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On collective cognition and language

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Abstract
This chapter presents a model of cognition as an attribute of groups and not just individuals, bringing into play *cultural conceptualizations* as the instrument of analysis. In this sense, cognition is viewed as an *emergent* phenomenon resulting from the interactions between the members of a group, who form a cognitive network across time and space. Collective cognitions, such as what I term *cultural cognition*, are "distributed" in the sense that the cognitive structures that give rise to the emergent, collective cognition are *heterogeneously distributed* across the minds of the members of the group. This view of group-level cognition is compatible with the Complex Adaptive Systems paradigm.

In this chapter I focus on cultural cognition and its two intrinsic aspects: cultural conceptualization and language. Cultural conceptualizations are components of cultural cognition such as *schemas*, *categories*, and *metaphors.* These have a conceptual dimension as well as a linguistic encoding. For example, words in human languages evoke schemas and categories that are conceptual in nature. In a sense, a language serves as a "memory bank" for cultural conceptualizations of its speakers, past and present, and as such is an important aspect of the group of speakers' collective cognition. This chapter elaborates on the model sketched here and presents examples of cultural conceptualizations from several languages.

1. Introduction

In the "call for paper" that was prepared for this volume, the editor asked if it would be possible to discover a "social or collective memory" in language (e.g., Climo and Cattell 2002; Gedi and Elam 1996; Halbwachs [1950] 1992). This chapter takes up this topic, discussing one form of collective memory, or more precisely collective cognition. Western psychology has mainly focused on cognition from the perspective of the individual. Even scholars in the area of social cognition have been interested primarily in perception, processing, and representation of social information by individuals. However, a number of scholars have viewed cognition to be a property of groups and not just individual minds (e.g.,

Clark and Chalmers, 1998: Sutton 2005, 2006; Wilson 2005). Group-level cognitions are "at once *grounded* in and yet *transcending* the underlying mental states of the interacting agents to which they are collectively ascribed" (Panzarasa and Jennings 2006: 402).

The particular form of group-level collective cognition that concerns us in this chapter emerges from the interactions between the members of a cultural group across time and space, which I refer to as *cultural cognition* (Sharifian forthcoming-a). It should be added that my definition of cultural cognition is not limited to capturing culture-specific cognition, rather it also applies to the fact that different cultural groups may develop similar or partly similar or very different group-level cognition. In fact, the interactions between cultural cognitions of two or more cultural groups may lead to the emergence of new blended cultural cognitions.

Cultural cognition is *emergent* in the sense that it is a gestalt that is more than the sum of its parts and cannot be reduced to the cognition of a single individual in the group (Beckermann, Flohr, and Kim 1992). According to the *Dictionary of the Philosophy of Mind* "Properties of a complex physical system are emergent just in case they are neither (i) properties had by any parts of the system taken in isolation nor (ii) resultant of a mere summation of properties of parts of the system"[i]. Thus, cultural cognition is neither totally captured by the cognition of an individual member of a group, nor is it the result of a mere summation of the minds in a group. It is the constant communicative interaction taking place between the members of a group that leads to the emergence of a collective, cultural cognition. As Panzarasa and Jennings (2006: 404) put it, "it is the move from agents' cognition to a social cognitive structure *via social interaction* [italics original] that brings about a new form of collective cognition". Their view of collective cognition is similar to the view of cultural cognition presented here in that they maintain "collective cognition is *holistic* in the sense of being essentially macroscopic rather than a mere summation of microscopic local properties" (2004: 405).

The notion of emergence has been employed in describing a wide array of phenomena such as hurricanes, ant colonies, climates, stock markets, etc. (e.g., Johnson 2001). It has also been used to describe human cognition as emerging from the neural activity in the brain. I find the notion of emergence useful in describing the patterns of cognitive and behavioural life that are often attributed to groups. It should be noted, however, that "emergence" is still very much a descriptive term and, as such, still in its infancy. Research in the area of computational social simulations seems promising in shedding light on the nature of the emergence of macro-level

phenomena from the interactions between micro-level, local agents (e.g., Panzarasa, Jennings, and Norman 2001).

Cultural cognition appears to be a form of *distributed cognition* (Hutchins 1994) in the sense that the cognitive structures whose interactions lead to emergent properties are *distributed* (albeit *heterogeneously*) across the minds of the members in a cultural group, across time and space (see also Hutchins 2000). The following section now turns to discuss cultural cognition from a complex adaptive system perspective.

2. Cultural cognition as a complex adaptive system

The above properties of cultural cognition make it compatible with the descriptive approach of "complex adaptive systems" thinking. Complex adaptive systems are studied through complexity science (e.g., Holland 1995; Waldrop 1992), a multidisciplinary science which seeks to explain how relationships between parts, or agents, give rise to the collective behaviours of a system or group. This approach to science has provided a useful frame of thinking about many aspects of the universe (e.g., Bak 1996). In complex adaptive systems the order is emergent and self-organizing (Allen 1997). As explained above, "emergence" in this sense refers to properties that result from the interactions between the agents in the system. "Self-organization" here means that there is no central control over the behaviour of the individual agents. Complex adaptive systems are also nested and adaptive. Being "nested" means components of complex adaptive systems are themselves complex systems and "adaptive" refers to the ability of the system to learn from experience, and therefore to evolve.

Cultural cognition, as mentioned earlier, is an emergent system in that it results from the interactions between the members of a cultural group across time and space. Thus, the emergent properties of cultural cognition as a system at the macro level are not mirror images of those that characterize the cognition of each individual within the group.

A closely related property of complex adaptive systems is that the agents constituting the system cannot contain the whole. Again, in this sense cultural cognition is also a complex system in that an individual's cognition does not comprise the cultural group's collective and emergent cognition as a whole. Cultural cognition is also nested in that members of a cultural group, as agents of the system, are themselves complex systems, controlled by nervous systems, endocrine systems, etc. As in the case of other complex systems, cultural cognitions have their own unique history of interactions that constantly construct and reconstruct the system. Often

changes in the interactions of cultural groups that may initially be viewed as insignificant have a remarkable influence on the future direction of their cultural cognition. This view is largely reflected in the writings of Vygotsky (e.g., 1978), who viewed cognitive phenomena as embodying the characteristics of historically bound sociocultural relations.

Another characteristic of complex systems is that they are "open" systems, that is, it is difficult to determine their boundaries. They are also open in the sense of their openness to inputs from individual agents, who have a two-fold role in the complex system. On the one hand, the individual is the locus of cognition and can have a causal role in the development, dissemination and/or reinforcement of group-level cognition. On the other hand, an individual's thought and behaviour can be influenced or determined to a varying degree by the cultural cognition that characterizes the cultural group. Thus, the role of individuals in a cultural group may best be described in terms of a circular pattern of cause and effect. Panzarasa and Jennings (2006: 402) maintain that "individual cognition is necessary for collective cognition to come into existence: thus the latter is nomologically dependent on the former". However, they observe that collective cognition is "ontologically autonomous", that is, ontologically speaking it has an existence beyond the level of individual cognition.

Cultural cognitions are dynamic in that they are constantly being negotiated and renegotiated across generations, and across time and space by members of a cultural group. In this sense, the actions of members of a group constitute a macro-cognitive network that functions as the base for the emergent collective cognition. Because the interactions between the members of a group are not mirror images of each other, the emergent cognition is constantly evolving, making the system adaptive.

3. Cultural cognition and cultural conceptualizations

Two intrinsic aspects of cultural cognition are *cultural conceptualizations* and language. Cultural conceptualizations are the ways in which people across different cultural groups construe various aspects of the world and their experiences (Sharifian 2003). These include people's view of the world, thoughts, and feelings. For example, different cultural groups may conceptualize the origin of the world and their relationships to each other and to nature quite differently. Also, research in cognitive linguistics has shown how the ways in which people "think about" their thinking and their emotional experiences may differ from one cultural and linguistic group to another (e.g., Palmer, Goddard, and Lee 2003; Enfield and Wierzbicka 2002). Traditionally, cognitive scientists interested in cultural differences in

cognition, such as cultural psychologists and cognitive anthropologists, have used analytical tools such as "schema" (e.g., Rice 1980; Shore 1996; Strauss and Quinn 1997), "category" (e.g., Rosch 1978), and more recently "metaphor" (Kövecses 2005) in accounting for the abovementioned cultural conceptualizations. However, the focus of most research in this area has been the cognition of an individual, rather than the group. Studies in social cognition have also largely employed the notions of "schema" and "category" in accounting for people's perception and processing of social information.

I maintain that within the framework of cultural cognition, as sketched out in this chapter, it is equally feasible for us to view schemas, categories, metaphors, etc. as components of cultural cognition. In this sense a cultural schema is an emergent property resulting from the interactions between the members of a cultural group. The cognitive structures (which are themselves cognitive schemas) that give rise to an emergent schema are heterogeneously distributed across the minds in a cultural group. That is, members of a cultural group may share some but not all elements of an emergent cultural schema with each other, and what is shared between two members may not be exactly the same as what is shared by two others in the group (see more in Sharifian 2003). Also, an individual's cognitive repertoire often includes elements from cultural conceptualizations of different cultural groups, depending on the nature of the person's social interactions. In today's globalized world, most people move inevitably between cultural groups and as such internalize cultural conceptualizations from more than one group.

At this stage, it should be made clear that the interactions between the group members which give rise to emergent conceptualizations do not take place in an experiential vacuum, but are in fact embedded within the context of their physical experiences. Often people view various aspects of the environment as cognitive "anchors" for their conceptualizations. For example, Aboriginal Australians have conceptually associated their totemic and cultural stories with aspects of their environment. This has often acted as a basis for considering various aspects of the environment, such as a rock, as "sacred".

An important prime source for conceptualizing various aspects of experience is the human body. Studies of embodiment within cognitive linguistics have increasingly shown how different cultures may conceptualize their thoughts and feelings differently in relation to their body parts. Although the notion of the body itself has been alleged to be universal (Wierzbikca 2007), one cultural group may conceptualize

emotions in terms of the heart and another group in terms of the belly (Gaby forthcoming). Often these cultural conceptualizations have been observed to originate from ethnomedical or religious traditions (see further in Sharifian, Dirven, Yu, and Niemeier forthcoming).

An important class of cultural conceptualizations is that of cultural categories. Although categorization seems to be a universal human faculty, the ways in which people across different cultural groups categorize their experiences may differ. We tend to categorize every single entity around us, perhaps to achieve cognitive economy for more efficient cognitive processing. But we also develop cognitive categories that may not have tangible referents in the external world. These include categories such as "time". Different cultural groups may not only conceptualize such categories differently but may also use different "concrete experiences" as the basis for conceptualizing these categories. For example, in many industrialized cultures people conceptualize "time" as a "commodity", which can be "saved", "spent", and "budgeted". This phenomenon has been referred to as *conceptual mapping* or *conceptual metaphor* in cognitive linguistics.

It should be emphasized again that from a complex systems perspective, cultural conceptualizations operate at two levels: they have a macro-level and a micro-level. They have a macro-level (*global level*) existence and structure when the unit of analysis is the group, and at the same time they can be viewed as having a micro-level (*local level*) when the unit of analysis is the individual. This ontological distinction entails different research approaches and methodologies depending on what level is aimed at.

4. Cultural conceptualizations and language

Cultural conceptualizations discussed so far in this paper have conceptual existence as well as linguistic encoding. Language is a central aspect of cultural cognition in that it serves as a "collective memory bank" (Frank 2003, 2005; wa Thiong'o 1986) for cultural conceptualizations, past and present. It is shaped by the cultural conceptualizations that have prevailed at different stages in the history of a speech community and these can leave their traces in current linguistic practice. In this sense language can be viewed as one of the primary mechanisms for storing and communicating cultural conceptualizations. It acts as both a memory bank and a fluid vehicle for the (re-)transmission of these socioculturally embodied cultural conceptualizations. Like cultural cognition, language can also be viewed as a complex adaptive system (e.g., Frank forthcoming; Steels 2000; Sharifian

forthcoming-a). The lexicon of a language is perhaps the most direct link with cultural conceptualizations in the sense that lexical items largely act as labels, and hence "memory banks", for conceptualizations that are culturally constructed. At least within the circle of cognitive linguistics it is agreed that meaning is conceptualization, and within the sub-discipline of cultural linguistics (Palmer 1996; Sharifian and Palmer 2007) it is further emphasized that conceptualizations are largely culturally constructed. "Cultural construction" of conceptualizations refers to the emergent nature of these conceptualizations at the level of cultural cognition. In short, the lexical items of human languages need to be viewed as capturing and storing cultural conceptualizations such as cultural schemas and categories.

The author's research on Aboriginal English has revealed how even everyday words of this indigenized variety of English, such as 'family' and 'home', instantiate Aboriginal cultural schemas and categories that are largely distinct from those associated with Standard Australian English (Sharifian 2005a, 2006). For instance, the word 'mum' in Aboriginal English may refer to someone who is culturally in the same category as one's biological mother, such as one's mother's sister (e.g, Sharifian 2007). On the other hand, 'home' may be used by Aboriginal English speakers to refer to wherever their "extended" family members live (e.g., Sharifian forthcoming-b). Then we find that at the level of grammar, some languages reveal interactions between certain syntactic devices and cultural conceptualizations such as those of politeness and kinship. Murrinh-Patha, an Australian Aboriginal language, uses ten noun classes, which are reflective of Murrinh-Patha cultural classification (Walsh 1993; Street 1987). These classes are identified through noun class markers appearing before the noun. The following list includes the class markers and the definition of each category (Walsh 1993: 110):

1. *kardu*: Aboriginal people and human spirits.
2. *ku*: Non-Aboriginal people and all other animates and their products.
3. *kura*: potable fluid (e.g., 'fresh water') and collective terms for fresh water (e.g., 'rain', 'river').
4. *mi*: flowers and fruits of plants and any vegetable foods. Also faeces.
5. *thamul*: spears.
6. *thu*: offensive weapons (defensive weapons belong to *nanthi*), thunder and lightning, playing cards.
7. *thungku*: Fire and things associated with fire.

8. *da*: place and season (e.g., dry grass time).
9. *murrinh*: speech and language and associated concepts such as song and news.
10. *nanthi*: a residual category including whatever does not fit into the other nine categories.

The above categorization also allows for multiple memberships, that is, depending on the function of an entity at the time, it may be categorized into one or another class. For instance, a boomerang may be categorized as *nanthi* when it is used as a back-scratcher and *thu* when it is used as an offensive weapon (Walsh 1993). Also in the Dreamtime Creation stories, when the Ancestor beings turn into animals in their journey of creating nature, this is signalled by a switch from one noun class to another. This system of noun classification is obviously entrenched in Murrinh-Patha cultural conceptualizations. For instance, as Walsh argues, the fact that fresh water, fire, and language have separate classes is an indication that each holds a prominent place in the culture of the Murrinh-Patha. This is a revealing case of how language has acted as a collective memory bank for certain cultural conceptualizations, which may or may not be currently active in the cultural cognition of the group of speakers. Even if they are active at the level of cultural cognition, they are likely to be heterogeneously distributed across the minds in the group, rather than equally shared between them.

As an example of the instantiation of cultural conceptualizations in the pronoun system, in Arabana, another Aboriginal language, the pronoun *arnanthara*, which may be glossed into English as 'kinship-we', captures the following complex category (Hercus 1994: 117):

> Arnanthara = we, who belong to the same matrilineal moiety, adjacent generation levels, and who are in the basic relationship of mother, or mothers' brother and child.

In Arabana, this cultural categorization of kin groups is also marked on the second plural kinship pronoun *aranthara* and third person plural kinship pronoun *karananthara*. It can be seen here that for an understanding of the meaning of this pronoun the reader would need to know what 'matrilineal moiety' means, which itself captures a cultural system of categorization of people in the Aboriginal community.

Another example of the link between grammar and cultural conceptualizations is found in an entirely different language, namely Persian, and specifically, in the case of the second-person plural pronoun *shomaa*[ii]. This pronoun is used as a second person singular honorific and the third person plural pronoun *ishaan* is also used as an honorific for the third person singular. Plurality as a marker of respect is not only marked in the pronoun system but can also be optionally marked by the verb ending. In fact, the interaction between the choice of pronoun, verb ending and the verb can yield a hierarchical system in terms of the degree of respect that each sentence conveys. Consider the following examples:

(1) a. *in nokteh raa ‘u beh man goft.*
this point DO.marker he/she to me said-SG

b. *in nokteh raa ishaan beh man goft.*
this point DO.marker he/she(respect) to me said-SG

c. *in nokteh raa ishaan beh man goft-and.*
this point DO.marker he/she(respect) to me said-PL

d. *in nokteh raa ishaan beh man farmud-and.*
this point DO.marker he/she(respect) to me said-PL
‘He told me this point.’

The above set of sentences differ in terms of the degree of respect and esteem that one holds for the person being talked about, whether or not the person is physically present when the conversation is being conducted. The degree of respect increases from (a) to (d). Sentence (a) is the most neutral in terms of respect. In (b) the degree of respect is increased by the choice of a plural pronoun for a third person singular case. Sentence (c) conveys a higher degree of respect by adding a plural verb ending while (d) shows the highest degree of respect by choosing the verb *farmud*, which is considered more respectful than *goft*. In addition it brings into play the plural verb ending and pronoun. Thus, in cases such as the above, which abound in Persian, the cultural conceptualizations of politeness are marked in the choice of pronoun, verb, and verb ending. It should be added that the choice between the three versions is not a straightforward rule that can be explicated in one sentence but in fact requires familiarity with cultural schemas governing communicative interactions between speakers of Persian. The examples discussed so far should suffice to show how

grammatical features of a language may be entrenched in cultural conceptualizations.

Another aspect of language that embodies cultural conceptualizations is the use of expressions which include a body part and appear to be metaphoric. In English one finds expressions such as *you broke my heart*, which suggests a conceptualization of HEART AS THE SEAT OF EMOTIONS. As mentioned earlier, many studies have revealed cultural differences in conceptualizations of body parts, in the sense that different body parts may be conceptualized as the seat/centre of thoughts, feelings, courage, etc. (e.g., Sharifian, Dirven, Yu, and Niemeier forthcoming). These conceptualizations are usually encoded in linguistic expressions that appear to be figurative, particularly if the original sources of the conceptualizations, such as ethnomedical traditions, are not consciously accessible to the speakers.

An example from Chinese comes from Yu (2007) who explores the Chinese cultural conceptualizations of the heart. These give rise to metaphors that profile this internal body organ as a physical entity (e.g., THE HEART AS A CONTAINER), a part of the body (e.g., THE HEART AS THE RULER OF THE BODY), and the locus of affective and cognitive activities (e.g., THE HEART AS THE HOUSE OF ALL EMOTIONAL AND MENTAL PROCESSES). Yu observes that the Chinese word *xin* refers to faculties that are covered by the 'heart' and the 'mind' in English. He attributes this to ancient Chinese philosophy in which the heart was conceptualized as the organ for thinking, feeling, will, reason, and intuition (Yu forthcoming). He further attributes the conceptualization of THE HEART AS THE MONARCH OF THE BODY to traditional Chinese medicine, which is based on the categorization of five elements. In traditional Chinese medicine the heart is the master of the body and governs various emotional and intellectual activities. As examples of the encoding of this conceptualization of the heart in the Chinese language, Yu (2007: 67) provides the following:

(2) 怡悦荡心房。
Yiyue dang ***xin-fang***.
joy wave (in) heart-house/room
'Joy rippled in the heart.'

(3) 进城几年了，乡亲们的嘱托他一直记在心间。
Jin cheng ji nian le, xiangqin-men de
enter city several years PER fellow-villagers MOD
zhutuo ta yizhi ji zai ***xin-jian***.
advice he always remember in heart-room/inside
'Having lived in the city for several years, he always bears in mind (lit. in the heart room or inside his heart) the fellow villagers' advice.'

The above examples clearly reflect conceptualization of *xin* as the seat of both memory and feelings. It is to be added here that although the encoding of the cultural conceptualizations under discussion have remained relatively constant linguistically speaking — with language acting as a memory bank — at the cultural level of cognition their representation is very likely to be *heterogeneously distributed*. That is, at the level of the individual language agent, Chinese speakers are likely to reveal individual differences in terms of the extent to which they consider the heart as the real seat of thinking and feeling. Some may consider such expressions as merely a matter of figurative language. From the perspective of cultural cognition, what is important is the view that although these conceptualizations originated from traditional medical/philosophical traditions, they have developed an emergent (macro-level) existence, which is the result of the "negotiation" and "renegotiation" of these conceptualizations by Chinese speakers in their communicative interactions across generations and thus across time and space.

I now return to the link between cultural conceptualizations and pragmatics. Cultural conceptualizations closely govern pragmatic meanings and the ways in which speech acts are interpreted. Scholars engaged in research in the area of pragmatics view pragmatic meaning as residing in the knowledge shared between speakers. Moreover, researchers are well aware that pragmatic meanings are subject to cross-cultural differences as well as similarities (e.g., Blum-Kulka, House, and Kasper 1989; Gass and Neu 1995; Wierzbicka 1991; Wolfson 1981). From the theoretical discussion presented thus far in this chapter, it should be clear

that the notion of cultural conceptualizations is partly an attempt to provide an account of this supposedly "shared cultural knowledge" that provides a basis for understanding pragmatic meanings across different languages. Within this approach, the notion of "sharedness" is more precisely viewed as "heterogeneously distributed", while "knowledge" is viewed as largely a matter of "conceptualization".

I maintain that people within a speech community understand implicatures or illocutionary forces of each other's communicative acts in the light of the cultural schemas and categories that characterize the cultural cognition of the community in question. Naturally when it comes to intercultural communication, differences and similarities between the cultural cognitions of the cultural groups involved may facilitate or debilitate the understanding of pragmatic meanings.

5. Cultural schemas of 'Self' in Persian

In the rest of this chapter I focus on providing an example of the link between cultural schemas and pragmatic levels of language by considering the case of a 'self' schema in Persian, which should be of particular interest to scholars working in the area of social cognition. One of the significant cultural schemas affecting communicative interactions in Persian is that of *shekasteh-nafsi*. The phrase itself is composed of two morphemes: *shekasteh* 'broken' and *nafs*, which may roughly be glossed into English as 'self, ego, soul, inner self, psyche'. As a whole this expression refers to 'humbleness' through somehow suppressing or "breaking" one's "self" and "ego". This schema captures norms about the ways in which a person should place their *nafs* in relation to those of others in the wider society.

Nafs has a pivotal role in the spiritual tradition of Sufism in which at least three stages of "self" have been conceptualized (Nurbaksh 1992). The first stage, as part of the purification of the soul, is combating *nafs amaareh* 'carnal' *nafs*. This aspect of the "self" reveals a tendency for pride, greed, and selfishness, which are considered as "evil" thoughts and acts. The second stage is what is called *nafs lavaameh*, or the 'reproaching' *nafs*, which admonishes a person for their "evil" acts and impels them to perform "good" deeds. The last stage is *nafs motma'eneh*, or the 'satisfied' *nafs*, in which the Sufi is free from all materialism and earthly problems and would be satisfied with the will of God.

It is the Sufi's battle with their materialistic and carnal *nafs*, in particular with traits such as selfishness and pride, which is the core value captured by the cultural schema of *shekasteh-nafsi*. While Sufism is not a strong spiritual tradition in contemporary Iranian society, the cultural

schema of *shekasteh-nafsi* is a significant part of contemporary Persian cultural cognition. This appears to be due to the fact that many Persian-speaking literary figures, particularly poets, have followed the Sufi tradition and their works embody values and principles cherished by Sufism. Persian speakers pride themselves highly on their well-known works of literature, including Sufi literature, and urge the younger generations to model the ethos incorporated in such Persian literature. Ahmadi and Ahmadi (1998: 104) observe that "Persian literature is full of texts urging everyone to pay respect to others, to be extremely polite in front of others, not to speak of one's 'I' and one's achievements". Thus it is not surprising to see the link between the cultural schema of *shekasteh-nafsi* and the Sufi tradition. This is a good example of an emergent conceptualization, where a value system originally part of a spiritual tradition finds its way into the literary works of a speech community and then into the cultural cognition of a group through sustained communicative interactions taking place between the members of the group across time and space about the value system. Often people whose interactions reflect such cultural conceptualizations are not consciously aware of the original root/source of them.

Returning to the link between cultural conceptualizations and language, as an example, a significant case of the reflection of the cultural schema of *shekasteh-nafsi* in communicative interactions between speakers of Persian is in compliment responses (see more in Sharifian 2005b, in press). In line with the conceptualization of *shekasteh-nafsi*, when receiving compliments and praise, speakers tend to highly disagree with a compliment, play it down, return it to the complimenter, or reassign it to an interlocutor, a family member, and/or God. Often the interlocutors in the communicative event engage in extended chains of returning the compliment back and forth, in the sense that the receiver of the compliment returns the compliment to the complimenter, who in turn returns the compliment to the complimentee and this may continue for some time.

Another instantiation of the cultural schema *shekasteh-nafsi* in the Persian language comes about as a result of the functioning of schemas associated with another common morpheme referring to "self", namely, *khod*. This morpheme forms part of many Persian words, which are usually composed of a noun and adjective. The following are some common compounds that include this morpheme (translations are from *Aryanpur Persian-English Dictionary*, 1984):

Khodbeen	'*khod*+see' (conceited)
Khodparast	'*khod*+worship' (selfish, egoist)

Khodpasand	'*khod*+admire' (self-admire)
Khodkhaah	'*khod*+want' (egoist, self-centred)
Khoddaar	'*khod*+have' (reserved)
Khodra'i	'*khod*+opinion' (obstinate)
Khodsaakhteh	'*khod*+built' (self-made)
Khodsar	'*khod*+head' (opinionated)
Khodkaameh	'*khod*+desire' (self-centred)
Khodmokhtaar	'*khod*+govern' (autonomous)
Khodnamaa	'*khod*+show' (showy)

From the above list of words, only the word *khodsaakhteh* 'self-made' captures a positive and approved-of trait, from a Persian perspective. All the other words in the list capture a negative trait, except the word *khoddaar*, which refers to someone who keeps their thoughts and feelings to themslves. This term can be used in a positive or a negative sense. Interestingly, the word *khodmokhtaar*, which refers to a wilful person, who usually acts and makes decisions according to their own will or desire, is largely a negative trait and can be used to refer to a child who does not follow its parents' guidance. However, the English translation provided by the *Aryanpur Persian-English Dictionary* (1984) equates this word with 'autonomous', which is a rather positive term in English.

Overall and in line with the cultural schema of *shekasteh-nafsi* any form of self-endearment is negatively valued in Persian. It should be added that while it seems English has similar values attached to such traits, two points of caution need to be kept in mind. First, in English, words such as 'self-centred' and 'egoist' are not very commonly used while their counterparts in Persian are very common words. Also what is categorized as *khodkhaahi* in Persian is not necessarily viewed as 'self-centredness' in English. I maintain that often the lexical items regarded as equivalent by bilingual dictionaries may in fact be equating cultural conceptualizations with each other whose fields of meaning or referentiality may overlap to some extent but which are structured by the different schemas and categories. One such thorny expression is the English word *self-love*, which can be a positive trait that is viewed approvingly in English. The Persian term whose meaning is closest to that of this English expression of 'self-love' would be *khodshifteh* '*khod*-lured', which captures a very negative trait, one that is viewed with strong disapproval in Persian. In short, the examples provided here should make it clear how entrenched cultural conceptualizations can be brought into focus, stored and recirculated through the use of linguistic resources. This, in turn, supports the view that

lexicon, and language in general, may act as an "archival site" or "memory bank" for heterogeneously distributed collective cognition.

6. Concluding remarks

This chapter elaborates on the author's thinking about the relationship between cognition, culture, and language by exploring the notion of cognition as a property of groups, and not just individuals. This group-level, collective cognition is an emergent property of the interactions that take place between members of a cultural group. Two intrinsic aspects of cultural cognition are cultural conceptualizations and language, aspects that are deeply intertwined. Cultural conceptualizations are group-level conceptualizations that are constantly negotiated and renegotiated across time and space by members of a cultural group. These conceptualizations have a micro-level (local) and a macro-level (global) existence. The micro-level cognitive structures are those that characterize the cognition of the individual while the macro-level ones are those which emerge, cumulatively, from the effects of the micro-level cognitions during such communicative interactions. The properties of what is viewed as cultural cognition seem to be in consonance with complex systems thinking in that they reveal emergent properties, they are nested and "open", and they are also dynamic and self-organizing.

Language is a central aspect of cultural cognition in that it serves as a "collective memory bank" for cultural conceptualizations that have prevailed at different stages in the history of a speech community. Language may best be viewed as a primary mechanism, but surely not the only one, for storing and communicating cultural conceptualizations. This chapter has provided examples from various levels of language and from several languages where different linguistic features and devices appear to be entrenched in the cultural conceptualizations of their speakers. The observations presented in this chapter are meant to provide some preliminary thoughts for further theoretical as well as empirical work in cognitive science that in turn hopefully will allow for fresh insights into the complex relationship between culture and language. It seems that the analytical tools of cognitive science, such as schemas and categories, as well as recent developments in the area of complex adaptive systems can facilitate our understanding of the relationship between culture, cognition, and language.

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[i] http://philosophy.uwaterloo.ca/MindDict/emergence.html

[ii] In Persian transcriptions, the letter "a" symbolises a low front vowel which is close to the sound of "a" in the word "cat". The "aa" sequence, on the other hand, stands for a low back vowel which is close to the sound of "a" in the word "father".