Hidden Biases of Cultural Schema

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Abstract
Communicating efficiently involves having an assumed set of knowledge underpinned by a learned system of cultural values, or what can be called cultural schemata. The American cultural self, for instance, is underpinned with the schemata of existentialism, individualism and competition. Schemata create hidden biases in the way we behave, make decisions and judgements. Most often, it greatly aids in the communication and interpretation processes by allowing us to simplify and predict others' behavior. However, in cross-cultural context, schema based interpretations can be problematic and may have long term repercussions. The aim of this short paper is to present and discuss the author's research of how cultural schemata are formed and cause hidden biases that are in turn used to interpret behavior in different ways leading to both recognized and unrecognized cross-cultural friction.

Keywords: Culture, Schema, Bias, cross-cultural, communication, misunderstanding

1.0 Introduction

How we understand the world and the assumptions we make about it are the product of "received wisdom" of what we have learned from elders, social groups or media (Robbins, 2014). The point that stands out is that much of this type of received wisdom is readily accepted as being true despite the fact we have not experienced it first hand. In order to make sense of the complex web of information threatening to overload our senses, we need to continuously classify, organize and simplify in order to function efficiently. If the context of communication interaction is less known, the simplification process becomes even more important and we become more reliant on our received wisdom to understand events in our daily life. This is why biases, such as assimilation bias, occur where we try to fit what is happening in the real world with our learned point of view. Our values and norms are strongly underpinned by received wisdom giving a long-term stability to national culture despite the dynamic nature of cultural adaptability, which gives us the capability of "getting by" in unfamiliar cultural contexts.
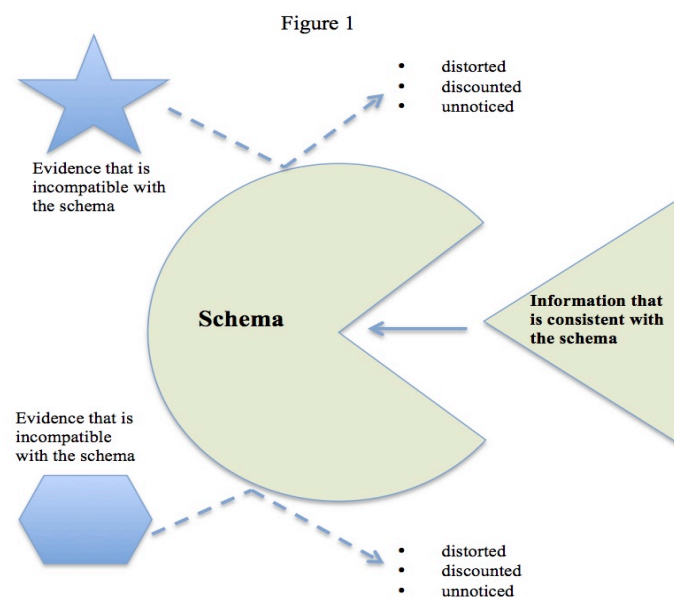
The way we construct the meaning of things in our lives is heavily influenced by things such as nationality, social identity and the physical geography of where we live or were raised. Issues that some people in one place accept as unproblematic and acceptable are considered completely unacceptable and wrong in others. What is it that causes these differences in viewpoint and interpretation? Why can two people from different places see the same thing but have a different interpretation of it? A starting point to begin answering this question is geography. Geography is the foundation that fosters the formation of a shared culture of traditions, norms and values among a community. Culture, defined as a system of learned meanings shared by a community, as a manifestation of geography of living space and social interaction, is the root of how we learn to find meaning in symbols, sounds and behavior.

Yet, we tend to ignore or underestimate the affect that cultural norms and values can have in our daily lives and much less so when interacting with different cultures. Banaji and Greenwald (2013) describes how hidden biases guide our behavior without our being aware of it. The mind is said to be an automatic association-making machine which we use to make decisions and interpret the external world. The authors describe examples such as how a small change in language can produce a significant change in what is remembered - called the *misinformation effect*. (2013, p. 37). This has shown to have significant ramifications in legal (e.g. false confessions) and medical contexts (e.g. right to know). Clearly biases have a strong affect on thinking and perception but also on decision-making.

2.0 Schema and Biases

To better understand hidden cultural biases, it is necessary to investigate the deep cultural structures that underpin our communication norms. To communicate efficiently, we need to take mental shortcuts and simplify the complex world of stimuli surrounding our busy journey through daily life. Taking mental shortcuts to increase efficiency in thinking and communication involves the use of schema or schemata (pl.).

Schemata are mental representations that organize our knowledge, beliefs and experiences into easily accessible categories. Research has shown that our behavior is connected to the type of information we store in our brains (Nishida 2005, p. 402). Thus, schemata provide a structure or framework of interpretation to our mental biases. Nishida (2005) identifies eight types of cultural schemas: fact-and-concept schema, person schema, self schema, role schema, context schema, procedure schema, strategy schema, and emotion schema. These schema activate preexisting knowledge such as problem solving strategies and social role expectations. Each framework greatly aids in making sense of complex information and guide us to be able to efficient communication. However, schemata, because of their simplified framework, also result in unconscious biases that have great potential be harmful to understanding in the communication process. Schema bias represent our core (cultural) beliefs and are resistant to change. This resistance creates hidden biases that influence how we interpret communicative behavior among other things. Information that does not fit tends to be unrecognized, ignored, rejected or distorted while information that fits our schema tends to make existing schema stronger (see Figures 1).

Figure 1

(Schema Bias Worksheet. Psychologytool.com)

As Figure 1 illustrates, existing schema tends to be resistant to conflicting new information because it takes more mental effort to incorporate it. We tend to be lazy and allow information that already fits with our preexisting set of knowledge to make decision making easier and more efficient. Because individuals construct their subjective reality on their biased interpretations of input, a cognitive bias is formed that affects behavior and decision making. Although cognitive bias enables faster "lazy" decision making and efficient information processing, it is highly dependent on the preexisting knowledge of schemata.
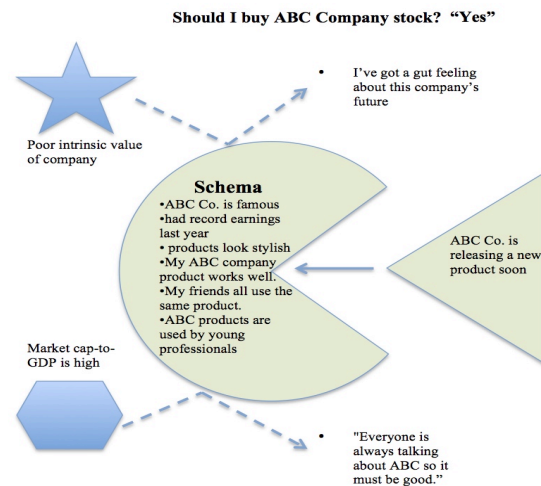
3.0 Cognitive Bias

The complex amount of new stimuli, forces us to simplify and choose which stimuli are important or and which are less so. The result of this phenomena is labeled **cognitive bias**. "Because we are not capable of perceiving everything in our environment, our focus is automatically drawn to the most prominent or "eye-catching"- that is, perceptually salient - stimuli" (Shiraev and Levy, 2013, p. 69). The result of his tendency is to try to explain behavior of other's based on internal factors rather than the external situational context. This results in what is called fundamental attribution error and would seem to be especially strong in Western, egocentric, cultures. Hidden biases, along with the schema that forms them, can be particularly problematic for cross-cross cultural interaction. For example, native English speaking business people and teachers have a tendency to misinterpret the Japanese listener as being shy and unmotivated (internal factors) because of their lack of outspoken participation in the a meeting or classroom. Western cultures, especially in the US, interpret individual behavior through an existentialist schema. That is, an individuals position in society and immediate future is self-determined; we are solely responsible for the choices we make. Notice that this in an internal or egocentric value. As a result of this tendency, many Americans have difficulty accepting that hidden biases can influence their decision-making and behavior without being cognitive of it. This existentialist tendency encourages *motivational bias* of mistakes in thinking that come from trying to satisfy our own personal needs. Therefore, fundamental attribution errors seem more likely by Western English speakers in cross-cultural communication with their sociocentric counterparts in Southeast Asia.

3.1 Intuitive Heuristics

Social psychologists such as Tversky and Khaneman (1974) have attempted to describe how the process of simplification thinking works. They have labeled it as *intutitive heurisitics* - taking mental shortcuts in order to solve complex, time-consuming tasks in an efficient manner. When we are faced with a complex question that takes mental effort we tend to default to our existing schema so that we can justify or simplify to answer the question. Psychologists use intuitive heuristics to explain how when we are, "faced with a difficult question, we often answer an easier one instead, usually without noticing the substitution" (Kahneman, 2011, p. 12).

 Khaneman's research in this area led to a Nobel Prize in economics for showing how investors make irrational choices based on mental biases. Perhaps one of the most interesting findings was the idea that when we are faced with question that is complex and difficult to answer, we substitute it for an easier one. For instance, if an investor was faced with the question of, "Should I buy ABC stock?". The laborious process of answering this question would involve a complex analysis of price-to-earnings ratios, product development, materials production and a host of other difficult questions. Instead, via intuitive heuristics, the investor would probably substitute the original question of, "Should I buy ABC Company stock?" with "Do I like ABC products?" or similarly, "Will ABC release a new product soon?" As a result, the investor is able to make timely decisions based on an efficient formula of oversimplification, or rule of thumb, to arrive at the answer of yes or no. Adapting from the schema model in Figure 1, Figure 2 illustrates how this may work.

Figure 2

Should I buy ABC Company stock? "Yes"

Poor intrinsic value of company

- I've got a gut feeling about this company's future

Schema
- ABC Co. is famous
- had record earnings last year
- products look stylish
- My ABC company product works well.
- My friends all use the same product.
- ABC products are used by young professionals

ABC Co. is releasing a new product soon

Market cap-to-GDP is high

- "Everyone is always talking about ABC so it must be good."

Kahneman calls this type of fast but lazy thinking as System 1 thinking (2011, p. 22). It is a spontaneous search for an easy solution or interpretation. This type of thinking does not engage our slow thinking or our more effortful System 2 thinking (2011, p 24). However, this tension between fast and slow thinking creates a paradox between accuracy and efficient thinking. System 1, our automatic and efficient way of thinking, is based on learned experiences of culture allows us to quickly make decisions and have smooth communication but leaves the door open for hidden biases to color our interpretations. System 2, on the other hand, takes mental effort and time, slowing our thinking process, allowing us to bring hidden biases to the conscious level but at the risk of missing stimuli that would normally not be overlooked. However, the final word goes to System 2 : "Most of what you (your System 2) think and do originates in your System 1, but System 2 takes over when things get difficult, and it normally has the last word" (Kahneman, 2011, p. 25). This is how we can "get by" or adapt to different cultural contexts and cannot maintain this consistently until the thinking patterns become part of our System 1. How long this enculturalization may take and with how much effort is dependent on a variety of complex factors but would certainly take sustained effort and long term exposure to the target language and culture - time that few business people, sojourners nor diplomats can afford. Thus, it is worthwhile to target specific types of biases that particular cultures have a tendency to make.

4.0 Hidden Biases

In the following sections, several hidden biases are discussed that are particularly salient to cross-cultural communication between high and low context cultures (e.g. Japan and the US) are defined and discussed.

4.1 Assimilation Bias

One way schemata form biases is by coloring our perception of reality to make them consistent with what we already believe (Shiraev and Levy, 2013, p. 59). This is called *assimilation bias* in cross-cultural psychology (Piaget, 1970). Examples of how we modify the data we have to fit with our schema are easier to see in cross-cultural

contexts because the type of data is often in stark contrast to our native culture. For, example, after decades of living as an expat in Japan, I am almost always offered beef as a first option at any dinner with Japanese colleagues. The schema of "Americans like beef" is a widely held belief and so becomes a hidden bias assimilated in to the subconscious of food preference.

Assimilation bias is the precursor to what is called the *belief preservation effect* which is the tendency to cling to a particular set of beliefs and interpretations where new information is assimilated to fit our bias leading us to "freely distort, minimize or even ignore facts that run contrary to our reality" (Shiraev and Levy 2013, p. 50). Some observers have suggested that this is why many voters in the recent American presidential race supported Donald Trump. Information that does not fit with the positive bias of Mr. Trump is minimized or simply ignored in order to preserve a belief system that is linked with social identity. This form of bias thinking is not completely bad however as it allows us to achieve goals that otherwise may not been accomplished without this distorted belief system. On the other hand, if we fail to think critically and apply this to people, we then risk stereotyping and miscommunication, making tolerance and acceptance increasingly difficult.

4.2 Anchoring Bias

Anchoring is a psychological term used "...to capture the idea that the mind doesn't search for information in a vacuum. Rather, it starts by using whatever information is immediately available as a reference point or "anchor" and then adjusting" (Banaji and Greenwald, 2013, p. 45). In a cross-cultural context, the anchor held down by our native cultural norms with the result is that we may interpret the same behavior or event differently. For instance, upon arriving in Japan for the first time many years ago, I attended a Sumo tournament. I noticed that each Sumo wrestler would scoop up a white substance in the ring before their match and throw it in the air. Now, the received wisdom from western media quickly led me to conclude that this white substance was rice.

A schema script may look similar to this:

(ANCHOR : Japanese eat white rice---> (NEW STIMULI) Japanese person, white substance, ritual ---> (SCHEMA) Japan, Sumo, food, rice ---> (INTERPRETATION) white rice

The received wisdom after all was that Japanese eat white rice everyday and is part of their culture and regular diet. This erroneous and embarrassing conclusion was realized when my Japanese host informed me that it was in fact salt. Having little background knowledge of Sumo much less of the salt purifying ritual of Shintoism connected with the ritual, I had used received wisdom as a stereotypical anchor draw an erroneous conclusion. Although this example was harmless, one can easily imagine contexts where this type of psychological phenomenon may be harmful to productive cross-cultural communication.

It is worth noting that biases are often based on stereotypes that often clash with our won closely held personal views. For instance, "A father and his son are in a car accident. The father dies at the scene and the son, badly injured, is rushed to the

hospital. In the operating room, the surgeon looks at the boy and says, "I can't operate on this boy. He is my son." (Banaji and Greenwald, 2013, p. 177)

Many people would be confused by this gender bias situation while others would soon figure out that it is the wife who is the surgeon. "Without giving it a moment's conscious thought, we use a stereotype of the group as a starting point for our perception of that person" (2013, p. 181). Schema allows us to form categories in which we associate things, places or people with so that they can be readily recalled and used for efficient communication . Often times these categories are highly simplified consisting of stereotypes of groups of people because we have so little background knowledge or first hand experience with them.

4.3 Availability bias

To communication efficiently it is necessary to draw off of readily available schema to answer questions of frequency. Psychologist's call the use of this type of bias availability bias. We can easily see the lazy thinking of System 1 at work here. The easier it is to retrieve from memory, the more likely you are to judge a particular behavior or action as being a more common occurrence. National media tend to focus on news stories that are likely to catch people's attention to increase sales and circulation. This results in a large frequency of repetition and occurrences of similar types news being reported creating an availability bias in its readers. In recent times, terrorism committed by Muslims has created a lazy availability bias of, "Muslims are terrorists" partly due to the huge amount of media coverage and conflict between Muslim dominated countries in the Middle East.

4.4 Representational bias

Representational bias occurs when we judge a person to be in a particular group based on how similar they are to a typical member. For instance, if you see a young man who is really tall you may be likely to judge him to be a basketball player. In cross-cultural contexts, we may misjudge someone based on what country they come from. Americans tend to be outspoken and friendly while a French person is probably less outgoing but more artistic. These types of representational biases that are projected on to people and can be dangerous as conflicts throughout world history have proved.

Both availability and representation biases seemed to occur after the Boston Marathon bombing in 2013 when many Americans understandably confused the Czech Republic for Chechnya (the country of ethnicity of the bombers) and then social media trended wildly with the name of the wrong suspect (Moodie, G. Boston bombings: social networks and the flow of misinformation). The satirical online newspaper, The Onion, bemused that Americans did not yet know enough about Chechnya to even form a stereotype but when told it was predominantly a Muslim country that they would be, "pretty good to go from there" in forming a stereotype. This is sadly amusing because it holds some truth, not just about the situation being referred to, but about how and why humans have a need to make oversimplifications to interpret complex events and then make judgements based on them.

4.5 Naturalistic Fallacy

Imagine that you are attending a business meeting for your job. You quickly notice that one young male coworker is not participating and remaining silent in contrast to everyone else in the room. This divergent behavior is judged to be atypical and, therefore, inappropriate because it is not normal for this context. Thus, a *naturistic fallacy* is a bias in thinking where we equate the divergent behavior as not normal and what is abnormal as being bad or strange. That is, "we equate what *is* with what *ought* to be" (Shiraev and Levy, 2013, p. 78). In the conversation from the author's previous research (see Table 1 below) in intercultural communication (Ryan, 2007, p 78), 47 Japanese and Americans were asked how they would behave in their first meeting at a new job.

Table 1

Situation: You have just graduated from college, have a new job, and are attending your first meeting. There are about 15 other co-workers in the room. What actions would you probably do?

a) [   ] I would introduce myself to everyone. J: 32.1% A: 51.1%
b) [   ] I wouldn't say anything.   J: 5.7% A: 4.3%
c) [   ] I would try to occasionally contribute to
          the meeting by making relevant comments. **J: 14.3% A: 57.4%**
d) [   ] I would wait until I was spoken to before saying anything. J:16.4% A:21.3%
e) [   ] I would keep quiet and only listen to everyone attentively. **J: 44.3% A:19.1%**
f) [   ] I would try to ask as many relevant questions as possible. **J:12.1% A:29.8%**
g) [   ] I don't know/ other: J: 4.3% A:8.5

J=Japanese respondents average   A=American respondents average

One can imagine American and Japanese managers having culturally bound interpretations to this behavior. For the Americans, one is expected to participate actively in the meeting by making relevant comments when possible. For the Japanese, a new person is expected to remain quiet until directly asked their opinion. Observing the hidden bias of social hierarchy is the norm for high context cultures. What is perceived as normal behavior or communication allows us to exist in our lazy System 1 thinking mode but also may result in erroneous judgements of others whose System 1 thinking is based on unique deeply held cultural values. In extreme cases, System 1 thinking can lead to the type of logic that justifies slavery, human sacrifice, child labor or other abhorrent behavior.

5.0 Discussion

Hidden biases have a profound effect on the communication process and behavior. These biases are even more magnified in cross-cultural communication because of the received wisdom of deep cultural differences in thinking and verbal and non-verbal behavior. We tend to underestimate their affect on behavior and communication because our biases exist at the unconscious level. Despite our good intentions to communicate effectively with someone from another culture, comprehension difficulties that lie below the surface of our immediate understanding can easily result in confusion, misunderstanding and negative stereotyping in critical areas of

interaction such as in health care, international business (see Ryan, 2007) and diplomacy (see Ryan, 2015) context. A first step in successful long-term cultural understanding would be to develop a meta awareness or growing our understanding of "knowing what we don't know" as we interact with others from cultures other than our own. Thus, intercultural education and training along with a healthy dose of humility and self-awareness would move us further down the road to acquiring more tolerance and patience when dealing with unfamiliar communication norms.

References

Banaji, M. R. and Greenwald, A. G. (2013). *Blindspot: Hidden Biases of Good People*. New York: Delacorte Press.

Kahneman, D. (2011). *Thinking Fast and Slow*. New York: Farrar, Straus and Giroux.

Moodie, G. (2013, April 22). Boston bombings: social networks and the flow of misinformation.   The Grub Street. Media Intelligence. Retrieved from http://grubstreet.co.za/2013/04/22/boston-bombings-social-networks-and-the-flow-of-misinformation/

Nishida, H. (2005). Cultural Schema Theory. In Gudykunst, W.B. (ed.). Theorizing about Intercultural Communication. London:Sage Publications

Robbins, P. (Speaker) (2014, October 24). Understanding Cultural and Human Geography. The Great Courses: Science and Mathematics. Lecture conducted from Audible.com.

Ryan, S.B. (2007). The Affect of Cultural Background Knowledge on Communication Between Japanese and Americans in a Business Context. *Bulletin of Yamagata University* (Humanities), Vol. 16, No. 2. pp. 77-97.

Ryan, S. B. (2007). The Disruptive Potential of Cultural Background Knowledge in Cross-Cultural Communication: An Analysis of Sample Japanese and American Business Conversations. *Journal of International Business Research*, Volume 6, Special Issue 1. Cullowhee, NC: Allied Academies. pp. 89-108.

Ryan, S.B. (2015). Cultural Diplomacy in International Relations: understanding hidden bias in cultural knowledge. Bulletin of Yamagata University (Humanities). Vol 18, No. 2. pp. 63-86.

Tversky, A. and Kahneman, D. (1974). Judgment Under Uncertainty: Heuristics and biases. Science, 185, pp. 1124-1131.

Schema Bias Worksheet. Psychologytools.com. Retrieved from http://psychology.tools/schema-bias.html

Shiraev, E.B. and Levy, D.A. (2013). Cross-Cultural Psychology. Critical Thinking and Contemporary Applications. 5th ed. Boston: Pearson.