this is the commitment that systematizes linguistic research with the accumulated knowledge of what is already known about mind and brain, incorporating neighbouring sciences, e.g., psychology and neuroscience, and exploring cognition. Nevertheless, some of more obsolete endeavours within the field of cognitive linguistics have not contrived to live up to the benchmark of cognitive commitment (A. E. Kibrik, 1983).⁵ Notwithstanding the fact that the topicality of the issue still remains, the framework of the discourse in 1983 has undergone drastic transformations, deviations, cultural and social

⁴ Lakoff, R. T.: *The politics of language in our lives*, 1990

⁵ A. E. Kibrik: *Reference in Discourse*, 1983

transmutations due to its instability and relativity within the contemporary, swiftly changing context. In addition, it must be taken into consideration that scientific boundaries are merely accidental and arbitrary, while on the contrary, the mind itself, which is the object of studies, is undivided.

Overall, the core objective of the language is to foster interactive, communicative transfer of innumerable arrays of information among individuals. However, as stated above, there are some undivided, less perceptive aspects, which are innate and, on the other hand, there is a part of the dynamic discourse that unfolds in real time. The juxtaposition of the linguistic resilience is the storage of any language that dwells in the vault and cannot be altered under any circumstances.

Like another natural paradigms, discourse has a specific structure. The structure has two layers, which are as follows:

- Micro – local structure;
- Macro – global structure;

These structures comprise a hierarchical model, which operates within previously ranging

elements. Further interior expansion is a highly sensitive and unstable matter.

LINGUISTIC HINDRANCE

Native and non-native English language speakers

The knowledge of any language is considered a privilege or as it can also be labelled ‘lexical dignity’ in academic and socio-cultural contexts. In order to assess the extent to which the English language has reinforced itself on the global arena, it is required to delve into various fundamentals, which will in their own turn imply not only socio-cultural, but also historic aspects.

The following figure demonstrates what a probable demeanour according to the context might be and how

exactly speakers might act and respond in order to either assuage the conversation or diminish an interlocutor’s worth because of subjective and implicit factors.

In these figures, the author deviates from mental spaces and their entailing aspects, but on the other hand, takes a raw look at what the hypothetical impetus for a peculiar demeanour might be.

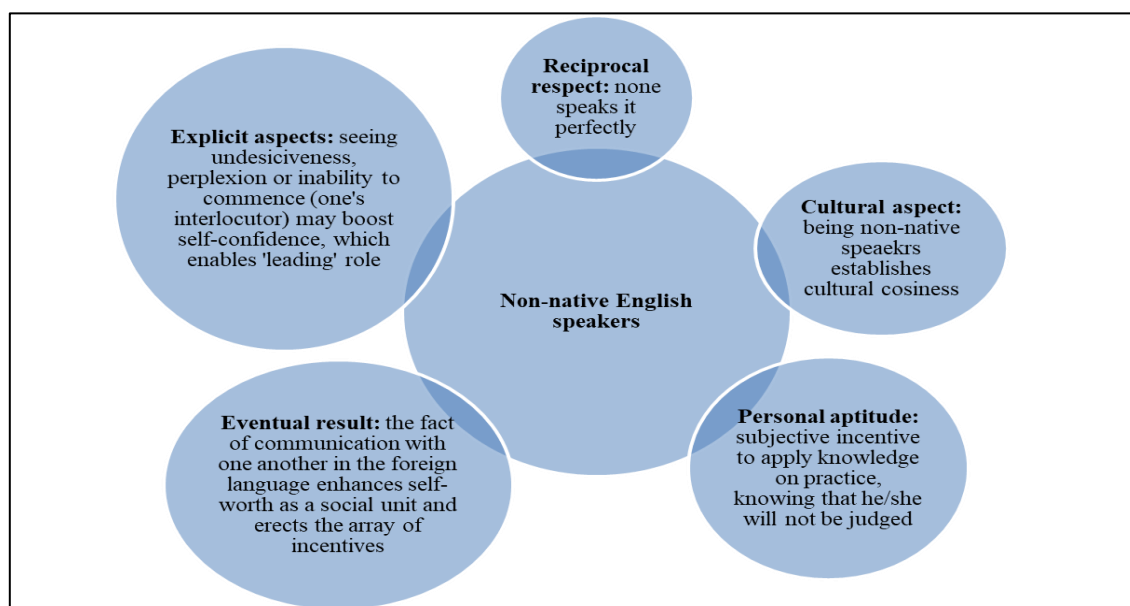


Figure 2: Preliminary effect of lexical dignity in interactions of non-native English speakers

The depicted-above figure may be elaborated further by adding sub-branches of the key elements, which may imply social, cultural, psychological, etc. factors that can affect attitude and the interaction. Nevertheless, no matter what additional constituents are added to the figure, the fact of being non-native speakers soothes the interaction, denoting a peculiar sense of lexical equality, regardless of one’s vocabulary,

pronunciation, fluency, etc. In the long run, the accumulation of these elements manifests itself in a prolific conversation, which does not undermine one’s self-worth and is based on a reciprocal respect.

Mapping of the mind: A questionnaire

In order to draw a cognitive framework within a particular social group, the author of the article

conducted a questionnaire consisting of 24 questions/statements. To narrow the scope, Latvian and Estonian students, both local and international/exchange, were chosen, their age ranging from 19-25. It must be noted that the questionnaire was conducted in March-April 2025.

The questionnaire was filled by 162 respondents, who remained anonymous, having presented the data solely for research purposes.

The questionnaire was compiled with the purpose to delineate peculiar mental constructs that were either entrenched within an individual or were acquired subconsciously/purposefully due to certain socio-cultural paradigms.

Nevertheless, in this article, the author analyses a specific set of questions/statements, which is as follows:

- What is your mother tongue?
- What are other languages you speak?
- For how many years you have you been using your second language?
- My identity changes, depending on the language I speak.
- Does speaking a specific language make you feel closer to a particular culture or set of values?
- Think of a memory you usually recall in a specific language. Does it change when you retell it in another language?
- Socio-culturally bound concept can be misunderstood/misinterpreted depending on the language you use.
- The language I use impacts the way I organize my thoughts and solve problems.

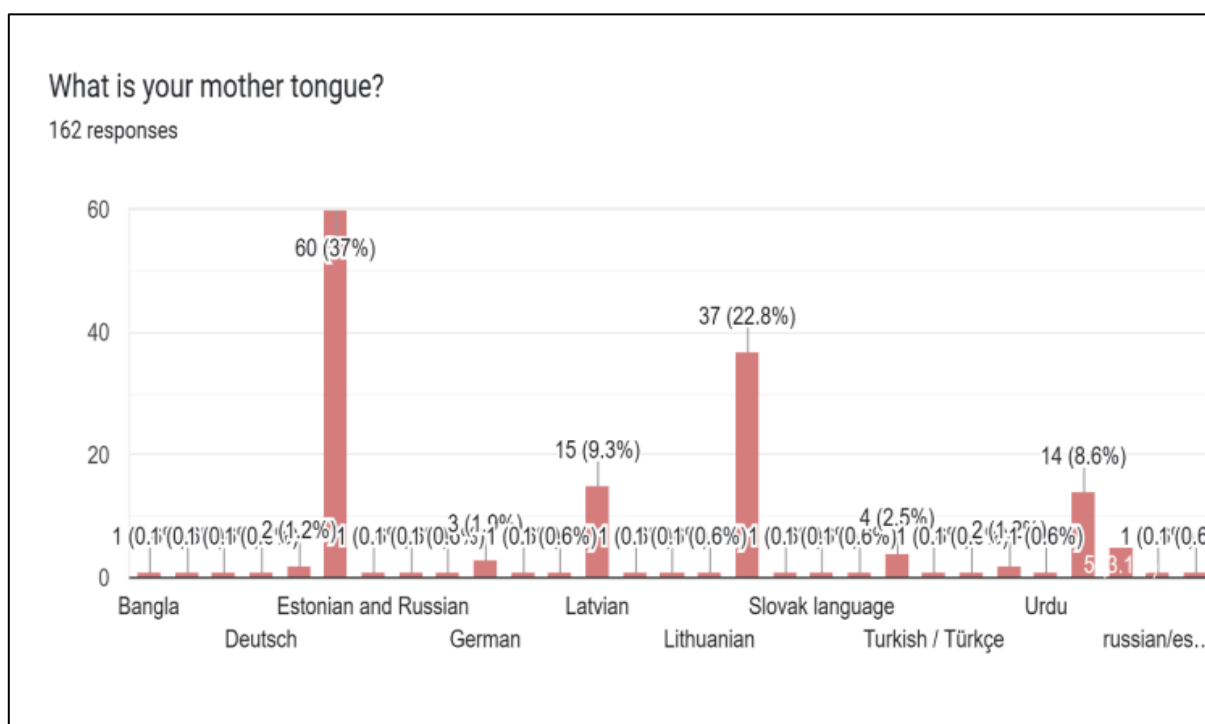


Figure 3: What is your mother tongue?

The distribution of multilingual and consequently multicultural backgrounds within the context of the respondents are an essential prerequisite for investigating mental spaces and identity convergence/divergence.

The presence of myriad Slavic and Finno-Ugric languages (e.g., Russian, Estonian, Slovak, Latvian) suggests overlapping cognitive schemata embedded in both Eastern and Northern European cultural paradigms.

This linguistic affinity may cultivate cognitive resilience, allowing individuals to navigate various cultural norms and semantic systems.

From a Fauconnierian perspective, each mother tongue may serve as a distinct mental space, carrying entrenched socio-cultural frames. These spaces are likely to interact dynamically with additional language systems acquired later, generating blended or competing identities.

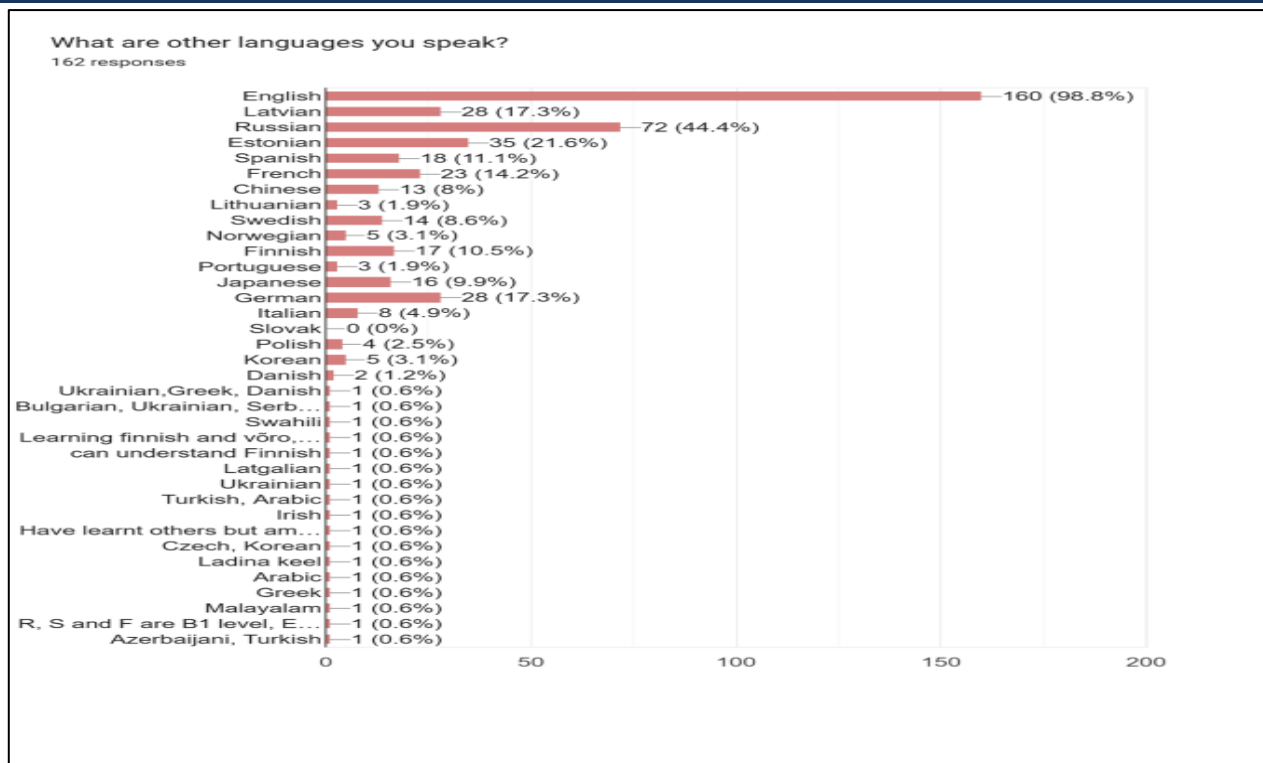


Figure 4: What are other languages you speak?

This multilingual diversity establishes a sufficient landscape for mental space complexity. According to Lakoff’s cognitive commitment, the speaker’s linguistic repertoire doesn’t exist in isolation but interacts with frames, schemas, and mappings that are socio-culturally bound. In multilingual cognition, each additional language embodies not only additional lexical access but also cultural scripts, as languages carry with them specific social roles, taboos, and cognitive routines.

This alleviates the explanation why the majority of participants in Figure 6 (*My identity changes,*

depending on the language I speak) feel that both language and identity shifts are interconnected, enacting cultural/cognitive mappings, some of which may be contradictory, overlapping, or complementary.

This may also be a real-world echo of the *weak version* of cultural cognition, where content varies, but cognitive processes retain their universal applicability. The stronger version, on the other hand, suggesting cognitive restructuring by culture, which cannot be excluded from the list.

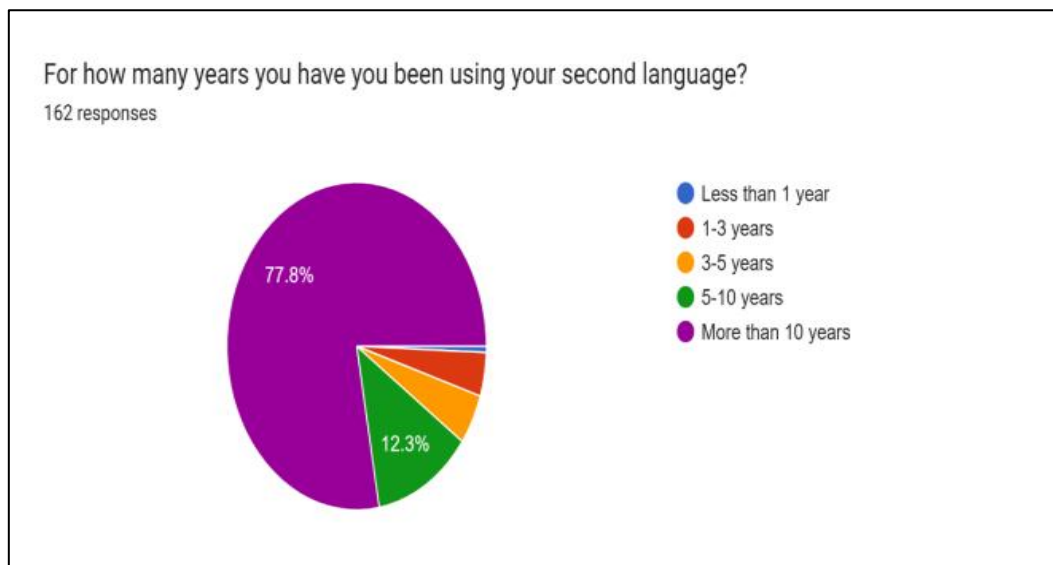


Figure 5: For how many years you have you been using your second language?

The respondents’ solid degree of linguistic experience (prevailing over a decade) denotes a subtle acquisition of versatile cognitive and cultural models. This aligns with the concept that mental spaces evolve with time and repeated usage, especially when those languages are used in identity-forming environments such as education, social and professional lives, etc.

Such long-term exposure solidifies more autonomous mapping between languages and thought patterns. This, in its turn, reinforces the hypothesis that second languages do not act as mere communication facilitators but actively reconstruct one’s cognitive architecture and impact identity expressions depending on the language used within context.

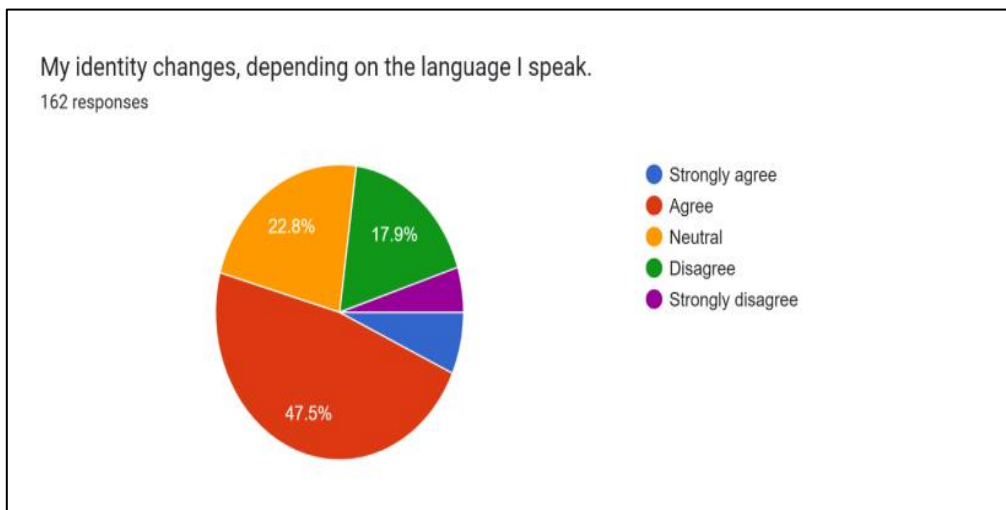


Figure 6: My identity changes, depending on the language I speak

The notion of identity fluctuation across languages is validated in Fauconnier’s mental space theory. Each language in use erects an array of mental spaces that can be solitary and framed but can also be convergent and adaptable depending on the socio-cultural, implicit and explicit shifts. These mental spaces are not merely linguistic containers but identity-bearing frameworks.

What respondents report here is an embodiment of identity mapping. As they shift between languages, individuals map multiple versions of “self” onto culturally specific roles, utterances, etc.

Moreover, this identity modulation echoes in contemporary theories in sociolinguistics and psychological linguistics, which argue that language use is performative and context-sensitive, denoting how individuals perceive themselves and are perceived by others (Gumperz, 1982⁶; Pavlenko, 2001⁷).

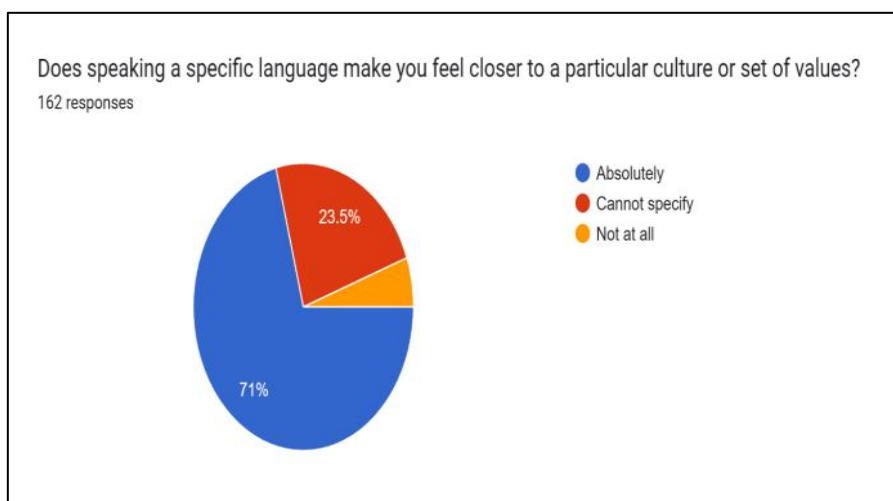


Figure 7: Does speaking a specific language make you feel closer to a particular culture or set of values?

⁶ John J. Gumperz: Language and social identity, 1982

⁷ Aneta Pavlenko: Negotiations of identities in multilingual contexts, 2001

The prevailing majority (71%) of respondents confirm a vivid correlation between linguistic practice and sociocultural affiliation. This consolidates the hypothesis that language is not a neutral entity but rather a medium through which cultural values and cognitive frameworks are embodied.

The findings refract Fauconnier's concept of convergent mental spaces, where linguistic input triggers culturally entrenched frames and schemas, which in turn impact perception and self-placement within a cultural context.

The 23.5% who "cannot specify" may point to the implicit and often inconspicuous nature of cultural cognition, which makes reflection more intricate. Meanwhile, the minority (5.5%) affirming no connection at all, implies cases where language use has been stringently instrumental, i.e., acquired without immersive or affective cultural engagement.

This distribution substantiates the notion of cognitive convergence, underlying partial identity alignment with social norms embedded in the language spoken.

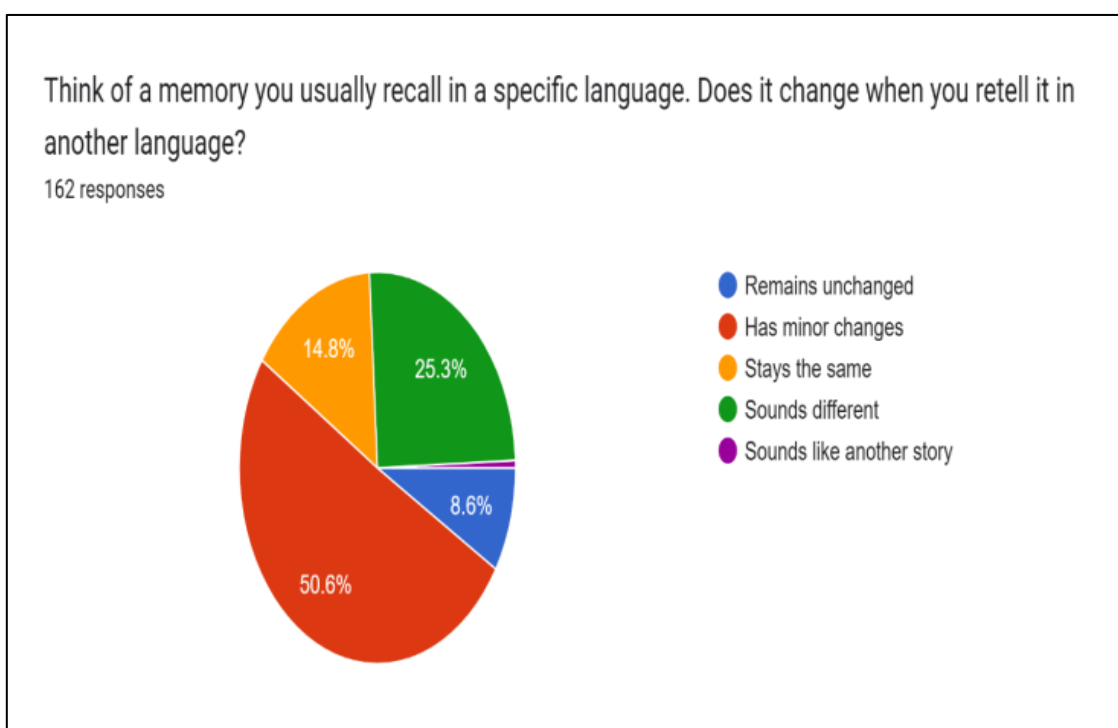


Figure 8: Think of a memory you usually recall in a specific language. Does it change when you retell it in another language?

It can be extrapolated from the above-depicted findings that a specific language functions not only as a conduit of recollections but as a cognitive filter, substantially altering the structure of and individual's memory.

This underpins contemporary understandings of memory as reconstructive rather than reproductive. The retelling of a memory in another language may trigger new mental frames, re-anchoring the event within a divergent cognitive and emotional scope.

The 25.3% who experience no shifts and the 8.6% who claim the memory remains unchanged may represent individuals with more stable core schemas or limited emotional/semantic proximity between languages. These results embody the non-neutrality of linguistic encoding, as posited in Catherine L Harris (2006) where language shapes not only memories but the cognitive shape and feeling of recollected experience.

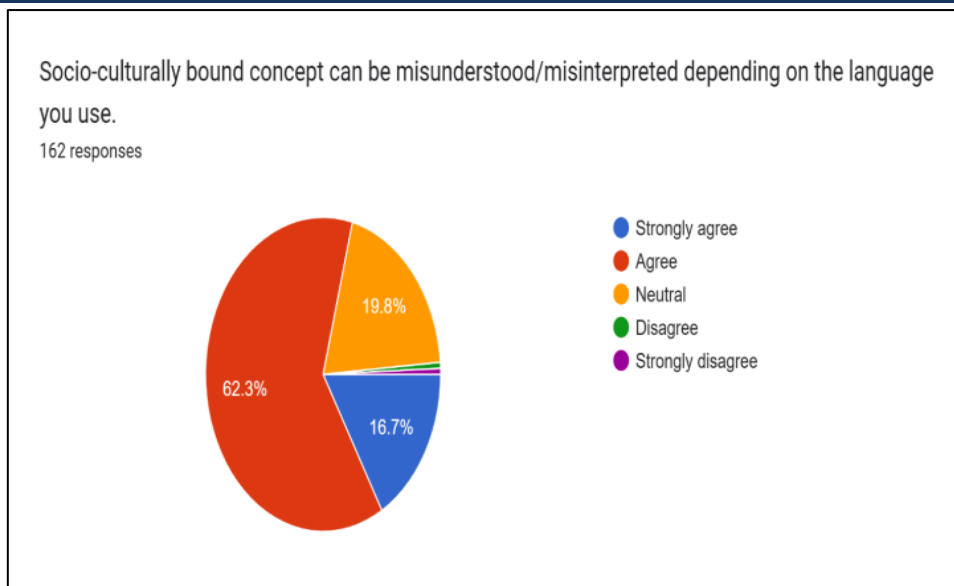


Figure 9: Socio-culturally bound concept can be misunderstood/misinterpreted depending on the language you use

The data reveals a predominant range (nearly 80%) claiming that socio-culturally rooted concepts are prone to misinterpretation across languages. This advocates the view that language is not a neutral medium but an active constructor of meaning, shaped by culturally specific cognitive frames (Lakoff & Johnson, 1980).

The neutral responses (19.8%) may depict either a lack of awareness of such deviations or enhanced cross-cultural fluency. The minimal disagreement further solidifies the theoretical premise of the article: language implies not sole interaction, but perception, interpretation, and cultural cognition.

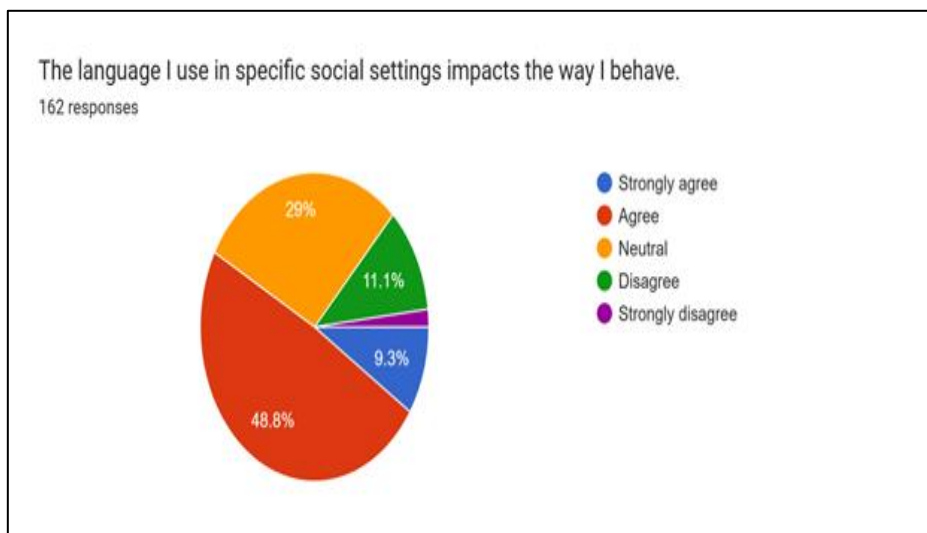


Figure 10: The language I use impacts the way I organize my thoughts and solve problems

This chart supports the notion that language and demeanour are interconnected, particularly in socially allocated cognition. The fact that over half of the respondents affirm demeanour shifts depending on the language used, aligns with the idea of context-framed mental spaces, evoking an array of experiences, emotions, interpretations, etc, demonstrating identity blending mental schemas based on linguistic context, advocating for the Sapir-Whorf hypothesis.

CONCLUSION

Overall, it can be argued that, basing on the questions provided, the versatility of languages an individual knows and speaks underlie the shapeshifting cognitive processes. It impacts interpretation and perception of transpiring events, utterances and experiences.

Any language acquired is an indispensable cognitive tool which, even if subconsciously,

contributes to the convergence of mental spaces by blending newly integrated and previously embedded frameworks. The given article may serve as a premise to a more thorough, target-oriented analysis of cognitive processes in perception, interpretation and decision-making of an individual (within an allocated socio-cultural environment), covering such spheres as Cognitive Linguistics, Psycholinguistics, Social and Cultural Studies.

REFERENCES

1. Chomsky, Noam A. *Reflections of Language*, (1975).
2. Chomsky, Noam: *Language and Mind* (3rd edition), 1960s, (2006).
3. Donald, M. "Origins of the modern mind: Three stages in the evolution of culture and cognition." *Harvard university press*, (1993).
4. Fauconnier, Gilles: *Mental Spaces*, (1985).
5. Gumperz, John J.: *Language and Social Identity*, (1982).
6. Harris, Catherine L.: *Language and Cognition*, (2006).
7. Kibrik, A. E.: *Reference in Discourse*, (1983)
8. Lakoff, R. T.: *The Politics of Language in Our Lives*, (1990)
9. Pavlenko, Aneta: *Negotiations of Identities in Multilingual Contexts*, (2001).
10. Pinker, Steven: *The Language Instinct*, (1994)
11. Thakker, Jo & Durrant, Russil: *Cultural Cognitive Theory*, (2001)

Source of support: Nil; **Conflict of interest:** Nil.

Cite this article as:

Zalan, A. "Mapping of the Mind: A Questionnaire-Based Study of Mental Spaces and Identity Construction in Multilingual Speakers." *Sarcouncil Journal of Arts and Literature* 4.5 (2025): pp 23-32.