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Introduction to Cultural Transmission: Psychological, Developmental, Social, and Methodological Aspects

UTE SCHÖNPFLUG

> Every view of life that becomes extinct, every culture that disappears, diminishes a possibility of life.
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> (Octavio Paz, 1978, Nobel Prize winner)

INTRODUCTION

The topic of cultural transmission – according to its current meaning of a transfer process carrying cultural information from one generation to the next, and from one group to the next – has received increasing interest in many disciplines. This volume attempts to impart perspectives on cultural transmission, what is known and – more important for future research – which issues still have to be clarified. The topic has been elaborated and refined in various academic contexts in Europe and the United States. This first chapter provides an outline of the history of prominent issues of cultural transmission. This chapter and the following contributions may serve as sources for the various perspectives outlined in the literature.

This volume is based on a special issue of the *Journal of Cross-Cultural Psychology* published in 2001. Some of the authors were already included in the special issue, and all of those asked agreed to elaborate on their contributions for chapters of this edited book. All contributors felt that the topic called for more theory, more data, and more stringent interpretations. However, other contributions also were included to extend the range of perspectives and the range of countries with their particular cultural variations. More specific, the extensions were oriented toward providing more contents, more contexts, and more mechanisms of transmission, as well as including the full range of the life span of the transmitters and the transmittees, with additional situational and dispositional characteristics of both.

This volume focuses on the contributions of psychologists and social scientists. Three contributions from multidisciplinary evolutionary psychologists whose interests extend to evolutionary biology and anthropology (Tomasello,

this volume) and to sociological and psychological issues (Euler, Hoier, & Rohde; van Geert, this volume) convey insights to the many links of cultural transmission with biological evolutionary theory and its roots therein. Other contributions demonstrate that it is useful to forgo the analysis of historical roots and focus instead on issues of cultural transmission from a social scientific or psychological perspective (see Part II). Even when the research is located within one culture, we are able to gain insight to a specific mechanism or content of transmission, or the role of a specific characteristic of either the transmitter or the transmittee (see Part III).

Cultural transmission is a universal process. We need to know, however, whether the mechanisms and contents involved in the process are also universal. We need to know whether the function of cultural transmission to maintain culture over time and space may be fulfilled by the contents and mechanisms identified. We hope the information provided is transmitted to students, readers, researchers, and theorists and leads to more research and theorizing. The contributors hope that the impact of their insight to the cultural transmission process helps all involved to acquire better judgment and more adequate measures to intensify cultural transmission when and where it is wanted and to constrain it when and where it is not desirable. Control of cultural transmission in societies and in terms of their politics can already be observed now, but another major aim of this volume is to deepen and extend insight to the benefits and the dangers involved in such control.

1.0. CULTURAL TRANSMISSION: A MULTIDISCIPLINARY RESEARCH FIELD

Cultural persistence is essentially a question of transmission, the passing on of information from individual to individual or from groups to other groups. Theoretical conceptualizations of cultural transmission come from various disciplines. The roots of thinking about cultural transmission as opposed to genetic transmission are located in biology. The biologists Cavalli-Sforza and Feldman (1981) wrote a seminal paper on the specific phenomena related to cultural as opposed to biological transmission. The term *cultural* may apply to traits that are acquired by any process of nongenetic transmission, be it by imprinting, conditioning, observation, imitation, or as a result of direct teaching. Cavalli-Sforza and Feldman pointed out that genetic transmission may not be the only source for parent–offspring biological similarity. Social orientations, skills, and accumulated knowledge are also similar in parent–offspring dyads and – as far as today's scientific insights hold – are not tied to genes. Hence, other mechanisms of transmission must be found to explain this kind of social or psychological similarity between successive generations.

What may be unique to mankind is the capacity to transmit knowledge explicitly to other individuals in space and time by means of such devices as deliberate teaching through shaping the behavior of other individuals (see Tomasello, this

volume). Various human behaviors seem to rely on just such explicit social-learning processes and, in fact, many behavioral acquisitions simply would not be possible without them.

Cultural anthropology generally assumes a commonsense pretheoretical view of the acquisition of culture, which Boyer (1994) calls the theory of "exhaustive cultural transmission." This conception of cultural acquisition is cognitive. The main point is that people brought up in a culture are given a ready-made conceptual scheme, which is absorbed (as it were) in a mysterious, *passive* way that is never described. Cultural anthropologists tend to think that the way in which children gradually acquire adult cultural competence, in most cognitive domains, is mainly driven by experience. Van Geert (this volume) demonstrates that language transmission may constitute such a case. However, Boyer contradicts this conception of cultural acquisition, arguing that cultural representations are underdetermined by cultural transmission because they are implicit, incomplete, and inconsistent (see also Knafo & Schwartz, this volume). It may be concluded that not all cultural information is transmittable or is transmitted and that individuals work with the same implicit assumptions because they are equipped with the same intuitive principles emerging from their general inferential capacities. In this case, cultural transmission simply provides explicit cues, which are likely to trigger in most subjects roughly similar spontaneous inferences.

Boyd and Richerson (1985) understand culture as the transmission of knowledge, values, and other factors that influence behavior from one generation to the next. Some findings suggest that vertical (i.e., parent–offspring) as opposed to horizontal (i.e., peer) transmission serves the function of spreading less primitive cultural units and that horizontally transmitted traits are advantageous in rapidly changing, spatially heterogeneous environments. Evolutionary intergenerational thinking extends this notion by looking at investments in progeny over more than one subsequent generation. These vertical investments of, for instance, grandparents to grandchildren (Euler, Hoier, & Rohde, this volume) must further slow down the pace of cultural change via transmission.

Parent–offspring transmission does not necessarily corroborate adaptation to variable environments. The capacity for cultural transmission probably has complex effects on the rate of genetic evolution. More recently, sociobiological and anthropological approaches (Cronk, 1995; Tooby & Cosmides, 1991) have been integrated. Culture may lead not only to direct genetic assimilation, which has only just begun to be understood, but may also increase the likelihood of group selection, which is also regarded as a mechanism of genetic assimilation. Cronk distinguishes "transmitted" culture from other aspects of culture: The transmitted culture refers to the spreading of mental representations from one person to the next. Other aspects of culture might be innovations that emerge in one epoch or generation and are forgotten in the next.

The limits of cultural transmission involve ethnocultural variability, which, like biological variability, promotes and sustains ways of life. Insofar as we insist

on homogeneity, we are closing off ourselves from options and alternatives that are needed. Adaptive evolution requires variability because variability requires and creates the differences necessary for adaptation to changing environmental demands. The "unenlightened society" continues to insist on "cultural homogeneity" and strict reproductive transmission; in so doing, it fosters its own demise. The "enlightened society" acknowledges and promotes "diversity" and, in this way, encourages its own survival.

Sociologists look at transmission issues from a cultural-capital point of view. Brinton (1988) suggested that education and family comprise a conjoint system of human development. She sees this system as having a social-institutional dimension and a familial dimension of exchanges and investments. Bourdieu's (1984) notion of cultural capital suggested a general description of what is transmitted. In many contexts, families and schools work in concert to ensure the educational advantages of some groups, whereas the disadvantaged position of other groups remains. A conjoint system of cultural-capital transmission requires us to consider the complex relationships among families, school types, educational experiences, and educational outcomes (Persell, Catsambis, & Cookson, 1992).

Nauck (this volume) emphasizes that the transmission of cultural capital is a special process when it takes place in a culture-contact situation. In addition, sociological analyses point out that the separation of intergenerational transmission results from societal changes in the same content area is usually neglected (Boehnke, Hadjar, & Baier, this volume). Parent and offspring similarity is influenced to a certain extent by the *zeitgeist* of the historical epoch in which they are living, as well as by transmission processes.

This volume arises from the conviction that cross-cultural psychology may contribute to theory and empirical evidence in the domain of cultural transmission. The psychological contributions to this volume are predominantly concerned with mechanisms that affect the extent and selectivity of transmission (e.g., the "transmission belts"; see Schönpflug & Bilz, this volume; see also Six, Geppert, & Schönpflug, this volume) and the mediation through parental goal-setting.

2.0. THE CARRIERS OF TRANSMISSION

Different social systems or cultures weigh various possible transmitters or models in the transmission process differentially: mother, father, teacher, and peers differ in their importance for the cultural transmission of certain behaviors or traits. Homogeneity of transmitters with reference to the transmitted contents ensures the greatest transmission effects. Knafo and Schwartz (this volume) show that the similarity between generations of migrants is less than that in families of the receiving society, due to perceived inconsistencies and uncertainty of orientation of the transmitting parents. Ter Bogt, Meeus, Raaijsmakers, van Wel, and Vollebergh (this volume) demonstrate that the recipient of the transmission,

the offspring generation, has a potent selective filter, enhancing transmission from the parent generation, which is non–youth centrist or adult-oriented. Different cultural contexts also allow for either one or more than one model for copying. An issue still to be studied is the choice of a model when cultural context does not constrain the number of models. This is certainly the case for horizontal (i.e., peer) and oblique (i.e., teacher/mentor) transmission and less so for vertical (i.e., parent–offspring) transmission.

3.0. THE CONTENTS OF TRANSMISSION

All important theoretical approaches of cultural transmission (Boyd & Richerson, 1985; Cavalli-Sforza & Feldman, 1981) state evidence that the three "channels" or directions of transmission transport different transmission contents: *Vertical transmission* includes factors such as personality traits, cognitive development, attitudes, attainments, educational and occupational status, patterns of upward/downward mobility, sex-role conceptions, sexual activity, attitudes toward feminism, political beliefs and activities, religious beliefs, dietary habits, legal and illegal drug abuse, phobias, self-esteem, and language and linguistic usage. *Horizontally* and *obliquely* transmitted traits include attitudes; career and social mobility; aspirations; sex role and sexual behavior; adolescent behavior; aggressive behavior; altruistic behavior; morals; social values; conformity; language and dialect; technological innovations; clothing fashions; consumer behavior; and children's games, rituals, stories, and rhymes. As may be seen from these lists, many traits are transmitted either way. Other traits follow a dual-inheritance model: *Genetically* and *culturally* transmitted traits include handedness, cerebral dominance, intelligence, and possibly religious and political beliefs (Laland, 1993). The contributions in this volume focus mainly on values as a central content of transmission (Cavalli-Sforza, 1993; see also Knafo & Schwartz; Knafo, Assor, Schwartz, & David; and Boehnke, Hadjar, & Baier, this volume).

4.0. THE MECHANISM OF THE TRANSMISSION PROCESS

The first considerations in the process of transmission lead us to postulate that it is a two-stage process: The first stage is awareness of the information to be transmitted, and the second is acceptance of it. The two stages are only distinguishable when there is a choice to accept or not to accept. A further complication that strengthens the confounding of awareness and acceptance is the possible existence of spontaneous tendencies or drives to teach and thus impart knowledge. Kuczynski, Marshall, and Schell (1997) suggested externalization attempts on the side of the transmitter and internalization on the side of the receiver as two main component mechanisms of the transmission process. In the transmission process, both the teaching and the learning may be deeply motivated. Which parameters determine the transmission dynamics? Which transmission belts

are most effective with given carriers, contents, and contexts of transmission? Do different social-learning mechanisms have different transmission dynamics? Answers to these questions, like our understanding of the transmission process, are still rudimentary. In this volume, the chapters by Berry and Georgas; Knafo and Schwartz; Knafo, Assor, Schwartz, and David; Nauck; Schönpflug and Bilz; Six, Geppert, and Schönpflug; Trommsdorff; and Uslucan and Fuhrer contribute essential new answers to these fundamental questions.

5.0. DEVELOPMENTAL PERSPECTIVE ON TRANSMISSION

The effects of transmission mechanisms may be confounded with developmental phenomena – namely, the existence of biologically founded "critical periods" – such as are known, for example, in the learning of the pronunciation of a language. However, there probably exists a host of other age-dependent sensitivities in acquiring specific behaviors or cognitions via transmission.

Conversely, the mode of transmission may be age-specific because of normative developmental transitions in the sociocultural context: Obligatory full-day schooling, for instance, implies that children are among their peers for several hours during the day. This is a favorable condition for horizontal transmission and emerging youth centrism counteracting vertical parent–offspring transmission. Cross-cultural studies may be especially useful in exhibiting the variation of such life-cycle phenomena. Tomasello (this volume) looks at the ontogeny of human cultural learning and compares it to primate social learning. Human children grow up in a cultural niche but need to have cognitive skills to utilize the preexisting cultural resources. Typically, these social skills begin to develop at the end of the first year of life, if Tomasello's criteria for cultural transmission are accepted. Silverstein and Conroy (this volume) take on a life-span view: Parents build early in the family life cycle a "support bank" – that is, a latent reserve of social capital by investing time, labor, and money in their children. This social capital is later drawn on in the form of social support from children when the parents develop age-related dependencies.

This volume shows diverse approaches to the study of cultural transmission. The various aspects presented contribute more to a complex theoretical model of transmission rather than being able to communicate final and perfectly consistent results. The chapters presented herein, however, reflect promising routes to further research. As with any edited volume, each chapter in this book is a coherent whole in its own right, such that it is not necessary to read the chapters in any specific order. Nevertheless, they do focus on somewhat different questions and it makes sense to combine them loosely together according to some broad organizational structure of three sections.

Part I is a collection of three studies and analyses that owe much to classical evolutionary theory and biology, as presented in the introductory chapter on the history of research and theorizing in the domain of cultural transmission.

Part II includes cross-cultural perspectives on cultural transmission, with all of the contributions focusing on vertical, intergenerational transmission in various cultural and national groups. Among them are immigrant populations with a special situation for cultural transmission because the culture transmitted is not the culture of the macrosocietal context. Part III emphasizes the importance of intracultural variations, including the comparison of the transmission between third and second generations and second and first generations. Nevertheless, smaller scale regional variations within one culture are also mentioned. The final two chapters deal with a crucial methodological issue inherent in all transmission research: In addition to the effect of the transmitter on the transmittee, a third factor – identified here as the *zeitgeist* – may influence both roles in the transmission process, thereby accounting for some part of the similarity between transmitter and transmittee. In the most extreme case, the similarity approaches a zero level when the *zeitgeist* factor is introduced into the analyses. The last chapter presents some afterthoughts that may be helpful in defining a valid model of cultural transmission, along with many allusions to issues that remain unresolved and that would be worthwhile to pursue in future research.

This book presents a set of theories, ideas, and research findings that reveals in detail the ways in which psychological processes influence the elements that constitute cultures. With a topic this large, no single volume can be entirely comprehensive; the tradeoff between breadth and depth is inevitable. Moreover, this volume is an attempt to balance the two, supported by the availability of qualified research, theories – and contributors.

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Theory and Research in Cultural Transmission: A Short History

UTE SCHÖNPFLUG

INTRODUCTION

Transmission may be understood as the deliberate or unintended transfer of information from a transmitter to a transmittee. The concept of *cultural transmission*, however, indicates the transmission of culture or cultural elements that are widely distributed: social orientations (e.g., values), skills (e.g., reading and writing), knowledge (e.g., the healing power of certain herbs), and behaviors (e.g., the exchange of rings in a wedding ceremony). The scope of this distribution defines the boundaries of the respective culture. The research traditions presented herein reveal that theorists have generally thought of cultural transmission as a process of replication of whatever is transmitted in another individual or in other groups. However, as pointed out by Reynolds (1981) (see also Henrich & Boyd, 2002), the replication has its limits. This debate is elaborated on throughout this chapter.

The transmission of culture is a necessary process to maintain culture; thus, it has always taken place, from ancient to newly developed cultures. In traditional, slowly changing societies, the transmission of culture is a common undertaking of the older generation applied to the younger generation. The mechanisms involved in the cultural transmission of either slowly or rapidly changing societies form the basis of various theories that have been developed in the history of transmission research.

The history of cultural transmission theories and research is characterized by interdisciplinary contributions. This chapter traces the origins and ramifications of theoretical approaches and looks at empirical evidence and counterevidence. Neither the literature cited nor even the many publications consulted in the course of compiling this chapter exhaustively cover the history of cultural psychology. The short history of cultural transmission presented here attempts to structure the contributions to theory and research over a span of 150 years.

1.0. EARLY THOUGHTS AND STUDIES ON CULTURAL TRANSMISSION

1.1. Neo-Lamarckism and the Inheritance of Acquired Traits

The roots of thinking on cultural transmission as opposed to genetic transmission are anchored in evolutionary biology and philosophy. Influenced by the controversial Lamarckian philosophy, which postulates the inheritance of acquired physical "characters" (de Lamarck, 1809), the zoological study of generations of diverse species showing individual environmentally induced organic changes revealed generally negative results: According to contemporaneous observations, environmental induction may not directly affect the living protoplasm or genes.

Decades after Darwin's influential writings, the transmission of environmental effects became a topic of discussion in 1913 in the *Philosophical Transactions of the Royal Society* (Agar & Kerr, 1913; Kerr, 1913). These biologists claimed that environmental conditions might affect the organism – in particular, the gonad of the F1 generation (i.e., parents). The developing gonad, with its affected protoplasm, develops into a new individual of the F2 generation (i.e., offspring), carrying changed soma. New metabolic substances in the F1 organism are passed on to the organism of the newly developing individual, which consequently shows the same variation as the parent, albeit removed from the inducing environment in question. These substances might be of such a nature as to stimulate the formation of antibodies, thus causing a reaction in a later generation.

In 1908, Hartog reviewed the controversial ideas of his time but claimed that even Darwin stressed the "Lamarckian factor" (Hartog, 1908). According to Hartog, his contemporary biologists believed in the genetic transmission of acquired mental traits. They used this mechanism to explain the phenomenon of "innate instincts." Spencer (1893a, 1893b) sparked a controversy regarding this issue together with the rigid (later) anti-Lamarckian biologist Weismann (Hartog, 1893). Hartog himself rejected the complex theory of Weismann and revealed himself to be a neo-Lamarckian.

Early thinking within the constraints of the knowledge of biology of the late 19th and early 20th centuries was rather ideological and not based on extensive empirical evidence. However, the usefulness of these early contributions for later theoretical developments becomes evident as the approaches of subsequent epochs are presented. Through these contributions, the issue of nongenetic or cultural transmission was born, which did not die out due to lack of interest.

1.2. Social Inheritance

The discussion regarding the plausibility of the Lamarckian hypothesis instigated thinking about *nongenetic* or *social inheritance*, terms that were sometimes used instead of *transmission*. These concepts not only indicated that there is another path of transmission in addition to genetic transmission but also extended the discourse to nonorganic features. The psychologist Thorndike elaborated on this