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Publication Date

1969-10-01

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THE LIFE CYCLE AS A BASIS FOR SOCIAL POLICY
AND SOCIAL INDICATORS

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October 16, 1969

Working Paper No. 106
(Revised)

Revised December, 1969

This paper was supported in part by a grant from the Economic Development Agency.

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Figure of Life Cycle Stages

THE LIFE CYCLE AS A BASIS FOR SOCIAL POLICY AND SOCIAL INDICATORS

Social indicators can be oriented specifically towards individual development. I shall suggest an indicator of individual development, look into a specific realization of it and look at some associated problems. I shall give an example which shows how such an indicator might well be correlated with futurist studies.

Considering individual development, I view the life cycle process as a series of steps. A person joining this series gets to a step after having fulfilled the requirements for the previous steps. This is somewhat like ideas suggested by Erik Erickson. He sees the life cycle as a crisis process--the individual must get through a series of crises as he matures.¹

I would measure, first of all, the number of people who succeed in getting to any single point within the life cycle process. If an individual fails to reach a certain level, we assume he has dropped out of the development process and has been lost to the social system entirely. The benefits, viewed in this manner, are the number of people who get to a certain point, the longevity in the life cycle process, and the distribution of people who do achieve certain levels of success within the life cycle process. Benefits might also be indicated according to the positive contributions made by people who succeed in achieving a certain level of life cycle development. The costs are the costs of the programs themselves, as well as the costs

¹E. Erikson, Identity: Youth and Crisis, W.W. Norton (New York, 1968) and "Life Cycle," International Encyclopedia of Social Science, MacMillan, 1968.

of the lost individuals--an individual who drops out of a life cycle process is assumed to be lost to the system and costs the system a large amount of money.

We assume that the social system provides a large number of the means by which a person achieves success in the life cycle process. (Admittedly, however, an arguable point.) Furthermore, we must recognize that even some of the most intimate aspects of personal development are social system oriented procedures. In a Kibbutz situation, for example, the process of weaning a child is a socially determined, positively oriented, developmentally known process. Of course the Kibbutz is a very special situation. Measures of individual development may be useful for social accounting, for a social indicator, and as a program evaluation technique. Appendix I discusses a specific way of using the life cycle process as a measure.

Value of Life Cycle Indicators

The value of a life cycle indicator as proposed above is that it orients the evaluation of social policy and the social quality of our lives towards the individual and his development. Ordinary types of indicators are programmatic in orientation: they look at housing or education programs or health services, for example. A life cycle indicator, however, cuts across these and thus can be viewed as a cross matrix onto the programmatic indicators.

A life cycle orientation is foreign to several of the social sciences. Economists, for example, do not look at the savings and accumulation of capital as processes occurring within the life cycle of individuals and

families, for example, so much these days. But perhaps this would be a valuable approach.² Life cycle indicators might give directions for reorienting the kind of research we do within the social sciences.

A second value of such an indicator is its emphasis on individual development. The ordinary programmatic indicators do not tell you how they all connect up in the case of an individual, a family, or a group. In fact, it is not at all clear that if our policies provide certain amounts of housing, certain amounts of education, certain amounts of health services, and so forth, they produce any "better" individuals than would result otherwise. Obviously, there are trade-offs among these various policies and provisions: more schooling may well compensate for less or more housing, for example. The cross-correlations of ordinary programmatic indicators can be put together by an orientation toward the individual.

A life cycle indicator is also useful if one believes that we are going to start interfering in a positive creative way with the affective quality of people's lives, as well as the cognitive values that we frequently interfere with in social policies. I think, in fact, that this will happen. I think that we will become more and more capable of dealing with the emotional aspects of life, trying to deal with these problems in a fairly positive way rather than by handling them through secondary and tertiary effects. And then we will really want to ask about how these things affect the individual.

Finally, an orientation towards the life cycle calls for new judgments of value. Let me suggest what they might be. We can now ask the

²As suggested to me by H. Rowen of the RAND Corporation. See also the article by Moss in E.B.Sheldon and W. Moore, Indicators of Social Change, Russel Sage Foundation, (New York, 1968).

question, how do we want a social program to increase life-cycle longevity? Should it produce as many people as possible who mature and not worry too much about those who do not? Or we may have a different value, that we want people to get through at least adolescence by means of our social programs.³ In other words, we want to make sure that our social programs provide for the crises through adolescence. We could also have a mix of such policies. It is important that we start thinking in a new way about the effects of our social programs, and that we make sure that we don't invest too much where it will do us too little good. Of course, such an orientation is going to attack many vested interests who are programmatically oriented. The value of a life cycle indicator is that it can provide some needed ammunition for doing this.

Specific Programs

I have used the work of Erik Erikson and Abraham Maslow to illustrate a life cycle process and the possibility of measuring individual development.⁴ Erikson, in his study of development, has set forth a series of eight crisis stages which are seen as the process of life cycle ego development. The figure on p. 25 presents the series of eight developmental stages that Erikson suggests, possible measures of the population of each stage, possible measures of the failure rate to get through such a stage, and policies that might be related more to this stage than another.

³The policy enunciated in the previous sentence creates an elite, the one suggested here is somewhat different.

⁴Erikson, op.cit., and Maslow, Toward a Psychology of Being, Van Nostrand, (Princeton, N.J., 1968).

Erikson's developmental process does not include enough developmental stages for adulthood. I think Maslow, however, provides a series of better procedures for indicating the quality of adult development in his treatment of self-actualization and the development of certain kinds of states of being.

A specific psychological orientation obviously biases measures to certain kinds of development. But a social indicator based on life cycle cannot avoid being cultural. In fact, it will most likely be a way of dealing specifically with cultural peculiarities of an area rather than being transcultural and universal.

Some Problems

I want to look now at a series of problems associated with the life cycle indicator and suggest possible ways out of such problems.

If we view the series of steps in the life cycle process as independent ones and the transition from each step to the next step as a fairly random process, and if we include the possibility of making a transition from failure to success in the next step--then the life cycle process becomes terribly complex. The life cycle can be construed as a Markov process where, at each point, there is a transition into a state and a transition probability out of a state.⁵ However, I think such a formulation of the life cycle process is not an adequate one and let me suggest why. First of all, I shall assume that the probability of making a transition from outside the system (from being a drop-out) to success in the system is small. In other words, the system is such that if a

⁵As suggested to me by Ira Lowery.

person fails at a certain point within the life cycle process, it is very difficult for him to make a transition back into the system. There is, therefore, a unique positive developmental process.⁶ This does not mean that each individual develops in identical ways, but there are universal characteristics of the developmental process. The process is essentially a single path.

The way in which the different life cycle points are defined makes the whole process essentially historical. If one looks at the life cycle process, any single point is not an independent point but in fact depends on having the past developmental process take place. The transitions from each point to the next point are not independent. I think that a view of the life cycle process as a fairly random one is not intended by Erikson. Rather we have an epigenetic principle, a matrix by which one goes through life, which is probably a real statement about the nature of the culture of the society. I think that to say that it is random is to ignore the strong cultural facts we know about our lives.

Another problem I see in a set of indicators is, as I suggested a few paragraphs ago, the lack of an adequate set of adult developmental indicators. Erikson offers only two for a life cycle period of about 40 years or 50 years. I think this will turn out to be an inadequate number of steps particularly because I think adult development is becoming more complicated. We are living longer, and we will want to have more steps even if they have to be created ad hoc. It is perfectly clear, for instance, that the demands of 20 year olds, 40 year olds, and 60 year olds are very different. There is also a problem with the fact that even though there is a strong cultural basis for the uniqueness of the life cycle, it is not canonically true. It can change in time.

⁶Part of this is for simplicity in a first model.

A third problem with such an indicator is that it is oriented towards the individual rather than the social system. But an indicator of individual development can be used in conjunction with a series of programmatic indicators to form a total indicator system for the qualities of systemic functioning. Systemic indicators are not alone sensitive enough for policy purposes of policy development and evaluation.

From a systemic point-of-view, there is utility in the life cycle approach. We can try to balance needs (expressed in individual terms) with costs (expressed programmatically). Costs are normally described as costs to the whole system, so that dysfunctional aspects can be broadly set forth. Success-benefits might also be explicitly stated. But what would be most exciting would be differential statements about what changes in life cycle profiles that might be obtained from certain programs and at what costs. Cost, here, has a long-term perspective because of the length of the life cycle orientation (up to approximately 70 years). The "interest rate" is compounded organically in the development of the individual.

Finally, I think that there are not very many good systemic indicators floating around. The lack of them has made us more modest about what we wish to do and suggested that we have to deal with more simple problems.

One thing these indicators do not do is to tell us how to deal with deviance. All we do know is how to charge off the cost of deviance. If a life cycle indicator would make us want to eliminate deviance because it is a cost, that would be a real problem. Despite the unique epigenetic orientation of the indicator, we must be careful to allow for deviance and variety. It may turn out that the cost of deviance is such that, instead of making people conform, we should develop a larger conception of what the life cycle process is about and develop social policy that is

broadly based rather than narrowly based. But I think this will turn out to be an extra value besides the life cycle orientation. An orientation towards diversity is a very special value.

Another problem with such an indicator is the fact that it has a crisis orientation. This is very much derived from Erikson. What about the times of peace and tranquility? One could argue there that the demands from the social system are much weaker then. There may be more time to adjust and the failure of the social system to provide is not so crucial.

It may well be that we are going to have to develop fairly easily evolving notions of the life cycle in this rapidly changing time, I refer to the fact that we now have models for lives with two careers, lives with very little traditional work. Our notions of love and work are altering dramatically so that it may turn out that if we have a life cycle indicator, it will be too limiting. However, I think it would be less limiting than most programmatic indicators.

Some Examples

Let me suggest one or two examples of a policy orientation that might be interesting for experimentation. Bill Gorham⁷ has pointed out that during his stay in Health, Education and Welfare, he looked into the expenditures for education and found that we spend a lot more money on higher education than we do on elementary and high school education. This seems rather strange for a life cycle orientation, for if we do not educate the very young they will never get to higher education. The value of a life cycle orientation would be that it reorients our policy to make it

⁷Urban Institute.

more effective; in education, for instance, we might spend more money on early childhood than we do now.

A second example might be social policy for social relations. Under this rubric, I have been considering social policy for friendship. Perhaps we want to develop a policy that will make it possible for friendship to bloom for certain times of life where it is more valued. Since, to some extent, friendship depends on propinquity or, at least, shared interest, we may be led to develop facilities for friendship.

Another application of the life cycle orientation would be in the evaluation of the environment.⁸ How well does a given environment aid in life cycle development. At certain ages there are certain kinds of physical developments that are more desirable. We may want to have a national sculpture program, for example, because people like to manipulate environments. It develops coping capabilities, it also develops a place where people meet at a certain age. Perhaps sculpture is the new kind of trees to provide shade for the future.

Futurism

I think that we can try to predict the future of the life cycle, which we can correlate with life cycle social indicators. Such processes as looking at time budgets, marriage rates, educational development, consumption patterns, and leisure patterns may well suggest how we want a social policy to go or, at least, where it is going. We can then discern where life cycle policies are needed.

Intrinsic in this discussion has been the suggestion that we can develop social policy in the realm of individual development. We have done so, indirectly, for the last twenty or thirty years. Although we

⁸ Donald Appleyard, "Experiments in Open Space." Connection, Spring 1966.

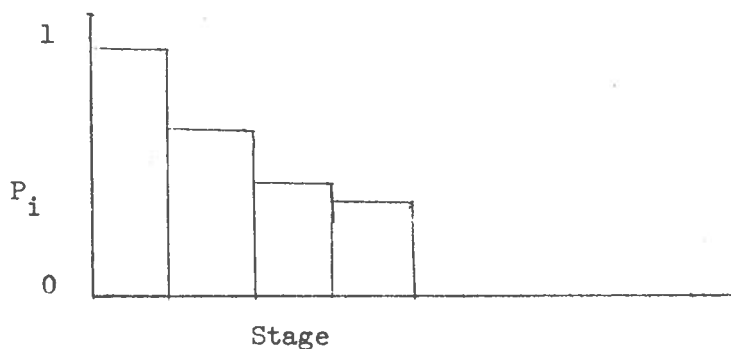
do not call them by such, a housing policy, a health policy, or a full employment policy is very much life cycle oriented. It is just that they have not been made life cycle accountable. However, this may turn out to be an important thing to do in a rich society, where simple programmatic fulfillments do not usually turn out to be satisfactory.

Appendix I: Using Life Cycle Indicators

I want to be more explicit about how such a life cycle indicator would work. Given a population, in a steady-state condition, we can look at life histories. For the moment, assume that all people live to old age and then die; we can relax the assumption easily. Now let's say that there are eight stages in the life cycle process, and the probability of going successfully from stage i to stage $i + 1$ is called p_{i+1} . Therefore the fraction of people who will successfully get to a certain level k equals $p_1 \times p_2 \times \dots \times p_k$; the rest will have dropped out at various points.

Now let me suggest some indicators: (1) Whole life indicator equals $p_1 \times p_2 \times p_3 \times \dots \times p_8$, which is what fraction of the people who have full lives.

(2) The plot of $P_i = p_1 \times p_2 \times \dots \times p_i$



which is a measure of mortality along the way.

(3) Let C_i be the cost to the society if someone drops out at stage i .

Then...

$D = \sum C_i [P_{i+1} - P_i] N_0$ (size of the population = N_0) is the total cost to the society of all the dropouts. This is program dependent.

Perhaps we want just the numbers of dropouts;

$$N = \sum [P_{i+1} - P_i] N_0$$

Goals can be expressed in terms of maximizing or minimizing some of these indicators. We can ask questions like: (1) What do we want the "mortality-table" to look like, considering the constraints (based on resources) that we have? What is an "ideal" set-up?

How do we compute the costs of deviance? Are they negative or positive? We shall need to explore the value of the rare but successful odd man. And is deviance, psychologically, really bad?

As a program evaluation technique, I think it is fairly clear what we want to do. An example should suffice. If it costs n_j to increase the number of survivals at stage j , by 1, and n_{j+1} for stage $j+1$, we want to distribute our funds so that they will benefit at stage $j+1$, the increased number of survivals at stage j . Note that these are arguments on the marginal increases.

total cost = $\$_j + \$_{j+1}$ where $\$_i$ is the number of extra dollars spent at stage i .

$\#_j = \frac{\$_j}{n_j}$ where $\#_j$ is the extra number benefited at j .

$\#_j = \#_{j+1}$ life cycle constraint (all the marginal increases survive).

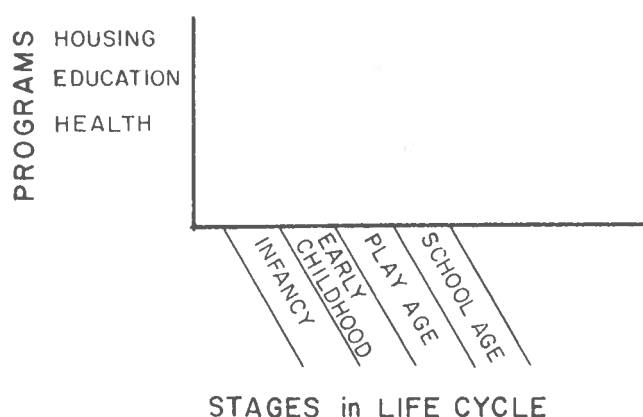
(1) $\frac{\$_j}{n_j} = \frac{\$_{j+1}}{n_{j+1}}$ { are a set of equations specifying
the allocation of new funds between
levels j and $j+1$

(2) total = $\$_j + \$_{j+1}$

Then, we can find out how much to spend by expressing program costs in terms of how they contribute to n_j 's.

Appendix II: A More Comprehensive Approach

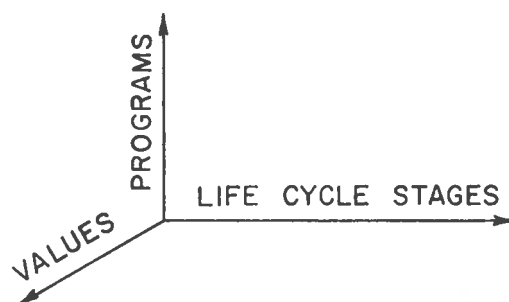
How would we deal with both systemic (programmatic) problems and life cycle (individual) concerns in a coordinated fashion? The matrix below suggests how we could do so:



We can look at how a program distributes its resources (dollars, people, facilities) among the life cycle stages. We could also try to assess how much each program contributes to the possibility for an individual getting through a certain stage.

We might want to try to include, as an intermediary in the process, some "affective" values such as the degree of self-actualization, diversity, surprise, creativity and so forth.⁹ We might then want to have a three dimensional scheme.

⁹Donald Appleyard, op. cit., in discussing open space, suggests that skills be classified by their physical, manipulative, sensory, cognitive, and social natures. These might also be added to the values dimension.



We could say that certain of the values are important to the life cycle growth process and see how programs contribute to these values.¹⁰ A formal apparatus is easily set-up to deal with these two schema.

For the first, let X_{ij} be the contribution of the i^{th} program to the j^{th} life cycle step. Say we evaluate programs in terms of how much they contribute to the probability of success in the life cycle process and X_{ij} is the contribution to the p_j 's as referred to in the previous appendix.

We could maximize the $p_j = \sum_i X_{ij}$ where the X_{ij} 's are program dependent and where the cost of a program could be $\$i = D_i \sum_j X_{ij}$ (linear marginal cost - a bad assumption). D_i is a scaling factor, and minimize the cost total = $\sum \$i$.¹¹

For the second case, let Y_{ik} be contribution of the i^{th} program to the k^{th} value and Z_{kj} be the contribution of the k^{th} value to the j^{th} transition. The $\underline{Z}$ matrix is derived from psychology, say. The Y_{ik} may also need some of this. The old $\underline{X}$ matrix = $\underline{Y} \underline{Z}$. Note that our values are subsumed under their effects on individuals; the problem of how one unit of education related to one unit of self actualization is also unanswered.

¹⁰ A Discussion with Robert Vincent and Robert House of Battelle Memorial Institute suggested this point.

¹¹ See B.R. Bergmann, "Urban Economy and the 'Urban Crisis'," American Economic Review, p. 639., 1969, for another kind of impact study.

Appendix III: Additional Remarks

For this reprinting of this working paper I have included the following added remarks and calculations, rather than rewrite the paper.

1. p. 2-- The economists have done some work on the value of human capital and its relation to the stages in the life cycle. Moss discusses income, consumption and wealth patterns as a function of life-cycle development.* This is not quite what we might be interested in with respect to the questions discussed here. Schelling has discussed the valuation of human life with some inventiveness.**

The approach offered by those who are concerned with human resources seems more in the line with problems explored in this paper.*** If we do cohort analysis of a working life we are getting data needed to determine the transition rates for Appendix I's discussion.

* Moss, op. cit., p.480. See also, G. Becker, Human Capital, Columbia University Press, N.Y., 1964.

** T.C. Schelling, "The Life You Save May Be Your Own," in S.B. Chase, Problems in Public Expenditure Analysis, Brookings, Washington, D.C., 1968.

*** See, George J. Stolnitz, "The Changing Profile of Our Urban Human Resources," in H. Perloff and L. Wingo, eds., Issues in Urban Economics, Johns Hopkins, Baltimore, 1968. See also, Russell C. Davis, Planning Human Resource Development, Rand McNally, Chicago, 1966.

2. p.5-- There exist a multiplicity of developmental models and I have chosen one in the text as an example. In the table on the last page, I referred to the "Seven Ages of Man" articles in New Society. Clare Graves has developed another set of stages of growth and ability more in the line with Maslow's type of discussion.*

The set of stages that should be used is not simply decidable. Ignoring for the moment the "scientific" basis for a set of stages (from developmental psychology, or psychiatry), and the possibility that a single set of stages will turn out to be best, we, at this time, must choose our set of stages on different grounds. I think that appropriate criteria may lie in how well a set of stages points up problems that we may be aware of intuitively, how well a set can measure the changes that current social programs induce, and how well a set points up desired values of a society and the social planner.

Another problem is the ontogenetic versus the phylogenetic. Graves likes to use the same set of stages for classifying the developmental stage of an individual for the developmental stage of a society. The latter usage is not the purpose of this paper. More importantly, the relative stages of persons should not become the way in which we value people (as Graves hints). Intrinsic valuations of individuals, qua individuals, needs to be emphasized.

* Clare Graves, "A Systems View of Value Problems," IEEE Systems Science and Cybernetics Conference, Oct., 1969, Philadelphia, Pa.

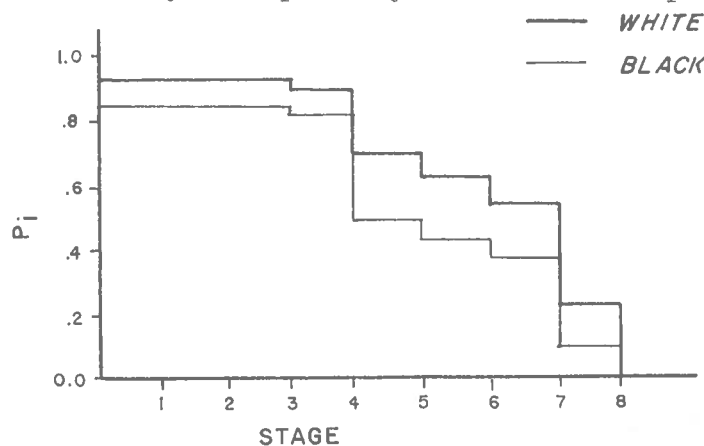
3. Appendix I: -- Below we have done a rough estimate for blacks and for whites of the transition probabilities as well as the p_i and I have plotted each of these. This is meant to be only a simple, first effort and the reader is welcome to devote more time to the improvement of these measures. The figures are for the United States. Note that (except for infant mortality) all the transition rates assume that the population has zero morbidity and zero mortality. It may be that those who survive physiologically are psycho-developmentally different from those who do not--a burden that this rough calculation will have to bear.

The indicators that have been chosen for each stage are not the best. They were easily available (mostly United States Statistical Abstracts, 1969, table numbers refer to this publication).

Stage	Indicator	p_i	
		white	black or non-white
birth	number of children surviving first year, #70	.93	.85
one year	?	1.0	1.0
three years	?	1.0	1.0
elementary school	school retention rates till grade 8, #178	.97	.97
high school	probability of graduating high school, #152,154	.77	.57
marriage	number of women ever married, #76,64	.90	.90
parents	number of women having children, #63	.86	.86
work	fraction of people with discretionary jobs--professional, managerial, craft, #323	.39	.19

Note that if data for white and non-white are same, the data did not distinguish them.

No easily interpretable data was attainable for early childhood development and I assume that the p_i 's are equal to 1.0. This is certainly not true and may be especially untrue for the poor.



In the above graph of the p_i 's note how the difference between whites and non-whites grows as the stages of development go on. From the p_i 's in the chart it would seem that extra effort should be put in programs that would decrease infant mortality, would increase the number of non-whites successfully getting through adolescence and increase the quality of the work life available to all. Other programs that would improve conditions for the stages that need the most help should be developed. Note that improvement in conditions should not be confused with improvement in an indicator. For example, it may be better to give adolescents some guaranteed income rather than force them to stay in high school more. "Better," when used here, is meant in the total developmental sense for a person.

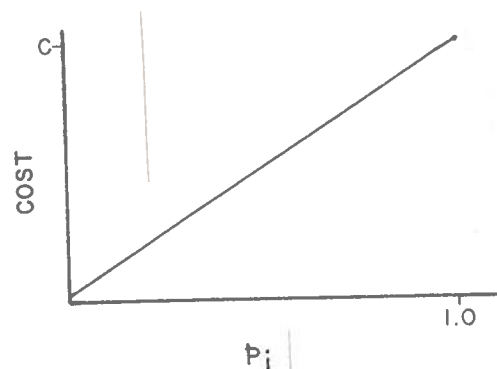
Note that the effects of programs on the p_i 's must be carefully evaluated. If one groups the population into one class, then dramatic changes in one subsector of the population will be hidden. This is because the p_i 's can only have values between zero and one. For example, if the ten percent of the population that is black had a deterioration

in a transition rate from 0.8 to 0.4, the effect on the total population p_i would be 0.04 and might not be noticed. Also, the P_i 's will suffer from substantial uncertainties due to uncertainties in the p_i 's. A 10 percent error in each of the eight p_i 's results in a 30 percent error in P_8 .

The development of the p_i 's also had another problems hidden in the bush. What is to be our standard for the evaluation of the effects of programs. We always need proxies to define the developmental stage that the population is in. The proxies that are chosen will turn out to be the crucial values in programs. We must somehow learn to combine many proxies to get less biased estimates of the p_i .

4. Appendix 1 - The following analysis of policy alternatives may be unduly mathematical but the author would appreciate forgiveness from his friends.

Say that one has fixed funds for social programs and that each dollar will be equally effective in changing any one of the p_i 's. Let us say that the cost of changing the p_i 's be dependent on the value of it. Say $\frac{d\text{Cost}}{dp_i} = c.$ (1),



$$\text{Now } P_8 = \prod_{i=1}^8 (p_i + d_i) \quad (2),$$

where p_i is the current value of the p_i 's. d_i 's are the current changes due to expenditure of monies, cd_i , which total

$$N = \sum_i cd_i. \quad (3)$$

We want to maximize P_8 subject to a constraint on the total monies (N). We may solve for d_8 in equation (3), substitute in (2), and then maximize (2). It is neater to use the technique of Lagrange multipliers.

We find that the solution that maximizes (2), with constraint (3), given the cost function (1), is that all the $(p_i + d_i)$ are equal.

Proof:

$$P_8 = \prod_{i=1}^8 (p_i + d_i) \quad \text{maximize}$$

$$N = c \sum_i d_i \quad \text{constraint}$$

(1) Lagrange multipliers:

$$\Delta P_8 + \lambda \Delta N = 0$$

$$\text{Therefore we get } \prod_{\substack{i=1 \\ i \neq j}}^8 (p_i + d_i) + \lambda c = 0 \quad j=1, \dots, 8$$

and the total cost constraints.

Note that solution is symmetric in $p_i + d_i$; they are all equal.

Explicit solution bears this out.

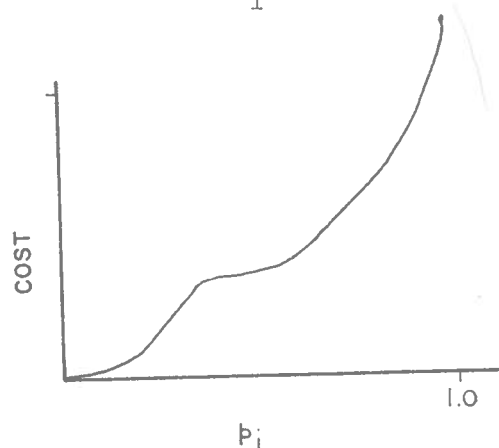
(2) The problem is also equivalent to maximizing the volume of an n-dimensional rectangle, given fixed sum of the edges. It is well known that the solution is an n-dimensional cube.

Example: If we have a three stage system, and $p_1 = .5$, $p_2 = .6$, $p_3 = .7$, and we have fifty dollars to invest ($N=50$) and it cost \$1000 to change a p by 1 ($c = 1000$), then we find that $p_i + d_i = .615$ for all cases as the solution. One has taken money from programs in stage three and reinvested funds in stages one and two.

Conclusion: By applying the results proven in this section we get the following kinds of recommendations for the policy maker. Their simplicity lies in the assumptions about what we wish to maximize (P_n) and the cost function we assume. More complicated assumptions can be made to yield less intuitive answers.

1. It does no good to improve a program for one sector of the population if other sectors are much much poorer.
2. Funds should be distributed so as to have comparable quality results from various program groups.
3. It may be more effective in total results (though politically and bureaucratically impossible) to redistribute resources than to add small amounts to current resources. For the example given below, P_3 before adjustment was 0.21 and after was 0.235, a 12% change. Most of this change is due to the \$50 expended, but it would be most effective if all three transition probabilities were first equalized.* This is especially the case when the P_i 's are substantially unequal in the first place.

Now for some exceptions: 1. We know that the shape of the cost function is not so simple. There may be economies of scale and it is unlikely that any reasonable expenditure will get any $p_i = 1.0$. Thus the cost function would look more like:



* A more specific explanation is due here. If there was not even \$50 expended, then the optimal solution would be to have each of the probabilities be 0.6 and $P_3 = 0.216$, a small change to be sure. Thus we would say that most of the change was due to the \$50. On the other hand if the \$50 were spent on changing just the last transition probability, from 0.7 to 0.75 then $P_3 = 0.225$, which is not quite so good.

Stage conflicts-product	Population of this Stage	Measures of failure	Policy Problem
Infancy basic trust } hope mistrust	births	autism motor skills	pre-natal care of mothers
Early Childhood autonomy } will power shame & doubt	one year olds	creeping abandoned children	nursery school
Play Age initiative } purpose guilt	3 year olds nursery school population	inability to speak	
School Age industry } competence inferiority	elementary school population	imagination failure learning failures	Schools
Adolescence identity } fidelity identity confusion	high school seniors military inductees	staticness of a society	manipulable environments open space
Young Adulthood intimacy } love isolation	marriages under 25 drivers	abortion rate	home formation housing
Maturity generativity } care stagnation	parents	illegitimacy, quality of career, sexual impotency hospital admissions isolated old handicapped	leisure health care

The above set of stages is taken from Erikson, op. cit.. An interesting discussion of the manifestations of these stages as well as other formulations is to be found in a series of articles in New Society, "The Seven Ages of Man," reprinted as a single volume. available from New Society, 128 Long Acre, London, W.C. 2, England, 3s. 6d.