

## Grand Valley State University ScholarWorks@GVSU

Papers from the International Association for Cross-  
Cultural Psychology Conferences

IACCP

2009

# Temporal Orientation and its Relationships with Organizationally Valued Outcomes: Results from a 14 Country Investigation

Tejinder K. Billing  
Virginia State University, [tbilling@vsu.edu](mailto:tbilling@vsu.edu)

Billing S. Bhagat  
The University of Memphis

Annamária Lammel  
Free University

Karen Moustafa Leonard  
Indiana University - Purdue University - Fort Wayne

David L. Ford Jr.  
University of Texas at Dallas

*See next page for additional authors*

Follow this and additional works at: [https://scholarworks.gvsu.edu/iaccp\\_papers](https://scholarworks.gvsu.edu/iaccp_papers)

 Part of the [Psychology Commons](#)

### Recommended Citation

Billing, T. K., Bhagat, B. S., Lammel, A., & Leonard, K. M. (2009). Temporal orientation and its relationships with organizationally valued outcome: Results from a 14 country investigation. In G. Aikaterini & K. Mylonas (Eds.), *Quod Erat Demonstrandum: From Herodotus' ethnographic journeys to cross-cultural research: Proceedings from the 18th International Congress of the International Association for Cross-Cultural Psychology*. [https://scholarworks.gvsu.edu/iaccp\\_papers/45/](https://scholarworks.gvsu.edu/iaccp_papers/45/)

This Article is brought to you for free and open access by the IACCP at ScholarWorks@GVSU. It has been accepted for inclusion in Papers from the International Association for Cross-Cultural Psychology Conferences by an authorized administrator of ScholarWorks@GVSU. For more information, please contact [scholarworks@gvsu.edu](mailto:scholarworks@gvsu.edu).

---

**Authors**

Tejinder K. Billing, Billing S. Bhagat, Annamária Lammel, Karen Moustafa Leonard, David L. Ford Jr., Fran Brew, Jose Rojas-Mendez, Vilma Coutino-Hill, Ujvala Rajadhyaksha, B.N. Srivastava, Bernadette Setiadi, Darwish Yousef, Olga Soler, Mannsoo Shin, Ichal Nowak, Shuming Zhao, Stefan Schmid, Murat Gumus, Tim Keeley, Catherine Kwantes, and Ben Kuo

---

## Temporal Orientation and its Relationships with Organizationally Valued Outcomes: Results from a 14 Country Investigation

---

**Tejinder K. Billing**, *Virginia State University, USA*, [tbilling@vsu.edu](mailto:tbilling@vsu.edu)

**Rabi S. Bhagat**, *The University of Memphis, USA*

**Annamária Lammel**, *Free University, France*

**Karen Moustafa Leonard**, *Indiana University - Purdue University - Fort Wayne, USA*

### **& Country Collaborators**

**David L. Ford, Jr.**, *University of Texas at Dallas, USA*

**Fran Brew**, *Macquarie University; North Ryde, New South Wales, Australia*

**Jose Rojas-Mendez & Vilma Coutino-Hill**, *Universidad de Talca, Talca, Chile*

**Ujvala Rajadhyaksha**, *Indian Institute of Technology, Bombay, India*

**B.N. Srivastava**, *Indian Institute of Management, Calcutta, India*

**Bernadette Setiadi**, *Universitas Indonesia, Depok, Indonesia*

**Darwish Yousef**, *United Arab Emirates University; Al-Ain, United Arab Emirates*

**Olga Soler**, *University of Venezuela, Caracas, Venezuela*

**Mannsoo Shin**, *Korea University Business School, South Korea*

**Ichal Nowak**, *University of Gdansk, Poland*

**Shuming Zhao**, *University of Nanjing, China*

**Stefan Schmid**, *University of Regensburg, Germany*

**Murat Gumus**, *Canakkale Onsekiz Mart University, Turkey*

**Tim Keeley**, *Kyushu Sangyo University, Japan*

**Catherine Kwantes**, *University of Windsor, Canada*

**Ben Kuo**, *University of Windsor, Canada*

In this investigation we were concerned with the cultural covariates of temporal orientation in 14 different national contexts. Data were collected from United States of America (US), Australia, Germany, Poland, Chile, Venezuela, Turkey, United Arab Emirates (UAE), India, Indonesia, Malaysia Japan, South Korea and China. Analyses show that collectivistic cultural orientation tends to be relatively important in the prediction of three facets of temporal orientation (i.e. emphasis on planning and scheduling; sense of time and attitude towards time).

Time and temporal experience are fundamental to human existence with research on international variations of time orientations being a central issue in cross-cultural psychology (Schrieber & Gutek, 1987; Bluedorn & Denhardt, 1988). Hofstede (2001) conceptualized short-term vs. long-term orientation as a dimension of cultural variation in his classic investigation of differences in organizational behavior related processes and outcomes across 40 countries and 10 regions of the

world. The work of Phillip Zimbardo emphasizes the importance of balanced *'time perspective'* for the optimal functioning of individuals. Time perspective refers to an individual's propensity to relate to psychological concepts of past, present or future (Zimbardo, 1999). An individual's time perspective is a relatively stable individual trait which is influenced by a number of factors such as one's cultural values, social background, religion, education, etc.

Temporal factors such as time perspective affect individual personality and motivation, moods and emotion, judgment and decision, stress and coping processes and even the construction of self (McGrath & Tschan, 2004; McGrath & Kelley, 1986). In an earlier classic work entitled "Patterning of Time", Doob (1971) discussed numerous interesting episodes reflecting strong international and cross-cultural variations in the way humans perceive time, develop a sense of time and attitude towards time. For example, he found that young adults from U.S. suburbs tended to have a faster biological sense of time than the objective sense of time as reflected in the movement of a clock compared to young adults from African rural areas. Young adults from the U.S. generally had the tendency to over estimate the objective flow of time whereas the young adults from Africa had the opposite tendency. Kastenbaum (1964, p. 98) noted that

*"Temporal orientation serves the function of liberating the individual from dominance by his immediate concrete situation ..... and offers a framework within which self identity develops, maintains, and transforms itself"*

Individuals differ in their perception of time (Ancona, Okhuysen, & Perlow, 2001) and the kind of temporal orientation (a cognitive appraisal of the flow of time linking various causal events from the past, present and in the future) that one develops tends to interact with identical situations producing different outcomes (Bluedorn, 2002). Researchers agree that experience of time varies across situations and individuals (Bluedorn, 1988; McGrath & Rotchford, 1983). Time is central to many aspects of human behavior and it is important for us to understand cultural variations of temporal orientation.

Doob (1971) used the term temporal orientation to denote "the direction of awareness at a given moment or characteristically over a long period of time" (1971, p. 8). This orientation develops over a series of temporal judgments which are likely to be organized within the person. These temporal judgments: 1) are characterized by some degree of internal consistency 2) are socially and functionally significant in one's society, and 3) the structural complexity of these embedded temporal judgments depends on the modal cultural values of the society. Doob (1971) also advanced the notion that temporal orientation is a *subjective phenomenon* and it cannot be completely *communicable*. The point is that individuals develop temporal orientation in response to cultural values of their societies. Temporal orientations can and do indeed vary according to the fundamental dimensions of cultural orientations. For example, western individualistic societies would foster a kind of temporal orientation that is unlikely to be similar to the one found in individuals from collectivistic societies.

Following Doob's (1971) insightful analyses of the human temporal experience, we define temporal orientation of an individual as a cognitive construct composed of *sense of time*, *attitude towards time* and *emphasis on planning and scheduling*. This formulation was developed by Bhagat (1986), was reiterated in a qualitative study (Bhagat & Moustafa, 2002) and recently re-examined in an empirical study involving an occupationally heterogeneous sample of 387 employees (Bhagat, Billing & Babakus, 2008). *Sense of time* is conceptualized as the ability of an individual to discover the significance of time by thinking and reflection. The greater the number of categories used to think about time, the greater the sense of time. Time must be considered a discovery that is only made by thinking and therefore it is ideas that we create. The sense of time develops in the presence of adequate temporal symbols and accompanying objective information from the world. Doob's analysis also suggested that the ability to make correct temporal judgment gradually improves as one exposure's to world increases (Doob, 1971). *Attitude toward time* reflects an individual's personal affect toward the use of time in various domains of his/her life. Punctuality is a strong indicator of one's positive attitude toward time. Valuing one's time,

avoiding losses of time, etc. are also part of this construct. Another strong indicator of an individual's temporal orientation is emphasis on *planning and scheduling* (McGrath & Rotchford, 1983). Planning behavior refers to setting goals and priorities and can be part of an individual's work strategy. Planning involves action, which will achieve a future goal in a manner only partially or incompletely known from the past experiences. Triandis (1989) noted that when one engages in appropriate planning and scheduling of activities, one also increases one's sense of control over one's environment i.e., events that one has to perform fall into a predictable fashion. Individuals who are more sensitive to meaning, utility and significance of time are more effective in performing their duties and responsibilities compared to others who do not engage in planning and scheduling activities as well (Bhagat, 1983).

### Cultural Variations in Temporal Orientation

In a recent international survey of how individuals and societies pattern their temporal experience, Levine (1997) assiduously noted that human experience of time had distinctive facets attached to it as a function of cultural differences. He made an interesting comment that '*time speaks with an accent*'. Societies differ in the way they emphasize *clock time* (i.e., valuing the starting and ending of activities and tasks according to the objective dictates of the clock). Then, there is *event time*. It is concerned with the emphasis that societies put on starting and ending of activities according to the degree of intrinsic satisfaction that one derives from performing such activities (Levine, 1997). Western cultures have a linear view of time and time is clearly viewed as a resource not to be whiled away or wasted in a frivolous manner (McGrath & Tschan, 2004). In contrast, in non-western, collectivistic and in rural areas, time is perceived in a non-linear sense and spending of time depends on interpersonal, social and cultural significance of the event and the context in which one spends time.

In a study on how non-Americans view American use of time, Bhagat and Moustafa (2002) found that non-Americans perceive the American use of time was primarily concerned with those activities that would enhance *private self* (the facet of self that reflects what one is, what one likes and what one's preferences are). Americans also show a strong preference for narrow segmentation of activities in accordance with the dictates of the objective clock. Hofstede (1991; 2001) found that individualistic cultures put greater emphasis on the use of time and where one's past has relatively little influence on future activities. In contrast, collectivistic cultures prefer acting in the present by reflecting and integrating events from the past with the present.

In western cultures like USA, UK, Canada, Germany, etc. people are driven to make productive use of every available moment and are very punctual, whereas in other cultures like Mexico, Latin America, it is common to accept with indifference that what does not get done today will get done tomorrow and that appointments are mere approximations (Levine, 1997). In the latter case, the passage of time is appreciated, experienced and even enjoyed rather than lamented (Levine, 1997). The above discussion should make it clear that each culture tends to formulate or impose a unified dominant conception about the nature of time. Levine (1997) contended that a culture's basic value system is also reflected in its norms and beliefs about time. The cultural values that are relevant to examining the cultural differences in perception and experience of time across cultures are *individualism and collectivism*. Individualism-collectivism is considered to be most distinguishing characteristic in the way societies analyze and process social behaviors (Bhagat, Kedia, Harveston, & Triandis, 2003; Earley & Gibson, 1998; Erez & Earley, 1993; Hofstede, 1980, 1991, 1994; Triandis, 1989, 1990, 1994, 1995, 1998, 2000).

Individualism pertains to societies in which the ties between individuals are loose: everyone is expected to look after himself or herself and his or her immediate family. Collectivism as its opposite pertains to societies in which people from birth onwards are integrated into strong, cohesive in-groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty (Hofstede, 2001). Individualistic cultures emphasize the goals of individuals rather than the group concerns and needs. However, in collectivistic cultures individuals are

primarily interested in satisfying the goals of the collectives and are strongly motivated by norms, duties, and obligations, which are imposed by the collective. Thus, individualistic cultures as compared to collectivistic cultures put more emphasis on achievement than affiliation (Triandis, 1995). More emphasis on achievement leads to linear conception of time (Levine, 1997). In cultures where social relationships take precedence (collectivist cultures), there is more relaxed attitude towards time.

Initially, Hofstede (1980; 1991) conceptualized individualism-collectivism as a bipolar dimension to distinguish national cultures. Triandis (1995) proposed that studying individualism and collectivism as a multifaceted construct will increase our understanding in many ways. In a similar vein, Schwartz (1990) suggested that individualism and collectivism should be refined in finer categories for more productive research. Triandis (1998) proposed that individualism and collectivism have four universal defining attributes: independent versus interdependent definitions of self, goal independent from groups versus goals compatible with in-groups, emphasis on attitude versus norms, and emphasis on rationality versus relatedness. He further offered a typology of individualism and collectivism in terms of vertical and horizontal dimensions of individualism and collectivism. He contended that when we cross the cultural syndromes of collectivism and individualism with cultural syndromes of vertical and horizontal relationships a typology of four kinds of cultures is obtained in terms of *vertical individualism*, *horizontal individualism*, *vertical collectivism*, and *horizontal collectivism*. Vertical and horizontal dimension refers how people define their selves, in vertical cultures individuals define themselves as “different from others”, whereas in the horizontal cultures definition of self is “same as others”. Therefore, vertical individualism (*VI*) cultures emphasize independence of action and the need to stand out from others e.g. U.S., France. Horizontal individualistic (*HI*) cultures emphasize independence of action and equality with others; Australia and Sweden exemplify such cultures. In vertical collectivistic (*VC*) cultures there is interdependence of actions and people define themselves as different from others e.g. India, China. Horizontal collectivism (*HC*) cultures emphasize interdependence of action and equality with others like in Israeli Kibbutz, and Eskimo cultures.

Triandis (1995) proposed that *VI* should be positively related to Schwartz’s values of achievement, self-direction, and hedonism; *HI* to universalism, self-direction, and hedonism; *VC* to power, conformity, and security; and *HC* to benevolence, conformity, and security. Oishi, Schimmack, Diener, and Suh (1998) empirically investigated the relationships between *VI*, *HI*, *VC*, *HC* and Schwartz’s value survey (Schwartz, 1992). The results of the study show that *VI* was moderately positively related to power and achievement, *HI* to self-direction, *VC* to conformity and security, and *HC* to benevolence. Triandis and Gelfand (1998) reported three studies that examined the validity of the constructs and found that *VI* scores were best predicted by competition and hedonism, *HI* by self-reliance, *VC* by family integrity and sociability, and *HC* by interdependence and sociability. Kurman and Sriram (2002) found that *VI* strongly correlated to self-enhancement as compared to *HI*, *HC*, and *VC* in a sample involving individuals from Singapore and Israel.

These findings suggest that vertical individualistic cultures foster high levels of self-indulgence, competition and put high emphasis on achievement. Given that emphasis on achievement and competition in these cultures are important, effective use of time is very important. In fact, as noted earlier, Levine (1997) found the New York city had one of the highest pace of life. This is reflected in a strong orientation towards using time effectively. Individuals in these cultures are likely to be highly conscious towards the passage of time and will have high sense of time, positive attitude towards time and will place high emphasis on planning and scheduling. Higher emphasis on temporal orientation is likely to be found in vertical individualistic cultures such as US, UK, etc.

In vertical collectivist cultures, though individuals might prefer to stand out from others, they also give priority to the goals of the collective and in-groups. Such tendencies also result in

predispositions to manage time fairly well. However, we do not expect vertical collectivists to be as strongly temporally oriented as vertical individualistic. Individuals in these societies are therefore likely to experience moderate levels of temporal orientation in terms of sense of time, attitude towards time and emphasis on planning & scheduling. In horizontal individualistic societies like Sweden and Australia people are individualistic but they do not prefer to stand out from others. Equity is accepted as given in horizontal cultures (Triandis, 1998). Hence, individuals in these societies are not likely to be as competitive and achievement focused as individuals in *VI* societies. Individuals in these societies are likely to follow their personal goals and agendas but are not likely to be competitive. Therefore individuals with in these societies are likely to develop moderate levels of temporal orientation. The two dimensions of *HC* cultures i.e., horizontal and collectivism both foster circular conception of time and here time is a resource that is available in abundance, and hence in these societies individuals will experience low levels of temporal orientation.

The above discussion clearly signifies that cultural values of various societies foster different orientations towards time (Gurvitch, 1964) as shown in Table 1. This figure depicts that the cultural facet of *VI* correlates more positively with three components of temporal orientation (i.e., planning and scheduling, attitude towards time, and sense of time). The cultural facet of *VC* and *HI* are correlated with the three facets of temporal orientation, but these correlations are not likely to be as strong as the ones between vertical individualism and three facets of temporal orientation. The central hypothesis investigated in our investigation is as follows: Cultural facet of Vertical Individualism correlates positively and more strongly with three components of temporal orientation (planning and scheduling, attitude towards time, and sense of time. Cultural facet of vertical collectivism is also correlated with the three facets of temporal orientation, but these correlations are not as strong as the one reflected in the relationships between *VI* and facets of temporal orientation.

**Table 1.** Components of Cultural Variations

<b>Individualistic</b>	<b>Collectivistic</b>
<p><b>Vertical Individualism</b></p> <ul style="list-style-type: none"> <li>-Stronger Emphasis on Self and differentiation of self from others.</li> <li>-Stronger emphasis on Achievement orientation.</li> <li>-<i>Stronger emphasis on temporal Orientation (e.g. Planning &amp; Scheduling)</i></li> </ul>	<p><b>Vertical Collectivism</b></p> <ul style="list-style-type: none"> <li>-Stronger emphasis on relatedness</li> <li>-Stronger emphasis on differentiation of self from others based on social status.</li> <li>-<i>Stronger emphasis on temporal orientation. (e.g. Sense of time)</i></li> </ul>
<p><b>Horizontal Individualism</b></p> <ul style="list-style-type: none"> <li>-Stronger Emphasis on Self and differentiation of self from others</li> <li>-Not a great deal of emphasis on standing out.</li> <li>-<i>Weaker emphasis on temporal orientation</i></li> </ul>	<p><b>Horizontal Collectivism</b></p> <ul style="list-style-type: none"> <li>-Stronger emphasis on relatedness but not a great deal of emphasis on individual goals.</li> <li>-Collective goals predominate.</li> <li>-<i>Weaker emphasis on temporal orientation</i></li> </ul>

### Method

Collection of data followed the recommendations reflected in Bhagat and McQuaid (1982), Bhagat, Kedia, Crawford, and Kaplan (1990) and van De Vijver and Leung (1997). Selection of the countries was primarily guided by their location on the collectivism-individualism scores from Hofstede (2001). The Principal Investigators contacted collaborators in these fourteen (14) countries. Appropriate translation and back translation were conducted in Germany, Poland, South Korea, Japan, China, Indonesia, Malaysia, U.A.E., Turkey, Chile and Venezuela. The analyses were conducted after defining six clusters. The countries were clustered following the regional clustering method employed by Gupta and Hanges (2004) in the GLOBE study. The clusters are formed based on the assumption that societies with regional-language, geography and ethnic similarities tend to have same fundamental attributes and values (Gupta & Hanges, 2004). Based on this, we formed six clusters from the 14 countries, the first cluster was the Anglo cluster composed of the U.S. and Australia, the second cluster is the Central European Cluster (Germany and Poland) followed by the Latin American cluster (Chile and Venezuela), the Middle East

culture (Turkey and U.A.E.), the South East Asian cluster (India, Indonesia and Malaysia) and the Confucian Asian cluster (China, Japan and S. Korea).

### *Samples*

Participants (overall N = 5,625) were managers and white-collar workers in each country: Australia (N=744); Chile (N=583); China (N=153); Germany (N=198); India (N=806); Indonesia (N=752); Japan (N=361); Malaysia (N=111); Poland (N=248); South Korea (N=365); Turkey (N=211); U.A.E. (N=235); Venezuela (N=509); and U.S. (N=349). In most cross-national studies of organizational psychology dealing with job-related reactions of individuals, samples of this kind from 14 countries are indeed rare. We were particularly keen in having large samples in order to increase the validity of the findings. Subjects included both men and women. Fourteen percent were of age 25 or less; 71.7% were between ages 26 and 50; 12.4% were between ages 56-65; less than 1% percent were over age 65. The samples from the 14 countries did not differ significantly in distributional terms of sex, age, education and organizational tenure. This is a reassuring fact as these demographic variables were not likely to confound the hypothesized relationships.

### *Measures*

*Temporal Orientation:* Temporal Orientation was measured using a scale developed by Bhagat (1986) by following the attitudinal scaling procedure of Thurstone and Chave (1929) and Thurstone (1931) method of scaling attitudes. An example of items used to measure attitude towards time is “I believe that I have an acute sense of how to manage my time on the job”. Examples of items assessing sense of time and emphasis on planning and scheduling respectively are “I like to make sure that other people do not get to waste my working time” and “I tend to determine my priorities for today from yesterday’s results and plan for tomorrow today” respectively. The internal consistency (Cronbach’s  $\alpha$ ) of planning and scheduling facet of temporal orientation ranges from .63 to .87 across the fourteen countries. The internal consistency indices of attitude towards time range from .70 to .81 and the respective indices of sense of time facet of temporal orientation ranges from .68 to .76.

*Individualism-collectivism:* The scale to measure individualism-collectivism cultural variations was developed by Singelis, Triandis, Bhawuk, and Gelfand (1995). The instrument has four subscales: horizontal collectivism (*HC*) and vertical collectivism (*VC*); horizontal individualism (*HI*) and vertical individualism (*VI*). There are 32-items; each subscale has eight items. Sample items include: “My happiness depends very much on the happiness of those around me” (*HC*), “Being a unique individual is important to me” (*HI*), “Winning is everything” (*VI*), and “Children should be taught to place duty before pleasure” (*VC*). Respondents are asked to indicate their disagreement/agreement with each on a Likert type scale of 1 to 7, with 1 indicating strong disagreement and 7 indicating strong agreement. Reliabilities for this scale range from .67 to .74 (Singelis et al., 1995).

## **Results**

Vertical and horizontal individualism and collectivism scores were computed for the 14 countries and the range of means, standard deviations, and reliabilities are depicted in Table 2. Vertical individualism correlated positively with three facets of temporal orientation in all of the 14 countries. Table 3 depicts the pattern of correlations between the study variables in 14 countries. Vertical individualism correlated most strongly with planning and scheduling facet of temporal orientation in most countries. However, vertical individualism was not as strongly related with the other two facets of temporal orientation.



**Table 2.** Range of Means, Standard Deviations and Reliabilities of Study Variables

	Means	Standard Deviations	Reliability indices
Vertical Individualism	3.60 to 4.60	.83 to 1.10	.55 to .74
Horizontal Individualism	6.10 to 5.10	.99 to 1.16	.64 to .84
Vertical Collectivism	5.61 to 4.40	.81 to 1.27	.69 to .79
Horizontal Collectivism	5.70 to 4.43	.61 to 1.31	.59 to .86
Planning & Scheduling	5.40 to 4.66	.06 to .92	.63 to .87
Attitude towards time	5.72 to 4.64	.65 to .88	.70 to .81
Sense of time	5.33 to 4.33	.77 to 1.05	.68 to .76

**Table 3.** Correlations of facets of temporal orientation with cultural variations in clusters of countries

Cultural Variations	Clusters	Facets of Temporal Orientation			
		Planning & Scheduling	Attitude towards time	Sense of time	
Vertical Individualism	Australia (1)	.25	.16	.29	
	USA (1)	.16	.10	.17	
	Germany (2)	.22	.24	.18	
	Poland (2)	.19	.25	.25	
	Chile (3)	.19	.21	.22	
	Venezuela (3)	.15	.13	.26	
	Turkey (4)	.20	.13	.20	
	U.A.E. (4)	.15	.13	.26	
	India (5)	.22	.14	.22	
	Indonesia (5)	.15	.11	.19	
	Malaysia (5)	.14	.22	.13	
	China (6)	.33	.24	.23	
	Japan (6)	.29	.27	.24	
	South Korea (6)	.38	.36	.32	
	Australia (1)	.12	.20	.11	
	USA (1)	.17	.20	.15	
	Germany (2)	-.01	.02	-.04	
	Poland (2)	.00	.00	-.05	
Horizontal Individualism	Chile (3)	.13	.14	.16	
	Venezuela (3)	.20	.13	.14	
	Turkey (4)	.14	.09	.06	
	U.A.E. (4)	.20	.13	.14	
	India (5)	.11	.12	.16	
	Indonesia (5)	.19	.17	.16	
	Malaysia (5)	-.05	.12	.02	
	China (6)	.20	.22	.21	
	Japan (6)	.19	.19	.05	
	South Korea (6)	.39	.41	.28	
	Australia (1)	.26	.26	.25	
	USA (1)	.38	.42	.29	
	Germany (2)	.32	.37	.29	
	Poland (2)	.30	.37	.32	
	Chile (3)	.30	.31	.31	
	Venezuela (3)	.27	.24	.19	
	Vertical Collectivism	Turkey (4)	.23	.20	.10
		U.A.E. (4)	.27	.24	.19
India (5)		.21	.20	.19	
Indonesia (5)		.34	.29	.25	
Malaysia (5)		.30	.34	.21	
China (6)		.42	.38	.34	
Japan (6)		.30	.28	.19	
South Korea (6)		.48	.42	.47	
Australia (1)		.17	.17	.13	
USA (1)		.29	.28	.22	
Germany (2)		.21	.23	.24	
Poland (2)		.16	.22	.12	
Chile (3)		.28	.23	.22	
Venezuela (3)		.21	.17	.12	
Turkey (4)		.24	.22	.08	
U.A.E. (4)		.21	.17	.12	
Horizontal Collectivism		India (5)	.21	.19	.13
		Indonesia (5)	.25	.23	.19
	Malaysia (5)	.22	.27	.26	
	China (6)	.39	.40	.28	
	Japan (6)	.20	.14	.23	
	South Korea (6)	.48	.45	.42	

**Key:** Australia, USA: Anglo Cluster (1), Germany, Poland: Central European Cluster (2), Chile, Venezuela: Latin American Cluster (3), Turkey, U.A.E.: Middle East Culture Cluster (4), India, Indonesia, Malaysia: South East Asian Cluster (5), China, Japan, South Korea: Confucian Cluster (6).

Since, no clear patterns emerged in correlation analyses conducted on the six clusters of 14 countries, we conducted a pan-cultural correlation analyses. We computed the correlations between three facets of temporal orientation along with four dimensions of individualism and collectivism using Fisher's  $z$  transformation. The results of the pan-cultural correlation analyses are shown in Table 4. An interesting pattern emerged from the results of these analyses. The association of planning and scheduling dimension with  $VC$  is very strongly related to the association of planning and scheduling with  $HC$ . Similar patterns were found for the sense of time association with  $VC$  and  $HC$  and the association of attitude towards time with  $VC$  and  $HC$ . This means that collectivistic orientations created stronger relationships with the three facets of temporal orientation as compared to individualistic orientation.

**Table 4.** Correlations at Pan-Cultural Level

	<i>VI-PS</i>	<i>HI-PS</i>	<i>VC-PS</i>	<i>HC-PS</i>
1. Vertical Individualism- Planning & Scheduling ( <i>VI-PS</i> )	1.00			
2. Horizontal Individualism- Planning & Scheduling ( <i>HI-PS</i> )	0.55	1.00		
3. Vertical Collectivism- Planning & Scheduling ( <i>VC-PS</i> )	0.60	0.54	1.00	
4. Horizontal Collectivism- Planning & Scheduling ( <i>HC-PS</i> )	0.67	0.71	0.86	1.00
	<i>VI-AT</i>	<i>HI-AT</i>	<i>VC-AT</i>	<i>HC-AT</i>
1. Vertical Individualism- Attitude towards time ( <i>VI-AT</i> )	1.00			
2. Horizontal Individualism- Attitude towards time ( <i>HI-AT</i> )	0.39	1.00		
3. Vertical Collectivism- Attitude towards time ( <i>VC-AT</i> )	0.55	0.33	1.00	
4. Horizontal Collectivism- Attitude towards time ( <i>HC-AT</i> )	0.56	0.64	0.72	1.00
	<i>VI-ST</i>	<i>HI-ST</i>	<i>VC-ST</i>	<i>HC-ST</i>
1. Vertical Individualism- Sense of Time ( <i>VI-ST</i> )	1.00			
2. Horizontal Individualism- Sense of Time ( <i>HI-ST</i> )	0.44	1.00		
3. Vertical Collectivism- Sense of Time ( <i>VC-ST</i> )	0.39	0.41	1.00	
4. Horizontal Collectivism- Sense of Time ( <i>HC-ST</i> )	0.11	0.43	0.79	1.00

This is indeed quite an interesting finding as individuals with collectivistic orientation tend to have similar or more developed patterns of temporal orientation as individualistic individuals have. In Vertical Collectivistic cultures, one has to spend a significant amount of time and effort in maintaining one's collective and public selves (Triandis, 1989). The sense of relatedness is high in these cultures and in fact relationship orientation is often more important than rational orientation (Hooker, 2003). In addition to relatedness, the propensity to stand out from others in the context of one's immediate as well as larger in-group also foster temporal orientation. This finding is indeed quite valuable in the domain of cross-cultural organizational psychology. While vertical individualism is clearly related to (and is directly responsible for as in the US case) facets of temporal orientation, vertical collectivism is also related to temporal orientation. But the reasons for the relationships are quite different. In the vertical individualistic cultures, preoccupation with private self means that one has to spend significant amounts of objective time in various related as well as unrelated social and organizational events; and do so most efficiently. In order for this to happen, one has to sharpen one's temporal orientation –especially in the areas of planning and scheduling, sense of time and attitude towards time.

### Discussion and Conclusion

Our findings suggest the importance of collectivism dimension of culture in predicting temporal orientation. Earlier studies in the cross-cultural psychology of time asserted that in modern western cultures the emphasis on time is focused on linear succession and duration of events and activities (Bhagat & Moustafa, 2002; Levine, 1997; Robinson & Godbey, 1997), however collectivistic cultures foster circular view of time. Thus, individualistic cultures are likely to be highly conscious of the passage of time and likely to foster highly developed sense of time, positive attitude towards time, and place an increased emphasis on planning and scheduling of activities. However, our results signify the importance of the collectivistic orientation in predicting temporal

orientation. This seems to be true regardless of the ranking of the country on the Collectivism-Individualism Index (Hofstede, 2001). These results support a model of convergence in response to globalization. Since all the respondents in our study were managers or white collar managers, it is likely that the organizational practices such as work hours, deadlines, etc., which are universal across cultural boundaries help in the development of temporal orientation of the individual.

In future research, there is a need to develop situational taxonomies in different cultures that might evoke different types of temporal orientation. It would be of considerable importance to discern the selective influences of situational forces and cultural variations in the way temporal orientation unfolds over time. We urge future researchers to develop a situational taxonomy in which proper use of time is explained to the respondents. Then, the respondents need to respond to a scenario in which they are to make decisions that have important organizational consequences. In analyzing the data from such designs, we will be in a better position to more accurately discern the role of cultural variations (at the individual level) in the way individuals act or perform the various actions and the kind of temporal orientation they display. Triandis' framework (1989) in terms of private, collective and public selves need to be more carefully implemented in designing as well as interpreting the results as reported in Bhagat and Moustafa (2000). Collectivists are more concerned with performing those activities in a temporally appropriate sense that are more important in their cultural context i.e., collective and public selves are going to be more important governing agents of how one's temporal orientation develops throughout one's life and how they come into play in organizational contexts. For individualist's performance of activities that are directly linked with enhancement of private self are of crucial importance. We need to find more about the nature of activities and tasks that are particularly salient i.e., socially important that foster culturally appropriate temporal orientation.

### References

- Ancona, D.G., Okhuysen, G.A., & Perlow, L.A. (2001). Taking time to integrate temporal research. *Academy of Management Review*, 26, 512-529.
- Bhagat, R.S. (1983). Effects of stressful life events on individual performance effectiveness and work adjustment processes within organizational settings: A research model. *Academy of Management Review*, 8, 660.
- Bhagat, R.S., Kedia, B.L., Crawford, S.E., & Kaplan, M.R. (1990). Cross-cultural issues in organizational psychology: Emergent trends and directions for research in the 1990's. In C.L. Cooper & I.T. Robertson (Eds.), *International Review of Industrial and Organizational Psychology*, 5 (pp. 59-99). New York: John Wiley & Sons.
- Bhagat, R.S., Kedia, B.L., Harveston, P., & Triandis, H.C. (2002). Cultural variations in the cross-border transfer of organizational knowledge: An integrative framework. *Academy of Management Review*, 27(2), 204-221.
- Bhagat, R.S., Kedia, L., Harveston, P.D., & Triandis, H.C. (2003). Cultural variation in the cross border transfer of organizational knowledge: An integrative framework. *Academy of Management Review*, 27, 204-221.
- Bhagat, R.S., & McQuaid, S.J. (1982). Role of subjective culture in organizations: A review and directions for future research. *Journal of Applied Psychology Monograph*, 67(5), 653-685.
- Bhagat, R.S., Moustafa, K.S. (2002). How non-Americans view American use of time? A Cross-cultural perspective. In P. Boski, F.J.R. van De Vijver (Eds.), *New Directions in Cross-Cultural Psychology* (pp. 183-192). Warsaw: Polish Academy of Sciences Publishers.
- Bhagat, R.S., Billing, T.K., & Babakus, E. (2008) *Task-structure-Work outcomes Relationships Reexamined: An Inquiry into the Moderating Role of Emphasis on Planning and Scheduling*. Department of Management, The University of Memphis, Memphis, TN.
- Bluedorn, A.C. (2002). *The Human Organization of Time: Temporal Realities and Experience*. Stanford, CA: Stanford University Press.
- Bluedorn, A.C., & Denhardt, R.B. (1988). Time and organizations. *Journal of Management*, 14, 299-320.
- Doob, L.W. (1971). *Patterning of time*. New Haven, CT: Yale University Press.
- Earley, P.C., & Gibson, C.B. (1998). Taking Stock in Our Progress: 100 Years of Solidarity and Community. *Journal of Management*, 24, 265-304.

- Erez, M. & Earley, P.C. (1993). *Culture, self-identity, and work*. New York: Oxford University Press.
- Gupta, V. & Hanges, P.J. (2004). Regional and climate clustering of social cultures. In R.J. House, P.J. Hanges, M. Javidan, P.W. Dorfman, & V. Gupta (Eds.). *Leadership, Culture, and Organizations: The GLOBE study of 62 societies* (pp. 178-218). Thousand Oaks, CA: SAGE.
- Hofstede, G. (1980). *Culture's Consequences: International Differences in Work-related Values*. Beverly Hills, CA: Sage.
- Hofstede, G. (1991). *Cultures and Organizations: Software of the Mind*. London: McGraw-Hill.
- Hofstede, G. (1994). Management Scientists are Human. *Management Science*, 40, 4-13.
- Hofstede, G. (2001). *Culture's Consequences: International Differences in Work-related Values*. 2<sup>nd</sup> Edition. Thousand Oaks, CA: Sage.
- Hooker, J. (2003). *Working Across Cultures*. Stanford, CA: Stanford University Press.
- Kastenbaum, R. (1964). The structure and function of time perspectives. *Journal of Psychological Researches*, 8, 97-105.
- Kurman, J., & Sriram, N. (2002). Interrelationships among vertical and horizontal collectivism, modesty, and self-enhancement. *Journal of Cross-Cultural Psychology*, 33, 71-86.
- Levine, R. (1997). *A Geography of Time*. New York: Basic Books.
- McGrath, J.E., & Kelly, J.R. (1986) *Time and human interaction: Toward a social psychology of time*. New York: Guilford Press.
- McGrath, J.E., & Rotchford, N.L. (1983). Time and behavior in organizations. In L.L. Cummings and B.M. Staw (Eds.), *Research in organizational behavior*, (vol. 5, pp. 57-101). Greenwich, CT: JAI Press.
- McGrath, J.E., & Tschan, F. (2004). *Temporal Matters in Social Psychology: Examining the Role of Time in the Lives of Groups and Individuals*. American Psychological Association, Washington DC.
- Oishi, S., Schimmack, U., Diener, E., & Suh, E.M. (1998). The measurement of values and individualism-collectivism. *Personality and Social Psychology Bulletin*, 24, 1177-1189.
- Robinson, J.P., & Godbey, G. (1997). *Time for life: The surprising ways Americans use their time*. University Park, PA: The Pennsylvania State University Press.
- Schreiber, J.B., & Gutek, B.A. (1987). Some time dimensions of work: Measurement of an underlying aspect of organizational culture. *Journal of Applied Psychology*, 72, 642-50.
- Schwartz, S. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, 25, 1-66.
- Singelis, T.M., Triandis, H.C., Bhawuk, D.P.S., & Gelfand, M.J. (1995). Horizontal and vertical dimensions of individualism and collectivism: A theoretical and measurement refinement. *Cross-Cultural Research*, 29, 240-275.
- Thurstone, L.L. (1931). The measurement of attitudes. *Journal of Abnormal and Social Psychology*, 26, 249-269.
- Thurstone, L.L., & Chave, E.J. (1929). *The measurement of attitude*. Chicago: University of Chicago Press.
- Triandis, H.C. (1989). The self and social behavior in differing cultural contexts. *Psychological Review*, 96, 269-289.
- Triandis, H.C. (1990). Cross-cultural studies of individualism and collectivism. In J.J. Berman (Ed.), *Nebraska Symposium on Motivation*, 37 (pp. 41-133). Lincoln: University of Nebraska Press.
- Triandis, H.C. (1994). Cross-cultural industrial and organizational psychology. In H.C. Triandis, M.D. Dunnette & L.M. Hough (Eds.), *Handbook of Industrial and Organizational Psychology* (2<sup>nd</sup> ed.), 4 (pp. 103-172). Palo Alto, CA: Consulting Psychologists Press, Inc.
- Triandis, H. C. (1995). *Individualism and Collectivism*. Boulder, CO: Westview Press.
- Triandis, H.C. (1998). Vertical and horizontal individualism and collectivism: theory and research implications for international comparative management. *Advances in International Comparative Management*, 12, 7-35.
- Triandis, H.C. (2000). *Greek identity: Implications for individual development in English speaking countries*. Paper presented at the Fifth International Conference on Greeks in English Speaking Countries, Speros Basil Vryonis Center for the Study of Hellenism, Sacramento, CA.
- Triandis, H.C. (2002). Generic individualism and collectivism. In Gannon, M.J., & Newman, K.L. (Eds.), *The Blackwell Handbook of Cross-Cultural Management*. Oxford, UK: Blackwell Business.
- Triandis, H.C. & Gelfand, M.J. (1998) Converging Measurement of Horizontal and Vertical Individualism and Collectivism, *Journal of Personality and Social Psychology*, 74, 118-128.
- Van de Vijver, F., & Leung, K. (1997). *Methods and Data Analysis for Cross-Cultural Research*. Thousand Oaks, CA: Sage.