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Decision Making in Individualistic and Collectivistic Cultures

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Abstract

How do cultural values influence individuals' decision making? One would expect answers to this question either from cognitive psychology or from cross-cultural psychology. Cognitive theories on decision making, however, rarely consider the factor of culture, and research in cross-cultural psychology deals only to a small extent with decision making. Therefore the study of culture and decision making is a relatively new and unexplored field. In this paper normative and descriptive approaches to decision making are discussed and three cross-cultural studies on decision making in individualistic and collectivist cultures using different methodologies are described. The results are integrated into a model that can be helpful to derive specific hypotheses for further studies in this field.

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Decision Making According to Normative Models and Descriptive Models

Decision making is the selection between several options. We make many decisions a day (e.g., when we go to the grocery store and choose a bottle of milk, when we select a TV channel, when we decide what to prepare and eat for breakfast, whether we buy a new DVD-player or save the money for our next holiday trip). Most of our decisions might occur unconsciously, but often we have to consciously decide among several options.

Imagine a student, called John, who finishes high school. John has to decide whether to study psychology, accounting or art. In Figure 1, psychology is choice 1, accounting is choice 2 and art is choice 3. Which subject will the student choose?

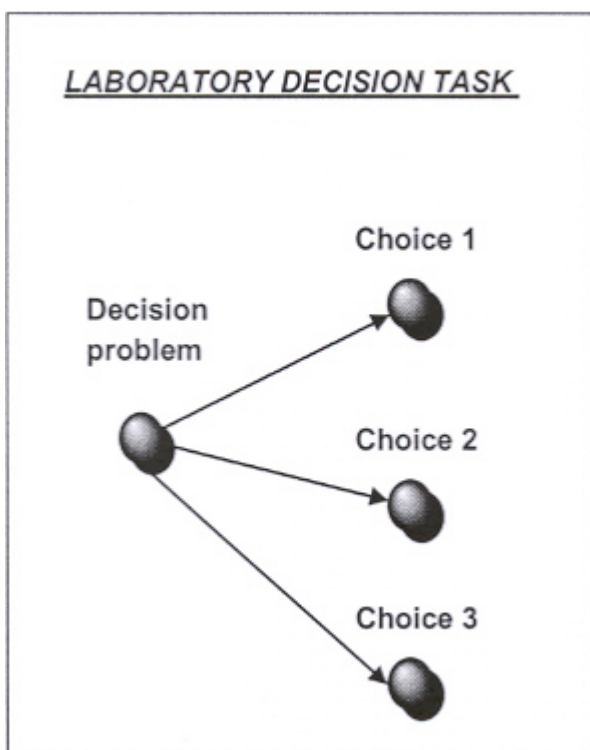


Figure 1: Abstract schema of a simple decision task.

Using normative models of decision making, we try to explain which is the best choice from among several choices. In effort to explain the decision making process, von Neumann and Morgenstern (1944) utilized a normative model that they called the expected utility model. According to this model, John will make the decision that maximizes an expected utility. The expected utility of an alternative is the sum of the product of its probabilities of success and its utilities as demonstrated in the following formula:

$$\textbf{Expected utility} = (\textbf{probability of a given outcome}) \times (\textbf{utility of the outcome})$$

Although this formula may look difficult, it is easy to understand with a concrete, simplified example. According to the formula, the student evaluates each option: psychology, accounting, and art. John estimates the probability of success in each subject. Perhaps John thinks that the success rate is highest in art (art .80, psychology .70, and accounting .50). Then the personal value of success (i.e., the utility) will be evaluated. Let's assume John's favorite subject is psychology, followed by art and then accounting (psychology 20, art 15, and accounting 10). Finally, John would choose the alternative with the highest expected utility, in our case psychology (psychology 14, accounting 5, and art 12).

Does John really make a decision following the rational of expected utility theory? First of all, the decision problem is more complex. As Figure 2 shows, the number of courses is not limited to two or three, but a lot more (e.g., languages, law, medicine, education, computer science, business administration, communication). First, decision making involves not only the choice of one alternative, but is related to the generation of possibly relevant alternatives.

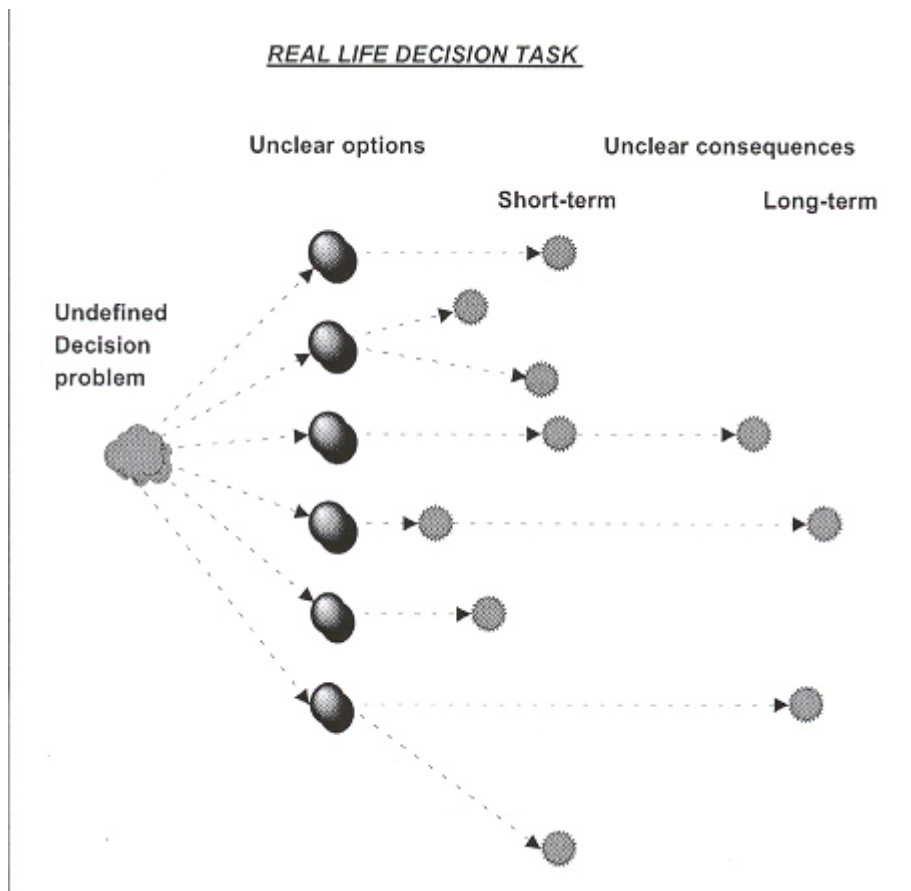


Figure 2: Abstract schema of a complex life decision problem.

Second, what is the success criterion? Is the success criterion only to get a good degree? Isn't the reputation of the university also important? Is a bad degree from Harvard better than a good degree from a not so known university? Another success criterion might be the chance to get a well-paid job after finishing college.

Third, how does John assign numeric values to the probabilities and utilities of each alternative? Why does the utility of psychology get a value of 20 and not of 17 or 23? If psychology would get the value 17 then the expected utility would be $.70 * 17 = 11.9$. Then art would have the higher expected utility with 12 and would be the best choice. It does not seem easy to assign a specific value for each probability and utility. The artificiality of such reasoning is clear in the example described above. Real-life is more complex since it is never possible to evaluate every option much less to evaluate it exhaustively. Furthermore, possible short-term and long-term consequences are hard to predict, making it difficult to assign such numeric values.

Fourth in real life, choices with the highest expected value often are not taken. Other aspects might lead John to choose a specific course: "Are my friends also studying the same course? What does my best friend suggest? I know one teacher who is great, so I will study what he teaches."

A fifth criticism of normative models is that they explain which of several given alternatives is the best choice, but they do not deal with the process of decision. Descriptive theories of decision making deal with this topic and describe the process of decision making. John would probably not sit down and say: "Now I will choose what I want to study." He might think about this problem for several months, searching for information that might be helpful for the decision (e.g., talking with people). Thus, many descriptive decision making models (see Lipshitz, 1993) describe the decision-making process not as a single act but as a process that is embedded in other cognitive processes. John first has to recognize that choosing a subject is a problem. If he does not worry about it, then he will not deal with this problem. If John views the selection of a subject as a problem, he will think about possible effects such as "If I study art, I might have fun, but it will be difficult for me to earn money and I do not want always to worry about my finances." Suppose that John already thought about his goals -- earning money and having fun. He prioritized the goals and mentioned that earning money is more important to him. John might ask his parents and friends about their experiences at college and at work to get a broader view and a better understanding of the problem. Step-by-step he will develop a mental model of possible courses, advantages, disadvantages, consequences, etc. With this knowledge, he will develop some plans about what to study. He will evaluate the different alternatives, compare them with each other, reject bad alternatives, and finally make a decision about what to study -- probably even up to the day he has to register for his first class. After some weeks John hopefully thinks: "Yes, that is the right choice!" All these steps of decision making are summarized in the following list:

1. Recognize that a decision problem exists
2. Investigate the causes and possible effects of the problem
3. Define and prioritize goals

4. Gather relevant and necessary information
5. Evaluate and organize the information into a mental model
6. Plan alternative solutions
7. Anticipate consequences of possible decisions
8. Select a reference alternative (preliminary choice) as an anchor to compare the other alternatives with
9. Select and reject bad alternatives
10. Select the best solution and make a decision
11. Inform others of decision and rationale
12. Evaluate outcome

Culture: Individualism-Collectivism and Power-Distance

Imagine that John lives in the United States, Roberto lives in Venezuela, Frida in Germany and Sheena in India. Imagine all are about the age of 16 or 17 and all have a financial background in which they can afford college. All have to decide what course to take. Do you think that their decision making will be similar or do you think it will be different because of their cultural background?

The cultural background of John, Roberto, Frida and Sheena is different in many ways: their plans for their future; their experiences; their values; their family size; the role and influence of mother, father, siblings and friends on their decision etc.;

Culture is a very heterogeneous term and a generally accepted definition does not exist. Depending on the specific area of interest of the researcher he or she focuses on a specific aspect of culture. In this paper, the focus will lie on value orientations in different cultures and their relation to decision making. When you hear the word value you might think of the example: "Do not kill! Or: Make a lot of money!" A value can be either terminal (Rokeach, 1973), saying what we have to do. In this case it is similar to a goal: "Do not kill!" A value can be also instrumental telling **how** we should do something, for example: "Think a lot before you make a decision! Or: Talk to others before you decide!"

In cross-cultural psychology, the most popular and widely analyzed dimension of cultural values is individualism and collectivism (e.g., Hofstede, 2000; Kim, Triandis, Kagitcibasi, Choi, & Yoon, 1994). Individualistic cultures are defined by detachment from relationships and community. The individual views himself or herself as relatively independent from others. In contrast, collectivist cultures stress the importance of relationships, roles and status within the social system. Individualism-collectivism is a very broad dimension used to differentiate cultures. In recent years, different aspects of individualism and collectivism have been treated more specifically (Singelis, Triandis, Bhawuk, & Gelfand, 1995; Triandis, Chen, & Chan, 1998).

Individualistic values and collectivist values influence individuals' decision making in three ways. These values can influence the perception of the problem, the generation of strategies and alternatives, and the selection of one alternative (see Figure 3).

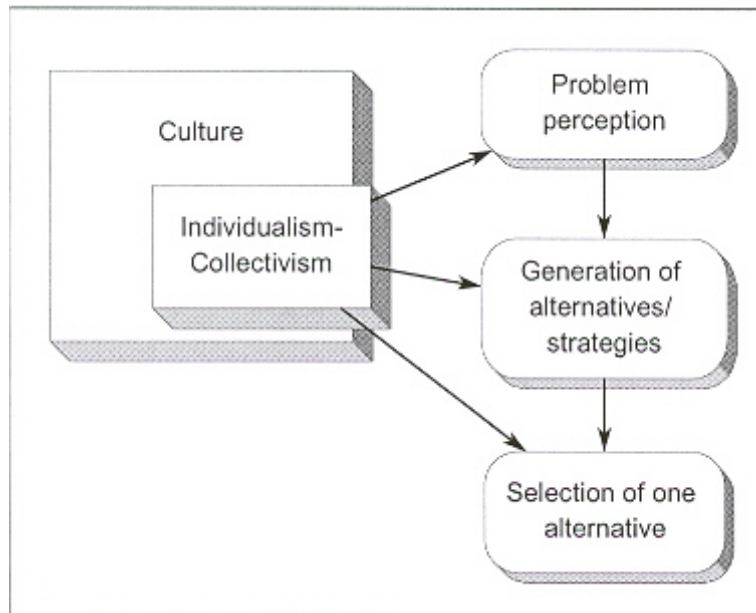


Figure 3: Cultural influences on decision making

The decision maker perceives and assesses critical aspects of a problem. Cultural expectations and values are represented in the individual's mind and may act as guiding principles for the selection of specific dynamic decision-making strategies. Values tell us what broad decision-making strategy we should follow, and why we should follow it.

According to several cross-cultural studies on individualism and collectivism, the United States and Germany are countries with more individualistic value orientations and Venezuela and India are countries with predominantly collectivist value orientations. Thus using an oversimplified explanation, John and Frida (who live in the United States and Germany) will focus on the task itself and Roberto and Sheena (who live in Venezuela and India) will rely strongly on the opinions of their family and friends. Cultural values will also influence the generation and selection of specific goals and decision-making strategies to solve the problem. Roberto and Sheena might think: "Deal with the social aspects of the problem! Proceed carefully and involve others." John and Frida, on the other hand, might think: "Focus on the task! Quickly find a good solution!"

The success of their decision making depends on what is appropriate and expected in their cultural environments. These expectations might be quite different. If Sheena does not talk to her parents about the problem and she tells her father, that she wants to study art, her father will be very surprised and he might get angry with her. If John does the same thing, his parent might not find this strange at all. Culture-specific expectations and values are transmitted from generation to generation and indicate which decision-making strategies are good or effective and which are not appropriate.

Individualism-Collectivism and Decision Making: Some Empirical Results

In the following part, three exemplary studies on decision making in individualistic and collectivist cultures are presented. These studies highlight different methodologies that can be used to study culture and decision making.

Dealing with Conflicts (Ohbuchi, Fukushima, & Tedeschi, 1999)

Ohbuchi, Fukushima, and Tedeschi (1999) studied the influence of cultural values on how people make decisions. They asked American (more individualistic) and Japanese (more collectivist) students to recall a conflict experience and to describe it. You might want to take a minute to think of a possible conflict that you faced recently. When recalling this situation, remember what you did and what you wanted to achieve. This is what the participants did in this study. Participants rated the episode on several scales measuring for example goals and tactics. The authors differentiate four major tactics, each one consisting of several sub-tactics: conciliation, assertion, third-party intervention, and avoidance. A conciliation-tactic is defined as the consolidation of one's and the other's goals or to indirectly communicate one's expectations. Assertion is defined as the act of strongly asserting one's request. Third-party intervention is defined as an attempt to seek help or advice and avoidance is seen as a passive tactic in order to avoid confrontation. Conciliation and assertion are direct tactics to deal with conflicts. Third-party intervention and avoidance are indirect strategies. Before we discuss the results, think back to your conflict: Which tactic best describes your procedure? What was your goal in this situation?

Results show that the individualistic American students prefer assertive tactics and the collectivist Japanese students favor avoidance tactics. The two groups also differed in regard to their main goals in the conflict situation. The American students were oriented towards achieving justice, whereas the Japanese students were more concerned about the relationships with others.

While the design and results of this study are very interesting and stimulating, several questions should be considered. Participants described an experienced conflict situation and rated their goals and tactics on given scales. To avoid socially desirable response tendencies in prefabricated scales, it would have been better to use a free answer response format -- simply asking: "What were your goals? What did you do?" Second, were the described conflicts comparable? Is it possible to compare ratings on tactics and goals related to a big variety of participants' described conflict situations? Maybe goals and tactics are related to the specific demands of specific conflict situations.

Self-reported decision-making style and confidence (Mann, Radford, Burnett, Ford, Bond, Leung, Nakamura, Vaughan, & Yang, 1998)

The authors used a questionnaire to measure decision-making style and confidence. They asked students in three western, individualistic countries (USA, Australia, and New Zealand) and in three East Asian, collectivist cultures (Japan, Hong Kong, and Taiwan) for

their ratings. Examples of the items of the questionnaire are "I think I am a good decision maker", "I like to consider all of the alternatives", "I avoid making decisions", "Even after I have made a decision I delay acting upon it" or "I feel as if I am under tremendous time pressure when making decisions". Re-read these four questionnaire items and rate yourself on a scale from 0 to 12 for each item. For which item did you have the highest rating (i.e., close to 12)? The questionnaire measures confidence in one's own decision-making ability (e.g., "I think I am a good decision maker"), and decision-making coping patterns: vigilance defined as careful decision making (e.g., "I like to consider all of the alternatives"), buck-passing as avoiding to make decisions (e.g., "I avoid making decisions"), and to shift responsibility to someone else, procrastination as escaping (e.g., "Even after I have made a decision I delay acting upon it"), and hypervigilance, a panicky decision-making style (e.g., "I feel as if I am under tremendous time pressure when making decisions").

Results show that students in the individualistic Western countries were more confident of their decision-making ability than students in the collectivist eastern Asian countries. Asian students score higher on the last three dimensions (buck-passing, avoiding, and hypervigilance) than Western students. An interesting result of this study was not the difference but the similarity in the ratings of participants in all six countries. Interestingly, no cross-cultural differences were found in vigilance. In addition, in all countries the relationship between decision-making self-esteem was negatively correlated with maladaptive coping patterns (buck-passing, avoiding, and hypervigilance) and positively related to vigilance. This means that if you think you are a bad decision-maker, you are more likely to follow maladaptive coping patterns.

A strength of this study is that it measures decision-making in six different cultures and that it shows the relationship between culture, self-esteem and decision-making strategies. However, in reading the items, someone might be tempted to say, "It depends. I follow different strategies in different situations, for example when I go shopping or when I plan my holidays. When I go shopping, I don't compare the prices of ten possible products before I buy one. I make more impulsive and non-vigilant decisions. But when I plan my holiday, I follow more vigilant strategies."

Another critical point might be social desirability, as the authors mention. In many Asian cultures, it is not common to brag about oneself or one's decision-making. A third critique refers to the measure of decision making. The data reflect how one thinks about his or her decision making. Often self-descriptions of psychological phenomena do not correspond with the actual behavior. Brehmer (2000) notes that decision-making research has diverted psychologists' attention away from what is important (i.e., studying what people really do when confronted with decision problems).

Manufacturing Cloths, Leading a Business Company and Making Decisions (Güss, Strohschneider, & Halcour, 2000)

The third study analyzes what people do when they are confronted with a dynamic situation. Students of business administration in India (more collectivist) and Germany

(more individualistic) participated in this study. They had to imagine that they were the director of a company that produces textiles in Kuala Lumpur, Malaysia (an equally unknown place for most of the Indian and German students). Take a minute and imagine this situation: You have a distant uncle in Kuala Lumpur who passed away. According to his last will, the whole company shall be given to you. You have the chance to go there and manage this company. Isn't this a fascinating adventure? What would you do? What would you like to know? What would be your goals?

This company, called Manutex, with its departments was simulated on the computer. Such computer simulations, also called microworlds, are dynamic tasks that require a series of interdependent decisions by the decision-maker (Brehmer & Dörner, 1993). They allow a rigorous experimental approach simulating decision problems that have similar characteristics to complex life problems (Putz-Osterloh, 1993). The data allow the comparison not only of the outcome of the decision but also of the process of dynamic decision-making. In this Manutex study, decision-making behavior, errors, and success are measured (Dörner, & Schaub, 1994). Examples for general decision-making behavior are how long the participant takes to complete the first three months, the number of decisions and questions and the intensity of marketing and production decisions. For example, does the participant produce 50 or 500 trousers and spend \$10.000 or \$50.000 for the advertisement? Tactical errors are incoherent information collection or lack of effect control. Incoherent information collection means that participants collect the same piece of information repeatedly in a short amount of time; lack of effect control means that participants plan actions implement them, but do not check the effects. Successful decision-making results in high total property, high salaries, and in a small number of alarm messages. The program shows an alarm message if, for example, the machines in the production area can not work because of lack of diesel. A low number of alarms indicates good decision making.

Table 1 shows differences in the means and the standard deviations in the German and the Indian group. A high standard deviation indicated that the members of the group behave quite differently. A low standard deviation indicated a more homogeneous behavior in the group. The German group showed more heterogeneous behaviors, but this point is not discussed in this paper. In the Manutex game, no differences were found in the strategic and tactical errors committed by the Indian and German students (Table 1, 2a-c). Also in the general decision-making behavior (Table 1, 1a-e), we did not find significant differences (exception: number of questions). These results were surprising, but could be due to the fact that participants in both countries were students of business administration at modern institutions who were quite familiar with this kind of economic-management problem. However, an important cross-cultural difference was found: The German participants were more successful -- they had more total property after the 20 years (Table 1, 3a).

Table 1
Means and Standard Deviations of Decision Making Variables in Indian Sample (n = 25)
and German sample (n = 25)

Dependent variable:	Indian Sample		German sample	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Absolute frequencies:				
1a: Time in minutes, months 1-3	35.10	17.05	41.79	19.40
1b: Number of decisions	136.00	52.79	173.28	60.67
1c: Number of questions *	149.76	38.77	244.64	89.79
1d: Intensity Marketing	18559.45	16287.61	22794.99	26393.68
1e: Intensity Production	31008.76	24429.12	50200.61	71939.45
2a: Incoherent information collection +	9.20	5.77	27.44	22.74
2b: Insufficient analysis of dependencies	2.28	1.28	1.84	1.46
2c: Lack of effect control	6.84	5.74	6.60	5.94
3a: Total property (month 18) in 1000 M\$*	1582.0	1144.3	2591.0	1930.8
3b: Number of employees (month 18) +	37.60	8.98	49.54	30.70
3c: Average salary (month 18) in M\$	2428.49	275.85	2506.55	605.49
3d: Number of alarm messages	8.56	5.14	7.00	5.82

As German and Indian participants show no differences in decision-making errors, the difference in success can not be explained by committing fewer or more errors. Why were the German participants more successful? Figure 4 sheds light on this question. German participants produced and sold more products than the Indian participants. But Figure 4 also shows that Indian participants slightly increased production numbers and managed better to coordinate production numbers and sales than the German participants. The German decision-making strategy could be described as expansive-risky, whereas the Indian strategy was a defensive-incremental one. This difference in approach between Indian and German students could be explained by the different markets in both countries. In a relatively unstable market, such as that in India, one must always be prepared for minor frictions. Therefore, it makes sense to proceed more carefully in India compared to dealing with a more stable and transparent market such as that in Germany.

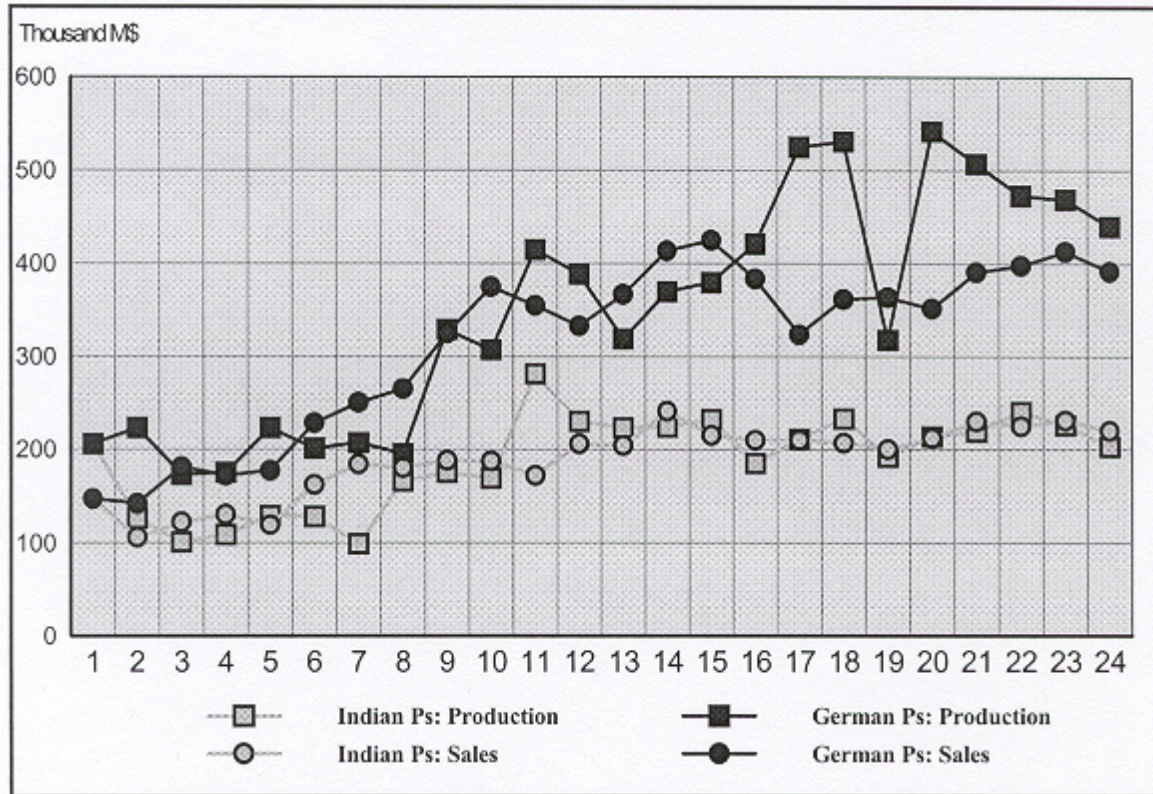


Figure 4: Development of the production and sales figures: Mean values of 24 months

Another interesting question in decision making is related to the adaptivity of decisions. Do people adjust their decision making to the different demands of situations? Do we find decision-making styles that show the same decision-making pattern in different situations or do we find flexible, situation dependent decision making? Of course this study can not answer this question thoroughly, but some data show interesting differences between Indian and German students. The numbers of questions and the numbers of decisions of the participants in certain periods of the game were compared. A high correlation of decisions and questions would indicate a similar decision-making procedure, a low correlation would show a change in the decision-making behavior.

As shown in Table 2, overall high correlations were found in the German group. This indicates a relatively stable decision-making behavior. In the Indian group, however, the correlations were mostly not significant, indicating a flexible decision-making approach. This result can be attributed to the collectivist and individualistic background of the participants. Persons with individualistic values view themselves as relatively independent and responsible for their decisions. Persons with collectivist values see themselves as a part of a group and are more sensitive to social consequences of their decisions. Therefore, it is more likely that they want to take decisions in congruence with the expectations of the others and that they follow a more cautious approach always adjusting to the current demands of the situation.

Table 2

Stability of Number of Questions and Number of Decisions over Time: Autocorrelations for Six Parts of the Simulation Process (Indian Sample: $n = 25$; German Sample: $n = 25$)

Variable	Participants	Month 1-3 / Month 4-6	Month 7-9 / Month 10-12	Month 13-15 / Month 16-18	Month 1-3 / Month 4-6	Month 1-3 / Month 4-6
Number of decisions:	Indian part.	+.491 *	+.620 **	+.266	-.113	+.067
	German part.	+.306	+.435 *	+.587 **	+.579 **	+.536 **
Number of questions:	Indian part.	+.059	+.266	-.127	+.251	+.346 +
	German part.	+.621 **	+.658 **	+.697 **	+.614 **	+.659 **

** $p < .01$; * $p < .05$; + $p < .10$

The advantage of studying decision making with computer simulations is that people have to really make decisions. They do not describe what they would do, but they actually do something. Furthermore, they see the results of their decisions and take further decisions. Thus decision making is seen as a process and not as a static one-time activity. However, this study was only conducted in India and Germany. Other countries should be included into such a comparison. Second, India is not a "typical" collectivist country. It is often described as both an individualistic and collectivist culture (Sinha, & Tripathi, 1994).

Three studies were discussed using different methodologies to study decision-making in individualistic and collectivist cultures. In the first study, American and Japanese students were asked to think of a conflict situation and to give ratings to certain questions on tactics and goals (Ohbuchi, Fukushima, & Tedeschi, 1999). In the second study students from six countries answered a questionnaire on their decision-making style and confidence (Mann, Radford, Burnett, Ford, Bond, Leung, Nakamura, Vaughan, & Yang, 1998). In the third study, German and Indian students were dealing with a computer simulated game and took the role of a business director. Each study shows interesting differences between decision-makers in individualistic and collectivist cultures. To summarize, these and many other studies show that individualistic values are related to active, and assertive decisions-making strategies, whereas collectivist values are related to and more passive, cautious, collaborative, and avoiding strategies.

Integration: A Model on Decision-Making in Individualistic and Collectivist Cultures

How do individualistic and collectivist value orientations influence the decision making in detail? Most of the studies on culture and decision making focus on simple choice tasks (Weber & Hsee, 2000). For a long time, the field has merely described cross-national differences. What is missing are theoretical models from which specific hypotheses can be derived and tested. The following model (see Figure 5) is an attempt to describe such theoretical assumptions. According to this model, people with individualistic value orientations try to prevent friction by controlling the situation through deep exploration and information gathering (Strohschneider & Güss, 1998). They are achievement-oriented (Triandis, 1994) and willing to take risks, resulting in an expansive-decisive strategy. Cross-cultural comparisons showed that people in individualistic cultures prefer active, assertive and confrontational strategies for resolving conflicts (Ohbuchi, Fukushima, & Tedeschi, 1999), have more confidence in their personal decisions (Mann, Radford, Burnett, Ford, Bond, Leung, Nakamura, Vaughan, & Yang, 1998) and might, therefore, be more decisive and risky than people in collectivist cultures in their decisions. People with collectivist values pay much more attention to the social aspects of problems (Triandis, 1994) and search especially context information in uncertain and complex situations (Strohschneider & Güss, 1999). They are sensitive to social consequences of their actions and follow a more defensive-incremental strategy (Güss, Strohschneider, & Halcour, 2000). They value security, are more risk-avoiding and follow passive, collaborative and avoiding strategies (Ohbuchi et al., 1999).

The model also includes the differentiation of the individualism-collectivism dimension in vertical and horizontal planes. A horizontal value orientation, which favors an egalitarian social structure, stresses the individual's responsibility for his or her own actions and favors individual initiative, leading to an active-innovative, and future-oriented strategy. However, a vertical value orientation favoring a hierarchical social structure stresses the limitations of the individual's responsibility and initiative, thus resulting in more reactive and adaptive decision-making strategies. In a recent study (Dollinger, & Danis, 1998), U.S. students showed preference for an innovator style (doing things differently) and Chinese students for an adaptor style (doing things better). The vertical-horizontal dimension intensifies or weakens the strategies resulting from individualistic or collectivist value orientations. A person with individualistic values, for example, favors an expansive-decisive strategy. If he or she has also horizontal values, his or her strategy might become more active-expansive-decisive. If he or she has vertical values, his or her strategy might become less expansive-decisive. A person with vertical-collectivist values might follow reactive-defensive strategies, leading in the extreme to avoidance or refusal to deal with the problem. In fact, Asian students scored higher on avoidant and hypervigilant decision-making styles than students from Western countries (Brew, Hesketh, & Taylor, 2001; Mann et al., 1998).

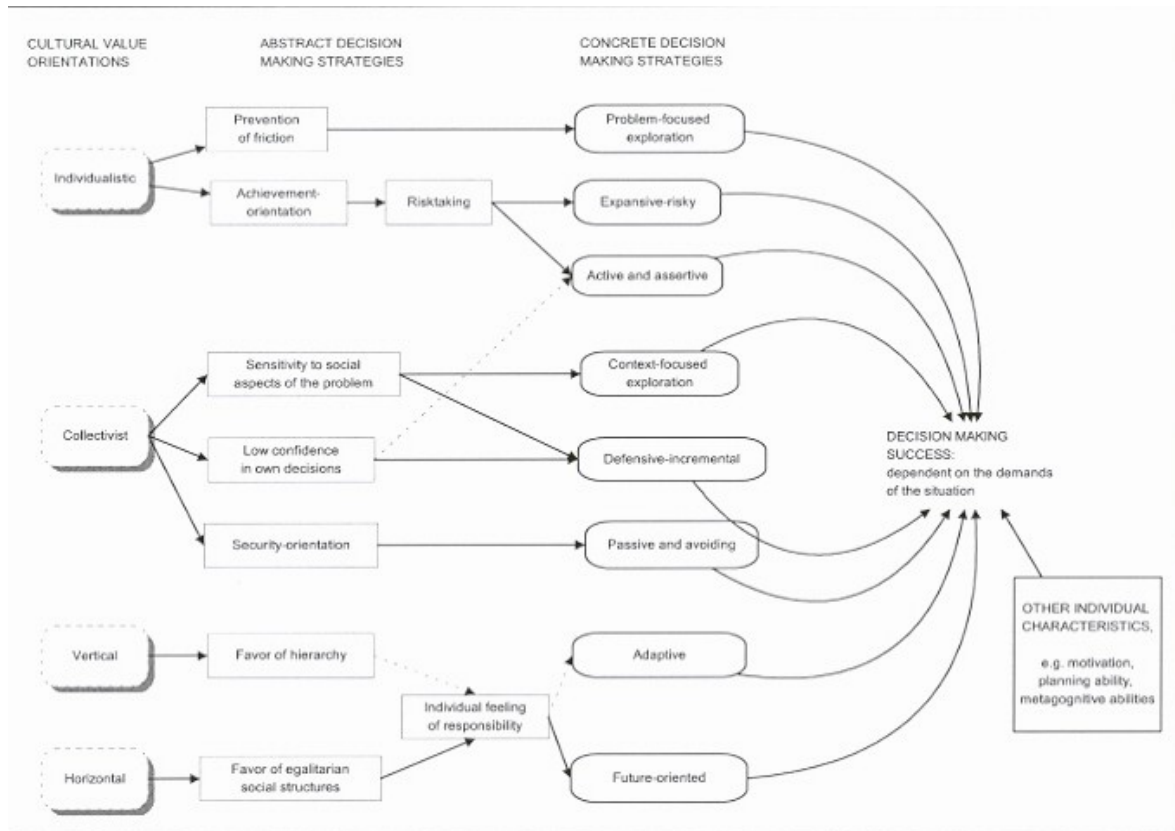


Figure 5: Relationship between cultural value orientations, abstract and concrete decision making strategies, decision-making success, and other possible influences. (The solid arrows stand for a positive relationship between variables, the broken arrows for a negative relationship, the curvilinear arrows for a unclear relationship)

It is assumed that these employed decision-making strategies influence the success in dealing with a specific problem. As every decision-making problem has special characteristics and is different from others, certain strategies might be more successful than others. Decision-making strategies might vary if one wants to buy a car or a bottle of milk, for example. Usually that person takes more time for information gathering, generation of alternatives and selection of one alternative when he or she buys a car. In this model, decision-making success is not only dependent on the demands of the decision problem and cultural value orientations, but also on individual differences, for example in planning and metacognitive abilities and motivation to deal with a decision problem.

This model is based on research on decision making in individualistic-collectivist cultures. From this model specific hypotheses can be derived for further studies in this fascinating and flourishing field. Results of such studies might have implications for the

applied field. They may lead to further development of education or training programs in the field of intercultural competence and multi-cultural awareness for institutions such as high schools, colleges, universities, and international organizations. Knowledge about different decision-making strategies in different countries can help people be more sensitive towards those from other cultures, to understand the embeddedness of psychological behavior in a specific cultural surrounding, and to work together more happily and efficiently.

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About the Author

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Questions for Discussion

1. What is the difference between normative and descriptive models of decision making?
2. How does culture influence decision making?
3. Where do you see the strengths and weaknesses of the three described studies?
4. Very broadly, in which way is decision making different in individualistic and collectivist cultures?
5. Can you think of different situations, that require different decision making?
6. How would you study decision making in different cultures? Which methods would you use? Which countries would you select for comparison?