CONVERGERS AND DIVERGERS: A Dimension of Cultural Difference between the United States and Europe

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ABSTRACT

This study analyzes cultural meanings obtained through free verbal association derived using the Associative Group Analysis technique. Two groups of U.S. and Russian managers were asked to respond to a list of stimulus words such as bank, innovation, corporation, profit, and labor union. Each subject then wrote down what other words the stimulus word brought to mind. The results reveal the meanings of the stimulus word to two groups of people, in this case managers in the U.S. and Russia.

There are three main findings in the study. First, the associated words from two groups did not overlap much. Second, for each stimulus word, Americans generally write down more associated words than Russians do. Third, Americans tend to “look down” to specifics to find meaning, whereas Russians tend to “look up” to more general categories. For example, for the stimulus word “bank,” Americans list such secondary words as money, savings, loans, and checking. Russians list such secondary words as economy, capital and necessity. This paper will present about 9 out of 84 stimulus words that best illustrate this different way of establishing meaning.

This view of understanding in the U.S. and Europe has been found on several occasions to explain different approaches to the construction of science. The different pattern of thinking has practical as well as scientific implications.
INTRODUCTION

Multi-cultural team effectiveness is an important topic in a period of globalization and researchers are eager to explore ways to help multi-cultural teams reach project success (Matveev and Nelson, 2004). It is intriguing to know how people process information and use relevant information in problem solving or task taking. The behavior of individuals is guided by their mental maps, which includes both cognitive and emotional elements. The mental map is influenced by the environment, but it also guides what is interpreted from the environment. Interpreting is the way we make sense of the environment. Through the process of interpreting, individuals develop mental maps about the various domains in which they operate (Daft & Weick, 1984). As a result, individuals will interpret the same stimulus differently, based on their mental maps. The mental map is like eyes glasses. If one puts on blue glasses, the entire world becomes blue.

A group of people living in a similar environment (e.g. the same country) usually share ways of interpreting and have compatible mental maps. Different groups of people may have incompatible mental maps, because they live in different cultures and have different perceptions. So the same stimulus can evoke a different meaning for two groups of people. For example, people who live in an old continent may not have the same understanding as people who live along the pacific “ring of fire” of an earthquake. The degree of difference in perceptions of the same stimulus depends on the extent to which the two groups differ in their mental maps. Fewer shared mental maps leads to a larger cultural distance between the two cultures.

The way people perceive and think about an issue, object, or behavior, is controlled by the perceptual representational system (mental map), which is an inclusive worldview, composed of interdependent, representational units. These representational units connect to one another and form a web-like system. By analyzing those units, we can understand how one unit relates to another, why some units have strong connections and cluster, and how dominant a representational unit is. Linguists believe that mental maps can be analyzed through language. Language not only serves as a tool for communication, but also as a mental representation (Szalay & Maday, 1973). Several methods of verbal association have been developed to analyze individual mental representations (Kris, 1997). The word association technique used in this study is Associative Group Analysis (AGA). Subjects are given several stimulus words and associate these words with other words which come in to their minds.
Using the AGA method, we are able to understand how people from two cultures are different or similar in terms of the meaning they associate with the stimulus words. In this study, groups of Russian and American managers were asked to write down associated words for each stimulus word given by the researchers. Significant differences in styles of thinking were found between Russians and Americans. Because of their different patterns of thinking, we propose a new dimension of cultural difference—*convergers* and *divergers*—between Americans and Europeans. The difference is similar to the distinction of convergers and divergers as described by J. P. Guilford in 1956 and by Liam Huson in 1966. Convergers look down at things and feel more comfortable dealing with closed systems, while divergers look things up and feel more comfortable dealing with open systems. We conjecture that the different philosophical positions held by the two cultures are associated with their ways of thinking.

**CONVERGERS VERSUS DIVERGERS**

Umpleby (2004) argued that Europeans and Americans have different patterns of thinking that can be reflected by two mainstreams of philosophy: German idealism (and French rationalism) versus American pragmatism (and British empiricism). Americans tend to focus on what is happening in the world while Europeans emphasize what is happening in the mind. These two philosophical positions can be traced back to the philosophies of Aristotle and Plato.

The principles and rules of these philosophical positions have been incorporated into and reflect social institutions and national culture. Americans (and Britons) tend to “reason down” to social implications while Europeans tend to “reason up” to social contexts. Borrowing the terms Hudson (1966) used to describe two kinds of conceptualizers, we associate Americans with *convergers* and Europeans with *divergers*. The reason up and reason down distinction does not mean that Americans always and only reason down while Europeans only reason up. Actually, both convergent and divergent thinking are used in our daily information processing and problem solving. Nevertheless, Guilford (1956) observed that most individuals display a preference for either convergent or divergent thinking. It is an observable fact that Americans usually look for examples and implications whereas Europeans usually focus on larger contexts. For instance, if a theoretical proposition is presented to an American audience, the first question will be “how can the principle be applied in practice?” However, a European audience will tend to ask “From what philosophical position is that proposition derived?” (Cho, Ruggia & Umpleby, 2008)
From the above example, it seems that Americans and Europeans have different ways of establishing meaning. Take the perception of “strategic planning” for example. Cross cultural studies have shown that Americans (and Britons) are more short-term oriented (Michailova, 2000). They make tentative plans because they expect to learn from experience. However, continental Europeans think more thoroughly when doing strategic planning. They generate different possibilities and think about many possible implications. Once the plan is made, it is not easy to change it (Hofstede, 1984; Michailova, 2000).

Convergers and Divergers are different in several aspects. Mitroff and Blankenship (1973) referred to these two kinds of thinkers. Convergers tend to work on manageable, well-defined problems where a single “best” answer can be found. In problem solving, they converge (reason down) taking general ideas—the goals and non-specific solutions—and creating specific solutions that form an application. From Hudson’s (1966) description, convergers are good at conventional intelligence tests or other kinds of single-best-answer questions. Their way of thinking is more analytical, focusing on gathering information, identifying the familiar, applying a known set techniques, and preserving learned knowledge and skills. Instead of considering the whole picture, they are more “parts” oriented.

Divergers are able to work on vague and ill-defined problems where there are many alternatives and possibilities. Hudson (1966) observed that divergers are very “creative” and are substantially better at open-ended tests than at the usual intelligence tests because of their ability to “reason up”. Their way of thinking is more synthetic, combining two or more pre-existing elements and resulting in the formation of something new. That is why divergent thinking is often associated with “creativity (Guilford, 1956; Hudson, 1966),” With the ability to handle different alternatives and possibilities; they take a “whole system” orientation, considering larger categories rather than specific parts.

Kolb (1984) identified four learning styles according to how learners perceive and process information. The four types of learners he identified are divergers, assimilators, convergers, and accommodators. To articulate our primary concern on convergers and divergers, we only address these two types of learning. Kolb describes convergers as those who perceive the world through abstract conceptualization and process it through active experimentation. They learn by thinking and doing. They are good at manipulating abstract symbols as well as doing quantitative analysis. They are
pragmatists, concerned with what works as opposed to what is true. When encountering problems, convergers usually approach problems analytically and scientifically. They are called convergers because they can quickly converge from different ideas to a conclusion or find a single, correct answer to get things accomplished.

Diversers, in contrast, learn by absorbing information concretely and observing reflectively. They enjoy relating to people and are good at using imagination. They are observers, emphasizing understanding instead of practicality, and they are concerned with what is true or how things happen as opposed to what will work. When encountering problems, divergers view situations from different perspectives and appreciate different points of view. They perform well in situations that call for the generation of alternative ideas, such as brainstorming.

<table>
<thead>
<tr>
<th></th>
<th>Convergers</th>
<th>Diversers</th>
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<tbody>
<tr>
<td>Problem type</td>
<td>Perform better with clearly-defined problems</td>
<td>Perform better with vague, ill-defined or open-ended problems</td>
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<tr>
<td>Reasoning approach</td>
<td>Analytical; narrow down to one best answer</td>
<td>Synthetic; broaden up to many alternatives</td>
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<tr>
<td>Worldview</td>
<td>“Parts” oriented</td>
<td>The “Whole System” oriented</td>
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<td>Purpose of learning</td>
<td>Finding practical implications</td>
<td>Seeking for the truth</td>
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**ASSOCIATIVE GROUP ANALYSIS**

Associative Group Analysis (AGA) is an inferential approach to analyze people’s mental representations, focusing on subjective meanings and images to assess similarities and differences across cultures and belief systems. Culture can be regarded as a group-specific cognitive organization or worldview composed of a mosaic of elements of meanings (Szalay & Maday, 1973). Language, as a communication tool in daily life, contains culturally specific meanings for people who use it. To understand differences in psychological meaning across cultures, it is useful to analyze words in a language. The words people use reflect their thinking or feeling. Thinking, or more precisely, the cognitive process, together with feeling, guides most of human behavior. By using AGA, we are able to understand how different groups organize and integrate their perception and understanding of the world around them.
AGA assumes that verbal associations are determined to a large extent by a decoding or meaning reaction. The disposition of associations then guides the overt reaction. AGA defines the stimulus word as the unit of analysis and as the key unit in the perceptual representational system. By analyzing the free verbal associations, the vertical and horizontal structure of the belief system can be determined.

The perceptual representational system includes what people perceive and think about an issue, object, behavior, etc. It is an inclusive worldview, composed of interdependent, representational units. There are three characteristics central to the perceptual-representational system (Kelly and Rev, 1985).

- **Hierarchy of priorities.** Among the representational units, some are more salient or dominant than others. For example, God is more salient to some groups than to other groups.
- **Relatedness or affinity.** Some units cluster into a larger category, sharing similar meanings and thus increasing the strength of selected views and beliefs. These clusters identify the culture, beliefs, and assumptions that can help us predict areas of motivation, vulnerability, need and concern within the group.
- **Affect loading.** The representational units are tinted with emotions, feelings and evaluations. (e.g., Marijuana may convey negative images like “hell” for some groups of people where its usage is illegal, but neutral meanings for others.)

From the above three characteristics, the AGA method focuses on three main categories of information (Szalay and Maday, 1973):

1. The meaning composition of selected themes.
2. The dominance of themes (i.e., the relative positions in a vertical dimension of priorities).
3. The relationship among themes and among their natural clusters (i.e., the horizontal patterns of affinities)

**METHODS**

**Sample**

The data for this study was collected in 1990 from sixteen Russian managers and twenty four American managers. The group of Russian managers was studying at The George Washington University under a program supported by a Russian association
for scientists and engineers.

The study used purposive sampling. AGA is not used as a survey instrument. Its main goal is to assess people’s subjective representation of the universe as conveyed by their priorities, perceptions, and meanings. Therefore, the AGA approach is closer to anthropological strategies that intensively assess culturally representative small groups rather than to those that use carefully organized large samples. Szalay and Kelly (1982) indicate that if the group is quite heterogeneous with considerable variation among subjects, a larger number of subjects is needed. In this study, respondents are managers in business corporations, and our interest is to understand the perceptions of these two groups of managers about business. Therefore we assume that the group heterogeneity is small.

Procedure

Following the AGA data collection procedure, each respondent was presented with a group of 60 cards showing stimulus words chosen by the researchers. Each card listed one stimulus word (in respondents’ native language) on multiple lines and included space for writing down respondents’ free associations to the stimulus word. Cards were given to respondents in a random order and respondents were instructed to give any response that occurred to them in the context of the stimulus word. American respondents were presented with words in English, whereas Russian respondents were shown the Russian equivalent. Two bilingual Russian native speakers independently confirmed translation of stimulus words from English to Russian.

The respondents considered one word at a time for one minute each. They were told that they have one minute to respond with whatever they associate with the stimulus. Each stimulus word then generated two lists of responses, a list for each of the two groups. Scores were assigned to these associated words according to their frequency and rank in the individual response sequences. The weights were assigned to each response according to the proximity of the response to the stimulus word, in a consecutive order of 6, 5, 4, 3, 3, 3, 2, 2, 1, 1…… (Szalay & Maday, 1973). By aggregating the scores of the associations reported by all participants within each national group, the researchers obtained two scored response lists of associations for each stimulus word, one in English and one in Russian. The Russian words were then translated into English independently by two bilingual Russian native speakers. The group responses contain a rich source of culturally-specific information, which is presented by using semantographs, as shown in Figures 1 to 9. Since there were fewer
Russian respondents than American respondents, the Russian scores were adjusted in making comparisons. Russian scores were multiplied by 24/16, or 3/2. Each semantograph shows associated words and their scores (answers from both Russians and Americans) for a single stimulus word.

**DATA ANALYSIS OF CULTURAL DIFFERENCE**

There are three main interesting results from the data analysis. First, compared to other studies using the AGA method (Linowes, Mroczkowski, Uchida, and Komatsu, 2000; Szalay & Maday, 1973), the meanings of the stimulus words for the two groups overlapped very little. In other words, the two groups wrote down different words. For example, for the stimulus word “Participation,” there is only one associated word “work” in common out of Americans’ 18 words and Russians’ 10 words (see Figure 5). A similar situation also appears with the stimulus word “Self.” Only one associated word “me” is in common, out of Americans’ 19 words and Russians’ 9 words (see Figure 7). Usually, two groups of people write down mostly the same words but in different order (Szalay & Maday, 1973). The different order causes different weighting. In our study, the use of different words denotes a high cultural distance between the two groups. The large cultural difference can probably be attributed to the ideologies of the Cold War as well as usual cultural differences.

The second interesting result is that Americans write down more associative words for each stimulus word than Russians. There are two possible explanations for this result. First, there are more parts than there are more wholes. Second, there are more words with English language than in other languages ([http://www.englishonline.org.cn/en/learners/listening/trend-uk/new-words](http://www.englishonline.org.cn/en/learners/listening/trend-uk/new-words)).

The third main result is that Americans wrote down more specific words while Russians wrote down more general words. This corresponds to our idea that convergers are prone to “reason down” while divergers are prone to “reason up.” For example, Figure 1 shows that in responding to the stimulus word “Corporation,” American managers associated it with “buyer/buyer/shopper/shopping/consumer (71), sales (33), money (30), and client (30).” Russian managers associated “Corporation” with “firm/business (30), association/union (27), competition (19.5), economics (15), and work (15).” On the one hand, American managers perceive that the practical purposes of a corporation are to provide products or services to customers, do commercial sales, and generate profits. On the other hand, Russian managers look beyond a corporation to its connections with a union, with other corporations, and
with the overall economy.

Figure 2 indicates that American managers associated “Bank” with “saving/deposit (59), loans/lender (56), checking/checks (24), and security/safety (20)” while Russian managers associated “Bank” with “interest/percentages (37.5), credit (27), economy (19.5), and capital (18).” The results again show that American managers look at the specific implication of bank, regarding it as a place that they can save money and finance and secure their properties. Russian managers associate bank with larger categories, such as economy and capital.
Figure 1. Semantograph of the stimulus word “Corporation.”
Figure 2. Semantograph of the stimulus word “Bank.”
For the stimulus word “Profit” (in Figure 3), American managers wrote down “money/dollars (87), net/gain/earnings/gross/margin (48), business (27), and success (26).” Russian managers wrote down “market (21), competition (18), satisfaction (18), and economy (16.5).” For the stimulus word “Labor Union (Figure 4),” the top 4 words from American managers are “wages/money (45), workers (33), power (32), and corrupt/Mafia/crime (28);” words from Russian managers are “society (21), fees (16.5), passes (13.5), defense (12), and whole (12).” Figure 5 exhibits that American managers associate the word ‘Participation’ with “group/team (68), involvement/included (31), and cooperative/together (19).” Russian managers associate “Participation” with “responsibility (55.5), collective (13.5), competence (13.5), and discussion (13.5).” Rather than just equating participation as a group of people who team up and cooperate with one another, Russians associate “Participation” with a sense of responsibility and believe that participation builds up collective competence.

Figure 6 shows that American managers associate the word “Politeness” with “manners (44), kind/friendly (29), caring (27), and nice (23).” Russian managers associate it with “culture (67.5), education/upbringing (30), parents (13.5), and order (12).” From this semantograph, we can infer that Americans and Russians use a different approach to form their understanding of “politeness.” Americans narrow politeness down to personal traits or specific behaviors while Russians broaden it to how and where politeness is formed.

Whereas Americans are more concerned with consequences, Russians are more concerned with origins. From the above semantographs, American managers’ associations reveal that they are more “parts” oriented, focusing on specifics. On the contrary, Russian managers’ associations reveal that they are more “whole system” oriented, trying to look up to larger categories and relate those stimulus words to broader social contexts.

Some word associations from Russian managers also support traits of divergers in that they are more related to others. For example, Figure 7 indicates that in responding to “Self,” Russian managers associate it with “work (19.5), society (18), family (16.5), freedom (13.5), and independence (13.5).” American managers wrote down “me/I (84), individual/person (57), and esteem/respect (32)” Results from the two groups disclose the distinction between social self and individual self: Russians identify themselves as one part of a family, a company, or even a society; Americans identify themselves as individuals, less related to others.
Figure 3. Semantograph of the stimulus word “Profit.”
Figure 4. Semantograph of the stimulus term ‘Labor Union.’
Figure 5. Semantograph of the stimulus word “Participation.”
Figure 6. Semantograph of the stimulus word “Politeness.”
Figure 7. Semantograph of the stimulus word “Self.”
Figure 8 shows respondents’ free associations to “Happiness.” Americans wrote down “fun (27), love (22), smile (12)” whereas Russians wrote down “family (49.5), children (33), work (24), and satisfaction (15).” It seems like Americans pay more attention to elements or signs. For Russians, they not only relate happiness to others (their children, family, etc.) but also ponder where sources of happiness come from.

Figure 9 indicates that American managers associate “Innovation” with “new (52), change/different (42), creative/creativity/invention (41), and helpful/needed/good/better/more (34).” Russian managers came out with quite different associated words such as “problems/difficulties (30) progress (28.5), and resistance (10.5).” It can be inferred that Americans hold a single, positive attitude toward innovation. They believe that innovation is good and can solve various social problems. However, Russians have views as described in the characteristics of divergers. They tend to look at some thing from different perspectives. They recognized the progress that innovations might bring to society, but they also note that it might cause problems, difficulties, and resistance within society.
Figure 8. Semantograph of the stimulus word “Happiness.”
Figure 9. Semantograph of the stimulus word “Innovation.”
THREE EXAMPLES OF THE DISTINCTION

Three examples can be cited of how the distinction between convergers and divergers arises in cross-cultural communication.

The first example occurred when Stuart Umpleby visited the Institute for System Studies in Moscow in 1994. When he arrived, he was invited to lunch by his colleagues. Over lunch he described the AGA study described in this paper. His Russian colleagues found the results interesting. They then told him that in the afternoon there would be a panel discussion of the internet. They asked him if he would be willing to describe how the internet was being used in the U.S. He agreed. The first presentation was a technical description of the hardware and software of the internet. The second presentation was by a sociologist. He began by holding his hands above his head to indicate the larger society. Then, as he described possible implications of the internet, he indicated different aspects of the social matrix, again motioning with his hands above his head. Umpleby’s presentation was the third. As he described how the internet was being used in business, government, education, and journalism, he looked down at his hand and ticked off on his fingers the different realms of use of the internet. As Umpleby was talking, Nikolai Lapin, who had been present at lunch and who was chairing the panel, began smiling. He asked Umpleby to describe once again the research reported in this paper. As he did so, the other participants in the room also smiled. Apparently they believed that the panel presentations were another illustration of the converger – diverger distinction.

The second example occurred during the negotiations preceding the recent invasion of Iraq. The United States tried to persuade the European powers to join the invasion to remove Saddam Hussein and find the weapons of mass destruction. Apparently the Europeans asked why invading Iraq was a good idea. The U.S. replied that the brutal dictator would be removed, the weapons of mass destruction would be found and removed, the flow of oil would be resumed, and a democratic state would be established in the Middle East. Apparently the Europeans did not find these arguments persuasive. Looked at from the point of view of convergers and divergers, we could say that the U.S. was giving specific consequences whereas the Europeans were wanting a larger context answer. That is, we could rephrase the European question as, “Given what we know about the history of the Middle East and previous interventions in the region by Western powers, how does it make sense for Europe and the U.S. to once again intervene in the region?” Hence, the failure to reach agreement on the advisability of the invasion of Iraq may have been in part a result of cultural
miscommunication which can be illuminated by the converger - diverger distinction.

The third example is a story of a presentation by two American management professors at a conference in Prague, Czech Republic. The Americans thought they had made a good presentation and then asked for questions. At first there was silence. The audience seemed puzzled. Finally, a Czech scientist raised his hand and asked, “Well, that might work in practice, but does it work in theory?” The American authors laughed. They had never heard that question before. In the U.S. a common question is, “That may work in theory, but does it work in practice?”

CONCLUSION

Understanding the cultural differences which occur due to different ways of establishing meaning may provide a fruitful resource to deal with problems which arise in multicultural team. The distinction between convergers and divergers is not currently common in textbooks on cross-cultural management. However, the authors have found that this difference occurs fairly frequently in discussions between Americans and Europeans. As mentioned before, neither convergent thinking nor divergent thinking can be solely used to solve problems. For example, during the product design phase, the team needs divergent thinking to generate many possibilities and creativity. Once the team decides to act, the team must distill one feasible plan from many. Convergent thinking is needed at this stage.

The convergers - diversers distinction can also be applied to shed some light on solving social problems. For example, in reaction to the current economic recession, governments are spending more money to boost the economy and enacting more regulation on the bailed-out companies and financial institutions. These can be regarded as actions after convergent thinking. People identify where the problems came from and do something to fix the problems. However, the convergers/divergers dimension offers us an alternative way of thinking. Instead of narrowing down problems and fixing them, we can think of more possibilities about the fundamental causes of these problems. Perhaps the assumptions underlying economic theory need to be revised. Divergent thinking suggests reflecting on how to change economic assumptions.
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BIOGRAPHIES

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