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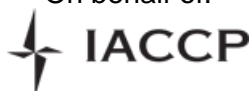
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Abstract

University students ($N = 301$) in Estonia, Morocco, and the United States read scenarios about various scheduled appointments and indicated the time at which a person arriving would be inappropriately early or inappropriately late. Participants also completed measures of time orientation, collectivism, and personality. Definitions of “on time” varied substantially across countries and across individuals but interacted in a regular fashion with specific features of appointments (e.g., the purpose of an appointment or the status of persons involved). Flexible definitions of “on time” were associated with youth, collectivist values, and a fatalistic orientation toward the present. Finally, definitions of “on time” were largely independent of personality traits. Taken as a whole, personal standards of punctuality appear to be best understood within a situational and sociocultural—rather than dispositional—framework.

Keywords

punctuality, culture, norms, time orientation, Estonia, Morocco

I daresay *their kind* don't set much store by punctuality.

—Uncle Vernon Dursley, as he waits for a family of wizards to arrive,
in *Harry Potter and the Goblet of Fire* (Rowling, 2000, p. 42)

Social scientists, business travelers, and others frequently report that different cultural groups have different norms or practices regarding punctuality. Some of these “time frames” are well known. In *Anglo time*, time is money and punctuality is highly valued. *Mañana* (Spanish for *tomorrow*, or literally *morning*) refers to a Latin American time frame in which “the business of today is put off until tomorrow” (Epstein, 1977, p. 52). In Navajo *Indian time*, meetings typically begin 1 hour or more after the stated time (Hopkins, 2006). Mormons in Utah “have developed promptness to a degree that is unknown in the rest of the country” (Hall, 1959/1981, p. 143) and, in traditional areas of the southern United States, there is little need to apologize for being early or

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late because there is “a greater permissible spread, or a wider range of deviation from the point” (p. 161). CPT or *colored people’s time* is an expression used primarily by African Americans to refer to a casual attitude toward the value of time; events start when the principals arrive, not when the appointed hour is reached (Jones & Brown, 2005). *Rubber time* is used by Indonesians to jokingly refer to their laid-back attitude about appointments and deadlines (Alves, 1997). In *Moroccan time*, there is no need to be prompt on all occasions because, as expressed in two popular proverbs, “today is like tomorrow” and “there is no need to be prompt for a good thing.” According to Pärdis (n.d.), older persons in Estonia value “German-style” punctuality and often criticize younger Estonians for adopting a Soviet mentality that does not emphasize the importance of punctuality.

Given the ease with which one can find statements about time frames and standards of punctuality in different parts of the world, one might assume there have been many studies on the subject. That is not the case. Indeed, with one exception, the number of empirical studies of punctuality is astonishingly meager.

The exception is in the realm of industrial/organizational psychology, where numerous researchers have carefully investigated the determinants of employee tardiness (e.g., Blau, 1986; Clegg, 1983; Koslowsky, Sagie, Krausz, & Dolman, 1997; Leigh & Lust, 1988). Researchers have found, for example, that tardiness is predicted by low job satisfaction (Adler & Golan, 1981; Gupta & Jenkins, 1983) and by organizational commitment, employee’s level of time urgency, and age of the employee’s youngest child (Dishon-Berkovits & Koslowsky, 2002). To our knowledge, only one published study has investigated the relationship between employee tardiness and personality. In their study of 181 train operators, Conte and Jacobs (2003) found no significant relationships between tardiness and any of the so-called Big Five personality factors.

Only a few researchers have investigated punctuality within different cultural contexts. This is surprising, given the conventional wisdom that different practices related to punctuality can hinder the formation of effective and satisfying intercultural relationships. An early study of returning Peace Corps volunteers found that, after language difficulties, the most challenging aspects of the Peace Corps experience were “the general pace of life” and “how punctual most people are” (Spradley & Phillips, 1972). Brislin and Kim (2003) also identified punctuality as one of the ways in which intercultural transactions can be complicated by cultural differences.

In our extensive search of the literature, we found only two published studies of punctuality within a cross-cultural context. Levine, West, and Reis (1980) found that Americans valued punctuality more highly than did Brazilians, and Brazilians were more flexible than Americans in their definitions of *early* and *late*. Levine and Bartlett (1984) found a weak relationship between Type A behaviors and attitudes toward punctuality among American university students (i.e., high Type A individuals were more likely to rate punctuality as an important quality in both friends and businesspersons) but could not replicate the finding in a separate sample of 36 female students in Calcutta, India.

In the exploratory study reported here, we sought to extend the findings of Levine and his colleagues by comparing definitions of *early* and *late* in three different countries—Estonia (in northeastern Europe), Morocco (in North Africa), and the United States. More important, we sought to determine the degree to which these definitions depend on (a) specific situational factors (e.g., the purpose of an appointment, the status of persons involved), (b) sociocultural factors (e.g., economic development, collectivism), and (c) dispositional characteristics (e.g., time orientation, personality traits).

Method

Participants

Participants were 301 university students in three countries: Estonia ($n = 101$, 67% female, 94% ethnic Estonian, 85% middle class), Morocco ($n = 75$, 27% female, 75% Arab and 24% Amazigh/

Table 1. Seven Items Used to Measure Definitions of “Early” and “Late”

	Item
<i>A teacher asks a student to meet him in his office at 3:00 p.m.</i>	<ol style="list-style-type: none"> 1. Suppose the student arrives before 3:00. At what time would you consider the student to be inappropriately early? 2. Suppose the student arrives sometime after 3:00. At what time would you consider the student to be inappropriately late? 3. Suppose the teacher does not arrive to his office until after 3:00. At what time would you consider the teacher to be inappropriately late?
<i>You have invited a close friend to come to your house for lunch at 1:00 p.m. Your friend will be the only guest.</i>	<ol style="list-style-type: none"> 4. Suppose your friend arrives before 1:00. At what time would you consider your friend to be inappropriately early? 5. Suppose your friend arrives sometime after 1:00. At what time would you consider your friend to be inappropriately late?
<i>A government official asks a government worker to meet him at a café at 10:00 a.m.</i>	<ol style="list-style-type: none"> 6. Suppose the worker does not arrive until after 10:00. At what time would you consider the person to be inappropriately late? 7. Suppose the government official does not arrive at the café until after 10:00. At what time would you consider the government official to be inappropriately late?

Berber, 96% middle class), and the United States ($n = 125$, 74% female, 90% white, 73% middle class). The mean ages of Estonian, Moroccan, and American participants were 19.3, 19.3, and 19.7 years, respectively. Most Estonian and American participants were enrolled in social science courses; all Moroccan participants were medical students. All participated voluntarily and were citizens of their respective country. (The responses of 12 international students were eliminated from the U.S. sample.)

Materials and Procedure

All participants were recruited to participate in a study of “time and personality.” They completed a packet of questionnaires in a classroom. All materials were translated by bilinguals into the language used most frequently in each country (i.e., Estonian, Arabic, or English).

Before opening the packet of questionnaires, participants completed a time-estimation task. On a signal from the experimenter, participants scrutinized a complex diagram. After 47 seconds had elapsed, the experimenter told participants to set the diagram aside and estimate the length of time (in seconds) they had examined the diagram.

Participants then read scenarios about work-related appointments or a social engagement and indicated the time at which a person arriving would be inappropriately early or inappropriately late. For example, participants read that a student was to meet a teacher in his office at 3:00 in the afternoon. Participants were asked, “Suppose the student arrives before 3:00. At what time would you consider the student to be inappropriately early?” A participant’s score on this item was the absolute difference between the stated meeting time (3:00) and the time reported by the participant as inappropriately early (e.g., 2:45). The scenarios (see Table 1) were similar to scenarios used by Levine et al. (1980).

Participants completed the Zimbardo Time Perspective Inventory (ZTPI), which measures one’s orientation or “bias” toward five time perspectives: past-positive, past-negative, present-hedonistic, present-fatalistic, and future. Items include “my life path is controlled by forces I cannot influence” (present-fatalistic) and “I’ve made mistakes in the past that I wish I could

undo" (past-negative). Responses to statements are measured on a 5-point Likert scale. The five subscales of the ZTPI demonstrate acceptable reliability and validity (Keough, Zimbardo, & Boyd, 1999; Rothspan & Read, 1996; Zimbardo & Boyd, 1999).

Participants completed the ESTCOL, which measures three types of collectivism: family, peers/companionship, and society/patriotism. Items include "in life, family interests are most important" (family) and "everything should be equally shared between friends" (peers). Responses to statements are measured on a 5-point Likert scale. The three subscales of the ESTCOL demonstrate acceptable reliability and validity (Realo, Allik, & Vadi, 1997).

Participants also completed the NEO-Five Factor Inventory (NEO-FFI; Costa & McCrae, 1992), which measures five major dimensions of personality: neuroticism, extraversion, openness, agreeableness, and conscientiousness. The NEO-FFI is a reliable and valid instrument that has been used by personality researchers in numerous countries (McCrae & Allik, 2002).

Results and Discussion

Reliability Analyses

All measures demonstrated acceptable levels of interitem consistency (i.e., $\alpha > .60$) across samples. Reported values are Cronbach's alpha, based on standardized items. For the seven punctuality items, $\alpha = .76$. For the ZTPI scales, $\alpha = .77$ for Past-Positive, $.79$ for Past-Negative, $.78$ for Present-Hedonistic, $.63$ for Present-Fatalistic, and $.69$ for Future. For the ESTCOL, $\alpha = .87$ for the scale as a whole, $.79$ for the Family subscale, $.63$ for the Peers subscale, and $.88$ for the Society subscale. For the NEO-FFI factors, $\alpha = .86$ for Neuroticism, $.79$ for Extraversion, $.77$ for Openness, $.73$ for Agreeableness, and $.81$ for Conscientiousness.

Structural Equivalence of Measures

To examine the structural equivalence of the measures, we used a principal components analysis (followed by a varimax rotation) to identify the factor structures of the ZTPI, ESTCOL, and NEO-FFI within each country sample. Next, for each questionnaire, we combined all responses into a single data set and factor analyzed the pooled matrix. After a Procrustes target rotation, we compared the factors found in the three countries to the pooled solution. That is, the three samples were compared not with each other but with the overall "averaged" factor solution (cf. Van de Vijver, 2003). For the ZTPI, mean Tucker coefficients of congruence (Tucker, 1951) were $.88$, $.82$, and $.88$ for the Morocco, Estonia, and U.S. samples, respectively. For the ESTCOL, mean coefficients were $.86$, $.77$, and $.82$. For the NEO-FFI, mean coefficients were $.75$, $.73$, and $.78$. Tucker values smaller than $.85$ are taken to indicate nonnegligible incongruities between the factor structures. Such values are adequate, however, when one seeks to evaluate factorial similarity at a molar level (Van de Vijver & Leung, 1997). In short, the ZTPI, ESTCOL, and NEO-FFI are not structurally identical in our samples, yet, for each measure, comparable factors appear to be represented in all three groups.

For the sake of clarity, we have organized our discussion of the results around seven questions that guided our investigation. Note that these questions cannot be fully answered without further research.

Question 1: Do personal standards of punctuality vary across cultures? To what extent do university students in Estonia, Morocco, and the United States have different definitions of early and late? Table 2 displays summary statistics for participants' responses to the punctuality scenarios. We averaged all seven punctuality scores (i.e., definitions of *early* and *late*) for each participant

Table 2. Summary Statistics of Participants' Responses to Seven Punctuality Items, by Country

Item	Estonia			Morocco			United States			Total		
	M	SD	Mode	M	SD	Mode	M	SD	Mode	M	SD	Mode
Student arrives early to meet teacher	24.9	22.7	15	38.9	27.0	30,60	25.2	12.8	30	28.0	20.9	30
Student arrives late to meet teacher	15.5	11.2	10	15.7	13.9	15	11.2	5.7	10	13.6	10.0	10
Teacher arrives late to meet student	13.9	9.1	10	18.3	19.8	15	11.0	5.9	10	13.5	11.3	15
Friend arrives early for lunch	61.8	61.3	30	90.5	49.3	120	44.2	31.2	30	60.5	50.4	30
Friend arrives late for lunch	47.6	41.3	30	53.9	35.6	60	32.9	19.0	30	42.5	33.0	30
Worker arrives late to meet official	10.7	6.5	10	13.0	11.9	5	9.7	6.8	10	10.8	8.2	10
Official arrives late to meet worker	12.3	8.7	10	21.1	22.7	30	11.2	9.9	10	13.9	14.2	10

Note: All values are in minutes.

to produce a measure we call On-Time Window (OTW). Individuals with larger OTW scores have wider, more flexible windows for what counts as "on time."

A two-way analysis of variance—with sex and country as independent variables and OTW score as the dependent variable—revealed a large difference among countries, $F(2,237) = 19.29$, $p < .001$, $R^2 = .17$. Post hoc tests revealed that Moroccan OTWs ($M = 35.6$ min, $SD = 13.6$) were substantially larger than Estonian OTWs ($M = 26.3$ min, $SD = 13.9$, $p < .001$), and Estonian OTWs were larger than American OTWs ($M = 20.8$ min, $SD = 9.6$, $p = .002$).

We sought to account for these large country differences. First, for the three countries in our study, we observed a strong inverse relationship ($r = -.99$) between a country's Human Development Index score (United Nations Development Program, 2008) and its average OTW, which suggests that individuals in more highly developed societies possess less flexible definitions of "on time." Wealthier, more highly developed societies are also faster paced societies (Levine, 1997). Thus, narrow OTWs may be an adaptive response to living in a fast-paced society in which time has become a commodity that should not be wasted.

Second, we observed that Moroccans ($M = 25.8$ on a 9-45 scale) and Estonians ($M = 25.1$) in our study scored higher than Americans ($M = 20.5$) on the ZTPI Present-Fatalistic scale, $F(2,298) = 39.47$, $p < .001$. Moreover, Present-Fatalistic scores were correlated with OTWs ($r = .20$, $p = .002$). To be present-fatalistic is to have a *que sera sera* (whatever will be, will be) attitude toward life. Individual items on the scale include "my life path is controlled by forces I cannot influence" and "you can't really plan for the future because things change so much."

This view of life is similar to the concept of *Insha'Allah* in Morocco and other Islamic countries. The phrase literally means "God willing," but *Insha'Allah* also has several idiomatic meanings. It can mean something between yes and no, including "possibly" and "perhaps," but is also similar to the Spanish concept of *mañana*. As noted earlier, popular proverbs in Morocco

signify there is no need for punctuality and promptness in all one's affairs. Given these features of Moroccan culture, it is not surprising to learn that Moroccans have more flexible definitions of "on time" than do Americans, who have learned from an early age that "the early bird gets the worm" and "time is money." Does this mean Moroccans do not value punctuality? Not at all. In Morocco, punctuality is valorized within a religious context. Moroccans express great respect toward persons who conduct their daily prayers at the proper time because the Koran says, "For believers, prayer is a sacred appointment."

Estonians also were relatively fatalistic and appear to have a relaxed understanding of "on time" but probably for different reasons. In the past 15 to 20 years, Estonians have experienced turbulent changes as their country has transformed itself from a semi-autonomous, Soviet republic to an achievement-oriented, free-market-loving member of the European Union. As a result, Estonians in our study may have more tolerance for early and late arrivers because they perceive social norms to be in a state of flux; the unwritten rules that govern behavior have changed and will continue to change for some time.

Question 2: Are norms of punctuality clearly defined? Within a culture, is the meaning of "on time" clearly defined and widely shared or is it imprecise and idiosyncratic? In their study of Brazilians and Americans, Levine, West, and Reis (1980) did not report the variability in individual scores, but an inspection of mean differences and associated F values indicates that standard deviations were substantial (i.e., participants varied widely in their definitions of early and late). In each country, there seemed to be no widely shared, precise standard for what counts as "on time."

We observed a similar pattern in our data. Participants' responses to the punctuality scenarios varied substantially (see Table 2). Within each country, there appear to be large individual differences with respect to personal definitions of "on time." Such a high degree of variability suggests that punctuality norms in all three countries are "fuzzy" and, as a result, there is no broad consensus about proper arrival behavior.

Question 3: Do persons in different cultures segment time differently? According to Levine (1997), most Americans assess punctuality in units of 5 min, but most Arabs assess punctuality in units of 15 min (i.e., "a quarter of an hour"). Americans, for example, are more likely to say someone will be 5 or 10 min late, whereas Arabs are more likely to say someone will be a quarter-hour or half-hour late.

Our data provide partial support for Levine's claim. First, for the time-estimation task, we counted the number of participants who reported their estimate (of how much time had elapsed) as a multiple of 5 (e.g., 55 s). The percentages of Estonians, Moroccans, and Americans who estimated the length of time as a multiple of 5 were 81%, 74%, and 93%, respectively. Tests for the difference between two proportions revealed that Americans used multiples of 5 more often than did Estonians ($p = .007$) and Moroccans ($p = .0004$).

Second, we examined participants' responses to the punctuality scenarios and calculated, for each country, the percentage of responses expressed as a multiple of 15 (e.g., 45 min). The percentages of Estonian, Moroccan, and American responses expressed as a multiple of 15 were 50%, 65%, and 47%, respectively. Tests for the difference between two proportions revealed that Moroccans used multiples of 15 more often than did Americans ($p = .02$) and Estonians ($p = .06$).

Moroccans in our study were more likely to partition time into 15-min intervals. This may explain, at least in part, why Moroccan on-time windows are typically larger than Estonian and American windows. An American who arrives 10 min after the appointed time is late by "two units of psychological time." A Moroccan who is late by the same two units has arrived 30 min (i.e., "two quarters of an hour") after the appointed time. To achieve metric equivalence when thinking about punctuality in cultural contexts, it may be necessary to think in terms of psychological time instead of formal "clock time."

Question 4: Are standards of punctuality more flexible for social engagements than for business meetings? To address this question, we used participants' responses to the scenarios in which a

person arrives late for a meeting with a teacher (or student), for a lunch date with a friend, and for a meeting with a government official (or worker). The first and third scenarios represent work-related appointments, whereas the second represents a social engagement. We conducted a matched-samples *t* test to determine whether participants' OTW scores were generally larger for social engagements than for work-related appointments. Participants' *late* scores for work-related appointments ($M = 12.2$ min, $SD = 7.1$) were much smaller than their *late* scores for lunch with a friend ($M = 40.0$ min, $SD = 27.9$), $t(256) = -16.85$, $p < .001$, $d = -1.05$. This pattern of larger *late* windows for lunch with a friend and smaller *late* windows for work-related appointments was found in all three countries, with all values of $p < .001$ and effect sizes ranging from -1.03 in the Estonian sample to -1.28 in the U.S. sample.

These findings parallel those of other researchers. Levine, West, and Reis (1980) found that American and Brazilian students were more flexible in their definitions of *early* and *late* when the scheduled appointment was lunch with a friend or a nephew's birthday party than when the appointment was with a teacher or government official. Francis-Smythe and Robertson (1999) asked 13 individuals to talk freely about their experiences of time including punctuality. "The strongest theme to emerge from the data was...the effect of situational context on many of the dimensions. Attitudes to time were often very different depending on whether they related to being at work, at home or on holiday" (p. 278).

Social engagements are more relaxed and less formal than business meetings. Casual attire and informal speech are the norm. Business meetings, on the other hand, usually occur during the work day. If the beginning of a meeting must be delayed because of a late arrival, the schedules of many people are affected and they are likely to become frustrated. In short, the cost of non-punctuality in business settings is substantially greater than it is for social engagements.

Question 5: Are standards of punctuality more flexible for arriving early than arriving late? Across cultures, is it more taboo to arrive after the appointed time than it is to arrive before the appointed time? If so, why? Migliore (1989) tells the story of a Sicilian-Canadian family who invite several other families to lunch in their home. The guests are asked to arrive at 1:00, but they know they can legitimately arrive at any time between noon and 1:30. The on-time window in Migliore's story is asymmetrical; acceptable arrival times extend 1 hr *before* the appointed time but only 30 min *after* the appointed time.

We conducted two matched-samples *t* tests to determine whether participants' OTWs were symmetrical or asymmetrical with respect to *early* and *late*. For the scenario in which a student meets a teacher in the teacher's office, participants' *early* windows ($M = 27.9$ min, $SD = 20.4$) were typically twice as large as their *late* windows ($M = 13.6$ min, $SD = 10.0$), $t(268) = 11.72$, $p < .001$, $d = .72$. For the scenario in which a person arrives at a friend's home for lunch, participants' *early* windows ($M = 59.5$ min, $SD = 48.7$) were nearly 50% larger than their *late* windows ($M = 41.9$ min, $SD = 32.2$), $t(263) = 7.29$, $p < .001$, $d = .45$. This pattern of larger *early* windows and smaller *late* windows was found for both scenarios in all three countries, with p values ranging from .001 to .01 and effect sizes ranging from 0.27 (Estonia; friend comes to lunch) to 1.14 (United States; student meets teacher).

A cost-benefit analysis is helpful in understanding this phenomenon. The costs associated with arriving late are generally greater than the costs associated with arriving early. Someone who arrives late may find that the person he or she was to meet has left, the best food and beverages have been consumed, important decisions have been made, or an important person has become angry because he or she was made to wait. When one arrives early, costs are minimized. Indeed, one may even benefit. One can spend extra time with a friend or take a few minutes to compose oneself and feel at ease before an important meeting. One can also arrive early as part of a self-presentation strategy that aims to induce attributions of motivation and eagerness to please.

Question 6: Does the meaning of “late” depend on the status of the person who arrives late? To our knowledge, only one published study has examined this question. Halpern and Isaacs (1980) measured waiting time as a function of status. They asked students and professors how long they would wait for a professor or a student who was late for an appointment. All 248 respondents said they would wait longer for a professor than for a student.

We conducted a matched-samples *t* test to compare participants’ definitions of *late* when an official (higher status) arrives late to meet a worker (lower status) and when a worker arrives late to meet an official. Participants’ definitions of “on time” were significantly more generous when the official arrived late ($M = 14.0$ min, $SD = 14.3$) than when the worker arrived late ($M = 10.7$ min, $SD = 8.2$), $t(285) = 4.57, p < .001, d = .27$. This pattern was found in all three countries, with values of *p* ranging from .001 to .053 and effect sizes ranging from 0.17 in the U.S. sample to 0.44 in the Moroccan sample.

We also compared participants’ definitions of “on time” when a teacher (higher status) arrives late to meet a student (lower status) and when a student arrives late to meet a teacher. In this case, status did not produce significant differences in participants’ definitions of “on time,” $t(271) = 0.11, n.s.$ This pattern of nonsignificant differences was found in all three country samples (see Table 2 for mean scores and standard deviations).

Our findings with respect to status were mixed. On one hand, participants in all three countries indicated that a worker is expected to arrive promptly when meeting with an official, but an official can “take his or her time” and not be considered late. On the other hand, we observed no status-related differences in the scenario that involved a student meeting a teacher at his or her office. This finding contradicts the finding noted earlier in which all persons questioned said they would wait longer for a professor than for a student (Halpern & Isaacs, 1980). One possible explanation for the contradictory findings is that Halpern and Isaacs used the word *professor* and we used the word *teacher*. A university professor may have higher status than a “mere” teacher.

Question 7: Is one’s definition of “on time” influenced by one’s personality, social class, temporal orientation, or collectivist values? We sought to unpack the country differences (see Matsumoto & Yoo, 2006) by examining the influence of various personal characteristics on the size of one’s OTW. To initially identify predictors of personal standards of punctuality, we correlated participants’ OTW scores with their scores on the measures described earlier. Four variables were weakly correlated with OTW scores. Across countries, older participants had smaller OTWs ($r = -.14, p = .03$). As noted earlier, participants who scored relatively high on the ZTPI Present-Fatalistic scale had larger OTWs ($r = .20, p = .002$). Participants who scored relatively high on Family Collectivism ($r = .18, p = .005$) and Societal Collectivism ($r = .25, p = .001$) also had larger OTWs. None of the Big Five personality factors correlated significantly with OTW scores (absolute values of *r* ranged from .01 to .09).

In a stepwise regression analysis of the combined samples ($N = 244$), Societal Collectivism ($\beta = .215$) and ZTPI Present-Fatalism ($\beta = .148$) emerged as significant predictors of OTW scores (multiple $R^2 = .083$). Individuals who were more patriotic and more oriented toward the fatalistic-present had larger, more flexible on-time windows.

Given that Moroccans were more collectivistic ($M = 24.3$ on a 0-32 scale) than Estonians ($M = 15.1$), and Estonians were more collectivistic than Americans ($M = 11.8$), $F(2,298) = 121.68, p < .001$, we conducted a path analysis to determine whether the relationship between country and OTW was mediated by collectivistic values. It was not. ESTCOL scores did not have a statistically significant effect on OTW scores when other effects in the model were taken into account (see Table 3).

We conducted three separate stepwise regressions, one for each country. No significant predictors emerged in the Moroccan sample. In the Estonian sample, the only significant predictor of OTW scores was participant age ($\beta = -.23$). Older Estonians in our sample generally had

Table 3. Standardized Parameter Estimates of the Effects of Country and Collectivism on the On-Time Window (OTW)

	ESTCOL Scores	Mean OTW Scores
Country 1	-.018	.204 ^a
Country 2	.582 ^a	.418 ^a
ESTCOL scores		.032

Note. Country 1 is Estonia vs. Morocco and the United States. Country 2 is Morocco vs. Estonia and the United States.
^aStatistically significant at $p < .05$.

narrower OTWs, thus confirming Pärdis's (n.d.) anthropological report that older Estonians are more concerned with promptness than are younger Estonians. Indeed, our findings may underestimate the actual strength of the relationship because the ages of our Estonian participants fell within a relatively narrow range (18-36 years).

In the U.S. sample, the only significant predictor of OTW scores was conscientiousness ($\beta = -.24$). This conforms to the American stereotype that conscientious individuals are more punctual than their less dutiful counterparts. Indeed, one of the items on the NEO-FFI Conscientiousness scale is "I'm pretty good about pacing myself so as to get things done on time." In the U.S. sample, responses to this item were significantly, albeit weakly, correlated with OTW scores ($r = -.18, p = .05$). The same relationship, however, was not observed in Estonia ($r = -.07, n.s.$) or Morocco ($r = -.07, n.s.$).

Although age and conscientiousness emerged as significant predictors in the Estonian and U.S. samples, respectively, neither variable accounted for more than 6% of the variation in OTW scores. It appears that within a country, definitions of "on time" are largely independent of one's personality, temporal orientation, social class, and other personal characteristics. Across countries, patriotic feelings and a fatalistic orientation toward the present predicted the size of one's OTW, but these factors in combination accounted for less than 9% of the variance.

General Discussion and Conclusions

As more and more people in the world acquire time-keeping devices, it becomes increasingly possible to observe whether someone has arrived on time for an appointment. But what is the exact meaning of "on time"? Is a dinner guest inappropriately early if she arrives 15 min before the appointed hour? Is a student inappropriately late if he arrives 5 min after the class officially begins? The answers to these questions appear to depend largely on local norms, the nature of the rendezvous, and the status of persons involved.

Clearly, norms of punctuality vary across cultures. Equally important, however, is the fact that these norms appear to be fuzzy—and equally so across diverse cultures. Imagine how a cultural insider might answer an outsider's question, "How many minutes can I be late without being inappropriately late?" The most likely answer would be some variant of "it depends." Such a state of affairs can make adjustment more difficult for sojourners. Adapting to a new culture is made easier when norms are widely shared and can be clearly stated. For example, if the rule for tipping in a restaurant is 15% of the bill and everyone knows the rule, then international visitors can easily adapt to the local standard. If the rule, however, cannot be stated easily or depends on several factors (e.g., size of bill, type of restaurant, quality of service), then visitors will struggle in their attempts to do the right thing.

The present study was designed to be exploratory and wide-ranging, as evidenced by the large number of guiding questions. As a result, there are several limitations. First, the samples studied

were not randomly selected from larger populations in each country. Indeed, all participants were university students. Thus, we do not claim that our findings generalize to all Estonians, Moroccans, and Americans. Second, we investigated *norms* of punctuality, not punctuality itself. Norms serve as guides to behavior but do not determine behavior, especially when norms are loose. Third, we did not measure all variables that may exert an influence on the size of one's OTW. The punctuality-related values of one's parents, for example, may affect one's definition of "on time."

Future research may wish to investigate generational differences in standards of punctuality. Despite the limited age ranges in our samples, we observed a modest inverse relationship between age and size of OTWs; older people tended to have narrower windows. Arriving on time can be viewed as a kind of politeness, and other kinds of politeness may also follow generational patterns. In Estonia, for example, younger people are more likely to use *sina* (the informal *you*) instead of *teie* (the formal *you*) when addressing someone they have met for the first time. In the United States, younger people are said to be less likely to hold the door for someone or write a formal thank-you note. In Morocco, young people are less deferential and less obedient, in part because Islam (which teaches respect and obedience to elders) is currently viewed as a political system rather than a method for living a moral life.

When reviewing our many findings, we were struck by the regularity of the observed patterns. Although norms of punctuality are quite different in Estonia, Morocco, and the United States, these local norms interact with particular situations in what appears to be a universally predictable manner. Arriving early is less taboo than arriving late. Arriving late for a social engagement is less taboo than arriving late for a business meeting. Making a lower status person wait is less taboo than making a higher status person wait. Moreover, definitions of *early* and *late* appear to be independent of personal attributes such as personality and temporal orientation. Taken as a whole, our findings suggest that personal standards of punctuality are best understood within a situational and sociocultural—rather than dispositional—framework.

Finally, what shall we say about Vernon Dursley? When Harry Potter's muggle uncle says of wizards, "I daresay *their kind* don't set much store by punctuality," he fails to acknowledge the possibility that wizards may be as punctual as anyone else but simply have a different understanding of the meaning of "on time."

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