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ABSTRACT

The ccncept of lifelong learning is generally defined as the exparsion of formal and informal education from the relatively exclusive life stage of youth and early adulthood. This presentation has two stated purposes: (1) to demonstrate that the success of current proposals for lifelong learning will be highly dependent on their integration with the institutions and human activities concerned with work and leisure; and (2) to outline and demonstrate a belief that progress is combating a wide range of interrelated social problems such as unemployment, over and under education, worker alienation, pcverty, racism, sexism, forced retirement and institutional obsolescence will require integrated policies and programs and that the redistribution of education, work, and leisure throughout entire lifetimes may represent an effective means of addressing many of these social ills. The paper deals with four basic areas: (1) a general framework for social analysis based on overall lifetime patterns; (2) a review of problems in the realm of work and their relation to current lifetime patterns; (3) some speculations concerning the future redistribution of education, work, and leisure throughout entire life spans; and (4) a discussion of some of the research and policy implications of the analysis. (Author/JMF)

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LIFETIME DISTRIBUTION OF EDUCATION, WORK AND LEISURE: RESEARCH, SPECULATIONS AND POLICY IMPLICATIONS OF CHANGING LIFE PATTERNS

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December, 1976

This article was developed from a presentation made by Fred Best and Barry Stern to the November 8, 1976 Monthly Dialogue on Lifelong Learning, sponsored by the Postsecondary Education Convening Authority. The Dialogue is a monthly forum open to anyone interested in lifelong learning and public policy. For more information and a schedule of upcoming events, call PECA at (202)833-2745.

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LIFETIME DISTRIBUTION OF

EDUCATION, WORK AND LEISURE:

Research, Speculations and Policy Implications of Changing Life Patterns

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Most persons pursue over their entire life spans a linear progression from school to work to retirement. Over the last few decades, this "linear life plan" has become increasingly pronounced, as work becomes compressed into fewer and fewer years of mid-life and non-work time increases in the form of additional years for education and retirement. Our analysis indicates that the continued predominance of this life pattern will intensify numerous social problems and suboptimize the value of human potentials. This article evaluates this proposition, reviews the problems associated with current lifetime patterns, speculates about the form of future lifetime patterns, and discusses some of the research and policy implications of our interpretations.

This paper is an edited transcript of a presentation sponsored by the Institute for Educational Leadership[1] dealing with overall lifetime scheduling of education, work and leisure. Our presentation had two purposes. First, it was our intention to demonstrate

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1. We thank Kenneth Fischer, Marilyn Kressel and others at the Institute for Educational Leadership for sponsoring our presentation and arranging for its transcription and distribution.

that the success of current proposals for "lifelong learning"[2] will be highly dependent upon their integration with the institutions and human activities concerned with work and leisure. Second, it was our intention to outline and demonstrate our particular belief that progress in combating a wide range of interrelated social problems such as unemployment, over-education, under-education, worker alienation, poverty, racism, sexism, forced retirement and institutional obsolescence will require integrated policies and programs; and that the redistribution of education, work and leisure throughout entire lifetimes may represent an effective means of addressing many of these social ills simultaneously.

This paper will deal with four basic areas. First, we shall outline a general framework for social analysis based on overall lifetime patterns. Second, we shall review a number of problems, principally in the realm of work, and their relation to current lifetime patterns. Third, we shall make a few speculations concerning the future redistribution of education, work and leisure throughout entire life spans. Fourth, we shall explore some of the research and policy implications of our analysis.

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2. The concept of "lifelong learning" is generally defined as the expansion of formal and informal education from the relatively exclusive life stage of youth and early adulthood. Such a restructuring of education would allow young persons to leave school and return at later dates, and older persons to resume unfinished schooling or pursue retraining or self-enriching educational programs. For discussion see Mondale, Walter, "The Next Step: Lifelong Learning," Change, October 1976, pages 42-45; and Kurland, Norman, A National Strategy for LIfelong Learning, Transcript of a presentaion by the Institute for Educational Leadership, Washington, D.C. October 18, 1976.

LIFETIME PATTERNS: A FRAMEWORK FOR ANALYSIS

For most persons in our society, the activities of education, work and leisure are distributed in what we call a "linear life plan." Stated simply, this is the tendency to go to school in youth, work during mid-years, and then progress to retirement in old age.[3] This particular pattern of lifetime scheduling can be said to be the product of the natural dynamics of the human life cycle and the opportunities and constraints that have emerged within industrial societies. In terms of the life cycle, it is natural that over one's life span a person must cope with inexperience and developing physical capacities by learning basic skills and knowledge during youth; assume a productive work role during the peak strength of mid-life when responsibilities are greatest; and finally withdraw from work demands as physical and mental vigor declines in old age.[4] The impact of industrial society upon lifetime

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3. This basic pattern of life is not followed by everyone, nor is it duplicated perfectly by those who follow it. However, a review of relevant data indicates that this "linear life plan" represents the basic way in which most persons distribute work, education and leisure through their lives. For more discussion see Best, Fred, "The Linear Life Plan and Its Alternatives An Analysis of Current Lifetime Patterns," Office of the U.S. Assistant Secretary for Education, Washington, D.C. (Contract No. POO-75-0221), January 1976, pages 54-93.

4. It should be noted that the family and child rearing cycle is also an important force fostering the "linear life plan." (Ibid, pages 6-7).

patterns is more complex.[5] However, it can be generally stated that the prevailing "linear life plan" has emerged as a result of the expansion of non-work time as a proportion of total lifetime, and competition for work between age groups.

Over the last century, the tremendous growth of economic productivity and human discretion brought about by industrialization[6] has allowed tremendous increases in non-work time as a proportion of total lifetime. Some rough estimates computed by the New York Metropolitan Insturance Company of the years of total lifetimes spent on major life activities during different stages of societal development serve to dramatize this growth of non-work time (See Chart I). These estimates show that about 33 percent of the primitive era person's total lifetime was spent on work, 28.6 percent

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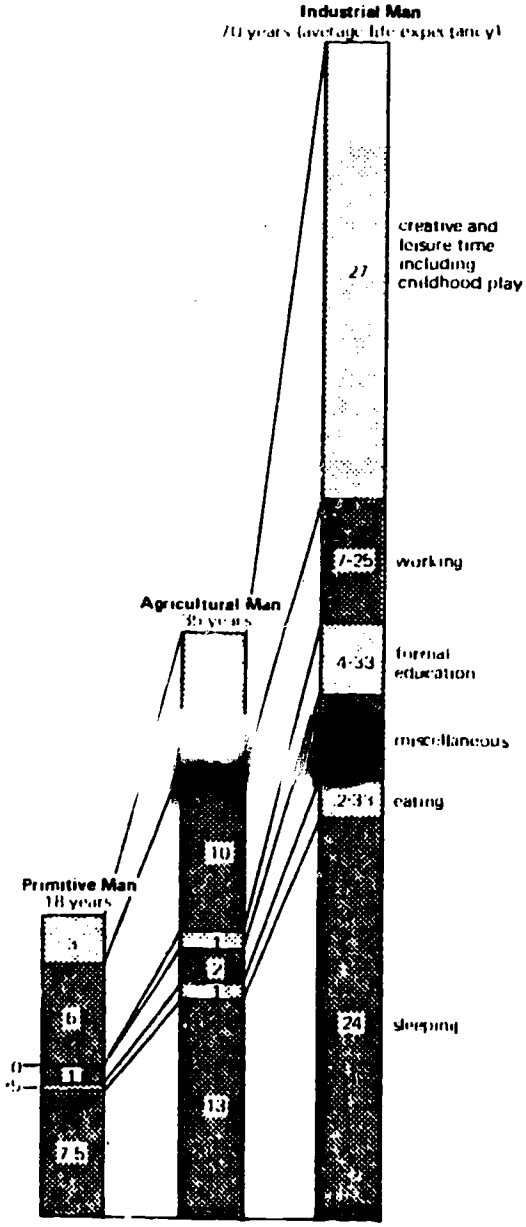
5. For a more detailed discussion of these forces see Ibid, pages 5-53.

6. The growth of human discretion can be conservatively illustrated by changing consumer expenditures. U.S. consumer expenditure studies have commonly defined all expenditures other than basic necessities (food, clothing, housing and utilities) as "sundries". While the category of "sundry expenditures" does include some basic necessities (particularly medical and transportation expenses), it primarily represents secondary expenditures for items such as recreation, reading, cosmetics, tobacco and the like. The proportion of the average U.S. consumer's budget given to "sundries" has increased from 22.7 percent in 1888-91 to 46.9 percent in 1960-61, and National Account data suggest further increases since 1960-61 (Department of Labor, How American Buying Habits Change, U.S. Government Printing Office, Washington, D.C., 1959; and Consumer Expenditures and Income: Total United States, 1960-61, BLS Report. February 1966).

CHART I

Number of Years Spent on Life Activities



SOURCE: New York Metropolitan Life Insurance Company. Cited from McHale, John, "World Facts and Trends," Futures, September 1971, page 260.

of an agricultural era persons lifetime, and aobut 13.5 percent of an industrial era person's life.[7]

What form has this increase of non-work time taken? A large measure of this non-work time has come in the form of the reduced workweek. Specifically, the average U.S. workweek has declined from approximately 60 hours to 39 hours over the last century.[8] However, during the last three decades the workweek has remained remarkably stable[9] and much increased non-work time has come in the form of longer vacations and more holidays.[10] But non-work time has also increased in other ways. Most notably, it has increasingly taken the form of more years for education in youth and retirement in old age. In overview, the growth of non-work time over the last century first took the form of reduced workweeks and increased vacations for those in the mid-years of life, then began to expand in the form of schooling and retirement for persons in the early and later years of life.

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7. McHale, John, "World Facts and Trends," Futures, September 1971, page 260.

8. Significant portions of this reduction came from the decline of agricultural work. See Hedges, Janice and Moore, Geoffery, "Trends in Labor and Leisure," Monthly Labor Review, February 1971.

9. For an informative discussion of workweek stability, see Owen, John D., "Workweeks and Leisure: An Analysis of Trends, 1948-1975," Monthly Labor Review, August 1976.

10. Hedges, Janice and Moore, Geoffrey, op. cit.

Before elaborating on the extent to which non-work time has grown during youth and old age, it is important to briefly explore why this pattern has developed. As already noted, the increase of non-work time during the earlier and later stages of life corresponds well with the basic requirements of the human life cycle. In this sense, it has been a natural outgrowth of the increased human discretion fostered by industrialization. At the same time, the increase in non-work time during youth and old age has also been fostered by industrial forces causing job shortages [11] and growing competition for available work between age groups.[12] Put differently, those in mid-life, who are at the peak of their skilll competency and political influence have responded to a shortage of jobs by pushing young persons back into school and older persons into ever earlier retirement.[13] In this way, both the options and constraints of advanced industrialization

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11. Major forces within U.S. industrial society causing a shortage of jobs include business cycles, increased productivity due to technological changes, and structural changes in the labor market due to technological changes and shifting consumer priorities. For discussion of these and other related forces, see Best, Fred, op. cit.; and National Commission on Technology, Automation and Economic Progress, Technology and the American Economy, Volume 1, U.S. Government Printing Office, Washington, D.C., February, 1966.

12. As we shall point out later, this competition has also occurred between racial, sexual and socio-economic groups.

13. While we have not yet found rigorous scientific proof of the life pattern effects of interage competition for jobs, the circumstantial evidence is overwhelming. This point will be discussed in the next section and has been explored systematically in Best, Fred, "The Linear Life Plan and Its Alternatuves: An Analysis of Current Lifetime Patterns," Office of the U.S. Assistant Secretary for Education, Washington, D.C. (Contract Number POO-75-0221), Washington, D.C., pages 5-53.

have led to an increasing compression of work into the middle of life and the pronounced development of the "linear life plan."

Just how extensive has the "linear life plan" become? A synthesis of a number of social statistics can give us some idea of the growth and distribution of work and non-work time throughout life (See Chart II). Figures computed to show the average "lifetime" spent primarily on work and non-work[14] for U.S. males[15] for the years 1900, 1940, 1960 and 1970 reveal some interesting trends. First, the percentage of the average U.S. male's "lifetime" spent primarily working or looking for work has decreased from 66.6 percent in 1900 to 59.7 percent in 1970. Second, computations based on average life longevity, years of school and average age of retirement indicate that the time spent primarily in work activities has been increasingly compressed into mid-life, and non-work time has increased substantially in the earlier and later years of life. While the meaning of these proportions between 1900 and 1940 is distorted by a dramatic increase in life longevity, the relatively constant longevity between 1940 and 1970 reveals both a continuation and acceleration of this compression of work into the middle years.

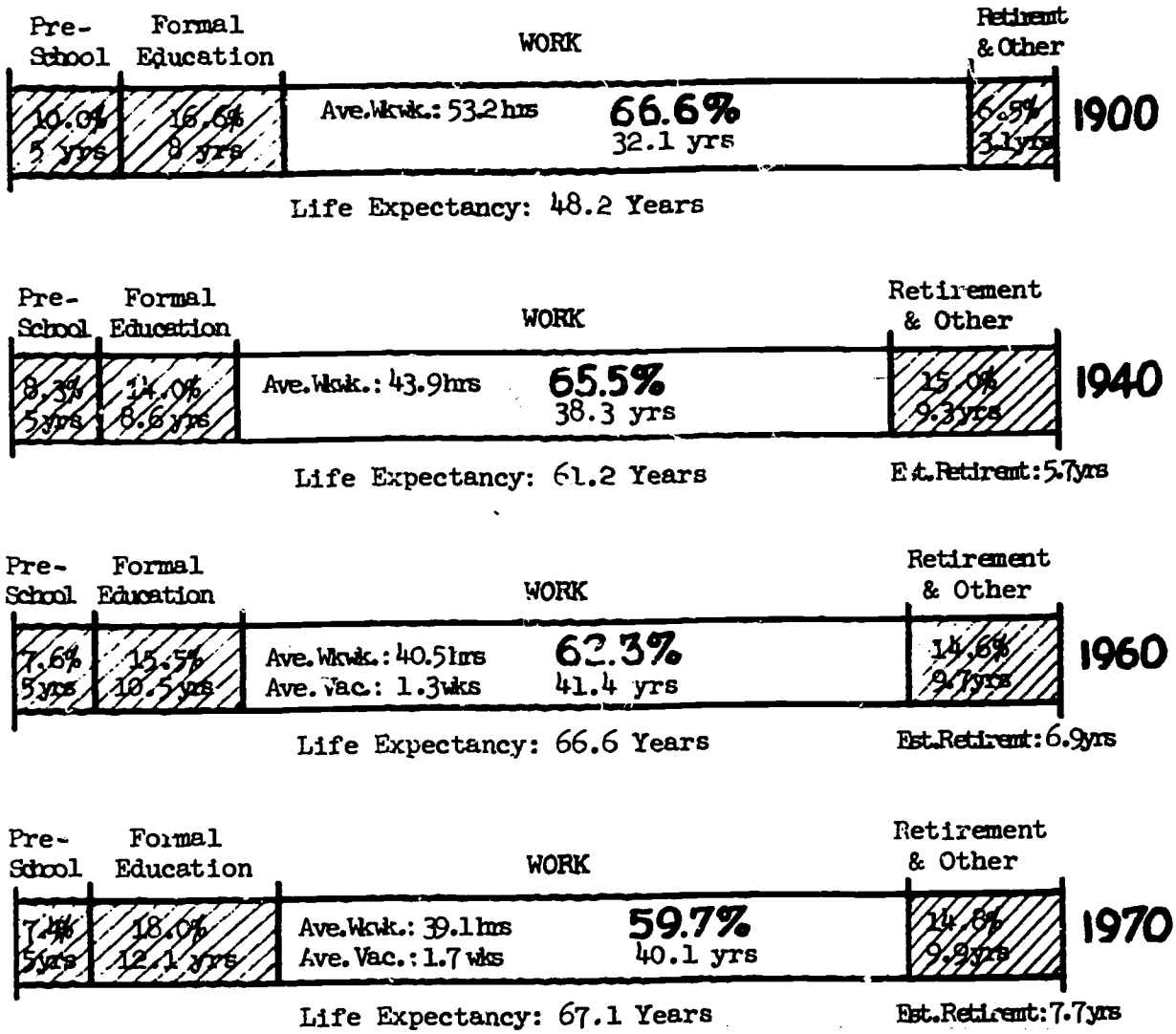
---

14. The term "primary activity" is used generally to designate the main activity of a person during their normal hours of work.

15. Figures were computed for U.S. males only because of fundamental differences in the current lifetime patterns between men and women which made consolidation of figures for both men and women inadvisable. Time limitations made comparable computations for women impossible, but these figures will be computed and published at a later date. Parenthetically, when "homekeeping" and "child rearing" are considered as "work," the life pattern differences between men and women become more similar. We expect that a number of trends will reduce still further these life pattern differences between the sexes.

CHART II

Estimated Lifetime Distribution of Education, Work and Leisure
(U.S. Males, By Primary Activity)*



SOURCE: "Work Life Expectancy" (number of years in which a person is in the Labor Force, either working or looking for work) figures obtained from Fullerton, H.N. and Byrne, J.J., "Length of Working Life for Men and Women, 1970," Monthly Labor Review, February 1976; and Fullerton, H.N., "A Table of Expected Working Life for Men, 1968," Monthly Labor Review, June 1971. "Life expectancy" (at birth) figures obtained from Statistical Abstracts of the United States - 1974, U.S. Government Printing Office, Washington, D.C., 1975, page 55. "School Years" (completed for persons over age 25) obtained from the Digest of Educational Statistics for 1975, U.S. Office of Education, Washington, D.C., 1975, pages 14-15. "Estimated Retirement" (in years) derived from "average estimated age of retirements" cited by Fullerton, H.N. and Byrne, J.J., Op.Cit. "Average Workweek" and "Average Vacation" cited from Hedges, J. and Moore, G., "Trends in Labor and Leisure," Monthly Labor Review, February 1971.

* "Primary Activity" designates the main activity of a person during their normal working hours.

The trends of lifetime distribution of education, work and leisure raise some important questions. First, are we approaching or perhaps past a point of "diminishing returns" for the "linear life plan"? Second, are we beginning to move toward an alternative way of distributing education, work and leisure throughout total lives?

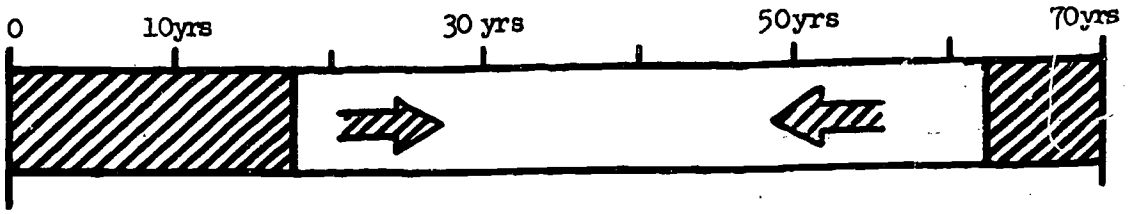
The most likely alternative to current linear lifetime patterns is a more "cyclic life plan". The basic idea of this alternative is that current time spent on education and retirement, as well as any further gains in non-work time, be redistributed to the center of life in the form of extended periods of leisure or education (See Chart III). Consideration of this alternative raises more questions. Would widespread adoption of such a "cyclic life plan" be feasible, not only from the standpoint of individual welfare but also from the perspective of the constraints facing our social institutions. The likelihood and feasibility of more cyclic life patterns will be discussed later, but first it is important to confront another more timely question: Is the continued widespread pursuit of the the currently prevailing "linear life plan" feasible?

THE LINEAR LIFE PLAN AND THE INEQUITABLE DISTRIBUTION OF WORK

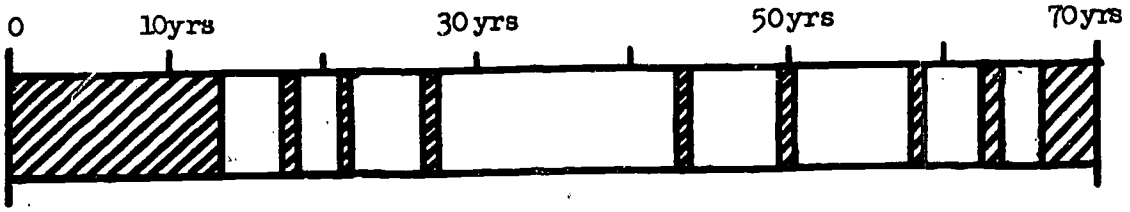
The issue of whether or not the linear life plan is disfunctional for society requires that this pattern be analyzed both as a cause and a result of numerous social problems and trends. The place to

CHART III

Alternative Future Lifet terns



Linear Life Plan: Extended periods of non-work during youth for education and during old age for retirement. Most work activities performed in consecutive years during mid-life. Most increases in non-work taken in reduced workweeks and expansion of time for education and retirement in youth and old age.



Cyclic Life Plan: Significant portions of non-work time now spent on education during youth and retirement in old age re-distributed to the middle years of life to allow extended periods of leisure or education in mid-life. Most increases in non-work time taken as extended periods away from work during mid-life.

Work Time

Non-Work Time
(Education and Leisure)

start is with an analysis of the number one human resource problem in the United States today: the shortage of jobs,[16] especially jobs which match the educational attainment and vocational aspirations of our labor force.[17]

Distribution of Work, Leisure, and Education Among Age Groups. The basic human resource problem among adults in the United States is not a shortage of skilled individuals, but a shortage of jobs - unskilled or skilled. The problem is larger than just the current recession. For the last half century, society has not been able to provide jobs during peacetime for everyone able and willing to work. This undercapacity to provide jobs has given rise, in part, to a variety of social ills - a large, expensive, inefficient and degrading welfare system, crime, mental illness, etc. These ills have been borne disproportionately by minority groups, women, youth, and older people. Though employment discrimination against these groups is still a problem, some progress has been made in eliminating it for minority group members and women. No so for youth and older people, whose position in the job market has deteriorated steadily during the last several decades.

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16. For a current discussion of the shortage of jobs, see Ginzberg, Eli (Editor), Jobs for Americans, Prentice-Hall, Englewood Cliffs, N.J., 1976.

17. For discussion of over-education and unfulfilled job aspirations, see O'Toole, James, Work in America, MIT press, Cambridge, 1973; Berg, Ivar, Education and Jobs: The Great Training Robbery, Praeger Publishers, N.Y., 1970; and Freeman, Richard, The Over-Educated American, Academic Press, N.Y., 1976.

Although the compression of work into the middle period of life cycle is the culmination of a long historical trend which has had basically healthy features (e.g,, child labor laws and the possibility of retirement with a pension) there is evidence that the trend has gone too far. The "lock-step" is especially frustrating for youth and retirees, who both want more work, independence, and responsibility.[18] As we shall demonstrate later, there is also evidence that a significantly large minority of prime age workers want more leisure without having to sacrifice too much in the way of economic security and job status to get it.[19]

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18. Retirement, while a blessing to many, is a time of boredom or anxiety to others, especially to those who are forced into "premature" retirement. In 1970, the Social Security Administration found in a survey that one-half of the men who were subject to compulsory retirement said that they did not want to stop working. The same survey found that these men realized a 60 percent cut in income after retirement (Reaching Retirement Age: Findings from a Survey of Newly Entitled Workers 1968-70, U.S. Department of Health, Education, and Welfare, Social Security Administration, Research Report No. 47, 1976, p. 60).

19. Increasing desire for more free time is suggested by (1) increases in the maximum number of weeks of paid vacation and (2) surveys of the kinds of benefits that workers want. The proportion of workers in collective bargaining units of 1,000 or more who were covered by agreements specifying at least four weeks of maximum paid vacation increased from 70 percent in 1966 to 89 percent in 1973 (Bureau of Labor Statistics, Characteristics of Agreements Covering 1,000 Workers or More, July 1, 1973, Bulletin 1822, 1974, Table 49; Paid Vacation and Holiday Provisions, Bulletin 1425-9, 1969, Chart 1). Workers without seniority, however, get much less paid vacation. In fact, almost half of all workers in the United States in 1972, got less than two weeks per year (Handbook of Labor Statistics, Washington, D.C.: Government Printing Office, 1975). It should be noted, also, that increasing the maximum number of weeks or days of paid vacation is not solely the result of workers' desire for more free time. It might reflect as well the desire of union leaders to spread employment

The progressively inequitable distribution of work, especially preferred or career-type work, among the three age cohorts is perhaps most vividly illustrated by what has happened to the youth labor market in the last few years. Table 1 shows that as the new jobs created between 1960 and 1970 in the United States were disproportionately in the low-skilled low-paying category (the proportion of jobs falling in the lower third of the earnings distribution increased from 36 percent in 1960 to 46 percent in 1970). These lower level jobs went disproportionately and increasingly to mature women and youth under the age of 25. Conversely, mature males maintained their share of the high- and mid-level jobs during this 10-year interval. A similar table showing the changing distribution of jobs by race and age yields similar results: minority group workers were becoming less well-represented in the mid-level jobs while becoming increasingly over-represented in the lower-level jobs, though this

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(continued)
among more workers, or the belief by management that workers will become more productive if they are given more time off with lower annual pay than if their wages increased with no increase in time off. Workers in these cases would merely take free time when it is available to them. Attitudinal studies on the subject, nonetheless, indicate that the hypothesis that the "rank-and-file" want more free time cannot be dismissed. Better vacation benefits are high on the list of workers' desires (Work: Desires, Discontents and Satisfaction, Special Report, the Roper Organization, New York, N.Y., June 1974; Robert Quinn and Linda Shepard, The 1972-73 Quality of Employment Survey, Ann Arbor, Michigan: University of Michigan Institute for Scoial Research, 1974; J.G. Goodale, "Workers' Preferences Among Time-off Benefits and Pay," Journal of Applied Psychology, Vol. 5, 1967).

Table 1: Labor Market Stratification by Sex and Age, 1960 & 1970 (Percent Distribution)*

	1960			1970		
	High	Medium	Low	High	Medium	Low
Total Labor Force	22.0	42.0	36.0	21.0	33.3	46.0
Mature Males	32.0	43.8	24.1	32.8	41.0	26.2
Young Males	12.0	42.0	46.0	12.9	32.0	55.1
Mature Females	8.4	36.9	57.4	7.7	23.4	69.4
Young Females	3.3	38.1	58.4	4.7	19.0	77.0

* Percent sums horizontally to 100.0

Table 2. Labor Market Stratification by Race and Age, 1960 & 1970 (Percent Distribution)

	1960			1970		
	High	Medium	Low	High	Medium	Low
Total Labor Force	22.0	42.0	36.0	21.0	33.0	46.0
Mature White	27.2	41.9	30.9	25.4	35.0	39.6
Young White (under 25)	9.7	42.1	48.2	9.5	26.0	64.5
Mature Nonwhite	7.2	39.8	53.0	9.6	31.9	58.5
Young Nonwhite (under 25)	2.1	29.8	68.1	4.5	28.0	67.5

SOURCE (BOTH TABLES): Marcia Freedman, Labor Markets: Segments and Shelters, New York: Allanheld, Osmun & Co., 1976, page 75.

is understated among minority youth due to their difficulties in finding any work (see Table 2). The poor or dead-end jobs in the society, then, are being assumed principally and increasingly by women, youth, and minorities. Indeed, these groups are competing with each other for the same jobs.

Table 3 dramatizes the changing youth labor market in another way. It shows that the growth in youth employment during the 1960's occurred within the same occupational-industrial categories where they had been the most heavily represented in 1960 - more dead-end and non-career-type work (work without advancement potential or in-firm training) in 1970 than in 1960.

Inequities Within the Middle-Aged Population. Forgetting for a moment the problems of younger and older workers in getting a "fair" share of the preferred career-type jobs, it should be noted that within the cohort of middle-aged workers (age 25 to 60), there are also great inequities. Obviously, not all or even most middle-aged workers can be expected to get high status well-paying jobs. But the ones who hold the low status, unskilled and low paying jobs are the ones who have the least leisure time and educational benefits as well. Highly skilled, unionized or professional persons who work for large companies experiencing continual technological development have the best of all worlds: their work is challenging and secure

Table 3. Youth Labor Market, 1960 and 1970
(Less than 25 Years of Age)

Occupation-Industry Groups	1960 (000)	1960 %	1970 (000)	1970 %	Change '60-'70 (000)	Change '60-'70 %
Service (Restaurants, Hotels, Motels)	364	21.1	813	37.3	449	16.2
Service (Health)	124	15.9	424	26.2	300	10.3
Service (Education)	93	13.9	246	21.2	153	7.3
Non-Office Clerical (Non-Durable Retail, Communication, Education, Insurance, Real Estate)	563	32.0	971	40.6	408	8.6
Office Clerical (Education, Producers Services, Health Services, Public Administration, Finance, Insurance, Real Estate)	709	30.9	1324	32.1	615	1.2
Sales Work (Non-Durable Retail)	462	23.8	613	27.9	151	4.1
Total Civilian Population Employed	10,249	15.6	15,860	20.7	5,611	4.6

SOURCE: Unpublished data provided by Marcia Freedman, who developed an occupation-industry classification scheme in her book, Labor Markets: Segments and Shelters, New York, Allanheld, Osmun & Co., 1976, Appendix D.

(at least they feel that way); and their vacation and education benefits exceed those obtained by other workers.[20]

A good example of the progressive inequality in the distribution of leisure and education among adult workers is that the greatest share of the increase in the participation rate of workers in adult (part-time) education between 1969-and 1975 was accounted for by workers who were well-educated already or who were in occupations requiring a high level of education, e.g., professional-technical occupations (see Tables 4 and 5).[21] Moreover the increases in opportunities to participate in education and training went overwhelmingly to workers in industries which have experienced continual technological development and accordingly have required programs to upgrade and keep skills current.[22] Thus it may be said that participation by adults

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20. That education and leisure benefits go disproportionately to workers in large companies in industries experiencing continual and accelerated technological development is suggested by data presented in teh following sources: Quinn and Shepard, op. cit., Bureau of Labor Statistics, Characteristics of Agreements Covering 1,000 Workers or More, July 1, 1973, Bulletin 1822, Washington, D.C. Government Printing Office (GPO) 1974; Handbook of Labor Statistics, Washington, D.C.: GPO, 1975; Paid Vacation and Holiday Provisions in Major Collective Bargaining Agreements, Bulletin 1425-9, Washington, D.C.: GPO 1969, p. 12; Training and Retraining Provisions, Bulletin 1425-7, Washington, D.C.: GPO, 1969.

21. Barry Stern, "Desire of U.S. Workers for Education and Training", Unpublished staff paper, Office of the Assistant Secretary for Education, Department of Health, Education, and Welfare, WAshington, D.C. 1976; Michael O'Keefe, "The Adult, Education, and Public Policy," Prepared for program of Aspen Institute for Humanistic Studies, Aspen, Colorado, 1976.

22. Stern, op. cit.,Seymour Lusterman, "Education for Work," Conference Board Record, May 1976, pp. 39-44; Bureau of Labor Statistics, Characteristics of Agreements Covering 1,000 or More Workers, July 1, 1973, Bulletin, 1822, 1974, Table 47; Training and Retraining Provisions, Bulletin 1425-7, 1969.

Table 4. Participation Rates in Adult (Part-Time) Education by Educational Attainment, 1969, 1972 and 1975

lucation	1969 Eligible Population (000) 1/	1969 Rate %	1972 Eligible Population (000)	1972 Rate %	1975 Eligible Population (000)	1975 Rate %	Change in Rate* '69-72 %	Change in Rate* '69-75 %
)tal	119,597	10.9	127,263	12.4	131,019	13.0	1.5	2.1
)ne - 8th rade	30,540	2.1	28,559	2.1	25,764	2.1	0.0	0.0
th - 11th rade	21,770	9.4	21,859	6.6	21,303	5.7	-2.8	-3.7
igh School	42,861	11.8	47,753	12.4	50,188	12.7	0.6	0.9
ome College	12,380	20.8	14,727	22.9	16,673	22.0	2.1	1.2
ollege raduate	7,510	26.3	9,207	20.8	10,692	28.9	1.7	2.6
ollege +	4,607	31.7	5,157	34.8	6,334	33.5	3.1	1.8

/ Non institutionalized persons age 17 or over who are not regular full-time students.

'All changes in rate significant at 0.5 level of confidence.

;OURCE: National Center for Education Statistics, published and unpublished data from 'Triennial Adult Education Survey," 1969, 1972, 1975.

Table 5. Participation Rates of Workers in Adult (Part-time) Education by Occupational Group, 1969, 1972, 1975

Occupation	1969 Eligible Population[1] (000)	1969 Rate %	1972 Eligible Population (000)	1972 Rate %	1975 Eligible Population (000)	1975 Rate %	Change in Rate '69-72 %	Change in Rate '69-75 %
Total Labor Force	74,466	14.0	78,989	15.8	82,073	16.6	1.8*	2.6*
Professional/ technical	10,414	32.0	11,009	34.8	11,879	35.8	2.8*	3.8*
Engineers	1,132	33.2	1,090	32.3	N/A	N/A	-0.9	-
Medical/health	1,631	23.9	1,748	32.8	N/A	N/A	8.9*	-
Teachers excluding college	2,416	42.9	3,029	46.8	N/A	N/A	3.9*	-
Other Prof./Tech	5,234	29.3	5,110	29.0	N/A	N/A	-0.3	-
Farms, Farm managers, foremen, & laborers	3,263	4.8	2,838	6.0	2,800	6.1	1.2	1.3
Managers & administrative	8,001	14.2	7,869	16.9	8,568	16.8	2.7*	2.6*
Sales	4,172	14.3	4,662	16.5	4,659	17.8	2.2*	3.5*
Clerical	12,203	14.3	12,968	15.9	13,095	17.	1.6*	3.3*
Craftsman & kindred	9,806	12.9	10,381	13.8	10,285	14.0	0.9	1.1
Operatives	13,289	7.3	12,731	7.6	11,531	7.4	0.3	0.1
Service workers domestics, & nonfarm laborers	11,337	8.9	12,855	11.0	12,737	11.8	2.1*	2.9*
Unemployed	2,002	12.2	3,676	14.4	6,503	12.5	2.2*	0.3*

1/ Noninstitutionalized persons age 17 or over who are not regular full-time students.

*Change in rate significant at .05 level of confidence.

SOURCE: Unpublished data, National Center for Education Statistics, "Triennial Survey of Adult Education, 1969, 1972, 1975.

in part-time educational activities is as likely to result from the kind of work that one does as it is to lead to such work. It is quite plausible, in fact, that economic opportunity is a better predictor of educational opportunity among adults than vice-versa.

A Worsening Problem. The problems and frustrations that result, in part, from the linear life plan and the inequitable distribution of work are getting worse. Paradoxically, some social forces are increasing inequities while others are causing heightened frustrations by increasing expectations for greater parity. What are the social forces causing greater inequity and frustration?

First, there is the imminence of a "promotion squeeze" or a declining amount of vertical career mobility within the large, well-educated "baby boom" generation (born between 1947 and 1961), whose members are experiencing more difficulties than persons from previous generations in moving past the lower echelons of the occupational ladder.[23] More young people are simply available to compete for the relatively stable number of preferred jobs. Competition for these jobs is increased further by two other phenomena: (1) young better-educated members of minority groups are seeking the job opportunities denied their parents; and (2) more women are reentering the labor force to become full-time career workers. All are competing for the same entry level career-type jobs. In comparison to previous generations,

23. "Changing Patterns of Occupational Opportunity," Manpower Report of the President 1975, pp. 104-130.

a smaller proportion of the "baby boom" generation is getting the preferred jobs, thereby increasing the inequitable distribution of work between age groups as well as within the younger age group.

A second factor inhibiting a more equitable distribution of work, especially the preferred career-type work, is what appears to be an ever-present job shortage problem, aggravated further by a sluggish economy. Public employment programs might increase the number of jobs, but so far they have been unable to satisfy the demand for career-type jobs. And holders of preferred jobs are less likely to give them up (to seek new work or to leave the labor force temporarily) in today's highly competitive labor market, witness the greatly decreased turnover in the teaching profession during the last few years.[24]

Third, while demographic and economic forces have reduced the possibility for a more equitable distribution of work, other social forces are heightening the desire for greater parity. People today have higher occupational aspirations than ever because of greater affluence, higher levels of educational attainment, and declining family obligations. Parents want their children to be better off than they were, and the children, who have been nurtured by considerable amounts of schooling and more financial resources, agree. Moreover,

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24. See, for example, Barry Anderson and Jonathan Mark, (Attrition, Mobility, and Productivity Among Teachers: The Case of Metropolitan St. Louis, St. Louis, Missouri: CEMEREL, Inc., 1976) who found that with decreased turnover or migration of teachers, the average age and salary level of teachers increased, resulting in higher salary expense and lower teacher productivity per pupil.

because of the increased penetration of the mass media, people are more aware of the desirable jobs that exist, especially the ones glamorized by television. Another factor which is increasing the desire among more people for a greater share of the preferred work stems from increased personal freedom resulting from declining numbers of family dependents.[25] These decreasing dependency ratios are due to increasing propensities of Americans to marry later, have fewer children, live in nuclear families, have both husband and wife working, divorce more often, and be financially independent during old age.

Despite the factors which increase desire for a more equitable distribution of work, economic and demographic factors for the rest of this century are probably too strong to permit a degree of redistribution (and hence occupational mobility) that will satisfy the desire for it. If the constraints on redistribution are allowed to run their course and nothing is done to restructure or redistribute work, we can expect a deepening and widening of the problems commonly associated with the linear life plan: (1) the progressively inequitable distribution of work among the three major age cohorts of the population, with the middle-aged group monopolizing even more of the preferred jobs in the society, while forcing older people to retire earlier and younger people to defer for more time their entry into career-related work; and (2) increasing amounts of job stagnation, boredom, and

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25. See footnote number 40.

underutilization of skills and education.

Already there are several strong indications that Americans perceive these problems and are favorably disposed to alter the current distributions of work, leisure, and education. Women and students, who traditionally have not been workers, now want more work.[26] Prime age full-time workers, about 2/3 of whom are men and who have been provided generously with work are working about as many hours per week as they did 30 years ago[27] but indicate, nevertheless, that they would like more free time.[28] A sizeable proportion of retired workers would rather continue working, though perhaps for fewer

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26. That women and students want more work is most convincingly demonstrated by their increasing labor force participation rates during the last several years. The labor force participation rate for students 14 to 24 years of age increased from 20.5 percent in 1948 to 25.3 percent in 1960 to 35.0 percent in 1973. For women over 16 years of age, the rate increased from 32.7 percent in 1948 to 37.8 percent in 1960 to 45.7 percent in 1974 (Manpower Report of the President 1975). Now women represent 2 out of 5 members of the labor force and from 1940 to 1970 accounted for about 2/3 of the increase in the working population. Participation of mothers in the labor force rose even faster, showing a five-fold increase - from 9 percent to 42 percent - in that 30-year period. For an increasing number of women the time out of the labor force for purposes of child rearing is becoming shorter; many stay in the labor force at least part-time while their children are young. One out of three women with pre-school children is now in the labor force; 4½ million women with children under six are working. (Handbook of Labor Statistics, 1975).

27. Owen, op. cit.

28. See footnote 19.

hours per week, than retire completely. Finally, many adults of all ages appear to want additional and more varied education opportunities.[29]

The aforementioned work-leisure-education problems and desires of workers in different population groups are summarized in different population groups are summarized in Chart IV. The chart merely shows that in general different demographic or labor force groups have different problems and desires. These are represented by the shaded areas, which might be referred to as the "problem" or "target" area. Whether or not these perceived problems and desires will intensify during the remainder of this century will depend primarily on what happens to the linear life plan. If the current school-to-work-to-retirement pattern b becomes even more rigid and predominant, the problems and frustrations are likely to get worse. The social forces likely to influence lifetime patterns in the future are described in the following section.

SPECULATIONS ABOUT THE FUTURE: THE LIKELIHOOD OF CYCLIC LIFE PATTERNS

There can be little doubt that many of our most serious and persistent social problems stem from the ways in which education, work and leisure are

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29. Increased participation rates of adults in educational activities and the responsiveness of educational institutions to provide adults with more options for combining work and education indicate the growing desire for education among individuals who are beyond the normal school-going years. Conspicuously on the increase are those opportunities for adults variously described as open university or external degree programs.

CHART IV

PROBLEMS AND POPULATION GROUPS

	PROBLEMS & DESIRES \ CATEGORIES OF WORK FORCE	Young Entrants Into Work Force	Unemployed and Discouraged Workers	Part-Time & Under-Employed Workers	Fully Employed Workers	Re-Entrants (Women & Veterans)	Pre-Retirees	Retirees
WORK	Inadequate Job Opportunities	▨	▨	▨				
	Low Career Change/ Promotion Options				▨			
	Under Utilization of Skills and Potentials	▨		▨	▨	▨		
	Job Redundancy ("Featherbedding)				▨		▨	
EDUCATION	Inadequate Entry-Level Training	▨				▨		
	Need for Further General Education			▨	▨		▨	▨
	Inadequate Renewal or Upgrading Training		▨	▨	▨			
LEISURE	Desire for Extended Vacations & Travel			▨	▨		▨	▨
	Desire to Participate in Community Service				▨		▨	
	Desire to Improve Personal property				▨		▨	
	Personal Renewal & Recreational Skills				▨		▨	▨

distributed throughout lifetimes. The question before us is whether or not the problems and shortcomings resulting from current lifetime patterns are great enough to move us toward alternative patterns, and whether suitable alternatives exist. This section will seek to show how some of the forces we have discussed, as well as other factors, may converge to move U.S. society toward more cyclic patterns of life. With the explicit caveat that we are engaging in an intuitive or speculative exercise, we shall review briefly eight major factors which, in our opinion, will determine the likelihood of cyclic life patterns within American society.

1. Demographic Trends. The demographic variables of population size and the distribution of specific characteristics within a population represent powerful social forces. In the case of life patterns, the distribution of age cohorts, life longevity and the marginal issue of health are important considerations.

The distribution of age groups within American society has been and will continue to be a major determinant of lifelong distribution of education, work and leisure. As noted already, the post-World War II "baby boom" has given rise to an inordinately large proportion of persons now aged 16 to 30. This group, which crowded our school systems in the 1950's and 1960's and swelled the ranks of teenage workers, is now experiencing difficulty in moving past the lower echelons of the occupational ladder. Large portions of this age group have deferred their entry into career type work while prolonging their education,

in part because of the fierce competition for jobs. As this age group now moves into middle age, it will experience more difficulty than previous generations in getting career-type work; and they will find it more difficult to get promoted or to change into some other occupation providing similar status and pay. Further, this state of affairs will work to the disadvantage of workers from the subsequent "post-baby boom" generation, who will not be able to dislodge experienced workers who are "stuck" above them. For the next 30 years the increased competition for work, especially preferred work, will bring pressure at once for earlier compulsory retirement, more jobs and greater sharing of existing jobs.

If our current linear pattern of life persists, we can expect even further social tensions when this same "baby boom" generation begins to withdraw from the labor force around the year 2000. Since the next age cohort is significantly smaller, there may be an inadequate number of persons to fill the jobs developed by their predecessors. As a result, younger persons are likely to be drawn out of schooling and older persons detained from retirement to fill the demand for labor.[30]

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30. In passing, scarcity of revenue for social security benefits is also likely to reduce the ability to retire among many elderly persons (Gray, Robert, "Will the Social Security Bubble Burst?" Nation's Business, November 1974, pages 28-30 and 32).

On the basis of demographic forces alone,[31] the problems associated with the "linear life plan" are likely to worsen dramatically, with new problems abruptly taking their place around the year 2000. These forces will be highly disruptive and possibly destructive to the continuation of linear lifetime patterns.

Life longevity and health may be less important[32] forces affecting lifetime patterns. While past trends and prospective medical advances[33] do suggest that we can expect only minor increases in life longevity, the current U.S. lifespan of about 70 may be decreasing the general willingness to delay extended leisure until retirement and possibly fostering the need for mid-life training. Furthermore,

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31. There are, of course, other variables. Most notably, "hard" and "software" technological advances may allow a rapid replacement of human resources with capital, thus attenuate the demand for large numbers of persons to replace a retiring "baby boom" generation. For an example, see Revzin, Phillip, "Grinding Out More: How Current Gains in Production Look from the Factory Floor," Wall Street Journal, December 8, 1975.

32. Between 1940 and 1970, average life expectancy for U.S. males increased at decreasing rates from 61.2 years to 67.1 years as compared with an increase from 48.2 to 61.2 years between 1900 and 1940. Between 1960 and 1970 average life expectancy for U.S. males increased only .5 years (Fullerton, Howard N., "A Table of Expected Working Life for Men," Monthly Labor Review, June 1971, page 49). It is important to note that life expectancy for women is longer and increasing more rapidly for women than for men. Specifically, the average U.S. woman lives 2 years longer than the average man in 1900 and 7 years longer in 1966 (Toward a Social Report, U.S.H.E.W., U.S. Government Printing Office, Washington, D.C., 1969, page 1).

33. Ibid, page 2.

improved health in old age[34] is likely to decrease the desire of older workers for earlier retirement. Healthy workers will likely want to work more, not less; and because work in the future will probably be less physically demanding[35] older workers will be able to work more. The ability to continue working in old age will bring pressure for gradual, not earlier retirement.[36] In sum, current and prospective life longevity and health are, if anything, likely to be conducive to more cyclic patterns of life.

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34. Indicators of general health are difficult to find or develop. One indicator of "healthy life expectancy" (years of non-bed disability) computed by H.E.W. showed that the expectation ofa healthy life increased from 67.2 to 68.2 years between 1958 and 1966. This is a slightly faster growth of years of health than the increase of overall life expectancy from 69.5 to 70.2 years for the same time period. Expectation for healthy life for persons over the age of 65 increased from 13.1 to 13.5 years for the same period (Toward a Social Report, op. cit., pages 3-4). Other evidence suggests that pain free existence and non-bed disability has declined (Ibid, page 5; and Best, Fred, Quality of Life Report for Massachusetts, Institute for Man and the Environment, University of Massachusetts, Amherst, June 1975).

35. Daniel Bell, The Coming of Post-Industrial Society, Basic Books, N.Y., 1973, pages 134-164.

36. The rise of old age "liberation" groups such as the "Gray Panthers" and widespread problems in adjusting to "forced" retirement suggest that current or future expansion of leisure in old age may be increasingly resisted. See Wirtz, Willard et. al., The Boundless Resource, New Republic Book Company, WAshington, D.C., 1975, pages 140-145. A survey of persons over age 65 taken during the 1960's found that about one-third of this age group had been forced to retire due to compulsory retirement age policies (Lenore Epstein and Janet Murray, The Aged Population in the United States, Social Security Administration, Research Report 19, U.S. Government Printing Office, Washington, D.C. 1967, pages 345-348; Reaching Retirement Age, op. cit.

2. Sex Roles and Family Structure. Today there is cause to believe that changes in sex roles and family structure will be critical forces in fostering more cyclic life patterns. In short, growing family financial discretion, declining dependence ratios, natural constraints of women workers, and increasing flexibility of sex roles may foster a more cyclic distribution of lifetime activities.

Foremost, the increase of individual and family discretion due to the rise of women workers,[37] particularly working wives,[38] will enable more traditional male "breadwinners" to decline income earning work time in favor of more free time (or at least a better distribution of leisure within the family unit).[39] Correspondingly,

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37. Labor force participation of women rose from 31.8 percent in 1947 to 45.7 percent in 1974 (Handbook of Labor Statistics - 1975, Table I, page 27).

38. Specifically, the percentage of husband and wife families with two or more income earners has increased from about 36 percent in 1950 to 48 percent in 1975. Similarly, labor force participation for wives with husbands present has risen from 23.8 percent in 1950 to 44.4 percent in 1975 (Howard Hayghe, "Families and the Rise of Working Wives - An Overview," Monthly Labor Review, May 1976, page 13).

39. While possible, this may not lead to more free time for the family unit as a whole, it will likely have the effect of fostering a more even distribution of free time within the family unit (Kreps, Juanita, "some Time Dimensions of Manpower Policy," in Ginzberg, Eli (Ed.) Jobs for Americans, Prentice-Hall, 1976, page 187). More Immediately, it seems to have caused less free time for women, (Hedges, Janice and Barnett, Jeanne, "Working Women and the Division of Household Tasks," Monthly Labor Review, April 1972, pages 9-14).

the decline of family size and dependents[40] will likely decrease parental chores[41] and thus free more time and income both during and after childrearing years for nonwork activities.

While women today are working more during and shortly after pregnancy, the physiological necessities and preferences of increasing numbers of women workers to take at least some time away from their work activities for both pregnancy and child rearing will likely have the effect of increasing the flexibility of work hours and work years for both men and women.[42]

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40. It is difficult to measure "dependency" with a single statistic. One common measure is to look at the ratio of the sum of younger (under 18 years age) and older (65 and over) persons to the number of persons between these ages (18-64 years old). Past and future years with their recorded and projected "dependency ratios" are: 1945 (.59), 1960 (.82), 1975 (.71), 1990 (.65), 2005 (.59), and 2035 (.70). See Dennis Johnston, "Aging and the Baby Boom Cohorts," Statistical Reporter, March 1976, Table IV (Series II Projections). Another means of measuring "dependency" is the ratio of persons outside the labor force to those inside (nonworkers/workers). Actual and projected figures of this type have been computed. Respective ratios are: 1950 (1.38), 1955 (1.44), 1960 (1.50), 1965 (1.52), 1970 (1.38), 1975 (1.25), 1980 (1.15), 1985 (1.11) and 1990 (1.11). See Howard Fullerton, "New Labor Force Projections to 1990," Monthly Labor Review, December 1976.

41. In many cases, the decline in the number of children may lead to a commensurately increased expenditure of time and money per individual child (Meadows, Donella et al., The Limits to Growth, Signet Books, N.Y., 1972, pages 119-124).

42. As one case in point, the Business and Professional Women's Foundation sponsored one of the most extensive studies of "flexitime" (V.H. Martin and J. Hartley, Hours of Work When Workers Can Choose, 1975).

Husbands and wives are becoming increasingly flexible in exchanging work, household and child rearing responsibilities.[43] At least within the family unit, this increasing sex role flexibility is likely to allow major increases in life pattern options. While past sex roles froze men into the "breadwinner" duties and relegated women to the role of "housewife", increasing sex role flexibility is likely to expand the opportunity for spouses to rotate roles and thus free each other from the "linear life patterns" of the past.

Increasing divorce rates are likely to have a mixed impact upon lifetime patterns. On one hand, the increasing incidence of divorce will expand the number of one parent families and thus create greater financial and time constraints for the sole parent. However, many divorcees will remarry. On the whole, the process of divorce will likely increase the number of women workers; under some circumstances this may be conducive to more cyclic life patterns.

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43. While there are scarce data representing the overall U.S. population in this area, examples and indicators abound to suggest changing sex roles. For example, a survey study by the National Assessment for Educational Progress found that only 3 percent of women aged 17 years planned to be housewives (Epstein, Noel, "Career Education Study Cites Rivalry for Jobs," Washington, Post, November 9, 1976, page A4). This finding is supported by an earlier series of studies conducted by Daniel Yankelovich (The New Morality, Doubleday & Company, Garden City, N.Y., 1974, pages 95-102). Further accounts and interpretations of changing sex roles and family structures include Mayda Cordell, John McHale, and Guy Streatfield, "Women and World Change," and Szalai, Alexander, "Women's Time: Women in the Light of Contemporary Time-Budget Research," both in Futures, October 1975, pages 364-399; and Elise Boulding, "The FAmily as an Agent of Social Change," The Futurist, October 1972, pages 186-191.

3. Developmental Stages of Adulthood. Over the last few years several scholars have proposed that adults experience developmental stages, as do children and adolescents. While these life cycle theories remain highly speculative and empirical research inconclusive a growing literature[44] suggests some major implications for future lifetime patterns.

There appears to be some concensus that most adults progress through successive phases of stabilization and consolidation followed by change and growth as they puruse new goals and confront the changing crises of different ages.[45] In terms of lifetime patterns, there are a number of broad implications to these observations. First, if periodic realignment of values and life styles are indeed traits of adult development, it is possible that cyclic life patterns would correspond more to the needs and rhythms of adulthood than linear patterns.

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44. Some of the many sources of thought concerning adult developmental stages includes: Erickson, Erik, Childhood and Society, W.W. Norton, N.Y., 1950, pages 247-275; Gould, Roger, "The Phases of Adult LIfe: A Study of Developmental Psychology," American Journal of Psychiatry, Marriage and the Family, Volume 30, Number 1, 1968, pages 26-39; Levinson, Daniel, "The Psychological Development of Men in Early Adulthood and the Mid-Life Transition," Article published by the University of Minnesota Press, Minneapolis, 1974 (Levinson is currently completing a book entitled Toward a Conception of Adult Development); and a series of important articles collected in Neugarten, Bernice (Editor), Middle Age and Aging, University of Chicago Press, Chicago, 1968.

45. Our review of the literature in this area suggests about six stages and junctures during the human life span are commonly cited: First, there is the generalized stage of childhood in which the individual seeks to learn rudimentary skills. Second, the stage of adolescence in whcih the major concerns shift toward the development of identity and psychological severence from parents. Third, early middle years in which the individual seeks a place in the adult world in terms of mature relationships and economic autonomy. Fourth, mid-life where the individual confronts aging and re-evaluates his or her general course in life. Fifth, late middle years in which the individual confronts what he or she has become and is likely to become. Sixth, old age, with the realization of death and the necessity for finding and maintaining ongoing interests and engaging purposes.

In fact, it is possible that the prevailing linear life plan is robbing society of much creativity and productivity which evidence suggests[46] occur naturally among adults during mid-life junctures. In a society where many critics claim that our institutions are clogged with human "dead wood," a recognition of the productive potentials of mid-life self-renewal could foster institutional acceptance or support for more cyclic life patterns.

4. Methods of Education. Major reforms within educational institutions may foster both values and behavior more supportive of cyclic than linear life patterns. Most schools, from elementary through advanced graduate levels, have until recently been modeled after a traditional system typified by a straight succession of student years with teachers providing lectures, reading assignments and graded tests within a classroom setting.[47] While there were rare exceptions to this model of education,[48] it was not until the massive democratization of education during the 1960's that educational research and the political pressures fostered by a larger and more diverse educational

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46. For example, Judith Bardwick has noted that those women who have actively responded to the maturation and departure of their children have exhibited periods of high motivation and productivity ("The Dynamics of Successful People," New Research on Women, University of Michigan Press, Ann Arbor, 1974). It should be noted that research by Daniel Levinson suggests that this phenomenon may be less true of men than women. Also see Bernice Neugarten, "The Awareness of Middle Age" and Eunice and R.M. Belbin, "New Careers in Middle Age," in Bernice Neugarten (Ed.), op. cit., pages 93-98 and 341-346.

47. Charles E. Silberman, Crisis in the Classroom, Vintage Books, Random House, N.Y., 1971, pages 133, 229, 268 and 272.

48. Colleges such as Antioch, Oberlin, Goddard and Sara Lawrence have long held "traditions" of innovative educational approches.

constituency forced a widespread recognition that different individuals learn best under varying methods and time frames.[49] The result has been a wave of educational innovations such as student initiated courses, non-graded studies, academic credit for work and other experiences, vouchers and "learning contracts", residential colleges, decentralized campuses, ethnic curriculums, programs for the elderly, and equivalency examinations.[50]

While examples abound of such "non-traditional" methods, public statistics do not reflect yet the scope and impact of these reforms. It is reasonable to assume, nonetheless, that their effects have been significant and that the learning demands of a changing student clientele will support their continued existence and growth. In terms of future life patterns, the impact of "non-traditional" education will be generally conducive to more cyclic patterns. Their

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49. Although the elementary and secondary school years of the post-World War II "baby boom" generation during the 1950's and the advent of educational opportunity and "drop-out" prevention programs in the 1960's expanded the resources and level of innovation within elementary and secondary schools, the effects of educational democratization upon school systems were most evident at the post-secondary level during the 1960's. The enrollment of women, minority and "working class" students coupled with other forces created more heterogeneous and "activist" student bodies pressing for non-traditional "relevance."

50. Some references concerning these innovations include Herbert London, "The Case for Non'Traditional Learning," Change, June 1976, pages 25-59; Lifelong Learning Act of 1975, Hearing before the Subcommittee on Labor and Public Welfare, U.S. Senate, S. 2497, December 18, 1976, pages 686-696; Bernice Neugarten and Robert Havighurst, Society and Education, Allyn and Bacon, Inc., Boston, 4th Edition, 1975, pages 275-290, 357-362 and 443-445; and a series of descriptive essays in Beatrice and Ronald Gross, Radical School Reform, Simon and Schuster, N.Y., 1969.

continuance and likely growth will tend to increase the scheduling flexibility of schooling, and therefore foster increasing departures from current linear life patterns.

5. Education and Social Opportunity. The failing link between educational attainment and occupational advancement is fostering social tensions which may lead to more cyclic life patterns.[51] In previous decades, the rising needs for a highly skilled and educated labor force has merged with widespread desire for personal achievement within the context of equal opportunity to make extended years of schooling the central avenue for social mobility. For many years, schooling represented the "meritocratic" ideal: The rewards and valued positions in society would be distributed on the basis of proven effort and skill as evidenced primarily by educational certification. Today we are beginning to realize that the developed skills, not to mention the undeveloped potentials, within our population are

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51. While there is reputable debate upon the influence of values and beliefs upon the nature of society, and equally valid disagreements about the origins of perpetuation of values and beliefs, it can be farily claimed that the value placed upon the pursuit of individual achievement within the context of equal opportunity has been and will likely remain a major force within American society. Social observers from Alexis deTocqueville (Democracy in America, Mentor Books, N.Y., 1973, pages 41-61) to Daniel Bell (The Coming of Post-Industrial Society, Basic Books, N.Y., 1973, pages 408-455) have noted the importance of both the pursuit of achievement and equality as major social forces within the American culture.

The importance and nature of values as a social force is an unresolved issue within the social sciences. One side of this ongoing debate, commonly called "Functionalists", view values as having a somewhat pervasive and independent influence upon society. The other side of the issue, a group often called "conflict theorists", view values as arising from political accomodations forged out of conflict over scarce resources.

considerably greater than the demands of our labor market. Nonetheless, young people are continuing to stay in school longer in order to first avoid and then overcome competition with older workers and each other. As a result, more and more education is required for jobs of relatively stable skill requirements.[52] In the absence of other channels of opportunity, the true meaning of education to both occupational achievement and human fulfillment is being lost as those seeking advancement to compete by rushing to ever higher levels of "overeducation."

The increasing problem of "overeducation" is perhaps best illustrated by comparing the actual and projected growth in the proportion of college graduates in the labor force with the growth in the number of professional and technical jobs (the kind which most college graduates get) as a percentage of total civilian employment. Table 6 shows that while there has been since 1960 a very rapid and accelerated increase in the proportion of workers who are college graduates, the growth in the proportion of professional-technical jobs as a percentage of all employment will remain abou the same as 1975 (about 15 percent). Meanwhile, the proportion of college graduates in the labor force will increase about four percent by 1985. This translates to

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52. For example, James Bright has noted that the job of department store sales clerk generally required completion of eight years of schooling in 1900, and now commonly requires two years of college. Today, the same job is, if anything, less demanding. (James Bright, "Does Automation Raise Skill Requirements?" in Exploring the Dimensions of the Manpower Revolution, Subcommittee on Employment and Manpower, U.S. Senate, 88th Congress, 2nd Session, U.S. Government Printing Office, Washington, D.C., 1964, pages 558-580).

Table 6. Actual and Projected Shares of Professional-technical Employment for College Graduates, 1960-1985.

Year	College graduates as portion of total civilian labor force (%)	Professional-technical workers as portion of total civilian employment** (%)
1960	10.0	11.0
1965	11.7	13.0
1970	13.2	14.2
1975	16.9	15.0
1985*	20-21	14.9 - 15.4

* Projected estimates.

** Proportion of managers in labor force will decline by about 1-2 percent between 1975 and 1985.

SOURCE: 1985 projections by Bureau of Labor Statistics and by Froomkin, "Supply and Demand for Persons with Postsecondary Education," Policy Research Center paper prepared for Assistant Secretary for Education, U.S. Department of Health, Education, and Welfare, Washington, D.C., 1976.

a labor market surplus of millions of college graduates.[53] Even the rather conservative estimates of the U.S. Bureau of Labor STatistics project a surplus of 1.6 million college graduates in 1985.[54] Other analysts project an even greater oversupply. Joseph Froomkin, for example, assumes a lesser demand for professional-technical and managerial jobs than BLS because of technological advances and automation and a greater supply of college graduates due to the increased labor force participation and educational attainment of women. His figures project an oversupply of from 6 to 8 million college graduates.[55] The growing magnitude of this growing imbalance may have serious consequences.

Projected levels of "overeducation" will not only result in widespread suboptimization of human resources, but political discontent, job dissatisfaction and the counter productive effects of dampened occupational aspirations. The signs of this crisis are rapidly

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53. It has been suggested by some that college educated persons would not be "underemployed" in managerial jobs, and that such jobs will abound in future years (Bernice Neugarten and Robert Havighurst, op. cit., pages 302-305). In many cases this is true. However, it sould be noted that just as many professional and technical jobs do not require college degrees, many managerial positions such as foreperson positions and small proprietorships would "underemploy" persons with college educations. All in all, we suggest that the growth of professional and technical positions is a good index of the number of jobs which can utilize college graduates.

54. Unpublished projections provided by the Bureau of Labor Statistics, October 1976.

55. Joseph Froomkin, Supply and Demand for Persons with Post-Secondary Education, Policy Research Center paper prepared for the Office of the Assistant Secretary for Education, U.S. Department of Health, Education and Welfare, Washington, D.C., 1976.

becoming apparent. According to two recent surveys by the U.S. Department of Labor, one-fourth to one-third of the American workforce feel overqualified for their jobs.[56] Since feelings of overqualification are one of the strongest correlates of overall job dissatisfaction, an increase of such feelings could well result in poorer worker morale and decreased productivity.[57]

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56. Robert Quinn and Linda Shepard, Op. Cit.; Survey of Working Conditions conducted by the Survey Research Center, University of Michigan, Ann Arbor, completed for Employment Standards Administration, U.S. Department of Labor.

57. There is some evidence that the inflation of educational credentials may actually lead to a lowering of productivity. It was argued in the 1960's by Theodore Schultz and other "human capitalists" that investments in education were investments in the Gross National Product. These economists felt that upgrading the workforce educationally would lead to high productivity as underqualified workers were replaced by those with greater skills.

Ivar Berg (Education and Jobs: The Great Training Robbery, New York: Praeger, 1970, pp. 86-104) has argued that the reality of the process is quite different from the economists' model. What actually happens is a process of unproductive job dislocation by more highly qualified workers who may be forced to stay in or accept jobs not utilizing their education and bump slightly less qualified workers from their jobs. No increase in productivity occurs because the nature of the jobs is usually such that they do not require higher skills. Productivity may actually drop because the more highly qualified worker is likely to be dissatisfied with the job. In sum, increasing the educational level of the workforce above a certain level, without concomitant changes in the structure of work to capitalize on the increased capabilities of workers, will probably exert a slightly negative impact on productivity.

On the positive side, the increasing overqualification of workers, who, ironically, have the educational backgrounds to articulate their dissatisfactions, could result in an overall improvement of working conditions, the creation of more interesting jobs (as employers consider how to adjust the demand to fit the supply), and greater amounts of industrial democracy with more workers sharing in corporate decision-making. Though the increasing educational attainment of the labor force has not had such an impact thus far, we must remember that the oversupply problem is still somewhat new, having begun only in the past 5 years. For discussion of social polarization and possible reform of work due to "overeducation," see Cary Hershey, "Educated Labor and Social Change," in Phillip Ritterbush (Ed.) Talent Waste Acropolis Books, Washington, D.C., 1972, pages 46-64; and Herbert Gintis, "The New WOrking Class and Revolutionary Youth," Sociological Revolution, May-June 1972.

In future years it may be necessary to develop new channels, and perhaps new definitions, for social opportunity and personal achievement. In looking to this task, it is important to recognize that schools should not be blamed for failures of society to provide opportunities for economic and occupational achievement.[58] The problem lies primarily with the world of work. In a society in which human capacities for achievement surpass the opportunities for achievement, it becomes necessary to either expand the opportunities, redistribute opportunities, or confront stagnation. Since the structural realities of the U.S. labor force are not likely to allow a significant expansion of opportunities, it may be necessary to redistribute opportunities by moving toward some type of rotational system for sharing not only the number of jobs, but the quality of work. In this sense, a cyclic life pattern, in which most persons open work and advancement opportunities to others by periodically leaving their jobs for extended periods, may well become the next step in American's traditional pursuit of achievement and equal opportunity.

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58. It must be noted that equal opportunities for educational attainment have been far less than perfect (Christopher Jencks et. al., Inequality, Harper Books, N.Y., 1972; O.T. Duncan, B. Duncan, and D.L. Featherman, Socioeconomic Background and Achievement, Seminar Press, N.Y., 1972; and Raymond Boudon, Education, Opportunity and Social Inequality, John Wiley and Sons, N.Y., 1973; Neugarten and Robert Havighurst, op. cit., pages 65-68; and William Sewell, "Inequality in Higher Education," American Sociological Review, October 1971, pages 793-809).

6. Social Change and Life Junctures. The overall rate of social change will have a crucial impact upon lifetime patterns by influencing the frequency and intensity of major junctures and adjustments within individual lives. Social change is a large and amorphous concept which touches upon many dimensions of life. While there are no comprehensive indicators, there is evidence that considerable change is occuring within American society. Empirical indicators dealing with the shifting structure of the labor force,[59] rate of major technological advancements,[60] travel and communications,[61] and

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59. Between 1960 and 1970, the proportion of the labor force working in the agricultural sector has declined from about 60 percent to about 4 percent. More recently, the labor force has been shifting about 1 percent a year. (Daniel Bell, op. cit., pages 130-134; and L. Broom and P. Selznik, Sociology, Harper and Row, N.Y., 1963, page 662; R. Hauser and D. Fetherman, "Trends in Occupational Mobility of U.S. Men, 1962-1970," American Sociological Review, June 1973, pages 302-310)

60. Two studies contracted by the National Commission on Technology, Automation and Employment in 1966 indicated that the time periods for the discovery, development and commercialization of major technologies such as the automobile or radio has declined greatly (Frank Lynn, "An Investigation of the Rate of the Development and Diffusion of Technologies in Modern Society," and Edwin Mansfield, "Technological Change; Measurements, Determinants and Diffusion" in National Commission on Technology, Automation and Employment, Appendix Volume II, The Employment Impact of Technological Change, U.S. Government Printing Office, Washington, D.C., 1966). While there have been indications that technological advancement rates may be slowing (Howard Bowen, "The Pace of Technology," Indian Journal of Social Research, August 1967, pages 73-82), it is reasonable to expect continuous and rapid rate of innovation in future years.

61. McHale, John, op. cit., page 64.

popular perceptions[62] suggest that overall social change is occuring at a rapid pace and that it will likely continue if not increase. In recent years, great emphasis has been placed upon technological advancements as the primary source of social change. While we have no argument with the importance given technology in this regard, we suspect that the primacy given to technology has often been exagerated and misinterpreted.[63] Nonetheless, technological advances interrelated with other forces such as international relations, natural resource depletion,[64] population growth and natural catastrophes suggest that rapid rates of social change will continue in the future.

7. Values Toward Time and Income. The preferences of American workers for time and income may be a major determinant of future lifetime patterns. While we have no conclusive data on this topic, there are a number of indications taht the American worker may prefer time-income tradeoff and work scheduling reforms which will foster more cyclic life patterns.

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62. Public Opinion Index, Ideological Trends: How Do People Feel About the Pace of Change Today? Opinion Research Corporation, Princeton, April 1970.

63. In many cases the importance of technology has been grotesquely overestimated. One case in point comes from the numerous social critics who maintained during the 1960's and early 1970's that the advancement of automation would lead to massive unemployment within a decade.

64. A controversial yet important analysis of the future impact of the depletion of nonrenewable natural resources can be found in Donella Meadows et. al., The Limits to Growth, Signet Books, N.Y., particularly pages 63-78.

A comprehensive review of behavioral, attitudinal, and consumer data[65] has indicated that worker tradeoff preferences between income and free time may be shifting toward more free time. This study suggested five major conclusions. First, the income level of the average American worker allows enough discretion for the exchange of money for more free time. Second, income remains a higher priority than free time. Third, the gap of preference between income and free time is declining. Fourth, future gains in free time are preferred in the form of extended time away from work such as vacations. Fifth, and most important, the way potential free time is scheduled is an important determinent of whether or not workers are willing to give up existing or potential income for more free time. Specifically, a few small studies indicate that if workers are asked to rank their choices between equally costly options such as a 2 percent pay raise, 50 minutes off the workweek and an additional week of paid vacation; they commonly choose vacation first, income second and shorter workweeks last.[66] The implications of this data are that those currently employed are willing to give up worktime during mid-life for extended periods of free time.

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65. Fred Best, "Changing Values Toward Material Wealth and Leisure." Policy research paper prepared for the Office of the U.S. Assistant Secretary for Education, Washington, D.C., (Contract No. POO-75-0221), January 1976.

66. S.M. Neally and J.D. Goodale, "Time-Off Benefits and Pay," Journal of Applied Psychology, Volume V, 1967; B. Chapman and R. Ottemann, "Employee Preferences for Various Compensation and Fringe Benefits," The Personnel Administrator, November 1975. Recent exploratory survey research conducted by Fred Best further supports these findings and will be published in the future.

Preliminary findings of recent survey research with a limited sample of workers provides a more specific indication of overall lifetime scheduling preferences. Responses from a non-random sample of 151 workers from manual and non-manual occupations suggest a high preference for cyclic life patterns (See Table 7).[67] Specifically, these workers were presented with three broad options for scheduling education, work and leisure throughout life. The options can be described as the "linear life plan," a moderate cyclic plan, and a fully developed cyclic plan. First, the workers were asked to rank these options in terms of their own personal preferences. The moderate cyclic plan was the first choice of 37.7 percent, the fully developed cyclic plan was chosen first by 29.8 percent, and the linear plan by 21.2 percent (11.3 percent did not give preferences). Second, the respondents were asked which plan they thought other persons would prefer. The results of this question suggest that people tend to think that everyone else prefers the type of life plan we currently have. Specifically, 37.1 percent thought others would prefere the "linear life plan," 37.7 percent thought their choice would be a moderate cyclic plan, and only 15.2 percent thought others would prefer the full cyclic plan. Third, when the respondents were asked which life plan would be best for the overall well being of society, most chose

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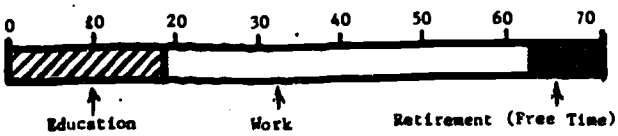
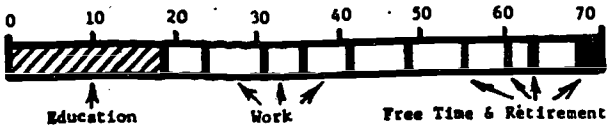
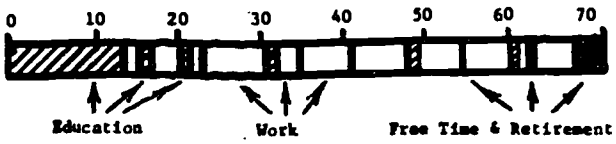
67. Data cited from survey pre-tests before questionnaire was administered to 800 employees of the County of Alameda, California. The final study is being prepared for publication (Quality of LIfe Research Associates, 925 25th Street #220, Washington, D.C. 20037).

Table 7: Personal Preferences and Opinions Toward Alternative Lifetime Patterns

Life Patterns Choices	Personal 1st Choice[1]	View of Others' Preferences[2]	Best for Societal Well Being[3]
A. Straight Progression from School to Work to Retirement: A life pattern in which all schooling and pre-work training is accomplished in youth or early adulthood, where one works full time with limited annual vacations during middle adult years, and enters full time retirement sometime after age 60. Thus school education is restricted to youth, work to middle adulthood, and free time to old age. Diagram of Option A:  	21.2%	37.1%	22.5%
B. Most Schooling in Youth with Several Rotations Between Work and Free Time Throughout the Remainder of Life: A life pattern in which most schooling and pre-work training is accomplished in youth or early adulthood, where one primarily works full time during middle adulthood but with extended periods away from work (for example 6 months) every 5 or 6 years, and increases the proportion of free time in later years until complete retirement in late 60's. Thus maximum retirement would be exchanged for extended free time periods in mid-life. Diagram of Option B:  	37.7%	37.7%	41.7%
C. Basic Schooling in Early Youth with Continuous Rotations Between Education, Work and Free Time Throughout the Remainder of Life: A life pattern in which basic education in essential skills (reading, math, etc.) ends early, where most persons leave school periodically starting in mid-teens for limited periods of work, and then finish high school and other education in the course of lifelong rotations between work, school and free time. Thus time spent for education in youth and time spent for retirement in later years would be reduced in exchange for extended periods of education and free time during the middle years of life. Diagram of Option C:  	29.8%	15.2%	25.8%
D. No Answer	11.3%	10.0%	9.9%

SOURCE: Data collected by Fred Best during period between July and September 1976. Responses selected from a questionnaire administered to 151 employees during work hours. Accidental sample included 51 manual (road construction) workers, 7 service workers, 36 clerical workers, and 52 professional and managerial workers.

1. Respondents were asked to rank above responses in order of personal preference.
2. Respondents were asked "Which of the life patterns described above do you think most persons would prefer?"
3. Respondents were asked "In your opinion, which of the life patterns described above would be best for the overall well being of society?"

one of the two cyclic plans. It should be noted that in terms of both personal preferences and overall societal well being, over 67 percent of the respondents chose one of the two cyclic life plans. While these data are not representative of the U.S. labor force, the heterogeneity of the sample allows us to speculate that American workers may prefer more cyclic life patterns.

8. Organizational Constraints and Options. While there are a number of social forces afoot which may foster or allow movement toward more cyclic lifetime patterns, there are also strong forces of institutional inertia that may make the emergence of more cyclic life patterns more fantasy than reality. Ultimately we must confront the critical question of whether or not the constraints and options of most work organizations can be adjusted to new patterns of life. Among the obstacles to more cyclic patterns which might be expected from such organizations and those who manage them are problems of organizational discontinuity, threats of losing trained personnel and possible business secrets to competitors, administrative costs of coordinating non-continuous employees, and fears by employees of all levels that they may lose both their jobs and organizational influence. Of course, more cyclic life patterns may also have positive impacts. For example, extended non-work time may allow both self-renewal and retraining of employees, worker morale and productivity may improve, non-productive and "dead-ended" workers may find new and more suitable jobs to the benefit of themselves and their old organization, and tax burdens for unemployment and welfare services may be lowered. Whether

these problems and benefits can realistically be managed or actualized, and whether the net effect would be positive or negative upon organization is perhaps the most critical question to be answered by those concerned with future lifetime distributions of education, work and leisure.

In evaluating the adaptability of work organizations to cyclic life patterns, it is important to recognize that their constraints and options vary tremendously. The product type, size structure and stability of organizations are important considerations. For example, the work scheduling flexibility of organizations concerned with continuous, year-round mass production is different from those concerned with seasonal or batch production. Similarly, a small firm will face different constraints and options than a large corporation. Likewise, the level of capital investment and nature of technologies will influence organizational flexibility.[68] The ways in which employees are organized is particularly important,[69] as is the overall stability

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68. For a general discussion of organizational constraints and options see Jay Galbraith, Designing Complex Organizations, Addison-Wesley Publishing Company, Reading, Massachusetts, 1973; James Thompson, Organizations in Action, McGraw-Hill Book Company, N.Y., 1967; and Curt Tausky, Work Organizations, Peacock Publishers, Itasca, Illinois, 1970, pages 76-117.

69. A strict hierarchical structure with high worker specialization will face different, but not necessarily more difficult problems in adjusting to cyclic life patterns than an organization typified by participative decisions and overlapping tasks. For a discussion of managerial styles and structures of employee organization, see Curt Tausky, op. cit., pages 24-75; George Straus et.al. (Ed.) Organizational Behavior, Industrial Relations Research Association, Madison, Wisconsin, 1974; Renesis Likert, Human Organizations, McGraw-Hill, N.Y., 1967; and Douglas McGregor, The Professional Manager, McGraw-Hill, N.Y., 1967.

and rate of organizational change.[70]

While there is, at this time, no systematic overview of the adaptability of work organizations to cyclic patterns of life, there are a number of indications that suggest widespread adaptions may be possible. The growth of progressively longer vacations[71] is an important case in point, suggesting that large numbers of organizations are finding it possible to adapt to extended absences by their employees. Other more limited and specific examples suggest that organizations have been adaptable to a wide variety of work scheduling innovations such as "flexitime,"[72] 4-day, 40-hour workweeks,[73] leaves of absence without pay,

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70. For a discussion of the effects of change upon organizational constraints and options, see James Thompson, op. cit., pages 25-38; Curt Tausky, op. cit., pages 96-110; Alvin Toffler, Future Shock, Random House, N.Y., 1970, pages 108-131; and Warren Bennis and Phillip Slater, The Temporary Society, Harper and Row, N.Y., 1968, pages 53-123.

71. While comprehensive and reliable figures on vacation time are rare, the U.S. Bureau of Labor Statistics estimates that the averag American worker's annual vacation has grown from 1.3 weeks in 1960 to 1.7 weeks in 1969 (Janic Hedges and Geoffrey Moore, op. cit.). Further, it was estimated that about 22 percent of all U.S. workers had paid vacations of 3 weeks or more in 1972 (U.S. Bureau of Labor Statistics Division of Compensation Structures).

72. Fred Best, "Flexible Work Scheduling: Beyond the 40 Hour Impasse," in Fred Best (ed.) The Future of Work, Prentice-Hall, N.J., 1973, pages 93-99; Janice Hedges, "New Patterns of Working Time," Monthly Labor Review, February 1973, pages 3-8; Virginia Maring and Jo Hartley, Hours of Work When Workers Can Choose, Business and Professional Women's Foundation, Washington, D.C., 1975.

73. Janice Hedges, "A Look at the 4-Day Workweek," Monthly Labor Review, October 1971, pages 33-37; and Riva Poor, 4-Days, 40-Hours, Bursk and Poor Publishers, Cambridge, 1970.

extended vacations sometimes approaching 3 months,[74] "cafeteria" time-income tradeoff options,[75] and a variety of work sabbatical programs.[76] On another dimension, a number of organizations experimenting with "job rotation" have reported positive results.[77] While further investigation and experimentation in this area is necessary, these trends and innovations suggest that the institutions of work can be adapted to more flexibility in the short and long-run scheduling of individual worktime.

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74. Fred Best, "Changing Values," op. cit., pages 41-46; U.S. Department of Labor, Bureau of Labor Statistics, Paid Vacations and Holiday Provisions, 1969.

75. An interesting "cafeteria plan" for providing workers with time-income tradeoff options has been put into effect by the County of Santa Clara, California. The plan gives employees the choice between keeping their current hours and pay or three additional pay-hour options. As described in a memo to employees dated July 16, 1976, these three options are: (a) 5 percent of current income traded for 10 1/2-days off, (b) 10 percent of current income traded for 21 days off, and (c) 20 percent of current income traded for two periods of 21 days off.

76. For some discussion see O'Toole, James, Work in America, MIT Press, Cambridge, 1973, pages 123-138; "Xerox Sabbaticals," Time, September 20, 1971, page 98; "Xeroxing Social Service," Business World, September 11, 1971, page 41; "Doing Good Works on Company Time: IBM Leave-for-Public-Service Program," Business World, May 13, 1972, pages 166-168; "How to Take a Mini-Sabbatical," Nation's Business, November 1974, pages 62; and United Steelworkers of America, Survey of Extended Vacations, Five Gateway Center, Pittsburg, Pennsylvania, 1972.

77. "The Job Blahs: Who Wants to Work?," Newsweek, March 26, 1973, page 79; and Michael Putney, "Work and Enjoy It, Inc., The National Observer, March 17, 1973, pages 1 and 16.

underutilization of skills and education.

Already there are several strong indications that Americans perceive these problems and are favorably disposed to alter the current distributions of work, leisure, and education. Women and students, who traditionally have not been workers, now want more work.[26] Prime age full-time workers, about 2/3 of whom are men and who have been provided generously with work are working about as many hours per week as they did 30 years ago[27] but indicate, nevertheless, that they would like more free time.[28] A sizeable proportion of retired workers would rather continue working, though perhaps for fewer

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26. That women and students want more work is most convincingly demonstrated by their increasing labor force participation rates during the last several years. The labor force participation rate for students 14 to 24 years of age increased from 20.5 percent in 1948 to 25.3 percent in 1960 to 35.0 percent in 1973. For women over 16 years of age, the rate increased from 32.7 percent in 1948 to 37.8 percent in 1960 to 45.7 percent in 1974 (Manpower Report of the President 1975). Now women represent 2 out of 5 members of the labor force and from 1940 to 1970 accounted for about 2/3 of the increase in the working population. Participation of mothers in the labor force rose even faster, showing a five-fold increase - from 9 percent to 42 percent - in that 30-year period. For an increasing number of women the time out of the labor force for purposes of child rearing is becoming shorter; many stay in the labor force at least part-time while their children are young. One out of three women with pre-school children is now in the labor force; 4½ million women with children under six are working. (Handbook of Labor Statistics, 1975).

27. Owen, op. cit.

28. See footnote 19.

hours per week, than retire completely. Finally, many adults of all ages appear to want additional and more varied education opportunities.[29]

The aforementioned work-leisure-education problems and desires of workers in different population groups are summarized in different population groups are summarized in Chart IV. The chart merely shows that in general different demographic or labor force groups have different problems and desires. These are represented by the shaded areas, which might be referred to as the "problem" or "target" area. Whether or not these perceived problems and desires will intensify during the remainder of this century will depend primarily on what happens to the linear life plan. If the current school-to-work-to-retirement pattern b becomes even more rigid and predominant, the problems and frustrations are likely to get worse. The social forces likely to influence lifetime patterns in the future are described in the following section.

SPECULATIONS ABOUT THE FUTURE: THE LIKELIHOOD OF CYCLIC LIFE PATTERNS

There can be little doubt that many of our most serious and persistent social problems stem from the ways in which education, work and leisure are

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29. Increased participation rates of adults in educational activities and the responsiveness of educational institutions to provide adults with more options for combining work and education indicate the growing desire for education among individuals who are beyond the normal school-going years. Conspicuously on the increase are those opportunities for adults variously described as open university or external degree programs.

CHART IV

PROBLEMS AND POPULATION GROUPS

	PROBLEMS & DESIRES \ CATEGORIES OF WORK FORCE	Young Entrants Into Work Force	Unemployed and Discouraged Workers	Part-Time & Under-Employed Workers	Fully Employed Workers	Re-Entrants (Women & Veterans)	Pre-Retirees	Retirees
WORK	Inadequate Job Opportunities	▨	▨	▨				
	Low Career Change/ Promotion Options				▨			
	Under Utilization of Skills and Potentials	▨		▨	▨	▨		
	Job Redundancy ("Featherbedding)				▨		▨	
EDUCATION	Inadequate Entry-Level Training	▨				▨		
	Need for Further General Education			▨	▨		▨	▨
	Inadequate Renewal or Upgrading Training		▨	▨	▨			
LEISURE	Desire for Extended Vacations & Travel			▨	▨		▨	▨
	Desire to Participate in Community Service				▨		▨	
	Desire to Improve Personal property				▨		▨	
	Personal Renewal & Recreational Skills				▨		▨	▨

distributed throughout lifetimes. The question before us is whether or not the problems and shortcomings resulting from current lifetime patterns are great enough to move us toward alternative patterns, and whether suitable alternatives exist. This section will seek to show how some of the forces we have discussed, as well as other factors, may converge to move U.S. society toward more cyclic patterns of life. With the explicit caveat that we are engaging in an intuitive or speculative exercise, we shall review briefly eight major factors which, in our opinion, will determine the likelihood of cyclic life patterns within American society.

1. Demographic Trends. The demographic variables of population size and the distribution of specific characteristics within a population represent powerful social forces. In the case of life patterns, the distribution of age cohorts, life longevity and the marginal issue of health are important considerations.

The distribution of age groups within American society has been and will continue to be a major determinant of lifelong distribution of education, work and leisure. As noted already, the post-World War II "baby boom" has given rise to an inordinately large proportion of persons now aged 16 to 30. This group, which crowded our school systems in the 1950's and 1960's and swelled the ranks of teenage workers, is now experiencing difficulty in moving past the lower echelons of the occupational ladder. Large portions of this age group have deferred their entry into career type work while prolonging their education,

in part because of the fierce competition for jobs. As this age group now moves into middle age, it will experience more difficulty than previous generations in getting career-type work; and they will find it more difficult to get promoted or to change into some other occupation providing similar status and pay. Further, this state of affairs will work to the disadvantage of workers from the subsequent "post-baby boom" generation, who will not be able to dislodge experienced workers who are "stuck" above them. For the next 30 years the increased competition for work, especially preferred work, will bring pressure at once for earlier compulsory retirement, more jobs and greater sharing of existing jobs.

If our current linear pattern of life persists, we can expect even further social tensions when this same "baby boom" generation begins to withdraw from the labor force around the year 2000. Since the next age cohort is significantly smaller, there may be an inadequate number of persons to fill the jobs developed by their predecessors. As a result, younger persons are likely to be drawn out of schooling and older persons detained from retirement to fill the demand for labor.[30]

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30. In passing, scarcity of revenue for social security benefits is also likely to reduce the ability to retire among many elderly persons (Gray, Robert, "Will the Social Security Bubble Burst?" Nation's Business, November 1974, pages 28-30 and 32).

On the basis of demographic forces alone,[31] the problems associated with the "linear life plan" are likely to worsen dramatically, with new problems abruptly taking their place around the year 2000. These forces will be highly disruptive and possibly destructive to the continuation of linear lifetime patterns.

Life longevity and health may be less important[32] forces affecting lifetime patterns. While past trends and prospective medical advances[33] do suggest that we can expect only minor increases in life longevity, the current U.S. lifespan of about 70 may be decreasing the general willingness to delay extended leisure until retirement and possibly fostering the need for mid-life training. Furthermore,

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31. There are, of course, other variables. Most notably, "hard" and "software" technological advances may allow a rapid replacement of human resources with capital, thus attenuate the demand for large numbers of persons to replace a retiring "baby boom" generation. For an example, see Revzin, Phillip, "Grinding Out More: How Current Gains in Production Look from the Factory Floor," Wall Street Journal, December 8, 1975.

32. Between 1940 and 1970, average life expectancy for U.S. males increased at decreasing rates from 61.2 years to 67.1 years as compared with an increase from 48.2 to 61.2 years between 1900 and 1940. Between 1960 and 1970 average life expectancy for U.S. males increased only .5 years (Fullerton, Howard N., "A Table of Expected Working Life for Men," Monthly Labor Review, June 1971, page 49). It is important to note that life expectancy for women is longer and increasing more rapidly for women than for men. Specifically, the average U.S. woman lives 2 years longer than the average man in 1900 and 7 years longer in 1966 (Toward a Social Report, U.S.H.E.W., U.S. Government Printing Office, Washington, D.C., 1969, page 1).

33. Ibid, page 2.

improved health in old age[34] is likely to decrease the desire of older workers for earlier retirement. Healthy workers will likely want to work more, not less; and because work in the future will probably be less physically demanding[35] older workers will be able to work more. The ability to continue working in old age will bring pressure for gradual, not earlier retirement.[36] In sum, current and prospective life longevity and health are, if anything, likely to be conducive to more cyclic patterns of life.

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34. Indicators of general health are difficult to find or develop. One indicator of "healthy life expectancy" (years of non-bed disability) computed by H.E.W. showed that the expectation ofa healthy life increased from 67.2 to 68.2 years between 1958 and 1966. This is a slightly faster growth of years of health than the increase of overall life expectancy from 69.5 to 70.2 years for the same time period. Expectation for healthy life for persons over the age of 65 increased from 13.1 to 13.5 years for the same period (Toward a Social Report, op. cit., pages 3-4). Other evidence suggests that pain free existence and non-bed disability has declined (Ibid, page 5; and Best, Fred, Quality of Life Report for Massachusetts, Institute for Man and the Environment, University of Massachusetts, Amherst, June 1975).

35. Daniel Bell, The Coming of Post-Industrial Society, Basic Books, N.Y., 1973, pages 134-164.

36. The rise of old age "liberation" groups such as the "Gray Panthers" and widespread problems in adjusting to "forced" retirement suggest that current or future expansion of leisure in old age may be increasingly resisted. See Wirtz, Willard et. al., The Boundless Resource, New Republic Book Company, WAshington, D.C., 1975, pages 140-145. A survey of persons over age 65 taken during the 1960's found that about one-third of this age group had been forced to retire due to compulsory retirement age policies (Lenore Epstein and Janet Murray, The Aged Population in the United States, Social Security Administration, Research Report 19, U.S. Government Printing Office, Washington, D.C. 1967, pages 345-348; Reaching Retirement Age, op. cit.

2. Sex Roles and Family Structure. Today there is cause to believe that changes in sex roles and family structure will be critical forces in fostering more cyclic life patterns. In short, growing family financial discretion, declining dependence ratios, natural constraints of women workers, and increasing flexibility of sex roles may foster a more cyclic distribution of lifetime activities.

Foremost, the increase of individual and family discretion due to the rise of women workers,[37] particularly working wives,[38] will enable more traditional male "breadwinners" to decline income earning work time in favor of more free time (or at least a better distribution of leisure within the family unit).[39] Correspondingly,

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37. Labor force participation of women rose from 31.8 percent in 1947 to 45.7 percent in 1974 (Handbook of Labor Statistics - 1975, Table I, page 27).

38. Specifically, the percentage of husband and wife families with two or more income earners has increased from about 36 percent in 1950 to 48 percent in 1975. Similarly, labor force participation for wives with husbands present has risen from 23.8 percent in 1950 to 44.4 percent in 1975 (Howard Hayghe, "Families and the Rise of Working Wives - An Overview," Monthly Labor Review, May 1976, page 13).

39. While possible, this may not lead to more free time for the family unit as a whole, it will likely have the effect of fostering a more even distribution of free time within the family unit (Kreps, Juanita, "some Time Dimensions of Manpower Policy," in Ginzberg, Eli (Ed.) Jobs for Americans, Prentice-Hall, 1976, page 187). More Immediately, it seems to have caused less free time for women, (Hedges, Janice and Barnett, Jeanne, "Working Women and the Division of Household Tasks," Monthly Labor Review, April 1972, pages 9-14).

the decline of family size and dependents[40] will likely decrease parental chores[41] and thus free more time and income both during and after childrearing years for nonwork activities.

While women today are working more during and shortly after pregnancy, the physiological necessities and preferences of increasing numbers of women workers to take at least some time away from their work activities for both pregnancy and child rearing will likely have the effect of increasing the flexibility of work hours and work years for both men and women.[42]

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40. It is difficult to measure "dependency" with a single statistic. One common measure is to look at the ratio of the sum of younger (under 18 years age) and older (65 and over) persons to the number of persons between these ages (18-64 years old). Past and future years with their recorded and projected "dependency ratios" are: 1945 (.59), 1960 (.82), 1975 (.71), 1990 (.65), 2005 (.59), and 2035 (.70). See Dennis Johnston, "Aging and the Baby Boom Cohorts," Statistical Reporter, March 1976, Table IV (Series II Projections). Another means of measuring "dependency" is the ratio of persons outside the labor force to those inside (nonworkers/workers). Actual and projected figures of this type have been computed. Respective ratios are: 1950 (1.38), 1955 (1.44), 1960 (1.50), 1965 (1.52), 1970 (1.38), 1975 (1.25), 1980 (1.15), 1985 (1.11) and 1990 (1.11). See Howard Fullerton, "New Labor Force Projections to 1990," Monthly Labor Review, December 1976.

41. In many cases, the decline in the number of children may lead to a commensurately increased expenditure of time and money per individual child (Meadows, Donella et al., The Limits to Growth, Signet Books, N.Y., 1972, pages 119-124).

42. As one case in point, the Business and Professional Women's Foundation sponsored one of the most extensive studies of "flexitime" (V.H. Martin and J. Hartley, Hours of Work When Workers Can Choose, 1975).

Husbands and wives are becoming increasingly flexible in exchanging work, household and child rearing responsibilities.[43] At least within the family unit, this increasing sex role flexibility is likely to allow major increases in life pattern options. While past sex roles froze men into the "breadwinner" duties and relegated women to the role of "housewife", increasing sex role flexibility is likely to expand the opportunity for spouses to rotate roles and thus free each other from the "linear life patterns" of the past.

Increasing divorce rates are likely to have a mixed impact upon lifetime patterns. On one hand, the increasing incidence of divorce will expand the number of one parent families and thus create greater financial and time constraints for the sole parent. However, many divorcees will remarry. On the whole, the process of divorce will likely increase the number of women workers; under some circumstances this may be conducive to more cyclic life patterns.

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43. While there are scarce data representing the overall U.S. population in this area, examples and indicators abound to suggest changing sex roles. For example, a survey study by the National Assessment for Educational Progress found that only 3 percent of women aged 17 years planned to be housewives (Epstein, Noel, "Career Education Study Cites Rivalry for Jobs," Washington, Post, November 9, 1976, page A4). This finding is supported by an earlier series of studies conducted by Daniel Yankelovich (The New Morality, Doubleday & Company, Garden City, N.Y., 1974, pages 95-102). Further accounts and interpretations of changing sex roles and family structures include Mayda Cordell, John McHale, and Guy Streatfield, "Women and World Change," and Szalai, Alexander, "Women's Time: Women in the Light of Contemporary Time-Budget Research," both in Futures, October 1975, pages 364-399; and Elise Boulding, "The FAmily as an Agent of Social Change," The Futurist, October 1972, pages 186-191.

3. Developmental Stages of Adulthood. Over the last few years several scholars have proposed that adults experience developmental stages, as do children and adolescents. While these life cycle theories remain highly speculative and empirical research inconclusive a growing literature[44] suggests some major implications for future lifetime patterns.

There appears to be some concensus that most adults progress through successive phases of stabilization and consolidation followed by change and growth as they puruse new goals and confront the changing crises of different ages.[45] In terms of lifetime patterns, there are a number of broad implications to these observations. First, if periodic realignment of values and life styles are indeed traits of adult development, it is possible that cyclic life patterns would correspond more to the needs and rhythms of adulthood than linear patterns.

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44. Some of the many sources of thought concerning adult developmental stages includes: Erickson, Erik, Childhood and Society, W.W. Norton, N.Y., 1950, pages 247-275; Gould, Roger, "The Phases of Adult LIfe: A Study of Developmental Psychology," American Journal of Psychiatry, Marriage and the Family, Volume 30, Number 1, 1968, pages 26-39; Levinson, Daniel, "The Psychological Development of Men in Early Adulthood and the Mid-Life Transition," Article published by the University of Minnesota Press, Minneapolis, 1974 (Levinson is currently completing a book entitled Toward a Conception of Adult Development); and a series of important articles collected in Neugarten, Bernice (Editor), Middle Age and Aging, University of Chicago Press, Chicago, 1968.

45. Our review of the literature in this area suggests about six stages and junctures during the human life span are commonly cited: First, there is the generalized stage of childhood in which the individual seeks to learn rudimentary skills. Second, the stage of adolescence in whcih the major concerns shift toward the development of identity and psychological severence from parents. Third, early middle years in which the individual seeks a place in the adult world in terms of mature relationships and economic autonomy. Fourth, mid-life where the individual confronts aging and re-evaluates his or her general course in life. Fifth, late middle years in which the individual confronts what he or she has become and is likely to become. Sixth, old age, with the realization of death and the necessity for finding and maintaining ongoing interests and engaging purposes.

In fact, it is possible that the prevailing linear life plan is robbing society of much creativity and productivity which evidence suggests[46] occur naturally among adults during mid-life junctures. In a society where many critics claim that our institutions are clogged with human "dead wood," a recognition of the productive potentials of mid-life self-renewal could foster institutional acceptance or support for more cyclic life patterns.

4. Methods of Education. Major reforms within educational institutions may foster both values and behavior more supportive of cyclic than linear life patterns. Most schools, from elementary through advanced graduate levels, have until recently been modeled after a traditional system typified by a straight succession of student years with teachers providing lectures, reading assignments and graded tests within a classroom setting.[47] While there were rare exceptions to this model of education,[48] it was not until the massive democratization of education during the 1960's that educational research and the political pressures fostered by a larger and more diverse educational

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46. For example, Judith Bardwick has noted that those women who have actively responded to the maturation and departure of their children have exhibited periods of high motivation and productivity ("The Dynamics of Successful People," New Research on Women, University of Michigan Press, Ann Arbor, 1974). It should be noted that research by Daniel Levinson suggests that this phenomenon may be less true of men than women. Also see Bernice Neugarten, "The Awareness of Middle Age" and Eunice and R.M. Belbin, "New Careers in Middle Age," in Bernice Neugarten (Ed.), op. cit., pages 93-98 and 341-346.

47. Charles E. Silberman, Crisis in the Classroom, Vintage Books, Random House, N.Y., 1971, pages 133, 229, 268 and 272.

48. Colleges such as Antioch, Oberlin, Goddard and Sara Lawrence have long held "traditions" of innovative educational approches.

constituency forced a widespread recognition that different individuals learn best under varying methods and time frames.[49] The result has been a wave of educational innovations such as student initiated courses, non-graded studies, academic credit for work and other experiences, vouchers and "learning contracts", residential colleges, decentralized campuses, ethnic curriculums, programs for the elderly, and equivalency examinations.[50]

While examples abound of such "non-traditional" methods, public statistics do not reflect yet the scope and impact of these reforms. It is reasonable to assume, nonetheless, that their effects have been significant and that the learning demands of a changing student clientele will support their continued existence and growth. In terms of future life patterns, the impact of "non-traditional" education will be generally conducive to more cyclic patterns. Their

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49. Although the elementary and secondary school years of the post-World War II "baby boom" generation during the 1950's and the advent of educational opportunity and "drop-out" prevention programs in the 1960's expanded the resources and level of innovation within elementary and secondary schools, the effects of educational democratization upon school systems were most evident at the post-secondary level during the 1960's. The enrollment of women, minority and "working class" students coupled with other forces created more heterogeneous and "activist" student bodies pressing for non-traditional "relevance."

50. Some references concerning these innovations include Herbert London, "The Case for Non'Traditional Learning," Change, June 1976, pages 25-59; Lifelong Learning Act of 1975, Hearing before the Subcommittee on Labor and Public Welfare, U.S. Senate, S. 2497, December 18, 1976, pages 686-696; Bernice Neugarten and Robert Havighurst, Society and Education, Allyn and Bacon, Inc., Boston, 4th Edition, 1975, pages 275-290, 357-362 and 443-445; and a series of descriptive essays in Beatrice and Ronald Gross, Radical School Reform, Simon and Schuster, N.Y., 1969.

continuance and likely growth will tend to increase the scheduling flexibility of schooling, and therefore foster increasing departures from current linear life patterns.

5. Education and Social Opportunity. The failing link between educational attainment and occupational advancement is fostering social tensions which may lead to more cyclic life patterns.[51] In previous decades, the rising needs for a highly skilled and educated labor force has merged with widespread desire for personal achievement within the context of equal opportunity to make extended years of schooling the central avenue for social mobility. For many years, schooling represented the "meritocratic" ideal: The rewards and valued positions in society would be distributed on the basis of proven effort and skill as evidenced primarily by educational certification. Today we are beginning to realize that the developed skills, not to mention the undeveloped potentials, within our population are

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51. While there is reputable debate upon the influence of values and beliefs upon the nature of society, and equally valid disagreements about the origins of perpetuation of values and beliefs, it can be farily claimed that the value placed upon the pursuit of individual achievement within the context of equal opportunity has been and will likely remain a major force within American society. Social observers from Alexis deTocqueville (Democracy in America, Mentor Books, N.Y., 1973, pages 41-61) to Daniel Bell (The Coming of Post-Industrial Society, Basic Books, N.Y., 1973, pages 408-455) have noted the importance of both the pursuit of achievement and equality as major social forces within the American culture.

The importance and nature of values as a social force is an unresolved issue within the social sciences. One side of this ongoing debate, commonly called "Functionalists", view values as having a somewhat pervasive and independent influence upon society. The other side of the issue, a group often called "conflict theorists", view values as arising from political accomodations forged out of conflict over scarce resources.

considerably greater than the demands of our labor market. Nonetheless, young people are continuing to stay in school longer in order to first avoid and then overcome competition with older workers and each other. As a result, more and more education is required for jobs of relatively stable skill requirements.[52] In the absence of other channels of opportunity, the true meaning of education to both occupational achievement and human fulfillment is being lost as those seeking advancement to compete by rushing to ever higher levels of "overeducation."

The increasing problem of "overeducation" is perhaps best illustrated by comparing the actual and projected growth in the proportion of college graduates in the labor force with the growth in the number of professional and technical jobs (the kind which most college graduates get) as a percentage of total civilian employment. Table 6 shows that while there has been since 1960 a very rapid and accelerated increase in the proportion of workers who are college graduates, the growth in the proportion of professional-technical jobs as a percentage of all employment will remain abou the same as 1975 (about 15 percent). Meanwhile, the proportion of college graduates in the labor force will increase about four percent by 1985. This translates to

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52. For example, James Bright has noted that the job of department store sales clerk generally required completion of eight years of schooling in 1900, and now commonly requires two years of college. Today, the same job is, if anything, less demanding. (James Bright, "Does Automation Raise Skill Requirements?" in Exploring the Dimensions of the Manpower Revolution, Subcommittee on Employment and Manpower, U.S. Senate, 88th Congress, 2nd Session, U.S. Government Printing Office, Washington, D.C., 1964, pages 558-580).

Table 6. Actual and Projected Shares of Professional-technical Employment for College Graduates, 1960-1985.

Year	College graduates as portion of total civilian labor force (%)	Professional-technical workers as portion of total civilian employment** (%)
1960	10.0	11.0
1965	11.7	13.0
1970	13.2	14.2
1975	16.9	15.0
1985*	20-21	14.9 - 15.4

* Projected estimates.

** Proportion of managers in labor force will decline by about 1-2 percent between 1975 and 1985.

SOURCE: 1985 projections by Bureau of Labor Statistics and by Froomkin, "Supply and Demand for Persons with Postsecondary Education," Policy Research Center paper prepared for Assistant Secretary for Education, U.S. Department of Health, Education, and Welfare, Washington, D.C., 1976.

a labor market surplus of millions of college graduates.[53] Even the rather conservative estimates of the U.S. Bureau of Labor STatistics project a surplus of 1.6 million college graduates in 1985.[54] Other analysts project an even greater oversupply. Joseph Froomkin, for example, assumes a lesser demand for professional-technical and managerial jobs than BLS because of technological advances and automation and a greater supply of college graduates due to the increased labor force participation and educational attainment of women. His figures project an oversupply of from 6 to 8 million college graduates.[55] The growing magnitude of this growing imbalance may have serious consequences.

Projected levels of "overeducation" will not only result in widespread suboptimization of human resources, but political discontent, job dissatisfaction and the counter productive effects of dampened occupational aspirations. The signs of this crisis are rapidly

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53. It has been suggested by some that college educated persons would not be "underemployed" in managerial jobs, and that such jobs will abound in future years (Bernice Neugarten and Robert Havighurst, op. cit., pages 302-305). In many cases this is true. However, it sould be noted that just as many professional and technical jobs do not require college degrees, many managerial positions such as foreperson positions and small proprietorships would "underemploy" persons with college educations. All in all, we suggest that the growth of professional and technical positions is a good index of the number of jobs which can utilize college graduates.

54. Unpublished projections provided by the Bureau of Labor Statistics, October 1976.

55. Joseph Froomkin, Supply and Demand for Persons with Post-Secondary Education, Policy Research Center paper prepared for the Office of the Assistant Secretary for Education, U.S. Department of Health, Education and Welfare, Washington, D.C., 1976.

becoming apparent. According to two recent surveys by the U.S. Department of Labor, one-fourth to one-third of the American workforce feel overqualified for their jobs.[56] Since feelings of overqualification are one of the strongest correlates of overall job dissatisfaction, an increase of such feelings could well result in poorer worker morale and decreased productivity.[57]

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56. Robert Quinn and Linda Shepard, Op. Cit.; Survey of Working Conditions conducted by the Survey Research Center, University of Michigan, Ann Arbor, completed for Employment Standards Administration, U.S. Department of Labor.

57. There is some evidence that the inflation of educational credentials may actually lead to a lowering of productivity. It was argued in the 1960's by Theodore Schultz and other "human capitalists" that investments in education were investments in the Gross National Product. These economists felt that upgrading the workforce educationally would lead to high productivity as underqualified workers were replaced by those with greater skills.

Ivar Berg (Education and Jobs: The Great Training Robbery, New York: Praeger, 1970, pp. 86-104) has argued that the reality of the process is quite different from the economists' model. What actually happens is a process of unproductive job dislocation by more highly qualified workers who may be forced to stay in or accept jobs not utilizing their education and bump slightly less qualified workers from their jobs. No increase in productivity occurs because the nature of the jobs is usually such that they do not require higher skills. Productivity may actually drop because the more highly qualified worker is likely to be dissatisfied with the job. In sum, increasing the educational level of the workforce above a certain level, without concomitant changes in the structure of work to capitalize on the increased capabilities of workers, will probably exert a slightly negative impact on productivity.

On the positive side, the increasing overqualification of workers, who, ironically, have the educational backgrounds to articulate their dissatisfactions, could result in an overall improvement of working conditions, the creation of more interesting jobs (as employers consider how to adjust the demand to fit the supply), and greater amounts of industrial democracy with more workers sharing in corporate decision-making. Though the increasing educational attainment of the labor force has not had such an impact thus far, we must remember that the oversupply problem is still somewhat new, having begun only in the past 5 years. For discussion of social polarization and possible reform of work due to "overeducation," see Cary Hershey, "Educated Labor and Social Change," in Phillip Ritterbush (Ed.) Talent Waste Acropolis Books, Washington, D.C., 1972, pages 46-64; and Herbert Gintis, "The New WOrking Class and Revolutionary Youth," Sociological Revolution, May-June 1972.

In future years it may be necessary to develop new channels, and perhaps new definitions, for social opportunity and personal achievement. In looking to this task, it is important to recognize that schools should not be blamed for failures of society to provide opportunities for economic and occupational achievement.[58] The problem lies primarily with the world of work. In a society in which human capacities for achievement surpass the opportunities for achievement, it becomes necessary to either expand the opportunities, redistribute opportunities, or confront stagnation. Since the structural realities of the U.S. labor force are not likely to allow a significant expansion of opportunities, it may be necessary to redistribute opportunities by moving toward some type of rotational system for sharing not only the number of jobs, but the quality of work. In this sense, a cyclic life pattern, in which most persons open work and advancement opportunities to others by periodically leaving their jobs for extended periods, may well become the next step in American's traditional pursuit of achievement and equal opportunity.

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58. It must be noted that equal opportunities for educational attainment have been far less than perfect (Christopher Jencks et. al., Inequality, Harper Books, N.Y., 1972; O.T. Duncan, B. Duncan, and D.L. Featherman, Socioeconomic Background and Achievement, Seminar Press, N.Y., 1972; and Raymond Boudon, Education, Opportunity and Social Inequality, John Wiley and Sons, N.Y., 1973; Neugarten and Robert Havighurst, op. cit., pages 65-68; and William Sewell, "Inequality in Higher Education," American Sociological Review, October 1971, pages 793-809).

6. Social Change and Life Junctures. The overall rate of social change will have a crucial impact upon lifetime patterns by influencing the frequency and intensity of major junctures and adjustments within individual lives. Social change is a large and amorphous concept which touches upon many dimensions of life. While there are no comprehensive indicators, there is evidence that considerable change is occuring within American society. Empirical indicators dealing with the shifting structure of the labor force,[59] rate of major technological advancements,[60] travel and communications,[61] and

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59. Between 1960 and 1970, the proportion of the labor force working in the agricultural sector has declined from about 60 percent to about 4 percent. More recently, the labor force has been shifting about 1 percent a year. (Daniel Bell, op. cit., pages 130-134; and L. Broom and P. Selznik, Sociology, Harper and Row, N.Y., 1963, page 662; R. Hauser and D. Fetherman, "Trends in Occupational Mobility of U.S. Men, 1962-1970," American Sociological Review, June 1973, pages 302-310)

60. Two studies contracted by the National Commission on Technology, Automation and Employment in 1966 indicated that the time periods for the discovery, development and commercialization of major technologies such as the automobile or radio has declined greatly (Frank Lynn, "An Investigation of the Rate of the Development and Diffusion of Technologies in Modern Society," and Edwin Mansfield, "Technological Change; Measurements, Determinants and Diffusion" in National Commission on Technology, Automation and Employment, Appendix Volume II, The Employment Impact of Technological Change, U.S. Government Printing Office, Washington, D.C., 1966). While there have been indications that technological advancement rates may be slowing (Howard Bowen, "The Pace of Technology," Indian Journal of Social Research, August 1967, pages 73-82), it is reasonable to expect continuous and rapid rate of innovation in future years.

61. McHale, John, op. cit., page 64.

popular perceptions[62] suggest that overall social change is occuring at a rapid pace and that it will likely continue if not increase. In recent years, great emphasis has been placed upon technological advancements as the primary source of social change. While we have no argument with the importance given technology in this regard, we suspect that the primacy given to technology has often been exagerated and misinterpreted.[63] Nonetheless, technological advances interrelated with other forces such as international relations, natural resource depletion,[64] population growth and natural catastrophes suggest that rapid rates of social change will continue in the future.

7. Values Toward Time and Income. The preferences of American workers for time and income may be a major determinant of future lifetime patterns. While we have no conclusive data on this topic, there are a number of indications taht the American worker may prefer time-income tradeoff and work scheduling reforms which will foster more cyclic life patterns.

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62. Public Opinion Index, Ideological Trends: How Do People Feel About the Pace of Change Today? Opinion Research Corporation, Princeton, April 1970.

63. In many cases the importance of technology has been grotesquely overestimated. One case in point comes from the numerous social critics who maintained during the 1960's and early 1970's that the advancement of automation would lead to massive unemployment within a decade.

64. A controversial yet important analysis of the future impact of the depletion of nonrenewable natural resources can be found in Donella Meadows et. al., The Limits to Growth, Signet Books, N.Y., particularly pages 63-78.

A comprehensive review of behavioral, attitudinal, and consumer data[65] has indicated that worker tradeoff preferences between income and free time may be shifting toward more free time. This study suggested five major conclusions. First, the income level of the average American worker allows enough discretion for the exchange of money for more free time. Second, income remains a higher priority than free time. Third, the gap of preference between income and free time is declining. Fourth, future gains in free time are preferred in the form of extended time away from work such as vacations. Fifth, and most important, the way potential free time is scheduled is an important determinent of whether or not workers are willing to give up existing or potential income for more free time. Specifically, a few small studies indicate that if workers are asked to rank their choices between equally costly options such as a 2 percent pay raise, 50 minutes off the workweek and an additional week of paid vacation; they commonly choose vacation first, income second and shorter workweeks last.[66] The implications of this data are that those currently employed are willing to give up worktime during mid-life for extended periods of free time.

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65. Fred Best, "Changing Values Toward Material Wealth and Leisure." Policy research paper prepared for the Office of the U.S. Assistant Secretary for Education, Washington, D.C., (Contract No. POO-75-0221), January 1976.

66. S.M. Neally and J.D. Goodale, "Time-Off Benefits and Pay," Journal of Applied Psychology, Volume V, 1967; B. Chapman and R. Ottemann, "Employee Preferences for Various Compensation and Fringe Benefits," The Personnel Administrator, November 1975. Recent exploratory survey research conducted by Fred Best further supports these findings and will be published in the future.

Preliminary findings of recent survey research with a limited sample of workers provides a more specific indication of overall lifetime scheduling preferences. Responses from a non-random sample of 151 workers from manual and non-manual occupations suggest a high preference for cyclic life patterns (See Table 7).[67] Specifically, these workers were presented with three broad options for scheduling education, work and leisure throughout life. The options can be described as the "linear life plan," a moderate cyclic plan, and a fully developed cyclic plan. First, the workers were asked to rank these options in terms of their own personal preferences. The moderate cyclic plan was the first choice of 37.7 percent, the fully developed cyclic plan was chosen first by 29.8 percent, and the linear plan by 21.2 percent (11.3 percent did not give preferences). Second, the respondents were asked which plan they thought other persons would prefer. The results of this question suggest that people tend to think that everyone else prefers the type of life plan we currently have. Specifically, 37.1 percent thought others would prefere the "linear life plan," 37.7 percent thought their choice would be a moderate cyclic plan, and only 15.2 percent thought others would prefer the full cyclic plan. Third, when the respondents were asked which life plan would be best for the overall well being of society, most chose

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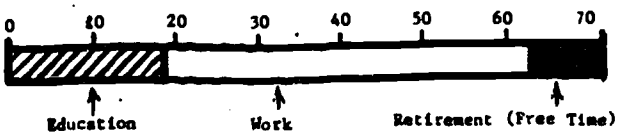
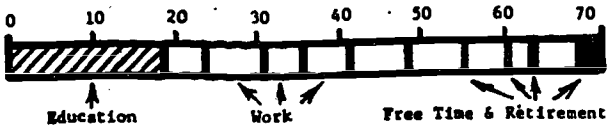
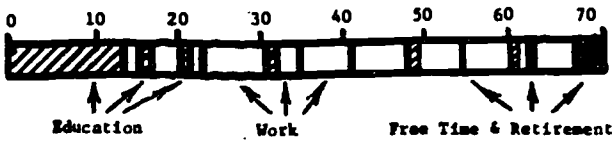
67. Data cited from survey pre-tests before questionnaire was administered to 800 employees of the County of Alameda, California. The final study is being prepared for publication (Quality of LIfe Research Associates, 925 25th Street #220, Washington, D.C. 20037).

Table 7: Personal Preferences and Opinions Toward Alternative Lifetime Patterns

Life Patterns Choices	Personal 1st Choice[1]	View of Others' Preferences[2]	Best for Societal Well Being[3]
A. Straight Progression from School to Work to Retirement: A life pattern in which all schooling and pre-work training is accomplished in youth or early adulthood, where one works full time with limited annual vacations during middle adult years, and enters full time retirement sometime after age 60. Thus school education is restricted to youth, work to middle adulthood, and free time to old age. Diagram of Option A:  	21.2%	37.1%	22.5%
B. Most Schooling in Youth with Several Rotations Between Work and Free Time Throughout the Remainder of Life: A life pattern in which most schooling and pre-work training is accomplished in youth or early adulthood, where one primarily works full time during middle adulthood but with extended periods away from work (for example 6 months) every 5 or 6 years, and increases the proportion of free time in later years until complete retirement in late 60's. Thus maximum retirement would be exchanged for extended free time periods in mid-life. Diagram of Option B:  	37.7%	37.7%	41.7%
C. Basic Schooling in Early Youth with Continuous Rotations Between Education, Work and Free Time Throughout the Remainder of Life: A life pattern in which basic education in essential skills (reading, math, etc.) ends early, where most persons leave school periodically starting in mid-teens for limited periods of work, and then finish high school and other education in the course of lifelong rotations between work, school and free time. Thus time spent for education in youth and time spent for retirement in later years would be reduced in exchange for extended periods of education and free time during the middle years of life. Diagram of Option C:  	29.8%	15.2%	25.8%
D. No Answer	11.3%	10.0%	9.9%

SOURCE: Data collected by Fred Best during period between July and September 1976. Responses selected from a questionnaire administered to 151 employees during work hours. Accidental sample included 51 manual (road construction) workers, 7 service workers, 36 clerical workers, and 52 professional and managerial workers.

1. Respondents were asked to rank above responses in order of personal preference.
2. Respondents were asked "Which of the life patterns described above do you think most persons would prefer?"
3. Respondents were asked "In your opinion, which of the life patterns described above would be best for the overall well being of society?"

one of the two cyclic plans. It should be noted that in terms of both personal preferences and overall societal well being, over 67 percent of the respondents chose one of the two cyclic life plans. While these data are not representative of the U.S. labor force, the heterogeneity of the sample allows us to speculate that American workers may prefer more cyclic life patterns.

8. Organizational Constraints and Options. While there are a number of social forces afoot which may foster or allow movement toward more cyclic lifetime patterns, there are also strong forces of institutional inertia that may make the emergence of more cyclic life patterns more fantasy than reality. Ultimately we must confront the critical question of whether or not the constraints and options of most work organizations can be adjusted to new patterns of life. Among the obstacles to more cyclic patterns which might be expected from such organizations and those who manage them are problems of organizational discontinuity, threats of losing trained personnel and possible business secrets to competitors, administrative costs of coordinating non-continuous employees, and fears by employees of all levels that they may lose both their jobs and organizational influence. Of course, more cyclic life patterns may also have positive impacts. For example, extended non-work time may allow both self-renewal and retraining of employees, worker morale and productivity may improve, non-productive and "dead-ended" workers may find new and more suitable jobs to the benefit of themselves and their old organization, and tax burdens for unemployment and welfare services may be lowered. Whether

these problems and benefits can realistically be managed or actualized, and whether the net effect would be positive or negative upon organization is perhaps the most critical question to be answered by those concerned with future lifetime distributions of education, work and leisure.

In evaluating the adaptability of work organizations to cyclic life patterns, it is important to recognize that their constraints and options vary tremendously. The product type, size structure and stability of organizations are important considerations. For example, the work scheduling flexibility of organizations concerned with continuous, year-round mass production is different from those concerned with seasonal or batch production. Similarly, a small firm will face different constraints and options than a large corporation. Likewise, the level of capital investment and nature of technologies will influence organizational flexibility.[68] The ways in which employees are organized is particularly important,[69] as is the overall stability

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68. For a general discussion of organizational constraints and options see Jay Galbraith, Designing Complex Organizations, Addison-Wesley Publishing Company, Reading, Massachusetts, 1973; James Thompson, Organizations in Action, McGraw-Hill Book Company, N.Y., 1967; and Curt Tausky, Work Organizations, Peacock Publishers, Itasca, Illinois, 1970, pages 76-117.

69. A strict hierarchical structure with high worker specialization will face different, but not necessarily more difficult problems in adjusting to cyclic life patterns than an organization typified by participative decisions and overlapping tasks. For a discussion of managerial styles and structures of employee organization, see Curt Tausky, op. cit., pages 24-75; George Straus et.al. (Ed.) Organizational Behavior, Industrial Relations Research Association, Madison, Wisconsin, 1974; Renesis Likert, Human Organizations, McGraw-Hill, N.Y., 1967; and Douglas McGregor, The Professional Manager, McGraw-Hill, N.Y., 1967.

and rate of organizational change.[70]

While there is, at this time, no systematic overview of the adaptability of work organizations to cyclic patterns of life, there are a number of indications that suggest widespread adaptions may be possible. The growth of progressively longer vacations[71] is an important case in point, suggesting that large numbers of organizations are finding it possible to adapt to extended absences by their employees. Other more limited and specific examples suggest that organizations have been adaptable to a wide variety of work scheduling innovations such as "flexitime,"[72] 4-day, 40-hour workweeks,[73] leaves of absence without pay,

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70. For a discussion of the effects of change upon organizational constraints and options, see James Thompson, op. cit., pages 25-38; Curt Tausky, op. cit., pages 96-110; Alvin Toffler, Future Shock, Random House, N.Y., 1970, pages 108-131; and Warren Bennis and Phillip Slater, The Temporary Society, Harper and Row, N.Y., 1968, pages 53-123.

71. While comprehensive and reliable figures on vacation time are rare, the U.S. Bureau of Labor Statistics estimates that the averag American worker's annual vacation has grown from 1.3 weeks in 1960 to 1.7 weeks in 1969 (Janic Hedges and Geoffrey Moore, op. cit.). Further, it was estimated that about 22 percent of all U.S. workers had paid vacations of 3 weeks or more in 1972 (U.S. Bureau of Labor Statistics Division of Compensation Structures).

72. Fred Best, "Flexible Work Scheduling: Beyond the 40 Hour Impasse," in Fred Best (ed.) The Future of Work, Prentice-Hall, N.J., 1973, pages 93-99; Janice Hedges, "New Patterns of Working Time," Monthly Labor Review, February 1973, pages 3-8; Virginia Maring and Jo Hartley, Hours of Work When Workers Can Choose, Business and Professional Women's Foundation, Washington, D.C., 1975.

73. Janice Hedges, "A Look at the 4-Day Workweek," Monthly Labor Review, October 1971, pages 33-37; and Riva Poor, 4-Days, 40-Hours, Bursk and Poor Publishers, Cambridge, 1970.

extended vacations sometimes approaching 3 months,[74] "cafeteria" time-income tradeoff options,[75] and a variety of work sabbatical programs.[76] On another dimension, a number of organizations experimenting with "job rotation" have reported positive results.[77] While further investigation and experimentation in this area is necessary, these trends and innovations suggest that the institutions of work can be adapted to more flexibility in the short and long-run scheduling of individual worktime.

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74. Fred Best, "Changing Values," op. cit., pages 41-46; U.S. Department of Labor, Bureau of Labor Statistics, Paid Vacations and Holiday Provisions, 1969.

75. An interesting "cafeteria plan" for providing workers with time-income tradeoff options has been put into effect by the County of Santa Clara, California. The plan gives employees the choice between keeping their current hours and pay or three additional pay-hour options. As described in a memo to employees dated July 16, 1976, these three options are: (a) 5 percent of current income traded for 10 1/2-days off, (b) 10 percent of current income traded for 21 days off, and (c) 20 percent of current income traded for two periods of 21 days off.

76. For some discussion see O'Toole, James, Work in America, MIT Press, Cambridge, 1973, pages 123-138; "Xerox Sabbaticals," Time, September 20, 1971, page 98; "Xeroxing Social Service," Business World, September 11, 1971, page 41; "Doing Good Works on Company Time: IBM Leave-for-Public-Service Program," Business World, May 13, 1972, pages 166-168; "How to Take a Mini-Sabbatical," Nation's Business, November 1974, pages 62; and United Steelworkers of America, Survey of Extended Vacations, Five Gateway Center, Pittsburg, Pennsylvania, 1972.

77. "The Job Blahs: Who Wants to Work?," Newsweek, March 26, 1973, page 79; and Michael Putney, "Work and Enjoy It, Inc., The National Observer, March 17, 1973, pages 1 and 16.

PUBLIC POLICY CONSIDERATIONS

While Americans appear to want to diminish the inequities in the distribution of work, leisure, and education, there is little consensus about how to do it. Some would redistribute more equitably the amount of work (and hence leisure) that people have by introducing a shortened workweek (4-day, 32-hour), limiting the work year or prohibiting forced overtime; others would effect such a redistribution by expanding the total amount of employment through government-subsidized public works and public service employ ment Others would redistribute more equitably the preferred career-type jobs through such schemes as job sharing and the creation of more part-time jobs in highly skilled occupations.[78] Schemes to redistribute leisure include guaranteed minimum amounts of paid or unpaid annual vacation, extended vacations as reward for length of service, greater opportunities to take leave of absence without pay, and laying off workers (when that is required) in reverse order of seniority with Supplemental Unemployment Benefits. Finally, schemes to redistribute education more equitably to adults include a variety of entitlement or voucher plans, paid or unpaid educational leave, work sabbaticals, and the countercyclical use of unemployment insurance to support job-related education and training (see Chart V).

Obviously, there is considerable overlap among proposals to redistribute work, leisure, and education. Redistribution in one

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78. Required short-term public service for the young would have the opposite effect: it would give young people an even greater share of the unskilled jobs than they have now.

CHART V

PROPOSALS FOR DISTRIBUTION OF WORK, EDUCATION & LEISURE

WORK

Public Service Employment
Public Works Projects
Youth Domestic Service Corps (e.g. CCC)
Work/Job Sharing
Creation of More Skilled Part-Time Jobs
Creation of Own Public Service Jobs (e.g. Canadian Y.O.P.)
No Forced Over-Time

LEISURE

Shortened Workweek
Longer Annual Vacations
Extended Vacations or Sabbaticals
Gradual Retirement Plans
Earlier Retirement
Fuller Vesting of Pensions
Supplemental Unemployment Benefits
for Workers with Seniority
Leave of Absence without Pay
"Cafeteria" Benefit Plans Featuring Leisure

EDUCATION

Entitlements or Vouchers
Paid and Unpaid Educational Leave
Educational Sabbaticals
Tuition Assistance for Low-income
Adults (Part-Time Study)
Tuition Aid or Refund
Countercyclical Use of Unemployment
Insurance for Education
Public Adult and Continuing Education
Vestibule Training
Job Corps
Opportunity Industrial Centers

area is almost certain to effect a redistribution in the other two. If someone works less, he is almost certain to have more leisure and hence more time, if not money, to engage in further education. If someone continues his education, he will become somewhat more likely to obtain work, especially higher skilled work. If someone gets higher skilled work, he is likely to get more opportunities to participate in further education, etc.

Despite general agreement that the present system of progression from school during youth to work during adulthood to retirement during old age is too rigid, there is little agreement about which of the redistribution schemes noted above are most likely to result in a more cyclical or rhythmical life pattern.[79] People concerned with full employment tend to focus on proposals to expand the number of jobs and to redistribute work. People concerned with the arts and other cultural activities tent to be more attracted to proposals which increase the amount of discretionary leisure time. And educators, naturally, will look favorably on proposals to promote education among adults who have had lesser amounts of it.

The present state of knowledge, unfortunately, makes it difficult to choose rationally among the many alternatives listed in Chart V.

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79. Despite widespread reservations about the efficacy and desirability of this lock-step system, negative labeling of people who do not conform to this pattern still obtains. Willard Wirtz (The Boundless Resource, Washington, D.C.: The New Republic Book Co., 1975), for example, says that any 17-year-old not in school is a dropout; any healthy 40-year-old not at work is called a laggard; and a 70-year-old still at work is an anomaly or a "workaholic".

While the evidence is mixed, it does tend to favor the point of view that if you have enough jobs, most of the other human resource problems are going to take care of themselves. And most people would agree that the best way to provide jobs is through a faster rate of economic growth.

What happens, however, if the economy does not expand and jobs are not created fast enough for all who want them? What if the unemployment rate does not go down? What if the public jobs that are going to be created by new legislation are the same kinds of public jobs that we created in the 1960's -- dead-end jobs with no career potential which tend to disappear as soon as the federal subsidy for them disappears? What happens if we have increasing amounts of job stagnation and boredom due to economic and demographic forces which prevent an increasing number of workers from getting promoted ("stepping up") or changing occupations ("stepping out")? Finally, what if the extent of featherbedding increases, where two people are paid to do the work that one can do? These are very serious problems which are likely to become even more entrenched and solidified if the linear life plan -- the current system for distributing work among the three major age groups -- is allowed to continue unchecked.

How can society address these problems? We don't know, but, nonetheless, suspect that in addition to looking at alternatives to stimulate economic growth, create public jobs, and share work through shortened workweeks, our society should begin to consider the new alternative of more cyclic life patterns. As already noted, this new approach would enable and encourage mid-career people to leave their jobs temporarily

and engage in leisure, education or community service activities. If enough workers were to choose such an option, a labor shortage or job vacancy situation would be created which could be filled by unemployed or underemployed persons.[80] In short, we are advocating that Americans investigate, discuss and debate the desirability and feasibility of addressing the problems of access to jobs, leisure and education at the same time with the same programs.

The immediate challenge before us might be portrayed by Chart VI labeled "Problems and Programs" (the title refers to the vertical and horizontal axes, respectively). The shaded areas represent hypotheses about which personal problems and desires are likely to be met by proposed work-, leisure-, or education-related programs. The chart suggests, logically, that different programs do different things. Moreover, it suggests what they do not do. Both considerations are important before a decision is made to push one program or another.

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80. This raises the issue of whether the workers who substitute for the ones who temporarily leave their jobs can perform adequately. Two Labor Department-funded studies suggest that for many jobs (if not most), people are not as indispensable as they think. Specifically, these studies found that welfare recipients who participated in public employment programs performed their jobs about as well as the previous incumbents of those jobs, who, incidentally, had more job experience and higher educational attainment than the welfare group (see Auerbach Associates, Inc. "Welfare Demonstration Evaluation Project," Department of Labor Contract No. Auer-1989-200, 1974; National Planning Association, "Evaluation of the Economic Impact Project of the Public Employment Program," Department of Labor Contract No. 43-2-001-11-73, May 1974). Ivar Berg (op. cit.) corroborates this by his finding that employer ratings of workers' job performance in most occupations are not related to their educational attainment.

CHART VI
PROBLEMS AND PROGRAMS

PROBLEMS \ PROGRAMS		WORK			EDUCATION			LEISURE			
		Public Service Employment	Public Works Projects	Job Sharing & More Part-Time	Entitlements or Vouchers	Educational Leave, Sabbatical	Tuition Assistance Low-income Adults	Shorter Workweeks	Longer Annual Vacations	Extended Vacations & Sabbaticals with Pay	Gradual/Earlier Retirement
WORK	Inadequate Job Opportunities	▨	▨	▨		▨		▨	▨	▨	▨
	Low Career Change Opportunities			▨	▨	▨	▨		▨	▨	
	Under-Utilization of Skills & Potentials		▨	▨						▨	
	Job Redundancy ("Featherbedding")			▨		▨			▨	▨	▨
	Undue Job Fatigue			▨				▨	▨	▨	▨
EDUCATION	Inadequate Job Upgrading & Renewal Training			▨	▨	▨	▨	▨	▨	▨	
	Continuation of General Education			▨	▨	▨	▨		▨	▨	▨
LEISURE	Leisure Incompetence			▨			▨	▨	▨	▨	▨
	Extended Time for Leisure & Travel								▨	▨	▨
	Desire to Participate in Community Affairs			▨				▨	▨	▨	▨
	Desire to Improve Personal Property			▨				▨	▨	▨	▨

Two major propositions flow from the consideration of this chart. The first is that when a single program cuts across or addresses several problems at one time, it is going to be more efficient and less costly than programs which are very narrow, categorical and highly specialized for different constituency groups. Incremental categorical programs for special groups and directed to limited objectives frequently fail to achieve their objectives and leave the big underlying problems and institutional rigidities largely unchanged. Moreover, in the aggregate these categorical programs are very costly.

The second proposition is that it would be a mistake to focus on only one variable or problem with respect to human resource development and not on the others. If we focus only on education, for example, it is likely that the problems associated with the linear life plan will get worse, not better. In fact, such an emphasis might exacerbate the problem of "overeducation" in which people continue to credential themselves beyond the level necessary for available jobs. Indeed, a one-dimensional emphasis on education could lead to programs resulting in a regressive transfer of income in which the middle-class providers of services benefit more than the low income target group.[81] Finally,

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81. Experience with the manpower training and work experience programs of the 1960's is instructive here. See Orley Ashenfelter, "Manpower Training and Earnings," Monthly Labor Review, April 1975; Robert Smith and Hugh Pitcher, "The Neighborhood Youth Corps: An Impact Evaluation," (Technical Analysis Paper No. 10 prepared for Office of Assistant Secretary for Policy, Evaluation, and Research, U.S. Department of Labor, 1973).

If no income test is required for participation, categorical education programs for adults become even more regressive inasmuch as the relatively affluent characteristically take advantage of these programs

the case has not been made that formal education for adults is a more worthwhile use of leisure time than reading at home, working on one's house or boat, taking an extended vacation, or participating in community activities. In this sense, a unidimensional focus upon education, work or leisure without careful integration with the other two is neither likely to engage public interest nor solve pressing social problems.

Recommendations for Federal Policy. The preceding pages have argued that the job shortage problem is unlikely to be improved by a mere expansion of education or training opportunities. The problem is more likely to be resolved by a strategy which promotes macro-economic expansion as well as greater flexibility in working life through a more equitable distribution of work, leisure, and education between the younger, middle-aged, and older cohorts of the population. Although a policy to provide more career-related work to younger and older people while providing more leisure and educational opportunities to mid-career people is appealing, there is little likelihood that the nation will make a major effort in the near future to restructure or redistribute work. It is recommended, nonetheless, that a variety of

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and the poor do not, thereby widening the "credentials gap" between social classes.

In fact, this is exactly what has occurred with the recurrent education programs for adult workers in several European countries (see Mark Blaug, "Recurrent Education -- The New Jerusalem," Policy Research Center paper prepared under auspices of Joseph Froomkin, Inc. for Assistant Secretary for Education, U.S. Department of Health, Education, and Welfare, 1976).

federal activities be pursued which would contribute in a modest way toward the end of making working life more flexible while providing valuable information which would be needed before contemplating more dramatic steps. In order of progressing degrees of involvement, the federal government could:

1. Expand research to assess the kinds of life scheduling patterns which appeal to people as well as serve the collective public interest. Various redistribution plans should be compared and contrasted in terms of their likely impact on the economy and political structure. Such plans might include the shortened workweek or workyear, public employment, including required public service for the young, job sharing, work sabbaticals, extended vacations as reward for length of service, guaranteed leave of absence without pay, and age-neutral educational entitlement plans which might take the place of some of the present federal student aid programs. Following such a study, the federal government might support some of these on an experimental basis; furthermore, it should carefully evaluate and monitor such programs when they are initiated by state and local governments or by business and industry.

A small unit or clearinghouse would be established in the Education Division to collect and disseminate information on activities related to the flexibility of working life and lifelong learning. In addition to providing descriptive information about such programs, the clearinghouse would keep records of relevant research and evaluation efforts and would disseminate annotated bibliographies of these as well. On occasion, clearinghouse staff would prepare (in-house) or contract out state-of-the-art or policy analysis papers which utilize the research and evaluation studies stored in the clearinghouse. Of particular interest would be studies on how flexible arrangements for combining work, leisure, and education affect productivity, rate of job changing and turnover, total company employment, worker health and job satisfaction, family life, and worker educational attainment and participation in available education or training. Finally, technical assistance staff would constantly arrange conferences, meetings, workshops, and courses on the subject of flexibility of working life, involving when appropriate other federal agencies having relevant concerns (Labor, Commerce, Commission of Productivity and the Quality of Working Life, etc.).

2. Help states establish occupational and educational information systems as well as (education consumer) brokering services which would help individuals of all ages make more intelligent choices about careers and educational and leisure activities. The development of career information systems makes as much sense for adults as for youth. Youth need general and comprehensive information about occupations and educational opportunities in order to facilitate career decisionmaking and entry into career type work. Adults need

operational, short-run and specific information about the labor market and training opportunities to facilitate job or career change or reentrance into the labor force. For those who look outside of work for sources of life satisfaction, information and guidance services are desirable to help people learn about the multitude of adult education and recreation activities available in the community. Several experimental and demonstration programs indicate the feasibility and desirability of establishing such systems while providing early federal guidance.

3. Consider legislation which would enable more workers to take a temporary leave of absence from their jobs in order to participate in activities which might facilitate career or life improvement, renewal, or redirection. Such a law would help neutralize economic and demographic forces which inhibit risk-taking with respect to changing jobs or preparing oneself in school to qualify for another or a better job. It would also provide people the time to "do the things they've always wanted to do" before their retirement years. Finally, it would provide preretirees the opportunity to prepare for retirement or to experience it somewhat before it is actually upon them.

Ultimately, a range of options along a spectrum of minimal to considerable amounts of federal involvement or regulation should be evaluated. One type of option would provide financial or tax incentives for employers who agree to allow employees to take leaves of absence. A more activist option would guarantee employees the right to take temporary leave. In both cases, the amount of leave would likely depend on the length of service with the employer. If, indeed, national consensus could be rallied around some plan, a plausible next step would be to find ways to maintain income during the leave of absence. Short of a federal program to do this, labor and management might work out payroll savings or flexible pension plans and the like which could supply some income during this period.

CONCLUSION

The job shortage problem might persist well into the rest of this century. The traditional remedies of macroeconomic expansion and public jobs might not be enough, given the fact that women, youth, and minorities want -- indeed, are demanding -- a greater share of available jobs, especially the preferred jobs. The presence of these "new workers" with serious vocational aspirations suggests that work sharing in the

form of more cyclic life patterns be considered as a third alternative for coping with the job shortage problem. One advantage of this approach is that it can be structured to deal with a number of social problems simultaneously, particularly inadequate access to leisure and education throughout life, and the need to ease the "lockstep" progression from school to work to retirement. Achieving the goal of making work more accessible, while making education and leisure more accessible as well, merits high priority on the nation's policy research agenda.