



8-1-2002

Automobiles, Individualism-Collectivism, and Psychic Systems: An Essay on the Functional Perspective in Cross-Cultural Psychology

Stefan Strohschneider

University of Bamberg, Germany, stefan.strohschneider@uni-jena.de

Recommended Citation

Strohschneider, S. (2002). Automobiles, Individualism-Collectivism, and Psychic Systems: An Essay on the Functional Perspective in Cross-Cultural Psychology. *Online Readings in Psychology and Culture*, 2(1). <https://doi.org/10.9707/2307-0919.1011>

Automobiles, Individualism-Collectivism, and Psychic Systems: An Essay on the Functional Perspective in Cross-Cultural Psychology

Abstract

This chapter identifies the mainstream approach in (cross-cultural) psychology as "variables psychology" and contrasts it with two versions of functionalist thinking. Functionalist approaches are concerned with the purpose of cultural differences and with the psychological mechanisms that produce them. Whereas questions of purpose are frequently debated in cross-cultural psychology, the problem of the basic psychological mechanisms is not. This reading demonstrates how this problem might be tackled by explaining empirical differences between individualists and collectivists through the concepts and mechanisms of a general model of action regulation. The consequences of this approach for the development of cross-cultural psychology are briefly discussed.

Creative Commons License



This work is licensed under a [Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 License](https://creativecommons.org/licenses/by-nc-nd/3.0/).

INTRODUCTION

Functionalism and the Problem of Understanding

Psychologists in general attempt to understand human behavior and cross-cultural psychologists in particular are interested in understanding intercultural variations of this behavior. The question of what it means "to understand" is, however, subject to considerable controversy. In this introduction, I want to describe how the problem of "understanding" is usually handled in Cross-Cultural Psychology and contrast it with the functionalist perspective. Mainstream psychologists are trained to view their world - human beings, that is - in terms of "variables". Variables are properties, or features of humans that can vary (hence their name), that can be measured reliably and that are supposed to be meaningful (which translates into: they correlate with other variables). Examples of typical variables are "individualism - collectivism", "body image", "need for achievement" and "entrepreneurship orientation", among thousands of others. Research is aimed at identifying still new and better variables and designing instruments for their measurement. Theoretical efforts are often satisfied with correctly hypothesizing the empirical relationships between such variables, e.g., between need for achievement and entrepreneurship orientation. We can call this view a meta-theory: A general understanding of how psychology should be conducted to be considered a proper science.

To some extent, this meta-theory has also found its way into cross-cultural psychologists' understanding of culture. There is, for instance, the well-known conceptualization of culture as a "bundle of variables" (Poortinga & Malpass, 1985). In order to achieve scientific progress it is considered important that this bundle be untangled, the psychologically important variables isolated and their effects studied independently. Accordingly, variables like "collectivism" are separated from their context, meticulously measured and then correlated with individual-level variables like morals, effectiveness of group decision making, or modesty. Many empirical articles in the leading journals in cross-cultural psychology follow this pattern.

There are, however, meta-theoretical competitors. For instance, cultural psychologists (e.g., Shweder, 1990) have criticized the variables-approach for lack of contextualization. Shweder and others argue that by attempting to introduce high standards of scientific rigor (isolating variables) into the study of culture, cross-cultural psychology has lost sight of the very concept it tries to understand.

From the perspective of general psychology the variables approach is also not really convincing. General psychology aims at understanding the processes and mechanisms that make up the system we call "psyche", and the functioning of a system cannot be understood by accumulating measures of and correlations between isolated variables. Let me try to make this point clearer by suggesting a thought experiment:

Imagine, for a moment, a mechanical engineer who has never seen a car before. Now he encounters this thing for the first time and wants to understand it. If this engineer was following the meta-theory many psychologists adhere to, he would measure the

length, width, and weight of cars. He would develop systems for categorizing colors and shapes. He would measure speed, power, and handling; he would build a nice lab and study the behavior of cars when given gas, diesel, whiskey, milk, and water, and he would develop a typology for the consequences of accidents on cars. He would correlate all his measures and he would do principal component factor analyses which would most probably yield a three-factor solution and he might label the first factor "strength", the second one "evaluation" and the third one "attractiveness". If our engineer was trained in experimental methods, he would make the picture more sophisticated by measuring speed under different light conditions, by evaluating the quality of the coating when thrown at with different kinds of gravel, and so on. If he was a cross-cultural engineer he would travel to Iceland and Samoa and elsewhere to repeat his measurements there in order to find out about cultural variations in cars and also to determine if there are commonalities. No doubt, our "psychological" engineer would learn a lot about cars but it is questionable whether he would be able to find out very much about the general laws that govern the cars' behavior. The question of why cars behave in the way they do is difficult to tackle with the methods described above.

What would a "real" engineer do? He would ask two questions: "What are these things good for?" and: "How do they work?" To answer the first question, he would observe cars in their natural context, look at origins and destinations, at riders and transported goods, traffic conditions and the police. From this, he would develop a broad or general theory on the purpose of cars. To answer the second question, the engineer would open the hatch or hood and study the "intestines" of a car using the mechanical knowledge he was equipped with at university. In the process, he would probably disassemble the car into bits and pieces. There would be no doubt, however, that it would not take too long for him to understand the principles of the engine, the clutch and gearbox, the steering devices, and so on.

Of course, psychologists are interested in humans not in cars, and for obvious reasons they do not have the opportunity of simply opening the hatch or hood of their objects of desire and look inside. The analogy between engineering and psychology is also deficient in some other ways. Nevertheless, in this reading I argue that the *functional perspective* which our fictitious engineer uses can be fruitful in improving our understanding of the interplay of culture and psychology.

Two Types of Functionalism

In order to avoid confusion it is necessary to distinguish two types of functionalism. Before continuing with the grand theme I briefly touch this distinction. Remember our hypothetical engineer who asked "What is it good for?" and "How does it work?" These are two different questions that need to be treated differently.

A highly reputed and very scholarly German professor who refuses to write in English (Bischof, 1985, 1995) has distinguished between "ultimate functionalism" and "proximate functionalism" (German professors are well known for their deliberate use of Greek and Latin words.) "Ultimate" functionalism tries to understand the *purpose* of a

system, a process, or a specific way of behaving. The approach is based on the evolutionary perspective; in psychology it assumes that behaviors, and the psychological mechanisms that cause these behaviors, have been developed because they serve a function - they increase fitness, extend the life span, reduce tensions between people, in short, they serve an adaptive purpose (see Barkow, Cosmides & Tooby, 1996). Following this "ultimate" functionalism we, as psychologists, should not start by isolating interesting behaviors from their context and try to measure them as reliably as possible (this can be done later, if at all). Rather, we should start with an attempt to understand the adaptive purpose of the behavior or process in question: "What is it good for?"

In contrast, "proximate" functionalism tries to understand the *mechanisms* that produce the behavior in question. This indeed implies adopting the engineering perspective and developing models of the "mechanic" principles that rule organismic behavior systems. Such mechanic models (they usually come in the form of computer simulations) are being developed in different areas of Cognitive Science and General Psychology and the more sophisticated ones are able to simulate and predict quite complicated forms of human behavior in the area of cognition, emotion, and motivation.

In terms of understanding, "proximate" researchers hypothesize about different memory systems interacting with dynamic motivational processes and thereby producing emotional and interpretational frameworks (like value systems). I shall describe the main features of such a mechanic system later in this reading. For the moment it suffices to state that "psychological understanding" has quite different meanings. For a researcher adopting the variables-approach it means knowing the values of certain variables and being able to relate these to other variables. For the researcher adopting ultimate functionalism it means being able to identify the purpose of a behavior or a psychological property in its larger (social and cultural) context. And for a researcher following the proximate version of functionalism it means a theory of the mechanisms that produce it. In the next sections I apply this distinction to issues relevant in cross-cultural psychology.

Ultimate Functionalism in Cross-Cultural Psychology

In cross-cultural psychology, the "ultimate" version of functionalism has a long tradition. For instance, 52 years ago in an article entitled "Functional prerequisites of society" Aberle, Cohen, Davis, Levy & Sutton (1950) considered the concept of culture from an ultimate perspective. They discuss nine key functions culture has to fulfill. Among other things they look at communication, role differentiation, developing a shared cognitive orientation and common goals, developing norms for attempting to reach these goals, and regulation of expression of needs and feelings.

Similarly, some of the seminal empirical work in early cross-cultural psychology is based on this version of functionalism. A good example focuses on cross-cultural differences in cognitive style (e.g., Witkin, 1967, 1974). Here, differences in field-dependence and cognitive differentiation are explained by reference to differences in the respective ecologies. The argument is a functional one: People from some cultures are (on the average) more field-independent than those from other cultures because their

environment is structured in such a way that field-independence serves, in the end, their survival.

John Berry's "ecocultural model" (Berry, 1976, 1993), influenced somewhat by Witkin, is a generalization of this way of looking at culture: Culture-specific modes of thought and action are not random. Rather, they develop as a "functional answer" to the circumstances of life. That is, people adapt to specific ecocultural circumstances. Besides objective physical, climatic, biological, and economical conditions, the culture already existing is an important contextual determinant of cognition and behavior - for instance, in the form of social structure and socialization practices. Of course, these aspects of culture itself are modified by the concrete behaviors of individuals. In the process of transmission from one generation to the next, cultural values, norms, and structures are optimized and made suitable to the changing socio-ecological conditions. This functionally-driven process then explains the enormous adaptive potential of people and consequently the cultures that these people form.

"Ultimately" functional thinking even lies at the core of the powerful explanatory concepts of present day cross-cultural psychology. For instance, Geert Hofstede (1983; 2001), in describing the development of his system of basic values, argues that each basic value dimension offers answers to one fundamental problem, cultures need to deal with. One of these problems is the design of relationships between individuals. Are these to be close and binding or loosely knit and superficial? According to Hofstede, the answers cultures have invented can be ordered along the dimension of individualism versus collectivism.

It would take us too far afield to discuss Hofstede's approach in all its details. It might well be that there are fundamental problems human societies attend to that are not represented in Hofstede's four original factors. Nevertheless, the idea is convincing: due to the nature of man, all societies of human beings encounter certain problems they need to solve in order to survive. If the solutions found are adaptive and functional within the environment given, they crystallize and are stabilized by means of a shared value system. Interestingly, the newly emerging theory of "social axioms" extends this functional perspective on values to all forms of generalized beliefs about oneself, the social and physical environment, or the spiritual world (see Leung et al., 2002).

It is no wonder, then, that the functional perspective has also become part of some definitions of culture. As early as 1927 Sumner and Keller defined culture as follows: "The sum of men's adjustments to the life-conditions is their culture, or civilization. These adjustments are attained only through the combined action of variation, selection, and transmission." In psychology, Trommsdorff's definition most clearly uses the functional approach: "Culture comprises the interpretation patterns and behavior patterns, knowledge, language and techniques used to cope with adaptational problems in man's dealing with his environment that are employed by a social group." (1989, p. 12; translation by the author).

I have tried to show that the ideas of ultimate functionalism (explaining human behavior in general and cultural peculiarities in particular by their adaptive purpose) are not strange to or new within cross-cultural psychology. However, the picture changes

drastically when it comes to proximate functionalism which seems to be neglected in the field. This is not the place to discuss the reasons for this fact; it might be more interesting to try to demonstrate the theoretical benefits that can be gained from adopting this perspective (see Tooby & Cosmides, 1992).

Proximate Functionalism: Structures and Processes that Create Differences in Behavior

In the remainder of this chapter I shall try to outline the procedure of such an approach using the example of individualism/collectivism (and promise to spare the reader all mechanistic details). I do this by briefly describing a model of the architecture of the psychic system (section 4) and then try to show how we could mold this system in a way to make it behave like an individualist or a collectivist (section 5). Two basic axioms need to be mentioned right from the beginning:

- 1) Functionalists assume that the basic structures and mechanism that make up the human psyche are universal. Variation is to be introduced by changes in specific parameters that control the working of this system. It is like our analogy with cars. They all have wheels, a steering device and a combustion engine, but there are differences with respect to the size and strength of the engine, the color, and so on.
- 2) The second axiom deals with the question of the super-individual character of culture. Although a culture is shared by a large number of people, culture itself must be located within individuals. There is nothing like a super-individual "mass soul" (like le Bon assumed it late in the 19th century), and culture-level phenomena (like Ind-Col) must be understood as resulting from the interaction of individuals.

What, then, is the basic architecture of the human psyche? There are several "architectural models" that share some features and differ in others. One of the most complete models is the "PSI-theory" developed by Dörner and his colleagues in Germany (Dörner, 1999). Basically, human behavior is understood as the process of regulation and completion of intentions. Intentions are (data-) structures that consist of a specific need, knowledge about the current situation, knowledge about possible goals and (at least some) knowledge about what to do to reach one of the possible goals. Usually we have several intentions at a time which are stored in a memory for intentions. Among these intentions the one that is most important (large need) or is very urgent (there is a deadline to be met) or has a high probability of success becomes the "active intention" and controls action for the time being.

The details of this PSI-theory need not concern us here. In fact, the theory is represented as a computer program that simulates motivation, intention regulation, action and the related cognitions on a close-to-neural level (interested readers may visit <http://www.uni-bamberg.de/psychologie/theoretische-psychologie/leistungen/forschung/> where the software is available for download). Two modules, however, require a little more

attention in order to be able to model individualistic and collectivistic behavior functionally. One is the motivational basis of action regulation, the other is the "expectation horizon".

Motivation lies at the heart of intention generation. The PSI-theory assumes a universal motivational system that consists of four basic motivations, namely securing one's existence ("basic needs" like hunger, thirst, warmth, etc.), sexuality (with all related facets), affiliation (the need for "affiliative signals" that come from being acknowledged in a group, from successfully securing one's group membership and social status, and from action that is in accordance with one's worldview), and the need for control. This latter motive is a bipolar one which comprises both the need for security (being able to predict and control important aspects of the future) and the need for excitement, novelty and new challenges (which, in turn, increases one's competencies and therefore security; see Carver & Scheier, 1982; Deci & Ryan, 2000).

All these needs are more or less satisfied at any given point in time. The general status of one's motivation is integrated into a general "feeling of competence" (called GFoC for the remainder of the chapter) or feeling of efficacy. Thus, when several needs are simultaneously active and when I do not make much progress in satisfying them my general feeling of competence (GFoC) will be low. When most of my needs are satisfied and I have time to simply chat and gossip with colleagues (affiliation) or attempt a new high-score on my favorite computer game (control) my GFoC will be high. It is important to note that humans strive to keep their GFoC-level as high as possible (Ryan & Deci, 2001). We do not only try to satisfy specific needs, we also try to increase our feeling of competence. When we have a choice of action, we select the alternative that has more effects on the GFoC and when GFoC is low we will do things that often appear meaningless but are aimed at increasing GFoC (have you ever observed yourself eating when in trouble with an academic task?). Our psychological well-being, our general position towards the world around us is dependent on this GFoC.

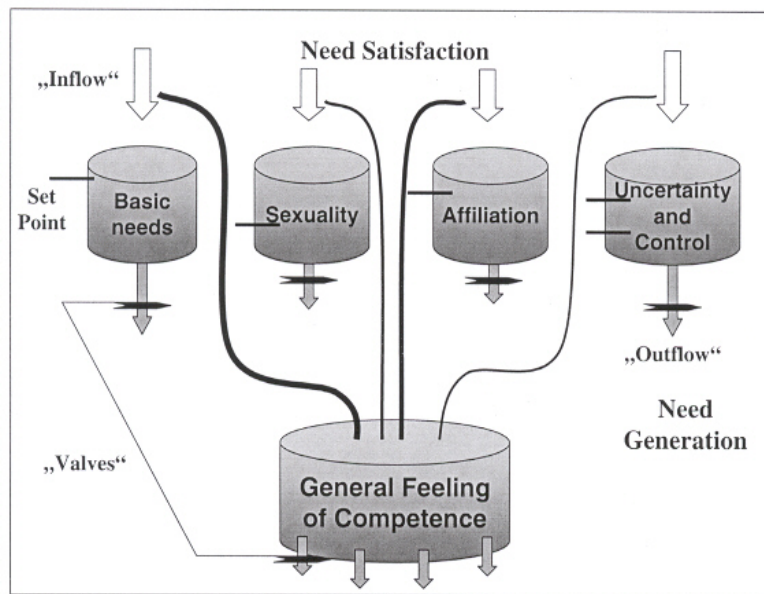


Figure 1. Basic motivational system in the metaphorical formulation of a container system.

Figure 1 summarizes this motivational system, using the metaphor of containers filled with "motivational liquid". Each container has a set point for its level. Liquid gets lost either automatically (as is the case with hunger) or through environmental conditions - for instance, when one gets hurt physically or by harsh words. An intention to increase the container's level is generated as soon as the level drops below the set point. The satisfaction of a need then means that liquid is added and the container is again filled beyond its set point.

The different speeds with which these containers get emptied and our varying success in getting them refilled is responsible for the complex dynamics of intention regulation and action. All four "need containers" are coupled with the GFoC. A growing need also empties the GFoC-container (the coupled "valves" in Figure 1), a need satisfied also increases its level. However, this coupling may be of different intensity for the different needs as indicated by the different diameters of the pipelines connecting the two. There are people whose GFoC is almost completely dependent on their need for affiliation while, e.g., sexuality is completely irrelevant. Their well-being would be largely dependent on a rich in-flow of affiliative signals like smiles from friends and colleagues, hugs from partners and children, and the "good feeling" that is created by the fact that one behaves as per the norms of one's in-group. For other people affiliation may be more or less irrelevant (small pipeline diameter) whereas the feeling of "having control" or even the basic needs determine the state of the GFoC.

Such a system is open for cultural influences in numerous ways. For instance, culture regulates the amount of possibilities one encounters to satisfy certain needs. It can influence the set points of the motivational containers and it can determine the pipeline diameters. I shall discuss these influences later in this chapter. First, it is necessary to also look briefly at the "expectation horizon".

According to the PSI-theory (and many other theories as well), human beings are not automata that simply react to certain environmental conditions. Rather, action and intention regulation are largely dependent on our expectations regarding the future. To give a simple example: Imagine that it is five o'clock in the afternoon and you feel hungry. If you know that you have an appointment with some friends at 6.30 and plan to have a pizza you probably can "manage" your hunger - which means that the hunger-intention does not become the actual intention. You continue with whatever you do because your hunger (and probably also your need for affiliation) will be satisfied in the near future. In the same situation, with no appointment to come, you will probably check for some food right away.

Theoretically, this "future orientation" is captured in the notion of the "expectation horizon". This is a data structure that is constantly updated and contains those situations, developments, possible actions and outcomes that - according to your individual experience and the social axioms prevalent in your culture - are likely to happen in the future. Some elements of the expectation horizon (like a pizza place) carry positive "markers" - these are situations which qualify as goal situations for actual or prospective needs. Other elements (like an empty refrigerator) carry negative markers - situations which should be avoided because they are likely to create or aggravate needs. The

relation between positively and negatively marked elements represents our general feeling of optimism or pessimism. The amount of knowledge we have in order to avoid negatively marked elements and approach positively marked ones represents our feeling of control.

We can assume that the expectation horizon is differentiated into sectors that represent different classes of motives. For instance, there could be one sector that constructs the future with respect to basic needs, another one that projects the future in relation to one's family, friends, and generally affiliative needs, and so on. The size of these sectors will be dependent on the relative importance that are attached to different motives. If I am a "family person", the family-sector of my expectation horizon will be large and carefully constructed, if I am a "lone rider" (like a hero in a Western movie) the family-sector will be very small and questions of horses, enemies, and distances to cover will dominate the expectation horizon.

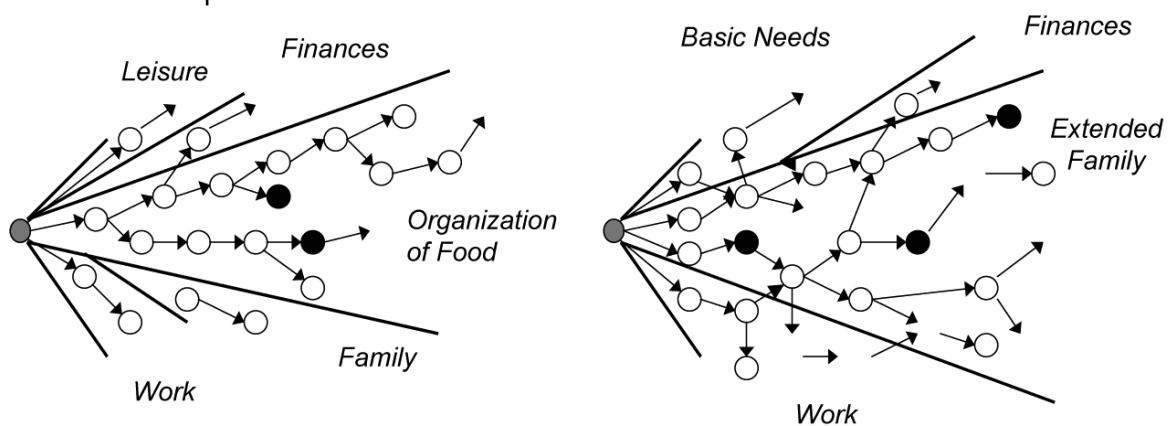


Figure 2: Two examples for the construction of the expectation horizon according to different needs. See text for explanations.

Figure 2 sketches the expectation horizon of a very hungry person (left) and a typical "family person" (right). Note the different size of the motivational sectors and the negatively marked (black dots) and positively marked (stars) situations. For the family person, events in the "family domain" are linked to developments in the other areas.

Although this is a very broad sketch the general direction should become clear: The system described (motivation plus expectation horizon plus intention regulation) is a theoretical attempt to answer the question of how behavior is generated within the human mind. The PSI-model has been successfully used to simulate and predict behavior in different settings. If it was possible to also simulate behavioral differences that have been found to be relevant in the cross-cultural context, this would add an additional, "proximate" level of understanding to the relation between culture and individual.

An Application to Cross-Cultural Psychology: The Case of Individualism and Collectivism

I shall attempt to demonstrate the principle by discussing a "proximate" explanation for one of the most prominent variables in contemporary cross-cultural psychology, namely

individualism versus collectivism (Ind-Col). It has been clearly demonstrated that there are significant and meaningful differences with respect to Ind-Col both within and between cultures. And it has been clearly demonstrated that the concept has explanatory power for a host of other differences. Remember the functionalist approach (proximate version) to such issues: "How does it work?". Here, the question can be translated into: "How are individualism or collectivism realized within human minds?" After all, Ind-Col is an empirically valid construct that therefore must have some basis in more elementary psychic structures and mechanisms.

For the remainder of this reading, I take "individualism" to mean an emotional detachment from social groups, the primacy of individual goals over in-group goals, a primary control-orientation and the regulation of behavior according to individual interests, values, and cost-benefit analyses. "Collectivism" refers to close emotional ties to the family and other relevant in-groups, the primacy of group-related goals over individual goals, the acceptance of hierarchy and secondary control-orientation, and the regulation of behavior according to in-group norms and group-related cost-benefit analyses (see, e.g., Kagitcibasi, 1997; Triandis 1995)

How then would we proceed if we wanted to construct a highly individualist person using the PSI-system? We would probably need to only take care of a small number of parameters:

- 1) A relatively low set point in the "need for affiliation" container
- 2) A small diameter of the pipeline that connects the affiliation container with GFoC
- 3) A relatively high set point in the "need for control" container
- 4) A large diameter of the pipeline that connects the control-container with GFoC

This setup of the motivational system would rather automatically make the GFoC more or less independent from the social environment. There might be occasional affiliation-powered intentions, but overall the actions and omissions of others do not have much of an effect on the GFoC. Instead, the GFoC is largely dependent on having individual control. This then implies, first, that "control needs" will generate powerful intentions and, second, that the "social sector" of the expectation horizon will be small as compared to the sector constructing individual possibilities for exerting or increasing control. In exercising control, the person will be highly task-focused since the position of others, their behavior with respect to the person's affairs is irrelevant and in following through on his or her intentions cannot gain much from being nice, from avoiding conflict, and so on. If all other things are kept equal, a collectivist person would be created using the opposite set of parameters:

- 1) A relatively high set point in the "need for affiliation" container
- 2) A large diameter of the pipeline that connects the affiliation container with GFoC
- 3) A relatively low set point in the "need for control" container
- 4) A small diameter of the pipeline that connects the control-container with GFoC

With this setup of the motivational system, having individual control would be of secondary importance as compared to earning signals of affiliation. The GFoC is largely dependent on the fate of the affiliation motive and the intentions created to fulfill these needs: The person would feel 'okay' when he or she is securely anchored within his or her relevant in-group. The person would feel threatened when he or she is low on affiliative signals and has to rely on individual control. Even if the person was able to exert control, it would not help a lot since (due to the small pipeline diameter) control experiences do not add much to the GFoC. Of course, this is as yet only a thought experiment but it may serve to demonstrate that it appears indeed possible to create individualist and collectivist motives, feelings, and behaviors by introducing comparatively small changes in an otherwise universal system.

So far we have talked only about the individual (micro) level, whereas "individualism" and "collectivism" are also used as categories on the (macro) level of cultures. Continuing in the same mode of thought, we would have to assume that both "collectivist cultures" and "individualist cultures" are comprised largely of persons who share certain properties of their motivational systems. Culture then would be the medium through which these similar properties are created. Cultures consists of conditions that make certain parameter settings (like motivational set-points or pipeline diameters) more likely than others. Cultures have numerous means to achieve this end, among them:

- 1) Influencing the probability to find satisfaction for specific needs (think, e.g., of sexual desires, or the availability of supervision, help, and guidance in decision making)
- 2) Influencing the likelihood of negatively marked situations (think, e.g., of social criticism and neglect or punishment for group-norm violations).
- 3) Rewarding the successful completion of some intentions more than others, thereby gradually modifying the pipeline diameters mediating between motivations and the General Feeling of Competence.

These mechanisms are usually subsumed under labels like "socialization practices and educational styles" and laws, norms, and cultural "styles" of action regulation. The theory presented here might help to explain how these "transmission" belts actually work.

Functional Thought in Cross-Cultural Psychology: A Summary

In this reading, I have tried to highlight three different ways of thinking about psychology and culture. The first one has been labeled "The psychology of variables". This is the mainstream approach in psychology. It tries to identify reliably measurable variables and then looks for cross-cultural differences (and similarities) and relationships to other variables. Empirical effects are **explained** by reference to other variables that are thought to be more basic, or general, than the focus variable.

"Ultimate" functionalism has a different understanding of "explanation". An empirical effect is assumed to be sufficiently explained if it is possible to answer the question "What is it good for?" This approach looks for the meaning of cross-cultural differences with

reference to the context or life-circumstances of the cultures in question. It is assumed that cultures develop norms, attitudes, behaviors, and so on because they serve an adaptive purpose and make life simpler - either for the individuals or for the cultural group as such.

"Proximate" functionalism goes even one step further. If there are reliable empirical effects that can be meaningfully interpreted, we should be interested in knowing how these effects can be generated by the psychic system which is assumed to be universal. This is the question of "How does it work?" To answer this question we need "mechanical knowledge". We need a general model of psychological functions and processes which can be tuned in such a way as to reproduce the observed effects. Such models are rare in cross-cultural psychology but they are developed in general and cognitive psychology. Using them has positive purposes for both sides: if these models fail to reproduce observed cross-cultural differences they need to be improved or adapted. Cross-cultural psychology can profit from them because they allow to link empirically found cultural differences to knowledge and theories generated in general psychology. This could be an important and better step to integrate cross-cultural psychology into psychology in general: making its findings relevant for other areas of research and reducing the risk of being judged only a superficial scientific endeavor.

References

- Aberle, D. F., Cohen, A. K., Davis, A., Levy, M. & Sutton, F. X. (1950). Functional prerequisites of society. *Ethics*, 60, 100-111.
- Barkow, J. H., Cosmides, L. & Tooby, J. (Eds.) (1996). *The adapted mind: Evolutionary psychology and the generation of culture*. Oxford, U.K.: Oxford University Press.
- Berry, J. W. (1976). *Human ecology and cognitive style*. New York: John Wiley.
- Berry, J. W. (1993). An ecological approach to understanding cognition across cultures. In J. Altarriba (Ed.), *Cognition and culture: A cross-cultural approach to Cognitive Psychology* (pp. 361-375). Amsterdam, the Netherlands: North-Holland.
- Bischof, N. (1985). *Das Rätsel Ödipus. Die biologischen Wurzeln des Urkonfliktes von Intimität und Autonomie [The enigma of Oedipus: The biological roots of the basic conflict between intimacy and autonomy]*. München, Germany: Piper.
- Bischof, N. (1995). *Struktur und Bedeutung: Eine Einführung in die Systemtheorie für Psychologen zum Selbststudium und für den Gruppenunterricht [Structure and meaning: An introduction into systems theory for psychologists for individual studies and group learning]*. Bern, Switzerland: Huber.
- Carver, C. S. & Scheier, M. F. (1982). Control theory: A useful conceptual framework for personality-social, clinical, and health psychology. *Psychological Bulletin*, 92, 111-135.
- Deci, E. L. & Ryan, R. M. (2000). The "what" and the "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268. DOI:10.1207/S15327965PLI1104_01.
- Dörner, D (1999). *Bauplan für eine Seele [Blueprint for a soul]*. Reinbek, Germany: Rowohlt.

- Hofstede, G. (1983). The cultural relativity of organizational practices and theories. *Journal of International Business Studies*, 14, 75-89.
- Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Thousand Oaks, CA: Sage.
- Kagitcibasi, C. (1997). Individualism and collectivism. In J. W. Berry, M. H. Segall & C. Kagitcibasi (Eds.), *Handbook of cross-cultural psychology, Vol. 3: Social behavior and applications* (pp. 1-49). Needham Heights, MA: Allyn & Bacon.
- Leung, K., Bond, M. H., de Carrasquel, Sh. R., Munoz, C., Hernandez, M., Murakami, F., Yamaguchi, S., Bierbrauer, G., & Singelis, T. M. (2002). Social axioms: The search for universal dimensions of general beliefs about how the world functions. *Journal of Cross-Cultural Psychology*, 33, 286-302.
- Poortinga, Y. H. & Malpass, R. S. (1985). Making inferences from cross-cultural data. In W. J. Lonner & J. W. Berry (Eds.), *Field methods in cross-cultural research* (pp. 17-46). Beverly Hills, CA: Sage.
- Ryan, R. M. & Deci, E. L. (2001). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68-78.
- Shweder, R. A. (1990). Cultural psychology: What is it? In J. W. Stigler, R. A. Shweder & G. Herdt (Eds.), *Cultural psychology* (pp. 1-43). Cambridge, U.K.: Cambridge University Press.
- Sumner, W. G. & Keller, A. G. (1927). *The science of society*. New Haven, CT: Yale University Press.
- Tooby, J. & Cosmides, L. (1992). The psychological foundations of culture. In J. H. Barkow, L. Cosmides & J. Tooby (Eds.), *The adapted mind: Evolutionary psychology and the generation of culture* (pp. 19-136). New York: Oxford University Press.
- Triandis, H. C. (1995). *Individualism and collectivism*. Boulder, CO: Westview.
- Trommsdorff, G. (1989). Kulturvergleichende Sozialisationsforschung [Cross-cultural research in socialization]. In G. Trommsdorff (Hrsg.), *Sozialisation im Kulturvergleich* (pp. 6-24). Stuttgart, Germany: Enke.
- Witkin, H. A. (1967). A cognitive style approach to cross-cultural research. *International Journal of Psychology*, 2, 233-250.
- Witkin, H. A. (1974). Cognitive styles across cultures. In J. W. Berry & P. R. Dasen (Eds.), *Culture and cognition: Readings in cross-cultural psychology* (pp. 99-117). London, UK: Methuen.

About the Author

Stefan Strohschneider is is professor for Intercultural Communication at Friedrich-Schiller-University Jena, Germany. He earned his Ph.D. from from the Otto-Friedrich-University of Bamberg, Germany in 1990 and he earned his PD (Privatdozent) in 2000. He studied at Oberlin College, Oberlin, Ohio, USA and worked for the Max-Planck-Society's Institute for Cognitive Anthropology in Berlin. His research and teaching interests focus on problem solving, crisis management and generally the relationship between cultural and cognitive processes. Besides writing numerous articles and book chapters he has edited books on

planning (1993, 2001), on problem solving differences between the eastern and western parts of Germany after reunification (1996), and has, most recently, written a monograph on cross-cultural differences in thinking and problem solving between India and Germany (2001). His E-mail address is: Stefan.strohschneider@ppp.uni-bamberg.de

Questions for Discussion

1. Mainstream psychology has been described as "variables-psychology". Which model of "science" does mainstream psychology follow? What are the criteria for proper science?
2. Can you think of similarities or commonalities between sciences like astronomy, engineering, and archeology?
3. Can you attempt a functionalistic (ultimate version) interpretation of the Big Five of personality psychology? Would such an interpretation be universally valid?
4. Try to model the motivational system of (a) a monk, (b) a free climber, and (c) a secretary using the "container model" described above.
5. Make yourself conscious of your expectation horizon for the rest of this day. List positively marked and negatively marked situations. Which classes of motives do they belong to? What would be the overall "hedonic coloring" of your day?
6. Is happiness always dependent on having individual control?