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THE EFFECTS OF WORKING NONTRADITIONAL HOURS ON LIFE SATISFACTION[1]

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INTRODUCTION

One of the central features of modern society is the synchronization of activity that permits it to operate. As noted by Hawley (1950:288-316) and Moore (1963:117-122), there are well-defined cycles of activity around which our culture is organized. One of the most important of these is the daily business cycle about which most of our lives are arranged. It is hypothesized that maintaining nontraditional daily routines will have negative consequences for the individual. Due to the low status and income characteristics generally associated with nighttime occupations, lack of access to career-enhancing contacts, isolation from socioemotional support networks, and physical stress from variable daily routines and rest interruptions, it is believed that nighttime workers will exhibit lower socioeconomic status and lower life satisfaction than persons maintaining traditional daily routines. This research will use data from a national time-use study to focus on the relationship between nighttime employment and life satisfaction.

TIME AS A DIMENSION OF SOCIAL ORGANIZATION

The importance of time in the organization of society has been recognized by numerous authors. Parsons (1951:302) states, "A society so complex as ours probably could not function without relatively rigid time scheduling." The need for scheduling is not unique to modern Western societies. All societies, no matter how primitive, must coordinate the efforts and activities of their members in time and space (Zentner, 1966). Human ecologists in particular have had an interest in the interdependence between the temporal and spatial structures of society (Engel-Frisch, 1943). Other writers such as Goffman (1959), Schwartz (1970), and Zerubavel (1979) have focused on the need for periods of social withdrawal and the institutionalization of these periods.

Human Ecology and Temporal Organization

Human ecology is best known for its focus on the spatial organization of urban areas, but its basic premises apply to human social systems of all kinds in their respective environments (Hawley, 1981). In processes seen to parallel biological ecology, human populations come to occupy specific niches in their environments through competition and differentiation. Population pressure is often seen as the driving force behind organizational change in a given environment (e.g., Boserup, 1965; Cohen, 1977). As population increases, the demand for needed resources is met by increased differentiation and specialization.

In some respects, human ecology is similar to both functionalism and conflict

theory. Like functionalism, human ecology assumes that the structure of society is a reflection of its need for the efficient distribution of resources. Through specialization of the parts of a society, the operation of the system as a whole is facilitated. Further, through this specialization the parts of the societal system become interdependent and integrated. Turner (1986:43) quotes Herbert Spencer, "Each differentiated structure comes to serve distinctive functions for sustaining the 'life' of the systemic whole," filling a societal "niche."

A central assumption of both conflict theory and human ecology is that the development of a working system is achieved through the weeding out or change of less "fit" parts of the system as they compete for scarce resources. In the traditional study of urban spatial patterns beginning with the Burgess (1925) concentric zone theory, human ecologists have often focused on the competition for spatial location near the central business district (Hawley, 1981). Zentner (1966), in reference to urban spatial organization, states, "The underlying process of competitive cooperation postulated by the ecologists leads them to view location in space as the outcome of a continuing struggle for position between various functions and activities near the center of dominance." He goes on to make a parallel argument for the temporal organization of human communities:

> As envisaged by human ecologists the urban environment comprises a temporal structure which is interdependent with and essentially parallel to its spatial structure. Just as objects and activities occupy a niche in space, so they occupy a niche in time. All disclose a temporal location in relation to a point of temporal dominance which is manifest in the congestion which characterizes periods of the normal business day. Thus temporal concentration can be observed during certain periods of the normal business day, with relative temporal deconcentration being in evidence at other times. The local hospital, for example, is viewed as segregated from the dominant temporal periods of the normal business day inasmuch as its functions are more or less completely independent of those which typically and centrally characterize the urban community. The rivalry for location at or near the center of temporal dominance is seen to arise out of phenomena of temporal interdependence among functions and activities and it is this which promotes temporal centralization and concentration processes and their reciprocals.

The Temporal Organization of Modern Society

Two of the points made by Zentner in the above quote are of particular relevance. First is his reference to the "normal business day" and "temporal domination." The second is his idea of the "temporal interdependence among functions and activities" and the resultant "temporal centralization and concentration processes and their reciprocals." Our societal routine is organized around the work day and certain other essential activities must be scheduled accordingly.

The Dominant Temporal Niche

Humans are primarily a diurnal species (Hawley, 1950:293). Through the use of fire humans were first able to extend activity into the night. Only through the development of gas and electric lighting has nighttime activity become widespread and practical (Hawley, 1950:302; Melbin, 1978). The diurnal cycle is the primary

unit in the rhythm of all communities. "The hours of sunlight are devoted to work and the darkness to recreation and rest" (Hawley, 1950:302). Many authors have identified the business day as the center of modern temporal organization (e.g.: Zentner, 1966; Schwartz, 1970; Chapin, 1974). Evidence of the temporally dominant position held by the workday is abundant. For example, there are radio stations in nearly every metropolitan area of the country that have helicopters to monitor "rush-hour" traffic in the morning and the evening. The daily business and activity cycle is so firmly rooted in our society that we reset our clocks twice a year to take advantage of the daylight hours rather than change our schedules.

The centering of activity during the daytime is not limited to modern Western society, it is nearly universal; however, variations can be noted. One example is the custom of siestas in Latin-American countries. This may be due to the climate of the region. An afternoon rest period is a good way to avoid the severe heat common to the area. Other less industrialized cultures may extend their cycles of activity into the night in order to gain full use of the daylight hours for subsistence activities. For example, societies that depend heavily on fishing may develop the custom of a late supper so that all available daylight can be utilized at sea.

Although the scheduling of activity in our society is built around the workday, local variations can be observed. Hawley (1950:305) and Stoneall (1983:203) note that the temporal distribution of activities (e.g., meetings, recreational activities) tend to be more rigidly defined and subside at an earlier hour in small communities than in large ones. Those observations are consistent with a model of temporal expansion driven by population pressure. As humans have populated and filled geographic niches, so have we filled and populated temporal niches (Melbin, 1978). As physical space is used up, temporal space is used to reduce the crowding. As a country, we have expanded from coast to coast. What is left is the relatively sparsely populated time from sunset to sunrise. More and more we are becoming an around-the-clock society. Twenty-four-hour convenience stores, 24-hour bank teller machines, and shopping centers open later and later provide evidence of this trend. As population increases, so does nighttime activity. Hawley (1950:305) states, "Every increase in size increases the number of individuals requiring a service at a given time." Population pressure fuels society's expansion into the night. Comparing it to the Western movement of the previous century, Melbin (1978) notes that the night exhibits all the trappings of the new frontier: a more homogenous population with a high percentage of young adult males, more violence, and more helping behavior. Melbin (1978) also points out that there are large numbers of unskilled and menial tasks performed at night while top management maintains daytime hours.

Other Aspects of Temporal Organization

The business activity at the core of a modern community is facilitated by the simultaneous functioning of its interrelated parts. Other non-business activities must then be synchronized outside of the normal workday.

Sleep. "The coordination within a collectivity of the timing of sleep is one of the most important senses in which it is institutionalized. It is because persons must have one another at their disposal in waking life that they sleep simultaneously," states Schwartz (1970). Formal mechanisms to defend our standard sleep period (nighttime) can be readily identified. Many communities have noise ordinances

specifying acceptable decibel levels after a certain hour of the evening. Apartment rental agreements may have provisions restricting the late-night use of TVs, radios, and phonographs (Schwartz, 1970). Cities such as Washington, D.C. and Boston have had major political battles over the rights of airlines to fly into and out of these cities at night (Melbin, 1978).

Complementary business activities. While most commercial activities rely on the simultaneous availabilty of those involved, some business activities are facilitated by "off-phase" scheduling to insure the proper sequencing of events (Moore, 1963:121). Examples of such activities include deliveries of materials needed by daytime businesses and cleaning and maintenance tasks. Of course, entertainment establishments such as theaters, restaurants, and night clubs also thrive during the time period following the workday. Other functions, including public services such as law enforcement, fire protection, and public utilities are required 24 hours a day. As communities grow, the demand for these services grows, and with it, the demand for people to occupy the required roles. As stated by Moore (1963:121), "The very continuity of urban life, the demand for services around the clock and around the calendar, implies that some people must be off schedule with regard to the dominant temporal patterns."

Voluntary memberships and meetings. The final aspect of temporal organization to be addressed here is the scheduling of meeting times of groups. Groups must schedule their meetings at times when their members are able to attend. Typically then, groups have meetings in the evening hours between the normal workday and the usual hours reserved for sleep (Chapin, 1974). Active membership in voluntary affiliations has been shown to be an important source of informal contacts leading to career opportunities (Granovetter, 1974; Boissevain, 1974).

THE EFFECTS OF MAINTAINING NONTRADITIONAL ROUTINES

The preceding section provided documentation of the business-day-centered schedule that is the core of our society's temporal organization. Both activity and inactivity (sleep) are synchronized. Voluntary organizational activities are usually scheduled between the normal workday and the normal hours of sleep. Some activities are carried out during "off-phase" periods and require the individuals involved to maintain nontraditional daily schedules. Previous research suggests that there are negative effects associated with having such a schedule, and it is therefore hypothesized that persons who work at night will report lower life satisfaction than persons with standard work schedules. Schwartz (1970), in reference to odd-shift work, writes:

> It is clear that workers under these conditions experience marked personal and domestic problems which arise out of their differential location in the temporal-spatial ecology governing their social lives.

Three categories of negative effects stemming from out-of-phase routines will be discussed: economic disadvantages, socioemotional support shortages, and physical stress.

Economic Disadvantages

As mentioned by Melbin (1978), lower-level occupations are overrepresented during the nighttime hours. There are also factors affecting nighttime workers that make professional advancement more difficult than for daytime workers.

The upper-level managers of most businesses maintain traditional daytime work schedules. These are the persons responsible for making policy and personnel decisions. This means that persons working at night do not have direct access to the individuals who make the bulk of the hiring, firing, and promotional decisions for their companies, making it more difficult for late-shift employees to move up the company ladder. This, despite the fact that nighttime workers generally have more responsibility on the job since decisions need to be made at lower levels due to the absence of upper management (Melbin, 1978).

Compounding career-advancement difficulties on the job is isolation from career contacts outside the workplace. This isolation comes from the difficulty in maintaining active memberships in voluntary associations. The value of these affiliations in providing information on job opportunities has been documented by such authors as Granovetter (1974) and Boissevain (1974). Authors such as McPherson and Smith-Lovin (1982) have also pointed out that not all organizations are equally valuable as sources of contacts. Professional organizations and large organizations provide the greatest number of these "second-order" contacts: large organizations by virtue of the number of individuals involved, and professional organizations due to their direct connection to business. Another factor affecting the relative value of specific memberships is the interaction of class homogeneity and differential rates of group membership. McPherson (1981, 1983) pointed out the compounding effects on the number of second and higher-order contacts due to the larger number of organizational memberships typically held by persons with high social and economic standing. Persons with high socioeconomic status tend to belong to more organizations than persons of lower status, and therefore tend to develop more career contacts.

Due to their work and sleep schedules, evening and nighttime workers can be isolated from the organizations that would do them the most professional good. Moore (1963:121-122) and Cottrell (1939) have noted the problems off-phase workers have in maintaining memberships. Professional organizations must schedule meetings at times when professionals can attend. Since most upper-level professionals (and most people in general) maintain daytime work schedules, these meetings are often in the evening (Chapin, 1974). The same is true for organizations that wish to maintain large memberships. These groups must also meet at the time most convenient for the majority of their members.

The net effect of isolation from management in the work place and isolation from career contacts through group memberships is career stagnation in low-level occupations.

Limited Access to Socioemotional Support Networks

Maintaining a nontraditional schedule often takes its toll on home life as well. The family and friends of an individual who works at night generally maintain standard daytime schedules. As stated by Moore (1963:121):

> The need for protective and emergency services is never ending: police

officers and firemen, hospitals and their staff physicians, monitors and repairmen for public utility services. For these workers, along with other "night-shift" workers, the problem of temporal coordination creates a kind of dilemma: either they must have a minimal relationship with their families and with other "normally" timed activities, or their families will be off phase with the standard patterns of the community.

Other authors such as Cottrell (1939) and Schwartz (1970) have noted the family stress in households containing family members with vastly different daily routines.

Scheduling problems also occur between nighttime workers and friends. It is difficult for persons with different routines to sustain close friendships. Often friendships with fellow night-shift workers are the only friendships that can be maintained. Naturally, participation in recreational clubs or religious groups can also be limited by scheduling handicaps (Moore, 1963:122). The stress and temporal separation from family and friends results in reduced access to social and emotional support for workers with nontraditional schedules. Additionally, socioemotional support is lost through reduced access to other organizations (e.g., recreational or religious) that also provide support of this type.

Physical Stress

In an attempt to minimize the isolating effects of having nonstandard schedules, many night-shift workers switch to daytime schedules on their days off. As stated by Melbin (1978):

> Each time they switch their active hours they undergo phase shifts in body rhythms such as heartbeat, temperature, and hormonal production. The several days' malaise that results was known to such workers long before air travel across time zones popularized the phrase "jet fatigue."

Even nighttime workers who do not change their schedules on free days often do not escape physical stress associated with their routines. Getting a good "night's" sleep is frequently an uphill battle. The difficulty of getting sleep while the rest of the family and community are active has been noted by numerous authors (e.g., Cottrell, 1939; Schwartz, 1970; Zerubavel, 1979).

Schwartz (1970) concludes that the sleep role receives less deference during the daytime than at night. He points out that a complaint about sleep interruptions during the day is not likely to be backed up by community officials when almost the entire community is active. Another reference to the low respect given to daytime sleep is made by Zerubavel (1979). Focusing on the health industry, he reports a complaint from a night-nurse about someone calling her at 10:30 in the morning, in "the middle of the day!"

Attempts to get needed sleep can also increase emotional stress for the night-shift worker and his or her family. Schwartz (1970) quotes Mott (1965:12):

> The demand for daytime sleep can generate friction in the family. Very often the husband's sleep, the children's play, and the wife's housework must be carried out at the same time. If the worker cannot adapt to the noise level

> created by these activities, he may become irritable with both wife and children, or they with him, and family relations may become strained.

HYPOTHESES

Due to the economic, professional, socioemotional, and physical disadvantages associated with maintaining nontraditional hours, it is hypothesized that, relative to persons who maintain normal daytime schedules, persons who work evenings and nights will have lower incomes; spend less time with family, friends, and in voluntary group activities; and report less satisfaction with their physical well-being. These factors should be reflected in lower reported satisfaction with job, family, and life as a whole.

DATA AND METHODS

Description of Data Analyzed

Data for this research were taken from a sample collected in 1975 and 1976 for the "Time Use in Economic and Social Accounts" study conducted by F. Thomas Juster, Paul Courant, Greg Duncan, John P. Robinson, and Frank Stafford at the University of Michigan Survey Research Center, Institute for Social Research. The original study was an attempt to fully develop a system of economic and social accounts. Emphasis was placed on obtaining accurate estimates of the yearly productive uses of time on a household basis. Respondents for the time-use study were selected from persons first interviewed as part of the Fall Omnibus study conducted by the Institute for Social Research. Respondents from the Omnibus study were selected to form a representative sample of American adults living in the conterminous United States. Spouses were also interviewed for the time-use study. Data collection was supported by the National Science Foundation (grant numbers SOC74-20206, SOC74-20206AO3, and RDA75-21077) and by the U.S. Department of Health, Education, and Welfare (grant number RDA75-21077).

In order to obtain accurate records of time use, a diary methodology was utilized. Respondents were asked to report the details of "yesterday's" activities. Support for this methodolgy is provided by Robinson (1985), who concludes that the method is both accurate and reliable. Time-allocation patterns for an entire year were desired, so households were sampled at various times throughout the year. Since time-use patterns vary greatly from weekdays to weekends, samples included measurements for both periods. Households were sampled four times during the year. Interviews were equally spaced during the year and were collected for two weekdays, a Saturday, and a Sunday. The first interviews were conducted in October and November 1975. Subsequent interviews were conducted in February 1976, May 1976, and September 1976. In addition to the time-diary information, data were collected on the employment status of both the respondent and spouse along with information on unemployment periods; earnings and income; personal resources (health, friendships, associations, and organizations) of the respondent; household technology; house repair and maintenance activities; division of labor in the household and related attitudes; physical characteristics of the housing structure; net worth and housing values; job characteristics of respondent and spouse; and typical daily use of mass meida.

The sample was designed to be representative of all households in the conterminous United States excluding those on military reservations. The 74 sample points selected were located in 37 states and the District of Columbia. Included in the sample were the consolidated areas of New York-Northeastern New Jersey and Chicago-Northwestern Indiana, the ten largest Standard Metropolitan Statistical Areas (SMSAs) not included in the two Standard Consolidated Areas, 32 additional SMSAs, and 30 counties or county groups representing nonmetropolitan and less urbanized areas of the country.

Multistage area probability sampling was used. The first-stage stratification of SMSAs and counties was carried out independently for each of four regions of the country (Northeast, North Central, South, and West). Sample sizes in each region were proportional to the region's population. The SMSAs and counties were assigned to 74 relatively homogeneous groups across all four regions. Of these groups or strata, 12 contained only one primary area. These 12 strata consisted of the two consolidated areas and the ten largest SMSAs, which were chosen with certainty. The remaining 62 strata contained from two to 200 primary areas each, with average population of the strata at slightly over two million. Within each stratum, a primary area was selected with probability proportionate to population. The sampling process led to approximately equal sample sizes in the 62 sample areas. Controlled probability sampling was used within each of the 62 strata so that the sample areas were more balanced by states and degree of urbanization. Multistage sampling was continued within the 74 primary areas. Each of the four geographic regions was divided into successively smaller areas. Each housing unit belongs to a unique sampling unit at each stage. Cities, towns, and rural areas were the secondary units within the primary sampling units. Blocks or clusters of addresses in cities and towns, and chunks of rural areas were the third-stage units. The fourth-stage units consisted of five to ten or more (depending on the size of the primary unit) smaller segments of about four housing units where interviews were attempted. Overall, the sampling rate for housing units was 0.315/10,000. One respondent 18 years of age or older was selected from the eligible household members. Probability selection was used at all stages of sampling. The interviewers did not have choice among housing units or among household members in a sample dwelling. The sample was designed to yield approximately 1,500 respondents.

In addition to the data collected from the four sample waves, synthetic weeks were constructed for respondents with sufficiently complete time diaries. The synthetic weeks consist of estimates of time (in minutes) spent in each of a number of major activities over the course of a week. Only respondents with time diaries for one or two weekdays and a Saturday and a Sunday are represented. Data from the first wave were obtained through personal interviews in the field. The data from the three remaining waves were collected via telephone interviews from Survey Research Center in Ann Arbor, Michigan. The actual sample contains data for 1,519 respondents and 887 spouses of respondents. Data-file arrangement allows spouses to be used as additional respondents.

Data and Methods Utilized in the Current Research

Data from the first and second waves of the time-use study were utilized. Spouses were not used as supplemental respondents, resulting in an initial sample

size of 1,519. Only individuals with data collected from a weekday, who reported working 30 or more hours per week, and who provided information on the time they started work were included. This reduced the sample to 469 respondents from the first wave of data collection. Second-wave data was collected primarily for weekend days. Respondents who reported having the same job that they had at the time of their first-wave interview were included in this research. This resulted in a sample size of 333 for the second-wave data.

Respondents were then categorized according to the time of day they reported working. Using the time-diary data from the first wave, the starting time for work at the primary job was determined. Persons who began work at or after 3:00 p.m. and no later than 3:00 a.m. were considered to have nontraditional daily routines. Persons who began work after 3:00 a.m. and before 3:00 p.m. were classified as having traditional routines. Respondents' time schedule classifications were then retained for the second-wave data analyses.

Basic demographic profiles were constructed (age, sex, marital status, and income) from first-wave data for each work-schedule group, and the two groups were tested for differences using a t-test for differences in group means. Following the comparison of demographic characteristics, the two time-schedule groups were also compared on measures of perceived health and involvement in religious and other organizations (from the second wave).

The health item read: "Compared to other people your age, would you say that your health is excellent, good, fair, or poor?" For the analysis, health was coded "1" if poor, "2" if fair, "3" if good, and "4" if excellent.

Religious involvement was measured by: "How active and involved would you say you were compared to other members of the congregation? Would you say you are more active, or less active, or what?" To compare the two work-schedule groups, this item was coded "1" if less, "2" if same, and "3" if more.

Organizational participation was measured by the yes/no question: "Outside of your work are there any groups or organizations in which you are quite active, that is, where you spend a lot of time?" This item was coded "1" if yes and "0" if no for group comparisons.

A comparison of reported life satisfaction (from the first wave) was then conducted for the two groups. The five measures of satisfaction contained items on life as a whole, income, standard of living and household possessions, achievement and success, and job. Again, means for the two work schedule groups were compared.

The specific questions used to measure satisfaction are as follows:

1. How do you feel about your life as a whole?
2. How do you feel about the income you and your family have?
3. How do you feel about your standard of living --the things you have like housing, car, furniture, recreation and the like?
4. How do you feel about the extent to which you are achieving success and getting ahead?
5. How do you feel about your job?

The possible response categories were: terrible, unhappy, mostly dissatisfied, mixed, mostly satisfied, pleased, delighted, and no feelings at all/never thought about it. The responses were assigned a number from one to eight, respectively. The "no feelings at all/never thought about it" category (numbered eight) was

omitted when comparing means for the two work-schedule groups.

The final analyses were regressions of the life-satisfaction measures on work schedule (coded "1" if nontraditional, "0" if traditional), controlling for yearly income, and then controlling for both income and perceived health. The correlation matrix of the variables in the analyses is presented in the appendix.

The fourth wave of the time-use survey contained questions about social time with family and friends, but due to attrition across data waves and nonresponse to the specific items, the number of respondents for which this information was available was very low. Therefore, these items were dropped from the analysis and only data from the first two waves were used.

The statistical computer package SPSSX (SPSS Inc., 1986) was utilized for all statistical analyses.

RESULTS

The selection criteria applied to the first wave of data yielded a sample of 469 individuals who reported working 30 hours or more per week and had time-diary data from a weekday reported for this wave. Of this sample, 85 were considered to have nontraditional (evening or night) work schedules and the remaining 384 were classified as traditional daytime workers. The second-wave sample contained 333 respondents, 55 of which were classified as nighttime workers and 278 as daytime workers.

Nearly two-thirds of the sample were male. Just over two-thirds were married. The median age of those included in the analyses was 36 (in 1975). Almost 80% of the respondents were high-school graduates. Table 1 contains summary demographic information on the sample analyzed. Tables 2 and 3 report similar data for the two groups of workers, traditional-hour workers and nontraditional-hour workers, respectively. Examination of Tables 2 and 3 reveals only slight differences in the makeup of the two groups. Missing data are not reported in the tables, therefore the total number of respondents listed varies from one measure to the next.

The distribution of responses to the perceived relative health item is presented in Table 4. Participation in religious and other organizations is reported in Table 5. As was the case with the basic demographic measures, no substantial differences between the two work-schedule groups are apparent.

The central hypothesis in this research is that persons working nights will report lower life satisfaction than daytime workers. The responses to the life-satisfaction items are reported in Tables 4 through 8. In general, respondents in both worker groups report being mostly satisfied. For the two groups combined, mean scores on the satisfaction items ranged from 5.48 for "life as a whole" (Table 6), down to 4.71 for "income" (Table 7). Scores were calculated by assigning values of "1" to the responses in the "terrible" category up to values of "7" for the "delighted" category. Means for the other satisfaction items for the combined sample were 5.21 for the "standard of living" item (Table 8), 4.87 for the "achieving success" item (Table 9), and 5.23 for the "job" item (Table 10).

Comparisons of the means of the two worker groups on the life-satisfaction items, some of the demographic variables, perceived health, reported sleeping time, and organizational and religious participation are presented in Table 11.

TABLE 1. Basic respondent characteristics

CHARACTERISTIC	NUMBER	PERCENT
Number of respondents in the sample: 469		
Sex		
Male	299	63.8%
Female	170	36.2%
Age		
18-24	66	14.1%
25-29	78	16.7%
30-34	77	16.5%
35-39	51	10.9%
40-44	53	11.3%
45-49	36	7.7%
50-54	43	9.2%
55-59	32	6.9%
60-64	24	5.1%
65 and over	7	1.5%
Marital status		
Married	321	68.4%
Separated	12	3.6%
Divorced	49	10.4%
Widowed	17	3.6%
Never married	70	14.9%
Years of education		
0-8	41	8.8%
9-11	58	12.4%
12	180	38.5%
13-15	77	16.5%
16	56	12.0%
17 or more	56	12.0%
Yearly income		
Less than $5,000	51	13.5%
$5,000-$9,999	126	34.2%
$10,000-$14,999	90	23.9%
$15,000-$19,999	64	17.0%
$20,000-$29,999	28	7.4%
$30,000 or more	18	4.8%

TABLE 2. Basic characteristics of traditional-time workers

CHARACTERISTIC	NUMBER	PERCENT
Number of respondents in the sample: 384		
Sex		
Male	240	62.5%
Female	144	37.5%
Age		
18-24	49	12.8%
25-29	65	17.0%
30-34	66	17.3%
35-39	43	11.3%
40-44	41	10.7%
45-49	27	7.1%
50-54	34	8.9%
55-59	28	7.3%
60-64	23	6.0%
65 and over	6	1.6%
Marital status		
Married	268	69.8%
Separated	9	2.3%
Divorced	39	10.2%
Widowed	15	2.9%
Never married	53	13.8%
Years of education		
0-8	33	8.6%
9-11	48	12.5%
12	149	38.9%
13-15	56	14.6%
16	53	13.8%
17 or more	44	11.5%
Yearly income		
Less than $5,000	39	12.6%
$5,000-$9,999	106	34.3%
$10,000-$14,999	78	25.2%
$15,000-$19,999	49	15.9%
$20,000-$29,999	24	7.8%
$30,000 or more	13	4.2%

TABLE 3. Basic characteristics of nontraditional workers

CHARACTERISTIC	NUMBER	PERCENT
Number of respondents in the sample: 85		
Sex		
Male	59	69.4%
Female	26	30.6%
Age		
18-24	17	20.0%
25-29	13	15.3%
30-34	11	12.9%
35-39	8	9.4%
40-44	12	14.1%
45-49	9	10.6%
50-54	9	10.6%
55-59	4	4.7%
60-64	1	1.2%
65 and over	1	1.2%
Marital status		
Married	53	62.4%
Separated	3	3.5%
Divorced	10	11.8%
Widowed	2	2.4%
Never married	17	20.0%
Years of education		
0-8	8	9.4%
9-11	10	11.8%
12	31	36.5%
13-15	21	24.7%
16	3	3.5%
17 or more	12	14.1%
Yearly income		
Less than $5,000	12	17.6%
$5,000-$9,999	20	29.4%
$10,000-$14,999	12	17.6%
$15,000-$19,999	15	22.1%
$20,000-$29,999	4	5.9%
$30,000 or more	5	7.4%

TABLE 4. Perceived health compared with others of same age

WORKER SCHEDULE:	TRADITIONAL		NONTRADITIONAL	
RESPONSE	NUMBER	PERCENT	NUMBER	PERCENT
Poor	1	0.4%	1	1.9%
Fair	22	7.9%	6	11.1%
Good	125	45.0%	22	40.7%
Excellent	130	46.8%	25	46.3%
(Total)	278		54	

TABLE 5. Participation in religious and other organizations

WORKER SCHEDULE:	TRADITIONAL		NONTRADITIONAL	
RESPONSE	NUMBER	PERCENT	NUMBER	PERCENT
Religious participation compared with others in congregatio				
Less	108	57.1%	20	52.6%
Same	39	20.6%	8	21.1%
More	42	22.2%	10	26.3%
Quite active in group or organization outside of work				
Yes	76	27.4%	12	21.8%
No	201	72.6%	43	78.2%

TABLE 6. Satisfaction with life as a whole

WORKER SCHEDULE:	TRADITIONAL		NONTRADITIONAL	
RESPONSE	NUMBER	PERCENT	NUMBER	PERCENT
Terrible	0	0.0%	0	0.0%
Unhappy	5	1.3%	0	0.0%
Mostly dissatisfied	8	2.1%	3	3.5%
Mixed	38	9.9%	13	15.9%
Mostly satisfied	129	33.8%	26	31.7%
Pleased	145	38.0%	27	32.9%
Delighted	57	14.9%	13	15.9%
(Total)	382		82	

TABLE 7. Satisfaction with income

WORKER SCHEDULE:	TRADITIONAL		NONTRADITIONAL	
RESPONSE	NUMBER	PERCENT	NUMBER	PERCENT
Terrible	8	2.1%	1	1.2%
Unhappy	21	5.5%	3	3.6%
Mostly dissatisfied	34	8.9%	8	9.5%
Mixed	62	16.1%	23	27.4%
Mostly satisfied	150	39.1%	29	34.5%
Pleased	98	25.5%	17	20.2%
Delighted	11	2.9%	3	3.6%
(Total)	384		84	

TABLE 8. Satisfaction with standard of living

WORKER SCHEDULE:	TRADITIONAL		NONTRADITIONAL	
RESPONSE	NUMBER	PERCENT	NUMBER	PERCENT
Terrible	1	0.3%	1	1.2%
Unhappy	4	1.0%	3	3.6%
Mostly dissatisfied	17	4.4%	5	6.0%
Mixed	56	14.6%	16	19.0%
Mostly satisfied	140	36.5%	25	29.8%
Pleased	132	34.4%	24	28.6%
Delighted	34	8.9%	10	11.9%
(Total)	638		143	

TABLE 9. Satisfaction with success

WORKER SCHEDULE:	TRADITIONAL		NONTRADITIONAL	
RESPONSE	NUMBER	PERCENT	NUMBER	PERCENT
Terrible	10	2.7%	1	1.2%
Unhappy	19	5.1%	4	4.8%
Mostly dissatisfied	23	6.2%	6	7.2%
Mixed	62	16.8%	18	21.7%
Mostly satisfied	123	33.2%	30	36.1%
Pleased	104	28.1%	18	21.7%
Delighted	29	7.8%	6	7.2%
(Total)	370		83	

TABLE 10. Satisfaction with job

WORKER SCHEDULE:	TRADITIONAL		NONTRADITIONAL	
RESPONSE	NUMBER	PERCENT	NUMBER	PERCENT
Terrible	1	0.3%	0	0.0%
Unhappy	16	4.2%	4	4.8%
Mostly dissatisfied	13	3.4%	8	9.6%
Mixed	51	13.3%	12	14.5%
Mostly satisfied	101	26.3%	23	27.7%
Pleased	144	37.5%	27	32.5%
Delighted	52	13.5%	9	10.8%
(Total)	382		83	

TABLE 11. Comparison of traditional and nontraditional workers

WORKER SCHEDULE:	TRADITIONAL	NONTRADITIONAL	
MEASURE	MEAN	MEAN	DIFFERENCE*
Age (years)	38.6	36.4	2.2
Education (years)	12.5	12.1	0.4
Income (yearly)	$12,359	$13,436	$-1,077
Daily sleep(hours)	7.4	7.1	0.3
Perceived health	3.38	3.31	0.07
Organizational activity	0.27	0.22	0.05
Religious participation	1.65	1.74	-0.09
Satisfaction-whole life	5.50	5.41	0.09
Satisfaction-income	4.73	4.65	0.08
Satisfaction-living std.	5.24	5.06	0.18
Satisfaction-success	4.88	4.81	0.07
Satisfaction-job	5.23	5.06	0.17

*None significant at the .05 level.

TABLE 12. Regression of life satisfaction on income and schedule

REGRESSION COEFFICIENTS			COEFFICIENT OF MULTIPLE
CONSTANT	INCOME	SCHEDULE	DETERMINATION
Satisfaction with life as a whole			
5.34**	.0000132**	-.180	.0222
Satisfaction with income			
4.41**	.0000308**	-.115	.0749
Satisfaction with standard of living			
5.06**	.0000178**	-.182	.0382
Satisfaction with success			
4.63**	.0000247**	-.195	.0420
Satisfaction with job			
4.99**	.0000244**	-.248	.0431

*Significant at the .05 level.
**Significant at the .01 level.

TABLE 13. Regression of life satisfaction on income, health, and schedule

REGRESSION COEFFICIENTS				COEFFICIENT OF MULTIPLE
CONSTANT	INCOME	HEALTH	SCHEDULE	DETERMINATION
Satisfaction with life as a whole				
4.49**	.0000085*	.287**	-.021	.0574
Satisfaction with income				
4.69**	.0000248**	-.027	-.223	.0765
Satisfaction with standard of living				
4.80**	.0000121*	.117	-.108	.0318
Satisfaction with success				
4.76**	.0000198**	.007	-.305	.0467
Satisfaction with job				
5.26**	.0000192**	-.034	-.026	.0354

*Significant at the .05 level.
**Significant at the .01 level.

There were no significant differences observed between the two groups for any of the items.

Results of the regressions of the life-satisfaction measures on work schedule, controlling for income, are summarized in Table 12. Income was found to have positive significant effects on each life-satisfaction measure. Consistent with the tests for differences between means, work schedule was found to have no significant effect (at either the .05 or .10 levels) on any of the satisfaction measures. The work-schedule regression coefficients were in the hypothesized direction, with small negative effects associated with working nontraditional hours.

Adding the health measure to the regression analyses did not result in any change in the significance of the nontraditional-hours effects. As in the regressions that included controls for income only, the work-schedule effects were small, but in the expected direction. The measure of health was found to be significant in only the regression of "satisfaction with life as a whole." Income was again found to be significantly positively related to all five life-satisfaction measures.

CONCLUSIONS

The most surprising result of the analyses conducted was the overall similarity of the two work-schedule groups. Differences between them (other than daily routine) were small or nonexistent. No significant differences were found in either the descriptive or the life-satisfaction measures. Overall, it must be concluded that this research provides little or no support for the hypothesis that working evenings and nights leads to dissatisfaction. The best that can be said for the results is that in all cases the nonsignificant results were in the expected direction (the life-satisfaction scores observed were lower for nontraditional workers).

Beyond failing to exhibit the expected unhappiness with life as a whole, the nighttime workers examined in this study showed very few of the problems that were expected to cause their unhappiness. While this may explain the failure of the life-satisfaction hypotheses put forth, it leaves open the question of why these causes were not present. Nighttime workers did not seem to lose sleep, miss out on organizational activities, or feel unhappy about their degree of success, their jobs, or their incomes.

It may be that utilizing different selection criteria for categorizing individuals into daytime or nighttime classes would yield different results. Perhaps evening workers should be excluded in favor of a group that works late-night to dawn. While the late-night workers should, in theory, exhibit the hypothesized problems to a greater degree than evening workers, it seems unlikely that the data set used in this analysis would yield much support for the hypotheses under any circumstances. A larger number of nighttime workers in the sample might have resulted in more supportive findings, but most of the differences between the traditional- and nontraditional-schedule groups were so small that even if statistical significance were achieved, little substantive information would be gained.

Whatever the causes, the issue of the well-being and happiness of nighttime workers is not as clear-cut as was expected. It is possible that the questions on satisfaction used in the time-use survey were not sensitive measures of the intended concepts. This does not, however, explain the similarities between nighttime workers and daytime workers on nearly every other characteristic as

well. Other factors that might be worth consideration are length of time that a worker has had night hours or whether rotating shifts are more stressful than prolonged employment in a night position. Perhaps negative effects from night work become more or less apparent as a worker adjusts to the hours. Whatever the causes, it is apparent that further research needs to be conducted in this area.

FOOTNOTE

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APPENDIX: CORRELATION MATRIX OF VARIABLES ANALYZED

	AGE	EDUC	INCOME	HEALTH	ORGACT	RELACT	LIFSAT1	LIFSAT2	LIFSAT3	LIFSAT4
EDUC	-.1538**									
INCOME	.1149	.3538**								
HEALTH	-.0581	.2511**	.1755**							
ORGACT	.1368**	.1033	.1039	.1341**						
RELACT	.0661	.0560	-.0100	.0428	-.0134					
LIFSAT1	-.0556	.1146	.1413**	.2087**	.0187	.1878**				
LIFSAT2	.0642	.0852	.2733**	-.0085	.0336	.1088	.2400**			
LIFSAT3	.0634	-.0062	.1639**	.0923	.0741	.1905**	.3573**	.4536**		
LIFSAT4	-.0077	.0854	.2036**	.0366	.0393	.0800	.3325**	.4915**	.4295**	
LIFSAT5	.0717	.0708	.1926**	.0094	.0486	.0672	.2098**	.3464**	.2840**	.4542**

**Significant at the .01 level.
AGE: Age in years.
EDUC: Years of education.
INCOME: Income from wages in 1975.
HEALTH: Perceived health compared to others of same age.
ORGACT: Active participation in organizations or groups outside of work.
RELACT: Religious activity compared to others in congregation.
LIFSAT1: Satisfaction with life as a whole.
LIFSAT2: Satisfaction with income.
LIFSAT3: Satisfaction with standard of living.
LIFSAT4: Satisfaction with success and achievement.
LIFSAT5: Satisfaction with job.

OBSTACLES TO COLLECTIVIZATION AMONG INDIGENOUS COMMUNITIES: TWO VENEZUELAN CASES

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State-sponsored programs of collectivization continue to generate a great deal of theory and policy debates. When Indian communities are involved in such national programs, the debate acquires newer and even more complex dimensions which have not yet been adequately addressed. In this paper, I examine a program of collective Empresas Indigenas *organized in Venezuela in the early 1970s, with particular focus on two of those* empresas. *I argue that pre-existing forms of economic and social organization (whether traditional or inherited) are not necessarily contradictory with more compex forms of cooperation in production. In fact, these pre-existing arrangements often represent an important foundation for the transition to higher forms of collectivization. However this is not an automatic process and much depends on the particular approach that is used to effect the transition, as well as on contingent, external forces which impinge upon the development of these cooperatives.*

INTRODUCTION

For those of us who value principles of collective organization and participatory democracy in economic production, the news concerning the success rates of production cooperatives and collectivization programs around the world is mostly bad. Galleski (1973), Fagen, Deere, and Coraggio (1986), and others tell us that peasants historically have resisted collectivization. For Latin America, Stavenhagen (1975), de Janvry (1981), Fals Borda (1977), and Zamosc (1986) present us with pictures of collapses and parcelization of cooperatives, and eventually total disillusionment with collectivization programs. Yet, neither governments, independent organizers, nor social scientists appear ready to abandon the ideal of production cooperatives as a means to address both the agrarian and peasant questions.[1] This is partly due to the fact that, despite general concensus on the forces which shape the succeses and failures of cooperatives, many questions remain about obstacles to democratic forms of production within a capitalist environment, and about how the different compositions of peasant groups affect their socio-economic situation.

Both policy makers (concerned with intractable rural poverty and recurring food crises) and progressive intellectuals lured by components of equality and self-determination continue to consider collectivization as a viable option for individual communities and entire societies in Latin America. However, the disturbing co-existence of big failures with small successes, and of unquestionable