The Pace of Life in 31 Countries

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This study compared the pace of life in large cities from 31 countries around the world. Three indicators of pace of life were observed: average walking speed in downtown locations, the speed with which postal clerks completed a simple request (work speed), and the accuracy of public clocks. Overall, pace of life was fastest in Japan and the countries of Western Europe and was slowest in economically undeveloped countries. The pace was significantly faster in colder climates, economically productive countries, and in individualistic cultures. Faster places also tended to have higher rates of death from coronary heart disease, higher smoking rates, and greater subjective well-being. Discussion focuses on how the pace of life is intertwined with the social-psychological and community characteristics of a culture, and the central role of pace of life in defining the personality of a place and its people.

THE PACE OF LIFE IN 31 COUNTRIES

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> Beyond doubt, the most salient characteristic of life in this latter portion of the 19th century is its SPEED,—what we may call its hurry, the rate at which we move, the high-pressure at which we work;—and the question to be considered is, first, whether this rapid rate is in itself a good; and, next, whether it is worth the price we pay for it—a price reckoned up, and not very easy thoroughly to ascertain.
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> —W. R. Greg (1877) on "Life at High Pressure" (p. 263)

The pace of life has been defined as the rate (Lauer, 1981); speed (Amato, 1983); and "relative rapidity or density of experiences, meanings, perceptions and activities" (Werner, Altman, & Oxley, 1985, p. 14). There is evidence that a city's pace of life is relatively stable across measures. Levine and Bartlett (1984), for example, found correlations ranging from .52 to .82 across 12 cities from six different countries between three diverse measures

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of the pace of life—walking speed, work speed among postal clerks, and accuracy of bank clocks.

Several studies have demonstrated strong and consistent differences in the overall pace of life of cities both within and between countries (e.g., Amato, 1983; Bornstein, 1979; Bornstein & Bornstein, 1976; Buggie, 1993, 1994; Levine & Bartlett, 1984; Levine, West, & Reis, 1980; Lowin, Hottes, Sandler, & Bornstein, 1971; Walmsley & Lewis, 1989; Wirtz & Ries, 1992; Wright, 1961). Fewer studies have attempted to explain these intercity differences. In those studies that have, virtually all have focused on the single factor of population size. For example, Bornstein and Bornstein (1976) observed a strong positive relationship between population size and the average walking speed of pedestrians across a sample of 15 cities and towns in six countries in Europe, Asia, and North America; Bornstein (1979) later replicated this finding in a sample of six more cities in Europe and the United States. Amato (1983) found that population size was significantly related to both walking speed and a measure of work speed (the speed of betel nut transactions in open market places) in a large city compared to small towns in New Guinea. Levine and Bartlett (1984) found generally faster walking speeds and more accurate timepieces in large versus medium-sized cities in six different countries. Overall, then, there is substantial evidence that bigger cities tend to have faster tempos.

Population size, however, is only one of many qualities that define the character of a city and that distinguish cities from each other (e.g., Cutter, 1985; Krupat & Guild, 1980; Levine, Miyake, & Lee, 1989). Strauss has argued that "the entire complex of urban life can be thought of as a person rather than a distinctive place, and the city can be endowed with a personality of its own" (cited in Krupat & Guild, 1980, p. 21). Explaining why some cities move faster than others requires an understanding of some of the complexity of cities' "personalities" beyond simply the size of their populations. A few previous pace-of-life studies (most notably, Bornstein, 1979) have discussed multiple explanations for the pace of places. With the single exception of Levine, Lynch, Miyake, and Lucia's (1990) investigation of the pace of life in 36 U.S. cities, however, these studies have ignored the larger constellation of community characteristics that are related to its pace of life. What factors, other than population size, might predict differences in the pace of life?

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Furthermore, what are the consequences of a community's pace of life for the well-being of its residents?

In large part, the lack of systematic assessment of other (than population size) explanations of community-level differences in pace of life may be a by-product of sampling shortcomings. All but Levine et al.'s (1990) 36-city study and (marginally, at least) Bornstein and Bornstein's (1976) 16-city study have been limited to convenience samples of a few readily testable large and small communities. To compare multiple predictors of tempo at the city level, however, it is necessary to treat each city as the unit of analysis in a correlational-type design. By treating each city as a single *n*, their pace-of-life scores can then be correlated with other available community characteristics, for example, community-level data reflecting population attributes, economics, and social-psychological qualities. These correlational analyses, however, require testing considerably more "subjects" (i.e., cities) than have most previous studies.

Furthermore, the two earlier studies that had tested large numbers of cities were focused on six countries in Europe in one case (Bornstein & Bornstein, 1976) and on cities solely in the United States in the other (Levine et al., 1990). Because there is relative homogeneity in the economic and social makeup of these cities—compared to the larger range of international differences—these did not present strong tests of the validity of multiple predictors. Certainly, they do not allow for strong tests of the relationship of cultural values to the pace of life.

THE PRESENT STUDY

The present study compared three indicators of the pace of life in a sample of large cities in 31 countries. The study had three main goals: first, to investigate differences in the pace of life across large cities in a wide range of countries; second, to examine which community characteristics best predict these differences; and third, to explore the consequences of the pace of life for the well-being of individuals and their communities.

The study focused on a large city—in most cases, the largest—in each country. There were several reasons for this choice. First, for practical reasons, it would have been difficult to carry out the field experiments in small places in some countries. Second, although no single city represents the entirety of a country, it seemed that the largest cities in each country would be best matched for purposes of making meaningful cross-national comparisons. Third, there is a strong population movement to large cities on an international scale. It is estimated that more than half of the world's population will be living in urbanized areas within the next decade (Gottdiener,

1994). Fourth, many more statistics reflecting community characteristics are available for large cities in each country than there are for nonmetropolitan areas.

Little theoretical attention has been paid to the question of how the pace of life is related to other community characteristics. Given the lack of a strong theory, the focus of the present study was to explore relationships between pace and a number of other social variables not previously studied. Rather than testing a single model or theory, our goal was to discover clusters of regularities in the socioeconomic patterns of cultures that relate to the pace of life. As a beginning, the present study drew on Hoch's (1976) theory concerning the relationship between economic factors and the pace of life. Hoch argues that the population density of large cities drives up the prices of land and other goods. These economic demands require that people use their time more efficiently so that greater economic value is assigned to people's time, which, in turn, leads to a faster pace of life. Conversely, of course, a faster pace of life will in itself tend to produce more vital economies.

PREDICTORS OF PACE

Using Hoch's economic model as a starting point, a series of hypotheses concerning the relationship of the pace of life to other community variables were developed. The first four of these hypotheses concerned the community characteristics that are predictors of the pace of life.

Hypothesis 1: Economic vitality: The more vital a city's economy, the faster its pace of life. To test the economic hypothesis, three indicators of economic vitality were examined. First, as a measure of the economic vitality of the country as a whole, we looked at the relationship of pace of life to each country's gross domestic product (GDP) per capita. Next, as an indicator of the economic well-being that is experienced by the average citizen, we examined what is known as purchasing power parity (PPP). This is an estimate of how much the average income earned in each country is capable of purchasing. Finally, as an estimate of how well people are able to fulfill their minimum physiological needs, the average caloric intake of each nation was examined.

Hypothesis 2: Climate: Hotter places are slower. The popular, but mostly untested, stereotype that the pace of life is slower in warmer climates may be predicted from two perspectives. First, according to economic theory, if the pace of life is driven by a need for consumer goods, it may be argued that people in warmer climates, who require fewer and less costly belongings—fewer

clothes, simpler homes—should have less need for making every moment productive, leading to less value placed on people's time, resulting in a slower pace of life. Second, a relationship between climate and the pace of life might also be predicted from an ergonomic perspective. A rapid pace of life requires more energy, and people in warmer climates have less physical energy in general (Bornstein, 1979; Levine, 1988). There is, in fact, some evidence that people within the same city walk faster when the temperature is cooler (Hoel, 1968; Rotton, 1985). No studies, however, have determined whether the pace of life differs between cities with different climates.

Hypothesis 3: Cultural values: Individualistic cultures are faster than those emphasizing collectivism. It was predicted that a culture's basic value system would be related to its pace of life. We focused on what many cross-cultural psychologists believe to be the most important construct for explaining the social patterns of cultures: individualism versus collectivism. Roughly, individualistic societies are characterized by an orientation to the individual and their nuclear family, whereas collectivistic societies give highest priority to the welfare of one or more larger collectives (Triandis, 1995). (For a discussion of subtypes of individualism-collectivism, see Singelis, Triandis, Bhawuk, & Gelfand, 1995.)

Triandis (1995) argues that a major antecedent of individualism is affluence, which we have argued is both a precursor to, and consequence of, a rapid pace of life. Compared with collectivist cultures, individualistic ones put more emphasis on individual achievement than on affiliation. Because an emphasis on individual achievement requires a greater concern with time than one that focuses on social affiliation, we predicted that individualistic countries would have a faster pace of life than those that place greater emphasis on the well-being of the collective.

Hypothesis 4: Population size: Bigger cities have faster paces. This fourth predictor of the pace of life, which follows directly from Hoch's economic theory, was only minimally retested in the present study. As discussed above, this hypothesis has received substantial empirical support in previous studies. Most of the studies that have looked at the relationship between population size and pace have had a large range of city sizes, ranging from under 29,000 to up to more than 1 million. In our study, in contrast, 23 of the 28 cities (population sizes were unavailable for three cities in our sample) had populations of more than 1 million. Our sample, therefore, does not allow an adequate test of the population-pace hypothesis as construed by past research on this topic. The present data did, however, allow us to examine to what extent this relationship is constrained by a critical cutoff point in population size.

PACE AND WELL-BEING

The next three hypotheses focused on the consequences of the pace of life for physical and psychological well-being.

Hypothesis 5: On the whole, faster places have higher rates of death from coronary heart disease. Perhaps no single physical disease has been so associated with the temporal demands of industrialization as coronary heart disease. More than a century ago, Greg (1877) commented that

> the anxiety to be on time, the hurrying pace—often the running to catch trains (which are punctual in starting, whatever they may be in arriving)—cause a daily wear and tear, as well as accelerated action of the heart, of which, in a few months or years, most of us become unpleasantly conscious, and which, as we all know, sometimes have a fatal and sudden termination. (pp. 267-268)

The association between economic stressors, time urgency, and coronary heart disease has been perhaps best described by the Type A behavior pattern. The original concept of the Type A personality proposed a global pattern of behaviors that predispose individuals to coronary heart disease (CHD). The core elements of this Type A pattern include extremes of aggressiveness, easily aroused hostility, competitive achievement striving, and a chronic sense of time urgency—the perpetual struggle to achieve a great many goals in a short period of time (e.g., Friedman & Rosenman, 1974). From this, it might be hypothesized that faster places will have higher rates of CHD.

There is considerable controversy, however, about the relationship of time urgency to CHD. A number of subsequent researchers have presented evidence that "hostility-anger" may be the single toxic element of the global Type A pattern. They argue that the other Type A behaviors, including time urgency, are unrelated to CHD (see, e.g., reviews by Booth-Kewley & Friedman [1987] and Matthews [1988]). Nonetheless, recent studies have found that scores on time urgency are just as strong or even stronger predictors of CHD as are hostility-anger scores taken alone. Friedman and Ghandour (1993), for example, found that the symptoms, traits, and psychomotor signs of time urgency were a better predictor of CHD in a sample of patients than were hostility scores; in addition, time urgency scores were almost as efficient in predicting CHD as were total scores on a global Type A measure. (See Friedman, Fleischman, & Price, 1996, for a review of articles suggesting that time urgency may be more important than hostility for predicting CHD.)

Virtually all Type A-CHD studies have measured time urgency by individual self-reports, either with questionnaires or structured interviews.

Examining the relationship between the pace of life and CHD at the level of the city offers a different perspective to the Type A debate. The single previous study to do this was Levine et al.'s (1990) 36-city U.S. study, which found a significant relationship (r = .51) between a city's overall pace of life and its rate of death from CHD. The present study was designed to see if this relationship would replicate at the more heterogeneous international level.

Hypothesis 6: Smoking rates are higher in faster places. From the economic hypothesis, we might also predict that people in faster places will have a tendency to engage in unhealthy behaviors. Levine et al. (1990) theorized that the higher CHD rates in faster places that emerged in their 36-city study may result from a tendency for people in time-urgent environments, who are presumably under greater stress to achieve, to engage in unhealthy behaviors. They hypothesized that one of these stress-related behaviors is cigarette smoking, which is a well-established risk factor for the development of CHD. Although statistics concerning smoking rates were not available for all of the 36 cities in their sample, Levine et al. found preliminary support for the smoking hypothesis when comparing regions: Smoking rates and CHD rates were highest and the pace of life was fastest in the northeast, followed in order by cities in the north central, south, and western regions. The present study offered a further test of this hypothesis, at the international level.

Hypothesis 7: People in fast places have greater subjective well-being. This hypothesis concerns a direct measure of psychological well-being: ratings of how happy and/or satisfied people are with their lives. To assess subjective well-being (SWB), we drew on previous large-scale surveys of happiness and life satisfaction that have been conducted within a number of countries. These survey data were available for 15 of the 31 countries in our study, which allowed at least a preliminary test of the happiness question.

Two diametrically opposed predictions about the relationship of pace to SWB may be derived from the economic hypothesis. On one hand, if economic vitality leads to temporal stress, should not the same stressors that lead to physically destructive behaviors like cigarette smoking also detract from general psychological well-being? This would lead to the prediction that a slow pace of life makes for happier people.

On the other hand, the opposite prediction follows from the well-established empirical finding that economic productivity is highly related to SWB, both at the level of nations and of individuals. A recent 55-nation study by Diener, Diener, and Diener (1995), for example, found high correlations between national life satisfaction and a wide range of national economic indicators, including per capita GDP, purchasing power, and the fulfillment

of basic needs. Because our basic hypothesis is that the pace of life is positively related to economic vitality, this economic argument would predict a positive relationship between the pace of life and SWB.

METHOD

OVERVIEW

Three measures of the pace of life were sampled in large cities in 31 countries. These measures were correlated with statistics reflecting climate, economic well-being, individualism-collectivism, CHD, cigarette smoking, and life satisfaction for each city (when available) or country.

SUBJECTS (CITIES)

The "subjects" in this study were large cities in each of 31 countries. The selection of countries was aimed at the widest possible sampling of the regions and cultures of the world. For practical reasons, however, subject selection was driven by convenience. Data collection at the various international sites was conducted by (a) interested, responsible students who were either traveling to foreign countries or returning to their home countries for the summer or (b) cross-cultural psychologists and their students in other countries who were willing to assist the authors. Although this method of subject selection was clearly less than random, the final list of countries did encompass a wide range of locales in North and South America, Europe, and Asia.

In most countries, data were collected in either the largest city or a rival major city: Amsterdam (the Netherlands), Athens (Greece), Bucharest (Romania), Budapest (Hungary), Dublin (Ireland), Frankfurt (Germany), Guanzhou (China), Hong Kong (Hong Kong),[1] Jakarta (Indonesia), London (England), Mexico City (Mexico), Nairobi (Kenya), New York City (United States), Paris (France), Prague (Czech Republic), Rio de Janeiro (Brazil), Rome (Italy), San Jose (Costa Rica), San Salvador (El Salvador), Seoul (South Korea), Singapore (Singapore), Sofia (Bulgaria), Stockholm (Sweden), Taipei (Taiwan), Tokyo (Japan), Toronto (Canada), and Vienna (Austria). In four other countries, again for reasons of convenience, the observations were made in more than one city: In Poland, data were collected in Wroclaw, Lodz, Poznan, Lublin, and Warsaw. In Switzerland, measures were taken in both Bern and Zurich. In Syria and Jordan, most observations were made in the capital cities of Damascus and Amman, but some

were done in secondary population centers. In each of these cases, data from the different cities were combined for that country, after testing for cross-city differences.

PROCEDURE

Three indicators of the pace of life were measured in each country. These measures demonstrated minimal experimenter effects in two previous studies (Levine & Bartlett, 1984; Levine et al., 1990). All measures were taken during a warm summer month between 1992 and 1995. The three measures were the following:

Walking speed. Male and female walking speed over a distance of 60 feet was measured in at least two locations in main downtown areas in each city. Measurements were taken during main business hours on clear summer days. All locations were flat, unobstructed, had broad sidewalks, and were sufficiently uncrowded to allow pedestrians to move at potentially maximum speeds. To control for the effects of socializing, only pedestrians walking alone were used. Children, individuals with obvious physical handicaps, and window-shoppers were not timed. Thirty-five men and 35 women were timed in most cities.

Postal speed. As a sample of work speed, the time it took postal workers to complete a standard request for stamps was measured in each country. Postal clerks at randomly selected post offices in each city were handed a note (to minimize experimenter effects) in the native language, written by a native speaker, requesting one stamp of a commonly used small denomination. Along with this note, the clerk was given a denomination of paper currency that required change in both coins and paper. In the United States, for example, the clerk was handed a $5 bill with a request for one 32-cent stamp. The experimenter in each city was a neatly dressed native or native-appearing man or woman. The dependent measure was the time elapsed between the passing of the note and completion of the request. A minimum of eight postal clerks were approached in each city.

Clock accuracy. As a sample of concern with clock time, the accuracy of 15 clocks, in randomly selected downtown banks, were checked in each country. The criterion for the correct time was that reported by the telephone company.

EXPERIMENTERS

A total of 19 experimenters (11 male, 8 female), most often working individually, each collected data in one or more of the cities. All experimenters were college age, from the native country, or able to "pass" as natives, and dressed neatly and casually.

Several steps were taken to ensure standardization and to minimize experimenter effects. First, all experimenters received both a detailed instruction sheet and on-site field training in procedures for subject selection, observation, and timing. The first author oversaw all such training. Second, two of the measures were unobtrusive (walking speed and clock accuracy). For postal clerk speed, steps were taken to ensure maximum standardization of experimenters' behaviors; in particular, to eliminate the effects of experimenters' talking speed and style, transactions were conducted with notes. Third, techniques were used that ensured that experimenters could not preselect participants ("blind" selection technique). Given the fact that most experimenters were responsible for data collection in only one or two countries, it was difficult to conclusively analyze for experimenter effects. As indicated earlier, however, our earlier studies with these measures indicated that, when provided the same experimenter training, experimenter effects were minimal. Finally, given that the data for each country in the present study were mostly gathered by different experimenters, the clear trends for consistent regional differences that are described in the Results section would argue that any experimenter differences were not a dominant factor in the overall results.

COMMUNITY VARIABLES

Climate. Climate was measured by the average annual high temperature in each city (or, where more than one city was tested in a county, the average of their temperatures) (Conway & Liston, 1974; Wright, 1993). (Data for humidity and temperature-humidity indexes, which may be a more sensitive measure of climate, are not available for many international cities.)

Economic indicators. As described earlier, three economic measures, each measuring a different aspect of economic vitality, were used. First, as a measure of the economic health of the country as a whole, we examined each country's per capita GDP for 1993 (World Bank, 1994). Second, as an indicator of the economic well-being that is experienced by the average citizen,

estimates of what is known as PPP—how much the average income earned in each country is capable of purchasing—were extracted for the year 1993 (World Bank, 1994). Third, as an estimate of how well people are able to fulfill their minimum physiological needs, the average caloric intake of each nation for 1989 (the most recent available data) was examined (Wright, 1993).

Individualism/collectivism. Triandis rated each of the countries on a 1 to 10 scale, with 1 being the most collectivistic and 10 the most individualistic. Some of these ratings were reported by Diener et al. (1995); the remainder were obtained directly from Triandis (personal communications, February 19, 1994; January 9, 1995; and September 19, 1995). Triandis was blind to the data and hypotheses in this study. Although these ratings were developed somewhat subjectively, it should be noted that Diener et al. (1995) found a correlation of .83 between Triandis's collectivism ratings and Hofstede's (1980) empirically derived collectivism ratings. (Hofstede's ratings were not available for many of the countries in the present study.)

Population size. Although not a central hypothesis in this study (see above), the population of the metropolitan area for each city, for the year 1992, was taken from U.S. Bureau of the Census (1993) or, when not available from that source, from the United Nations (1992).

CHD. Rates of death from ischemic heart disease (the sum of deaths for acute myocardial infarction plus other ischemic heart diseases) for the latest available year were taken from the United Nations (1992). Data were available for 26 countries in the sample.

Smoking rates. Smoking statistics were taken from Nicolaides-Bouman, Wald, Forey, and Lee's (1993) compilation of cigarette-smoking statistics for 121 countries. Data reflect the percentage of manufactured cigarette consumption per adult (aged 15+), for men and women combined, in 1982-1983.

SWB. Veenhoven (1993) has compiled and integrated the results of a large number of previous national surveys of happiness and well-being. Many of these surveys varied in the phrasing of questions and/or response options. One survey, for example, asked respondents to rate how happy they were, offering three response options ranging from *very happy* to *not too happy*. Another survey asked people how satisfied they were with their lives, offering 11 response options varying from *very satisfied* to *not satisfied*. To calibrate the different surveys, Veenhoven asked a sample of expert researchers

in the area of SWB (persons working on the World Database of Happiness) to assign a value of 0 to 10 to each response option in each survey. This weighting process produced a 0 to 10 Thurstone value for the SWB of each country, based on the last (or only) survey conducted in that nation. These survey data were available for slightly less than one half ($n = 15$) of the nations in the present sample.

RESULTS

Although multiple measurements were taken for each field measure in each city, it should be noted that for purposes of analysis, the 31 countries were treated as the unit of analysis. Each data point represents the mean of the sample for a given country.

OVERALL PACE-OF-LIFE INDEX

For each country, the three measures of pace were converted to *z*-scores, which were then combined to produce an overall pace-of-life index. This overall index significantly correlated with each of its components (walking speed, $r = .76$; post office speed, $r = .80$; clock accuracy, $r = .69$; $df = 29$, $p < .001$ using a one-tailed test in all cases). Walking speed and post office speeds were more closely related to each other than either was to clock accuracy. The intercorrelations between the three pace measures were as follows: walking speed with post office speed: $r = .48$, $p < .01$; walking speed with bank clocks: $r = .25$, $p < .09$; bank clocks with post office speed: $r = .32$, $p < .04$ ($df = 29$ in all cases). Although it may be questioned whether correlations of this magnitude warrant creation of an overall index, such an index appeared helpful for exploring some of the hypotheses and is included in the analyses.

RANKS

The ranks and means for each country on each of the pace variables are shown in Table 1. It may be seen that Japan and the Western European countries (more precisely, the non-ex-Soviet bloc countries of Western Europe) had the fastest overall pace of life scores. Other than Japan, the 9 fastest countries were from Western Europe. Put another way, the 9 Western European countries all scored among the fastest 11 countries. Switzerland was the fastest country, based on consistently high rankings on each individual measure: The combined scores from Zurich and Bern ranked third in walking speed, second in postal times, and first in clock accuracy. The middle of the list was

TABLE 1
Means[a] and Ranks on Pace Measures by Country

	Overall Pace Index		*Walking Speed*		*Postal Speed*		*Clock Accuracy*	
Country	M	*Rank*	M	*Rank*	M	*Rank*	M	*Rank*
Switzerland	–3.43	1	11.80	3	16.91	2	19.29	1
Ireland	–3.02	2	11.13	1	17.49	3	51.42	11
Germany	–3.00	3	12.01	5	13.46	1	43.00	8
Japan	–2.68	4	12.11	7	18.61	4	35.00	6
Italy	–2.13	5	12.75	10	23.00	12	24.17	2
England	–2.09	6	12.00	4	20.78	9	53.72	13
Sweden	–1.96	7	12.92	13	19.10	5	40.20	7
Austria	–1.43	8	14.08	23	20.60	8	25.00	3
Netherlands	–1.43	9	11.45	2	24.42	14	82.33	25
Hong Kong	–1.39	10	13.10	14	20.10	6	54.83	14
France	–1.36	11	12.34	8	27.84	18	49.00	10
Poland	–1.32	12	12.90	12	25.83	15	43.00	8
Costa Rica	–1.13	13	13.33	16	21.13	10	55.38	15
Taiwan	–0.73	14	13.58	18	20.22	7	68.00	21
Singapore	–0.65	15	14.75	25	22.42	11	32.00	4
United States	–0.30	16	12.03	6	36.99	23	67.87	20
Canada	–0.26	17	12.86	11	30.50	21	70.00	22
S. Korea	–0.02	18	13.76	20	29.75	20	58.00	16
Hungary	0.01	19	13.75	19	28.45	19	64.17	18
Czech Republic	0.28	20	13.80	21	27.73	17	76.07	23
Greece	0.54	21	13.10	14	24.33	13	117.0	29
Kenya	0.78	22	12.58	9	42.50	30	77.14	24
China	1.03	23	14.26	24	39.63	25	51.82	12
Bulgaria	1.59	24	15.57	27	33.67	22	60.00	17
Romania	2.42	25	16.72	30	42.25	29	32.46	5
Jordan	2.44	26	15.79	28	39.92	27	66.16	19
Syria	3.26	27	15.95	29	40.02	28	94.52	27
El Salvador	3.63	28	14.04	22	25.88	16	210.0	31
Brazil	3.98	29	16.76	31	38.17	24	108.0	28
Indonesia	4.14	30	14.82	26	39.64	26	161.5	30
Mexico	4.23	31	13.56	17	70.00	31	92.31	26

a. Overall pace index means are the average of the *z*-scores for each measure. For the other measures, smaller numbers represent faster walking speeds, faster postal times, and smaller clock deviations (all in seconds).

dominated by ex-Soviet bloc European countries; newly industrialized Asian countries; and, squarely at the median, the United States. The slowest countries on the list were all nonindustrialized countries—from the Middle East, Latin America, and Asia.

RELATIONSHIP OF COMMUNITY VARIABLES TO PACE OF LIFE

First-order correlations. Table 2 presents scores for each country on the community variables. Table 3 presents first-order correlations between the nine community variables and each of the pace-of-life measures. Note, again, that these correlation analyses treat each of the countries as a single subject. Given the large number of predictor variables for a sample of 31 countries, these results must be treated cautiously.

Given that unidirectional predictions were made concerning the relationship of each of the community variables to pace of life, the significance of first-order correlations was evaluated with one-tailed tests. Using this liberal standard, it may be seen in Table 3 that, as predicted, every community characteristic other than population size was significantly correlated, in the expected direction, with the overall pace-of-life index. The highest correlations were for the "antecedent" variables (see Hypotheses 1 through 4). The highest correlations were for two economic predictors—per capita GDP (r = .74) and PPP (r = .72). Looking at the pace measures individually, it may be seen that the strongest predictors of walking speed were GDP (r = .61), individualism/collectivism (r = –.60), and PPP (r = .59); the strongest predictors for post office speed were GDP (r = .55) and PPP (r = .53); and the strongest predictors of clock accuracy were climate (r = –.53), GDP (r = .48), and PPP (r = .48). In summary, places with a faster pace of life were significantly more likely to have colder climates, have healthier economies, and to emphasize individualism.

The correlations for the variables reflecting well-being with the pace of life were also all in the predicted direction but were mostly of lower magnitude than those for the "predictor" variables. For overall pace of life, there were significant positive correlations with CHD (r = .35), percentage smokers (r = .52), and SWB (r = .59). Looking at the individual pace measures, the highest correlations for walking speed (r = .40) and postal speed (r = .54) were with SWB; the highest correlation for clock deviations was with percentage smokers (r = .40). In summary, faster places had higher rates of death from CHD, higher smoking rates, and higher SWB.

To test whether differences in well-being were consequences of pace of life or of economic factors, we conducted partial correlations between an index of overall economic productivity (see below for a description of this index) and the three well-being measures, controlling for pace of life. The resulting correlations between the economic index and psychological well-being (r = .35, df = 10) and CHD (r = .28, df = 19) were nonsignificant, indicating that the significant correlations between pace of life and these two

TABLE 2
Values of Pace of Life Index and Other Community Variables

Country	*Pace Index*	*Climate*	*GDP*	*PPP*	*Calories*	*Collectivism*	*Population*	*CHD*	*Smoking*	*SWB*
Switzerland	–3.43	55.0	364.10	236.2	35.6	9	298.9	1.5	9	12.9
Ireland	–3.02	56.0	125.80	118.5	37.8	5	921.0	2.4	7	—
Germany	–3.00	57.0	235.60	209.8	34.4	8	644.9	2.2	7	—
Japan	–2.68	66.0	314.50	210.9	29.6	4	27,530.0	0.4	9	–5.0
Italy	–2.13	71.0	196.20	180.7	35.0	6	3,028.0	1.2	7	–3.4
England	–2.09	48.0	179.70	177.5	31.5	9	9,168.0	2.9	7	2.3
Sweden	–1.96	48.0	248.30	175.6	29.6	8	1,471.2	3.0	5	12.0
Austria	–1.43	55.0	231.20	188.0	35.0	8	2,392.0	2.1	7	—
Netherlands	–1.43	54.0	207.10	180.5	31.5	9	1,053.4	1.5	5	8.8
Hong Kong	–1.39	77.0	178.60	216.7	—	4	5,762.0	0.5	5	—
France	–1.36	59.0	223.60	194.4	34.7	7	8,589.0	0.9	5	–3.4
Poland	–1.32	53.0	22.70	50.1	—	5	—	1.1	9	–9.1
Costa Rica	–1.13	77.0	21.60	55.8	28.1	5	395.4	0.6	3	—
Taiwan	–0.73	79.0	106.00	—	29.7	5	6,924.0	—	7	—
Singapore	–0.65	87.0	193.10	204.7	32.0	5	2,743.0	0.9	7	1.5
United States	–0.30	62.0	247.50	247.5	36.7	10	14,628.0	2.1	9	6.4
Canada	–0.26	54.0	206.70	204.1	34.8	9	3,182.0	1.7	9	10.4
South Korea	–0.02	61.0	76.70	98.1	28.5	3	17,334.0	0.1	7	–1.7

Hungary	0.01	60.0	33.30	62.6	36.4	6	2,304.0	2.7	9	–3.4
Czech Republic	0.28	54.0	27.30	77.0	36.3	6	—	3.2	7	—
Greece	0.54	71.0	73.90	83.6	38.3	7	—	1.2	9	–7.4
Kenya	0.78	74.0	2.70	13.1	21.6	3	1,162.2	—	1	—
China	1.03	79.0	4.90	21.2	26.4	3	3,314.0	0.3	3	—
Bulgaria	1.59	60.0	11.60	37.3	—	4	1,221.0	2.3	7	—
Romania	2.42	62.0	11.20	29.1	31.6	4	2,175.0	1.8	5	—
Jordan	2.44	74.0	11.90	40.1	26.3	3	9,363.0	—	5	—
Syria	3.26	76.0	—	—	30.0	3	1,444.3	—	5	—
El Salvador	3.63	90.0	13.20	23.6	23.2	3	497.6	0.2	3	—
Brazil	3.98	79.0	30.20	54.7	27.5	4	3,182.0	0.5	5	—
Indonesia	4.14	86.0	7.30	31.4	27.5	2	10,185.0	—	3	—
Mexico	4.23	72.0	37.50	71.0	30.5	5	21,615.0	0.2	3	–17.2

NOTE: The pace index represents the combined *z*-scores of the three pace measures; lower numbers signify a faster pace. Climate is the average annual maximum temperature (in Fahrenheit). GDP is per capita gross domestic product. PPP refers to purchasing power. Calories refer to the average caloric intake. Collectivism refers to Triandis's individualism-collectivism ratings; higher numbers indicate greater individualism. Population is the population size of the metropolitan area for the city or the average when more than one city was measured (in hundreds). CHD refers to the rate of death from coronary heart disease. Smoking refers to per capita cigarette smoking, on a scale of 1 (*low*) to 9 (*high*). SWB refers to subjective well-being. See text for further description of these variables.

TABLE 3
Correlations[a] (and sample sizes)[b] Between the Pace of Life and Other Selected Community Characteristics

	Pace Measure			
Community Characteristic	*Overall Pace*	*Walking Speed*	*Postal Speed*	*Clock Deviation*
Climate (temperature)	–.58** (31)	–.47** (31)	–.30* (31)	–.53** (31)
Gross domestic product per capita	.74** (30)	.61** (30)	.55** (30)	.48** (30)
Purchasing power parity	.72** (29)	.59** (29)	.53** (29)	.48** (29)
Daily caloric intake	.51** (28)	.39* (28)	.35* (28)	.40* (28)
Collectivism	–.59** (31)	–.60** (31)	–.39** (31)	–.36* (31)
Population size	–.07 (28)	.15 (28)	–.31 (28)	.00 (28)
Coronary heart disease	.35* (26)	.19 (26)	.29 (26)	.28 (26)
Percentage smokers	.52** (31)	.29* (31)	.48** (31)	.40** (31)
Subjective well-being	.59* (15)	.40 (15)	.54* (15)	.31 (15)

a. Higher correlations indicate that the community characteristic is positively related to a faster pace of life (faster walking speeds, faster postal speeds, and smaller clock deviations).
b. Note that statistics for some community characteristics were not available for some countries, resulting in smaller sample sizes for those analyses.
*$p < .05$. **$p < .01$ (one-tailed significance test).

well-being indicators could not be accounted for by the economic measures. However, the resulting correlation between the economic index and cigarette smoking ($r = .68$, $df = 22$) was significant ($p < .001$), indicating that the significant correlation between pace of life and cigarette smoking could be accounted for by the economic measures. It should be noted, however, that because of missing data on different variables, these partial correlations were not ideal tests of the question of the relative validity of the measures of pace of life versus economic productivity for predicting well-being.

Although not a major focus of this study, we also examined the correlations between walking speed and the community variables for men and women separately; *t* tests indicated that the correlations of men versus those

for women did not significantly differ for any of the nine community characteristics. However, although the differences between the *r*s for men and for women were not significant, for two community variables the correlations for women were significant ($p < .05$), whereas those for men were not significant: percentage smokers: r (women) = .36, r (men) = .20; SWB: r (women) = .50, r (men) = .28.

Multiple regression analyses. To compare the validity of each of the "predictor" variables, they were simultaneously entered in a series of multiple regression analyses in which one of the four pace-of-life variables served as the criterion variable. Given the large number of predictor variables for the sample size, the three economic predictors were combined, after first converting each to *z* scores, into a single economic index. This overall index was significantly correlated with each of its components (GDP: $r = .92$; PPP: $r = .95$; average calorie intake: $r = .78$, $df = 24$ [reflecting missing data for five cities], $p < .001$ using one-tailed test in all cases). The intercorrelations between the three economic measures were as follows: GDP with PPP: $r = .96$, $p < .01$; GDP with caloric intake: $r = .48$, $p < .01$; PPP with caloric intake: $r = .57$, $p < .01$ ($df = 24$ in all cases). The overall alpha for the three-item economic index was .73. The resulting alpha if any single item were deleted would have been .07 (PPP), .12 (GDP), and .95 (caloric intake). Even though including caloric intake reduced the overall alpha, it measures an important aspect of economic well-being at the individual level and thus seemed warranted for inclusion in the index.

As can be seen in Table 4, when the three predictor variables (climate, economic index, and individualism-collectivism) were optimally combined, the resulting uncorrected multiple *R*s were generally high: R (overall pace index) = .81 ($p < .001$); R (walking speed) = .63 ($p < .01$); R (post office speed) = .57 ($p < .05$); R (clock accuracy) = .67 ($p < .01$); $df = 3, 22$ in all cases. The adjusted R^2 values, which take into account the sample size and number of predictors, were as follows: overall pace index = .60; walking speed = .32; post office speed = .23; clock accuracy = .38. It may be seen that economic well-being was the strongest single predictor of all four dependent measures. The economic index accounted for significant variance for postal speed, clock accuracy, and the overall pace index in these multiple regression analyses. Individualism-collectivism also accounted for significant variance on clock accuracy. Thus, the unique contributions of climate for explaining the variance in each of the four pace-of-life measures, and the unique contributions of individualism-collectivism for three of the pace-of-life measures, become nonsignificant after partialing out for the effects of economic well-being. First-order intercorrelations between the three predictor variables

TABLE 4
Results of the Multiple Regression Analyses of Pace of Life on the Predictor Variables (standardized betas)

Predictor Variable	*Overall Pace-of-Life Index*	*Walking Speed*	*Postal Speed*	*Clock Accuracy*
Climate	.36	.17	–.10	.52*
Economic index	–.79**	–.37	–.66*	–.70*
Individualism-collectivism	.30	–.15	.21	.58

NOTE: $N = 26$ for all variables. Adjusted R^2: overall pace index = .60; walking speed = .32; post office speed = .23; clock accuracy =.38.
*$p < .05$. **$p < .01$.

supported the finding that they are highly interrelated: Economic well-being was negatively correlated with climate (average temperature) ($r = –.63$) and positively correlated with individualism ($r = .82$); individualism was negatively correlated with climate ($r = – .68$); $p < .001$ in all cases.

DISCUSSION

COUNTRY RANKS

The fastest pace of life on the present measures was found in Japan and in the countries of Western Europe. This strong overall trend for Western Europe was particularly remarkable: Eight of the 9 overall fastest countries were from this regional category, and the 9 countries in our sample falling into this category all scored among the fastest 11 countries. (Greece, which might be marginally classified as "Western," was 21st.) Only Japan (4th) and Hong Kong (10th) intruded on this Western European monopoly.

The United States, Canada, and four economic-growth countries of Asia (Hong Kong, Taiwan, Singapore, and South Korea) dominated the middle of the rankings; these six countries scored between 10th and 18th overall. Poland (12th) and Costa Rica (13th) also fell into this middle group. Other than Poland, the four remaining ex-Soviet countries on the list tended to fall just below this middle group: Hungary and the Czech Republic were 19th and 20th and Bulgaria and Romania were 24th and 25th, respectively. The remainder of the slowest third of the list was composed of relatively nonindustrialized countries from Africa (Kenya, 22nd), Asia (China, 23rd), the Middle East (Jordan and Syria, 26th and 27th), and Latin America (El Salvador, Brazil, Indonesia, and Mexico, 28th through 31st, respectively).

Perhaps the most surprising rankings were the very average times of the U.S. and Canadian cities—compared, at least, to the industrialized countries of Western Europe. It might be noted that in a later replication, a second experimenter conducted the same three measurements in New York City and obtained virtually identical times (Norenzayan, 1994). It is interesting to speculate whether New York's modal overall pace reflects the fact that the city moves at slower speeds than its popular stereotype would suggest or whether the pace of life in workday Western Europe has simply accelerated. Because two Western European countries—Italy and England—and the United States were included in our 1980 study (Levine & Bartlett, 1980), it was possible to partially answer this question by comparing these countries' times in the present study with those from the early study. Compared to 1980, New Yorkers were faster on walking speed (12.03 seconds compared with a prorated 13.65 seconds) but slower on postal times (36.99 vs. 28.00 seconds) and less accurate on clock time (67.87 vs. 42.0 seconds). Compared to 1980, the Romans were faster on all three measures: 12.75 seconds in the current study versus 14.14 (prorated) seconds in 1980, 23.0 seconds versus 52.13 seconds on postal clerk speed, and 24.17 seconds versus 130.20 seconds for average clock deviations. Compared to 1980, Londoners were virtually identical on walking speed (12.00 seconds compared with a prorated 12.03 seconds) but faster on postal clerk times (20.78 vs. 35.63 seconds) and more accurate on clock time (53.72 vs. 72.00 seconds). In other words, the two Western European cities were clearly faster overall in the current study compared to 1980, whereas the scores from New York showed mixed changes. These preliminary data would suggest that the relatively slow ranks for New York City reflect increased speed in Western European cities rather than slow speeds in New York.

The overall regional and economic trends were striking. Given that, in most cases, data were gathered by different experimenters in each of these countries, it is unlikely that these trends were the result of experimenter effects. Rather, it appears that at this moment in time, the fastest pace of life, during main business hours, on our measures, is in Japan and Western Europe. Consistent with the popular stereotype, the slowest speeds were in the nonindustrialized Third World. The very slowest were in three countries popularly associated with a relaxed pace of life: Brazil (where the stereotype of "*amanha*" [literally, "tomorrow"] holds that, whenever it is conceivably possible, people will put off the business of today until tomorrow); Indonesia (where the hour on the clock is often addressed as "*jam kerat*" ["rubber time"]); and, slowest of all, the archetypical land of *a manana*, Mexico.

Of course, there are many aspects of the pace of life that the present measures do not address. The three indicators of pace focus solely on the tempo

during working hours. Cities and countries may, however, also differ in the tempo of their "downtime" and, perhaps even more significantly, on the balance between these two times. It has been suggested, for example, that Western Europeans are more skilled at slowing down at the end of the workday than are their cohorts in, for example, the United States and Japan. (A pair of *New York Times* articles captured this stereotype with the headline "Why *La Dolce Vita* is Easy for Europeans. . . . As Japanese Work Even Harder to Relax" [Riding, 1991; Sanger, 1991]). There is, in fact, some evidence for this stereotype. Annual work hours, for example, are longer in Japan and the United States than they are in Western Europe. One recent estimate indicates that the average annual paid working hours are 2,159 in Japan, compared with 1,957 in the United States, 1,646 in France, and 1,638 in the former West Germany. Only 27% of the Japanese labor force works as little as a 5-day week, compared with 85.1% in the United States and 91.7% in France (Japan External Trade Organization, 1992). Western Europeans also take significantly more vacation days than do workers in the United States, who take more than those in Japan. Whereas U.S. workers typically take 2 weeks of summer vacation time, every country in Europe has collective bargaining agreements guaranteeing minimum paid vacations ranging from 4 to 5½ weeks (Schor, 1991). In Japan, recent data indicate that workers take an average of 8.2 vacation days, although an average of 15.5 days are authorized (Japan External Trade Organization, 1992). Perhaps an even more dramatic indicator of the single-minded commitment to work in Japan is the fact that the Labor Ministry has had to undertake a formal campaign to encourage workers to take more vacation time, using slogans such as "To take a vacation is proof of your competence" (Sanger, 1991).

Each of the three pace measures may also be criticized for other shortcomings. Our measure of work speed, for example, measures the time it takes to complete a transaction but does not take into account the waiting time before the transaction occurs. The postal times in Rome, for example, were a respectable 12th fastest in our sample, which is contrary to the popular stereotype of inefficient Italian post offices. However, a recent Italian "Report on the Social Situation of the Country," compiled by the authoritative Censis foundation, indicates widespread consumer discontent with the waiting lines in Italian post offices, a variable that our measure does not address. Perhaps this combination of relatively rapid transactions and long lines is partly explained by the fact that post offices are only open for about 5 hours per day in Italy—compared, for example, with 11 hours in France (Gasparini, 1995).

Despite these shortcomings, however, the present data suggest a number of generally consistent economic patterns and geographic trends in the general pace of life—at least the pace of life in main downtown areas during the workday. The present data do not warrant inferences about the pace of life of any single city or country, just as generalizations about any entire sample do not justify inferences about individual participants within that sample. However, taken as a whole, the present data suggest a number of interesting patterns for the pace of life.

PREDICTORS OF THE PACE OF LIFE

The present study provided strong support for each of the three previously untested hypotheses concerning the predictors (or correlates) of the pace of life: Hotter cities were slower than cooler ones, places with more vital economies were faster, and individualistic cultures were faster than those emphasizing collectivism. Although each of these community characteristics was significantly related to the overall pace of life, multiple regression analyses indicated that the variance in overall pace was best accounted for by the economic hypothesis.

It should be noted that the present measure of individualism-collectivism, which consisted of an expert but subjective rating, was not ideal. It would be helpful, in a future study, to test the relationship of this variable to pace of life by developing systematic, objective indicators of individualism-collectivism for the countries in our study.

A fourth hypothesis, that more populous places are faster, was not supported by the present results. As indicated earlier, however, the present study, which focused only on large cities, provided a very limited test of this hypothesis. It may be that there is a critical point beyond which population size does not relate to the pace of life. Bornstein's (1979) and Bornstein and Bornstein's (1976) earlier studies, which provided the strongest demonstration of the link between population size and pace, were based on cities with a wide range of population sizes, beginning at under 29,000. Only 3 of the 21 cities in their two studies combined had populations of more than 1 million. In the present study, 23 of the 28 cities for which population size data were available had populations of more than 1 million. It might be interesting in a future study to systematically select cities to test whether there is, in fact, a particular range, or critical cutoff point, for which population size is an important determinant of pace of life. The present study, however, does not address population size differences across the broad spectrum of city sizes

that has been tested in previous studies. As such, it does not adequately challenge the results of previous studies that strongly demonstrate a positive relationship between population size and pace of life.

WELL-BEING AND THE PACE OF LIFE

The present study also offered evidence that the pace of life is related to the physical and psychological well-being of communities: Faster places tended to have higher rates of death from CHD, smoking rates were higher in faster places, and people in faster places tended to report somewhat greater SWB. These relationships were not generally as strong as those between the predictor variables and the pace measures. They were, however, all in the predicted directions.

The finding that people in faster places tended to have higher CHD death rates but to also have higher SWB was particularly interesting. If a fast pace of life creates the stress that leads to CHD, should not this same stress make people less happy? The key to this seeming paradox may lie in the central role that the pace of life plays in the broader web of community characteristics in which these findings are embedded. Although the present data are correlational, we suggest that some of the same variables that successfully predict the pace of life are themselves the product of the pace of life that they create. Perhaps the two best examples of this are economic vitality and individualism-collectivism. Economic needs are primary forces in creating a sense of time urgency, and that sense of time urgency, in turn, leads to a productive economy. Similarly, a focus on individualism thrives on a rapid pace of life, which, in turn, creates pressure for further individualism. We argue that these forces—economic vitality and individualism—have both positive and negative consequences. On one hand, the focus on making every minute count and being productive creates the stressors that lead to cigarette smoking and CHD. On the other hand, they provide material comforts and a general standard of living that enhance the quality of life. Productivity and individualism—which in themselves are very difficult to separate from one another—have double-edged consequences.

It is interesting to note that the mixed consequences of these community variables have also been found on other measures. Diener (personal communication, March 23, 1995), for example, has observed that although divorce is much higher in individualistic nations, marital satisfaction is also often higher—the United States being a primary case in point. His research has also found that suicide and psychological well-being are both higher in individualistic cultures than in collective ones.

CONCLUSIONS

On the whole, the present results strongly support the hypotheses. Taken together, they suggest that the pace of life is central to a wide range of community characteristics that define the personality of a city or culture. The goal of the present study was to investigate clusters of regularities in the socioeconomic patterns of cultures that may relate to the pace of life, in the hope of leading to an eventual inclusive theory. Figure 1 summarizes the hypotheses and major findings of the present study and, extrapolating from the present correlational data, offers some speculations as a beginning toward building such a theory.

We propose that the relationships between pace of life and other community characteristics are frequently mutually reinforcing. Factors such as population size, economic conditions, and cultural values may raise or lower the characteristic pace of life. These norms may, in turn, directly alter the same population and cultural characteristics that produced them. For example, the economic opportunities in fast-paced places will tend to attract potential migrants, resulting in even larger population size and density. Similarly, the fast-paced norms generated by individualism exert pressure for even greater individualistic activity. Although not tested in this study, it is also suggested that migration patterns will be selective: People attracted to faster places may be the very ones who are likely to support a fast pace of life, and vice versa.

This model assigns a key role to economic vitality, which emerged as the strongest predictor in our study. Faster paced places will tend to be more economically productive—which then raises the value of time and, subsequently, the pace of life. The consequences of this economic vitality, as the present findings suggest, are mixed. On one hand, the very time stressors that are responsible for success lead to unhealthy behaviors (e.g., smoking) and stress-related physical problems (notably CHD). On the other hand, the tangible rewards of economic success raise the general level of psychological well-being. People in fast-paced places tend to be happier.

One further consequence of the pace of life that warrants future exploration is its relationship to social behavior. Cognitive processing theories predict that people who move quickly are less likely to find time for social responsibilities, particularly when those responsibilities involve strangers. Milgram's (1970) system overload theory, in particular, argues that one of the consequences of a rapid pace of life is inattention to the needs of strangers. Milgram hypothesizes that people who are confronted with more sensory inputs than they are able to process experience psychological overload. This

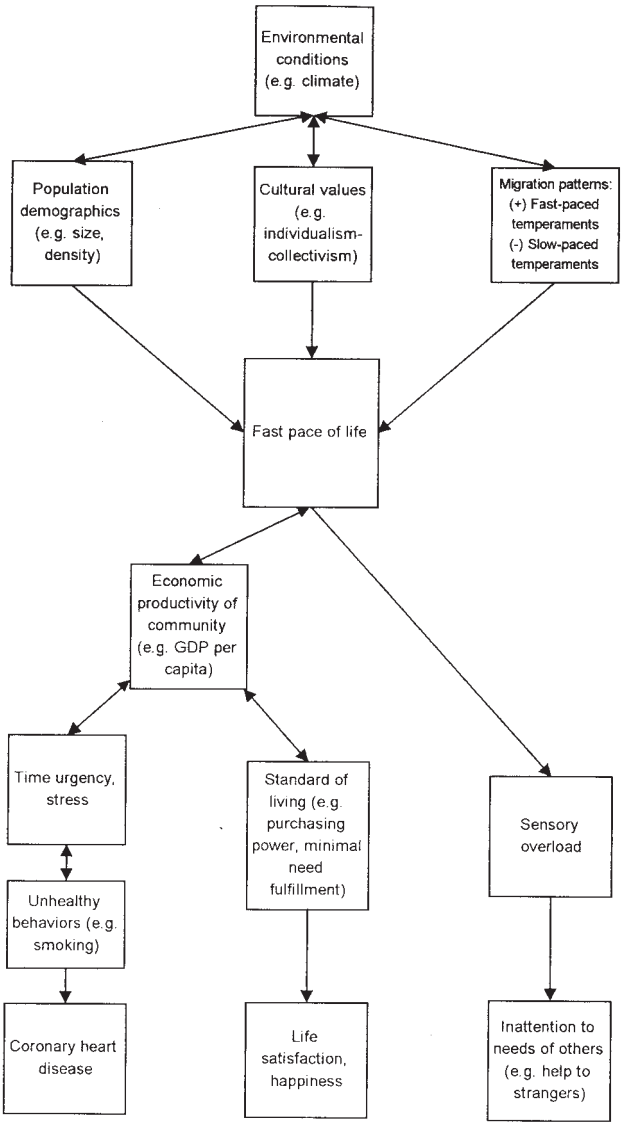

Figure 1: A Community's Pace of Life: Some Predictors and Consequences

is frequently the case in modern cities—the larger the city, the greater the overload. One way that the overloaded urbanite adapts to this predicament is by screening out nonessential stimuli. In essence, the city dweller focuses on his or her goals and moves directly toward them as quickly as possible. Because the needs of strangers are usually low on the urbanite's hierarchy of necessities, attention to these needs becomes a frequent casualty of the screening process. Indeed, there is evidence that people who are pressed for time are less likely to help a stranger than people who are not in a hurry (Darley & Batson, 1973).

It would be interesting to test this model in a future study using causal modeling analyses—to test which variables are, in fact, predictors and/or consequences of the pace of life, and which variables are mutually reinforcing. The small *N* in the current study did not permit the application of causal modeling to the present data.

This model speaks in generalizations. The course of any single culture may be buffered or altered by many factors. What the model does attempt to demonstrate is how broadly the pace of life is intertwined with other cultural characteristics and how central it is to the personality of a place and its people.

NOTE

1. For simplicity, Hong Kong is referred to here as a country. Technically, however—at the time this study was conducted—it was a colony.

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