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LINKING PERSONAL VALUES AND TIME ORIENTATIONS: THE CASE OF THE ATTITUDE TOWARDS CELLULAR PHONE IN FRANCE AND GERMANY.

Abstract

Perception of time is central to many marketing issues, specially to consumer behavior and to international comparative marketing. The main purpose of this study is to explore the possible connections between values, time orientations and the overall attitude towards mobile behavior in two different cultural settings : France and Germany. It also aims at providing a test of the nomological validity of the two scales we used: a modified version of Kahle's List of Values and a scale recently developed to capture core distinct dimensions the time perceptual patterns. The analyses are conducted at a confirmatory level using a multi-group structural equation approach. Due to the convenience nature of our samples, the results can not be generalized. However, within the two selected countries, we found different patterns of relationships between personal values, time orientations and the overall attitude towards mobile behavior.

Introduction

Within the personal value research stream (see Smith and Schwartz, 1997, for a comprehensive review), the “macro” perspective (Reynolds, 1985) still remains the most popular approach. Its success lies in its ability to segment individuals into qualitative

groups defined according to their value orientations. Although more than 25 measures of values are available (Robinson, Shaver and Wrightsman, 1991), the Rokeach's Value Survey (RVS) and the Kahle's List of Values (LOV) remain the most preferred instruments. Despite a few recent studies (Grunert and Scherhorn, 1990; Kamakura and Mazzon, 1991; Kamakura and Novak, 1992) the structure of these two instruments has not yet been clearly established, especially in the context of different cultural settings. Moreover, the relationships between values and other psychological or social concepts have not yet received the attention of many researchers. At the most, a few researchers have studied the nature of the relationship shared between values and innovativeness or the enduring and situational facets of involvement (Roehrich et al., 1989).

Among the numerous concepts studied in consumer behavior, the role of time has been receiving an increasing attention since the mid-seventies (Jacoby et al., 1976; Hornik, 1984; Bergadaà, 1990; Ko and Gentry, 1991; Usunier, 1991). The relationship to time appears to be central to many marketing issues, not only to consumer behavior related aspects, but also to international cross-cultural marketing issues. Recently, Usunier and Valette-Florence (1995) have presented a scale, designed from the outset to grasp most of the temporal orientations previously studied in different fields and still applicable to diverse cultural contexts. This scale meant to capture eight important temporal orientations.

The main purposes of this study are:

- to explore the possible connections between personal value systems and time orientations. Consumer life styles have already been studied with an emphasis on individual time orientation, but researches have been quite few (Settle et al., 1978). In any social environment there are habits and customs related to how people plan and organize their activities and synchronize with each other in their personal and business lives. In that perspective one might expect some connections between an individual's value system and his/her temporal orientation. Besides of the few studies linking values and time orientations, we don't know any cross-cultural study on that research topic.
- to provide a test of the nomological validity of the values and time scales in a cross-cultural context. From the empirical data collected in France and Germany, we looked at the influence of these variables on the attitude towards mobile behavior.

A review of literature relating to the main concepts and their connections will first be presented, followed by the description of the empirical cross-cultural research. We will finally discuss the major results and implications of this research.

I/ Review of literature.

1.1. Value Systems.

The nature of human values is a topic of growing interest in several social sciences and particularly in marketing. In that field a lot of empirical studies have established links with product/brand choice (Henry, 1976), media usage and preferences (Todd et al., 1997; Beatty et al., 1985), store patronage (Becker and Connor, 1982), gift giving (Beatty et al., 1996). Research has also brought evidence of the relationships between values and several variables influencing consumer behavior, such as attitudes (Homer and Kahle, 1988), pro-environmental attitudes (McCarty et Shrum, 1994; Grunert and Juhl, 1995), emotions (Laverie et al., 1993) or innovativeness (Roehrich et al., 1989).

According to Schwartz (1992), five features are common to most of the definition of values. Values are described as concepts or beliefs, about desirable behaviors and/or end states, that go beyond specific situations, guide selection or evaluation of behaviors and events, and are ordered by a certain hierarchical importance. In the approach of social adaptation theory (Kahle, 1983), values are inferred constructs held collectively by societies and individually by persons that represent the point of intersection between individuals and society. One can regard them as the most abstract type of social cognition,

that helps people guiding themselves in the interpersonal world (Grunert and Scherhorn, 1990). In any social environment there are habits and customs related to how people plan and organize their activities and synchronize with each other in their personal and business lives. Value systems represent a major component of national cultures characterizing societies. In that perspective one might expect some connections between an individual's value system and his/her temporal orientation.

1.2. Time Orientation.

The concept of time and therefore time-related behaviors have been studied in numerous disciplines (Jacoby et al., 1976, Feldman and Hornik, 1981; Jones, 1988, Levine, 1988, Adam, 1990). Reviews of time studies in various fields of research (Bergadaà, 1990, Prime, 1994) show that the concept of time is a social construction that is highly subjective (both collectively and individually). The relationship to time covers many aspects and it is a multidimensional construct.

Cultural anthropology (Munn, 1992) has been a major contributor to the study of temporal orientations. Most of the literature in anthropology considers time perceptions as cultural artifacts. Numerous anthropological observations highlight that it is impossible to assume that men were born with any type of innate "*temporal sense*". Our concept of time is always "culture-bound" (Hallowell, 1955).

Psychology, and especially experimental psychology, has also been a large contributor to the study of time, with a more individual and perceptual approach (Knapp, 1971; Bond and Feather, 1988). Whereas the anthropological approach has been mostly conceptual and descriptive in nature, psychological research has been more concerned with measurement. Psychometric scales emphasize the dimensions of individual adaptation to the collective cultural time patterns described by the anthropologists.

Time in economics may be an input in any consumption process (Becker, 1965). It is allocated where its marginal productivity is the highest; or, at least, the different "*slices of time*" must be used in such a way that their respective marginal productivities outweigh their marginal costs. Individuals maximize their overall satisfaction by optimally allocating units of time to units of activities. This economic concept of time is perceived as linear, continuous, and uniform. It is also qualified as being the "Anglo" time (Graham, 1981).

Time orientation is important for business studies because time impacts on a number of important issues such as planning behavior, respecting time commitments, valuing the durability of products or brand loyalty. These issues are significant for consumer behavior, services marketing as well as buyer-seller relationships and business negotiations, especially in an international context (Usunier, 1996). A high economic time impacts on a large variety of consumer behavior aspects, because products may save time, such as household appliances, or because waiting time must psychologically be minimized. It also impacts on buyer-seller interaction when the propensity to respect deadlines is high. Finally service consumption may be based on time orientation, such as future orientation displayed when buying bank loans or life insurance policies. Time orientations are a key issue for marketing management (Jacoby et al. 1976).

1.3. Dimensions of time orientation.

Usunier and Valette-Florence's time-style scale (1995) gives emphasis to dimensions of time perceptions, which have been described both by anthropologists and experimental psychologists (Kluckhohn et Strodtbeck, 1961; Calabresi and Cohen, 1968; Hall, 1959, 1976, 1983). Their combination depicts a concept of time, which is partly internal and partly external to the individual. It is multidimensional, individual based, but also framed by the dominant time patterns in a given society and environment. These dimensions are:

- *The money value of time*: when time and money are interchangeable, the *economicity of time* is high and activity in time is organized in a *monochronic* way. This time concept is traditionally dominant in "anglo-saxon scandinavian" cultures, though it may be present to a certain extent in most industrialized-urbanized countries and business contexts. This dimension was recently studied by consumer behavior researchers (Kaufman et al., 1991). The organized-linear economic time has also been described at the individual level in the "structure" dimension of Settle et al. (1978), and the "structured routine" dimension of Feather and Bond (1983). These relate to individual orientations to planning and scheduling daily activities.

- *The temporal orientation, and especially the projection towards the past and the future*. Time orientation tends to be related to temporal orientations defined as the social projection along the arrow of time (Kluckhohn et Strodtbeck, 1961). At the individual level, temporal orientations toward the past, the present or the future have been an interest for experimental psychologists (Cottle, 1976) and consumer behavior (Settle et al., 1978).

- *The psychological dimensions*, which emphasize how people do individually cope with time as an external and constrained economic resource and as a social and culture-bound process of synchronization with the others, may be broken down in two main dimensions: (1) *tenacity* or persistence (Settle et al., 1978), that is the capacity delay gratification when undertaking a task or a project. It is a motivational dimension of the individual relationship to time; (2) *mastery* when experiencing time (Calabresi and Cohen, 1968), that is the feeling of discomfort and anxiety about time and the need to control it through a precise organizational framework of activities. It is an affective dimension of the individual relationship to time.

1.4. Value systems and time orientation.

Coming to the connections between value systems and time orientations it is important to first precise their articulation within the concept of culture. Culture is defined as a system (Linton, 1945; Hofstede, 1980; Hall, 1983) and therefore the cultural components are to be seen as closely linked with each others in a complex whole of implications, actions and retroactions. As such the literature review emphasizes the multiple complex links between value systems and time orientations.

First of all the relationship between value systems and time orientations can be looked at the impact of values on time orientations. Looking for the origin of the dominant time orientation within a society, several researchers (Evans-Pritchard, 1937) have noted the

links with the value system in the sense that time is seen as the expression of the core values of each society. Sorokin (1943) notes that the development of mathematical time in modern societies was due to precise social evolutions, mainly urbanization and industrialization. Therefore modern societies have grown on the basis of specific values expressed in the economic vision of time: trust in science (newtonian vision of time - linear, uniform, continuous - implying a future orientation and a value for progress), technology and quantitative vision of reality (preference for digital measure and organization of time), having things and money - materialism (dominant profane conception of time). At the very heart of life, choosing between a value system anchored in a "having" or "being" mode of existence is very central to the relationship to time. The being mode exists only "here and now", while the having mode exists only in the continuum of time: past, present, future (Fromm, 1976).

Secondly, the relationship between value systems and time orientations has been studied in the sense of the impact of the time orientations on value systems. Also, time orientation serves the necessary need for stability of the social system through maintaining a stable value system and collaboration of the different members of the society. Measuring time (with digital or analogical temporal reference points) allows for cutting time in spaces, for bordering behaviors, for synchronizing relationships so that they contribute to the timeliness of the group (Evans-Pritchard 1937, Hallowell, 1955).

Finally, the relationship between value systems and time orientations shows that time orientations and value systems should be consistent with a given society. Time orientation impacts on the meaning attached to behaviors and social situations (Zerubavel, 1981). Those meanings are largely dependent upon their values-embedded temporal context: for example, eating has a different meaning whether it is a festive or a regular day; arriving late or being on time to an official ceremony - or drinking alcohol- has a different meaning at forty or at fifteen. In other words, time orientation is one of the main framework of signification of behaviors and social actions, themselves consistent with the ultimate value system of the group. In that perspective one might expect some connections between one's value system and his/her time orientation.

II/ The empirical study.

The objectives were to identify in two different cultural settings in terms of time orientation the possible links: (1) between value systems and time orientations; (2) between value systems and time orientations and the attitude towards the use of a cellular phone. The study was carried out in France and Germany. It is based on a convenience sample of 200 students within each country, 47% of whom were female. All the students were 19-20 years old, and were undergraduates in business administration. Although our sample is a convenience one, it can be considered as sufficient in exploratory studies like ours (Calder, Philips and Tybout, 1981).

2.1. Methodology.

The questionnaire was subdivided into three parts. The first part contained the Usunier and Valette-Florence’s scale¹ (1995) which is made up of 23 items and designed to measure eight main temporal orientations on a seven point Likert scale (see table 1).

The second scale was shorter and contained a modified version of Kahle’s list of values (Aurifeille and Valette-Florence, 1991). In Europe, we are using this version, due to the fact that the translation of the term “*excitement*” remains very problematic.

TABLE 1
Time orientation scale and selected items.

Dimensions	Selected items
1. Preference for organized/ economic time	It is better to split-up one’s work-day in such a way as to plan time for each task
2. Preference for non-linear/unorganized time	I hate to follow a schedule
3. Orientation toward the past	I think quite often about my life as it used to be
4. Orientation toward the future	I often think about the things I am going to do in the future
5. Mastery of time	I am almost never late for work or appointments
6. Usefulness	I sometimes feel that the way I fill my time has little use or value
7. Tenacity	Once I’ve started an activity I persist at it until I’ve completed it
8. Preference for quick return	I would rather try to get two or more things done quickly than spend my time on one big project

The third part was related to the attitude towards mobile behavior. Mobile category of product was chosen because of the values and temporal associations it may involve: to support the daily routine in reference to chronological time (Newtonian time), to save time (economic time) or to enjoy relating to the others (unorganized-time). A small qualitative survey was undertaken through focus group methodology. Relying on a convenience sample of twenty French mobile consumers, it was set up in order to determine the main components of mobile behavior. Three main orientations appeared to be relevant: freedom, contact with others and an instantly behavior. Interestingly, these dimensions are on different levels. Freedom is a means-end interpretation of a value, contact with others a social benefit and instantly behavior a functional benefit. Accordingly, seven items were generated in order to capture these three dimensions.

Concerning the methodological design of the empirical research, an exploratory approach was chosen because we have used a convenience sample, and because these scales were seldom used on a cross-cultural basis.

¹ A full presentation of this scale is available in Usunier and Valette-Florence, 1995.

Finally in order to minimize the potential methodological difficulties associated to cross-cultural research, methodological precautions have been taken to ensure conceptual equivalence of the scales in the two languages and cultural mindsets (Frijda and Jahoda, 1966; Poortinga, 1989). Specifically, items have been carefully translated and then back-translated before formulating the final version (Mayer, 1978).

2.2. Analysis and results.

Our results will be presented in three parts. First, the structure of the scales will be shown. Second, the path coefficients obtained from a multi-group structural equation approach will be discussed. Finally, we will suggest potential implications for further research and for international marketing.

Structure of the scales.

From the outset, in order to test the structure of the scales, we firstly performed exploratory principal component analyses. Secondly, we confirmed by means of confirmatory factor analyses the structure obtained at the previous step. Due to the non-normality of our data, systematic bootstrap procedures have been undertaken. Lastly, we systematically tested the invariance structure of the scales between the two countries (Steenkamp and Baumgartner, 1998). For the three scales used in this research, we found that a constrained solution setting the equality of loadings did provide the best fit to the data.

Concerning the temporal scale, the dimensions are identical to those obtained by Usunier and Valette-Florence (1995) in their former study.

Regarding the List of Values scale, four factors represent the best fit of the data. Unfortunately, their meanings are not the same as those obtained by Homer and Kahle (1988) in their US based national survey. Indeed, they are to some extent related to those obtained by Valette-Florence et al. (1991) in a cross-national study and Aurifeille and Valette-Florence (1991) in a French context. Factor 1 is related to the stimulation domain (see, also Schwartz, 1992). Factors 2 and 3 are related to individual orientations, respectively self-accomplishment and self-protection. Lastly, the fourth factor is related to the social orientation.

Finally, and as expected, we found three main dimensions for the mobile scale.

TABLE 2
Confirmatory factor analysis: Temporal scale.

Items	F ₁	F ₂	F ₃	F ₄	F ₅	F ₆	F ₇	F ₈	t value
Future 1	.797								44.62
Future 2	.821								35.03
Future 3	.892								47.32
Tenacity 1		.764							37.35
Tenacity 2		.819							15.34
Tenacity 3		.679							20.43
Economic 1			.596						17.24
Economic 2			.669						17.35
Economic 3			.773						25.22
Past 1				.623					20.37
Past 2				.682					29.74
Past 3				.857					19.59
Preference quick return1					.688				7.59
Preference quick return2					-.419				-10.68
Preference quick return3					.899				9.91
Mastery 1						-.552			-14.26
Mastery 2						.808			19.56
Mastery 3						.701			10.22
Unorganized time 1							.632		18.88
Unorganized time 2							.845		9.29
Unorganized time 3							.463		8.07
Usefulness 1								.467	3.88
Usefulness 2								.776	4.10
Reliability (<i>r</i> of Joreskog (1971))									
Future						0.99			
Tenacity						0.98			
Economic time						0.98			
Past						0.98			
Preference for a quick return						0.95			
Mastery						0.97			
Unorganized tile						0.96			
Usefulness						0.83			

TABLE 3
Confirmatory factor analysis: LOV scale

Items	F ₁	F ₂	F ₃	F ₄	t value
Stimulation1	0.676				11.57
Stimulation2	0.614				19.51
Stimulation3	0.629				13.14
Self-accomplishment1		0.607			8.57
Self-accomplishment2		0.691			15.92
Self-accomplishment3		0.750			29.02
Self-protection1			0.582		18.56
Self-protection2			0.632		13.28
Social orientation1				0.430	7.78
Social orientation2				0.620	9.51
Reliability (r of Joreskog)					
Stimulation				0.96	
Self-accomplishment				0.97	
Self-protection				0.95	
Social orientation				0.90	

TABLE 4
Confirmatory factor analysis: attitude towards mobile behavior scale

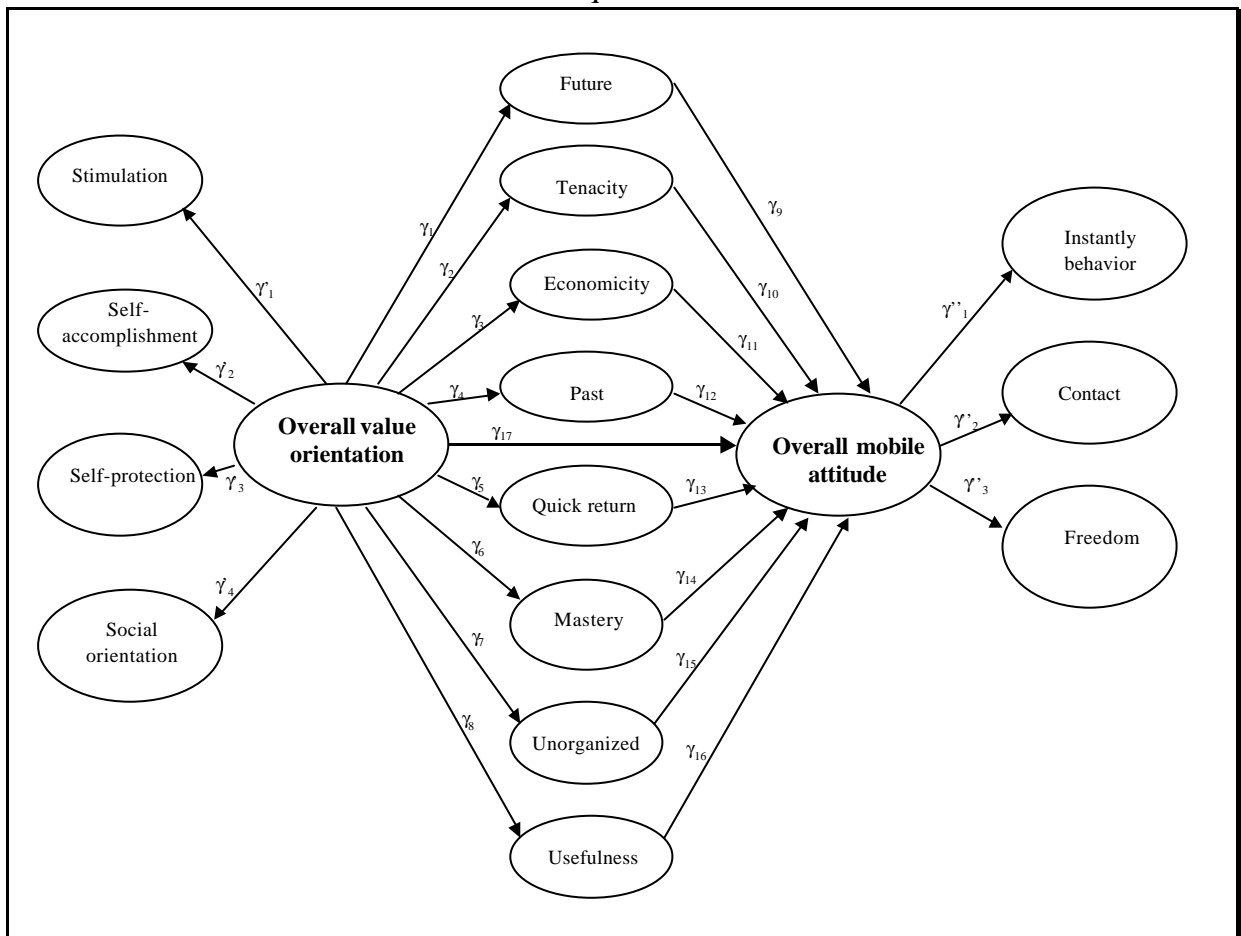
Items	F ₁	F ₂	F ₃	t value
Instant 1	0.717			22.72
Instant 2	0.694			15.21
Free 1		0.816		37.20
Free 2		0.723		14.59
Free 3		0.749		21.91
Contact 1			0.659	15.66
Contact 2			0.655	20.91
Reliability (r of Joreskog)				
Instantly behavior			0.96	
Freedom			0.98	
Contact with others			0.96	

Findings and discussion.

All the results come from a multi-group structural equation approach. Due to the high degree of colinearity between the value dimensions and the free components of the attitude towards mobile behavior, we tested the model depicted in figure 1. Measurement parameters are not displayed for the sake of clarity, and therefore figure 1 presents only the latent constructs. The model depicts the relationships between two second order latent constructs (overall value orientation and overall mobile attitude) and the latent constructs of time orientations. These two second order latent constructs summarize the four value dimensions for the overall value orientation and the three mobile attitude dimensions for

the overall mobile attitude. Since we performed a multi-group analysis, we systematically tested for the invariance of the structural parameters between the two groups. In this research, the best results were obtained for the solution where the path coefficients were left free within each sub-group. Table 5 presents the “bootstrapped estimates” for each group.

FIGURE 1
The structural equation model



The results show a quite different pattern of relationships between the two countries. In Germany, all the links but only two, namely mastery and usefulness, between the overall value orientation and the temporal orientations are statistically significant, whereas in France only two links (future and tenacity) are significant. These two links are significant in both countries.

TABLE 5
The bootstrapped estimates for each cultural group.

	France		Germany	
	Estimate	t value	Estimate	t value
γ'_1	0.554	8.10	0.554	8.10
γ'_2	0.946	18.31	0.946	18.31
γ'_3	0.870	15.74	0.870	15.74
γ'_4	0.847	11.77	0.847	11.77
γ_1	0.659	7.32	0.649	8.55
γ_2	0.216	3.56	0.526	4.82
γ_3	ns	ns	0.409	2.52
γ_4	ns	ns	0.552	4.24
γ_5	ns	ns	0.240	2.63
γ_6	ns	ns	ns	ns
γ_7	ns	ns	0.422	4.24
γ_8	ns	ns	ns	ns
γ_9	ns	ns	ns	ns
γ_{10}	-0.229	-2.07	ns	ns
γ_{11}	0.295	1.90	ns	ns
γ_{12}	ns	ns	ns	ns
γ_{13}	ns	ns	0.346	4.20
γ_{14}	ns	ns	ns	ns
γ_{15}	ns	ns	0.313	4.58
γ_{16}	ns	ns	ns	ns
γ_{17}	0.465	3.42	0.240	3.35
γ''_1	0.740	25.19	0.740	25.19
γ''_2	0.663	22.24	0.663	22.24
γ''_3	0.835	16.61	0.835	16.61

As for the nomological validity of the scales, we found that in both countries the overall value orientation did have an impact on the overall attitude towards mobile behavior. However, a different pattern appeared as for the influence of the temporal orientations. In France, economic time (.295) and tenacity (-.229) have an influence on the overall mobile attitude. In Germany, we also found two relationships: preference for a quick return (.346) and non-organized time (.313).

In France, the link between economicity and mobile attitude show that for French the mobile is associated to the capacity to organize the individual's life and to save one's time. The negative path coefficient we found between tenacity and mobile attitude suggests a different aspect. The French mobile attitude may here indicated that, being intellectually monochronic (and monochronism is more associated to tenacity than polychronism) but

behaviorally polychronic (Hall, 1983), the French time orientation in terms of tenacity is negatively associated with mobile attitude. Using a mobile leads and enables oneself to manage in the instant just as with a polychronic use of time.

In Germany, the link between preference for quick returns and mobile attitude may suggest that for the Germans, using a mobile is associated with instant behavior. Concerning the relationship between unorganized time and mobile attitude, it may suggest that mobile is associated also with flexible time and instant behavior. The Germans, traditionally described as valuing organized time, show an association between using the mobile and behaving spontaneously and freely, without an pre-organized framework.

Implications

Due to the exploratory nature of our study, we will outline potential academic implications in terms of direction for future research. Coming back to our objectives, the results suggest in the two countries the existence of a relationship between value systems and time orientations, that is measured behaviorally in the context of mobile usage (nomological validity). Future research should be developed to further explore first the theoretical links in a deeper review of literature, specially in the fields of anthropology and sociology, and secondly those links in different cultures and for different products on the basis of larger and random samples. Also a deeper analysis should be undertaken concerning the rationales of the relationships and the links between the several dimensions of the three concepts: which dimensions of value systems are more present in dimensions of mobile attitude? which dimensions of value systems are more present in dimensions of time orientation? which dimensions of time orientations are more present in dimensions of mobile attitude?

From a managerial perspective, our exploratory results could suggest that all consumers may not be sensitive to the same product benefits, depending on their country and time orientation. If the relationships we found were to be confirmed, the French consumers would be mostly valuing the economic aspect of using a mobile (saving time). The Germans would value more the capacity to get immediate gratification and to create a space in their lives that allows for unorganized time. This would have a strong impact on international communication campaigns for mobile products. An international mobile telecommunication provider may then need to adapt its communication messages to its different national markets. Our results therefore suggest that the mobile product, though global in essence, may be also local in the meanings and functions attached to it.

Conclusion.

This research was written from the outset with the main objective to explore the possible linkages between personal values and temporal orientations on a cross-cultural basis. Two convenience samples of 200 students were retained in France and Germany. Confirmatory

factor analyses showed that the structure of the scales was invariant across the two countries.

However, a multi-group structural equation model underlines the fact that an overall value orientation did not affect the temporal orientations in an identical manner within each country. In Germany six temporal orientations are influenced by the overall value dimension, whereas in France only two orientations seem to be related to this value orientation. Moreover, we found that in both countries the overall value orientation did have an impact on the overall attitude towards mobile behavior. However, a different pattern appeared as for the influence of the temporal orientations.

The main limit of our research lies in the nature of our samples: convenience samples, though satisfactory in exploratory studies, don't allow for generalization, and student's samples may be very specific in their value systems, time orientations and mobile attitude. However, the number of significant relationships we found lead us to conclude that developing that research area on a cross-cultural basis is worthwhile. Obviously, a lot of research avenues still remain open...

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