MEASURING THE QUALITY OF LIFE USING SAMPLE SURVEYS *

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1. Introduction

Much is written these days on measuring the state of cities and of nations by deriving social indicators from 'hard' and 'semi-hard' data in the shape of economic and social statistics. In the United States there is the work of Sheldon and Moore[1], Olson[2] and Bauer[3]. In Britain we have the new publication 'Social Trends' from the Central Statistical Office, whose Director has published an article with the actual title 'Measuring the Quality of Life'[4] The Social Science Research Councils of the U.S.A. and U.K. recently held a joint conference on Social Indicators, the proceedings of which have been published in book form[5]

The search for social indicators has now spread to the use of 'soft' data with which to fill out the social account. In conjunction with Professors Angus Campbell and Philip Converse of the University of Michigan, the Survey Unit is currently investigating the possibility of deriving new subjective indicators, more descriptive of how people actually *feel* about the quality of their lives. What is envisaged is a systematic longitudinal study of perceived satisfactions and dissatisfactions in order to pinpoint possible future problematic areas, and to measure the progress of existing attitude changes.

We hope to establish, as Campbell and Converse[6] say, a research programme devoted to the generation of information regarding the aspirations, attitudes, satisfactions, disappointments, grievances, expectations and values of the British population. For whilst objective conditions of life may, in some aspects, have changed for the 'better' in that there is less hunger, 'better' housing, 'better' schools, 'better' transport etc.,

there may not be an equivalent subjective change in feelings that life is also 'better'. People do not necessarily feel more secure, or more self-fulfilled.

Campbell and Converse claim somewhat tritely, but accurately, that the quality of life must be in the eye of the beholder, and it is only through an examination of the experience of life as our people perceive it that we shall understand the human meaning of the great social and institutional changes that characterize our time.

2. Formulation

After a review of available empirical literature, notably Campbell and Converse[6], Bradburn[7], Robinson[8] and Kilpatrick and Cantril[9], a series of depth interviews with members of the public, and reading essays by children on 'happiness', we were able to make hypotheses about inputs to a sense of life-satisfaction, but we are not so heavily committed to them that we cannot change them or postulate new ones. First we defined various life-areas such as health, district, job, and leisure with which people might be satisfied or not, which we called domains. Secondly, we needed to be able to discern the effects on reported satisfaction of personality syndromes and short term changes of mood. Thirdly, we included background variables such as sex, age, class, educational level and income.

This gave rise to three models to guide the investigation. The simplest model hypothesizes a measurable sense of overall life-satisfaction which is some kind of summation of satisfactions and dissatisfactions with particular aspects of life (See Fig. 1 a). Fig. 1 b introduces the concepts of positive and negative affect (after Bradburn) and hypothesizes that some domains may contribute to life-satisfaction only through positive affect, others through negative. Thirdly we postulated that reports of satisfaction with life or with life domains may in fact all be determined by some underlying social-psychological syndrome or personality factors. Each of these models should be seen in the context of the background variables.
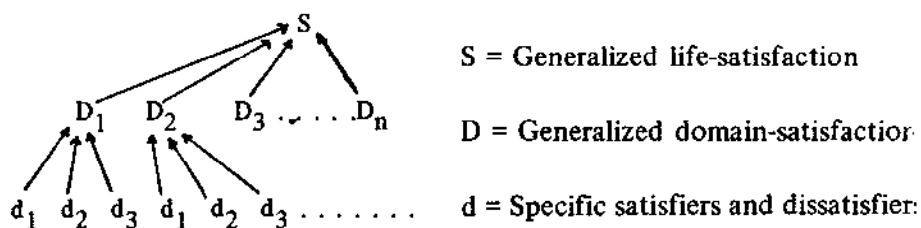
S = Generalized life-satisfaction

D = Generalized domain-satisfactior

d = Specific satisfiers and dissatisfier:

Fig. 1b

A = General Affect

Q = Other components of S.

Fig. 1c

P = Personality Syndrome
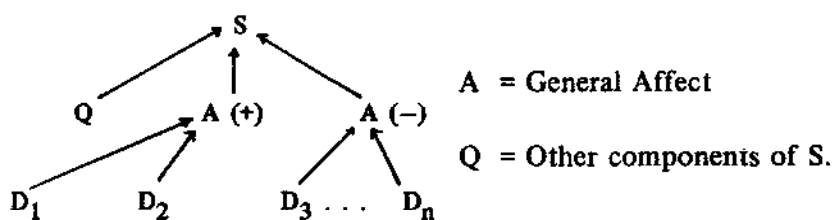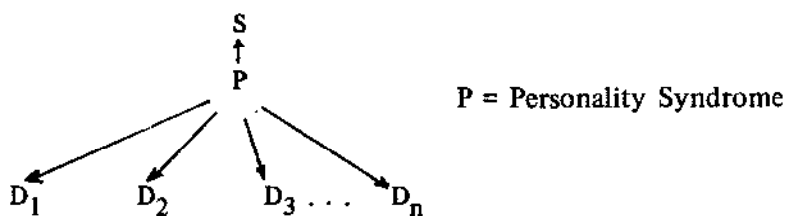
Fig. 1 Models used in Investigation

3. Methodology

To date three surveys have been conducted, known respectively as

(a) Pilot I (Quota sample of 213, United Kingdom, March 1971)

(b) Pilot II (Quota sample of 593, 8 major conurbations. Oct.-Nov. 1971)

(c) Oxlife (Random sample of 173, Oxford, July 1972)

For Pilot I our basic measure of satisfaction both for domains and overall life-satisfaction was a vertical ladder-scale numbered 0-10 based on that used by Cantril[9]. To measure anomy we used the 7-item Srole scale augmented by 6 items suggested by Christie to offset response set. Indirect measures of overall life-satisfaction were items concerning a wish to change past and present lives, and distances from ideal selves.

Pilot II represented the British part of the cross national work with Campbell. For comparability the ladder scale was changed to run from 1 to 7. The indirect measures of life-satisfaction were replaced by a semantic differential scale of life-satisfaction adjectives, and the anomy scale was reduced to seven items. Some domains were dropped, new ones added, and an attempt was made to discover components of domain satisfactions by obtaining ratings on specific aspects within them.

Oxlife was a practical exercise for students attending our 1972 summer school on survey methods. It was concerned with only 5 domains, but had new items in the form of a semantic differential scale for self-assessment, and in the questions relating to goal achievement and feeling happy, which were used by Bradburn[7].

Respondents had no difficulty in using the ladder-scales to give ratings either for themselves or attributed to others. We ourselves are not quite sure exactly how people are using them and consequently face dilemmas in analysis. For instance, should we standardize on variables or on people? However, multivariate techniques offer some validation of the technique since all variable groupings produced by the analysis are

consistent with sociological sense if not with common sense; some variables are regrouped in a different order to that in which they were used in the questionnaires.

One reservation we have about using these scales, before everyone rushes off to try them, is that the distributions are very heavily skewed towards the top except in those domains where blame for discontent lies other than with self. Thus these distributions may reflect a desire to keep up appearances, or they may be some kind of constant, in the sense that whatever the objective conditions of residence, work, leisure, health, the levels of satisfaction will be the same. Perhaps 'satisfied' is not the right question to ask; perhaps 'happy' or 'content' would be better. These questions can only be answered by further methodological research.

As a further check on validity, respondents were asked to rank, in order of importance for life-satisfaction, the domains for which they had given self-ratings.

4. Findings

It would be inappropriate to embark on a detailed presentation of our findings since these are available upon request direct from the Unit. I would rather like to briefly illustrate the nature of the results in the three surveys.

Pilot I

In the first few questions of Pilot I, respondents were asked to ascribe satisfaction ratings to a list of socio-economic groups and then to themselves. They were then asked to which group they themselves belonged. This gave us 3 kinds of ratings to compare (See Table 1).

1. The average rating given to each group by everyone else
2. The average rating given to each group by those who later placed themselves in the group
3. The overall self-rating on (a) present and (b) entitlement

Table 1: Average ratings of satisfaction with 'Things in general today'

Pilot I March 1971 (Scale 0 – 10) Ratings of	Unskilled Workers	Skilled Workers	Office Workers	Professional People	Business executives	Small businessmen	Old age Pensioners
Group by all other groups	4.36	5.64	5.86	7.26	8.05	5.02	2.44
Group by those in group	3.75	5.46	6.13	5.95	7.68	2.90	2.66
Satisfaction by those in group	4.75	5.64	6.04	5.91	6.84	4.10	4.74
Entitlement by those in group	7.10	7.45	7.74	7.86	8.32	6.40	6.91

These and other findings from Pilot I are fully discussed by Abrams and Hall [10] and will not be elaborated on here.

Table 2 shows the average self-ratings of satisfaction on each domain, the average rank position of each domain in importance for life-satisfaction, correlations between these ratings and overall life-satisfaction and anomy, and a discrepancy index to highlight areas of high importance which have high satisfaction or dissatisfaction. The correlation coefficients shown are multiplied by 100 and rounded to two places for ease of presentation.

What have we actually measured here? We suspect that reported satisfaction is largely based on perceived slice of Gross National Product. Correlational and factor analysis confirm our suspicions of an economic bias, the variables falling into three distinct clusters. Since one of these clusters apparently measured most closely what we defined as 'Quality of Life', we consequently designed the survey Pilot II to keep the overall life-satisfaction items well away from economic or any other contamination.

Table 2: Domain satisfactions and relation with overall satisfaction and anomy

Pilot I	Average rating	Rank		Index of Discrep-ancy*	Correlations	
		Satis-faction	Import-ance		Things in general	Anomy
Domains						
Family life	8.77	1	2	+ 10	+ 17	– 17
Friendships	8.09	2	7	+ 4	+ 08	– 10
Health	8.05	3	1	+ 7	+ 10	– 12
Housing	7.89	4	5	+ 3	+ 13	– 05
Job	7.83	5	4	+ 2	+ 24	+ 01
District	7.44	6	9	0	+ 03	– 11
Leisure	7.33	7	11	0	+ 24	– 18
Children's education	7.23	8	8	– 2	+ 14	– 04
Police & law-courts	6.91	9	10	– 1	– 04	– 12
Welfare Services	6.51	10	6	– 5	+ 37	– 20
Financial Situation	5.48	11	3	– 9	+ 52	– 36

(*Discrepancy index obtained by *(6 – Satisfaction Rank) x (12 – Importance Rank) ÷ 5* and rounding to nearest integer. This brings items low on importance to the centre of the scale and scores high positive for high satisfaction and high negative for high dissatisfaction on the important domains.)

Pilot II

Comparison of the Pilot II figures (See Table 3) shows that this strategy was justified. It is immediately apparent that each of the domains except religion taps some aspect of the dimension measured by reported satisfaction.

Table 3: Domain satisfactions and relation to overall satisfaction, semantic differential score and anomy.

Pilot II November 1971 Scale 1–7	Average rating	Rank		Index of Discrepancy	Correlations		
		Satis-faction	Import-ance		„Life as a Whole"	S.D. Score	Anomy
Domains							
Marriage	6.51	1	1	+ 11	+ 23	+ 37	– 09
Family Life	6.12	2	1	+ 9	+ 38	+ 36	– 20
Job	5.99	3	6	+ 4	+ 33	+ 37	– 18
District	5.74	4	7	+ 2	+ 24	+ 21	– 15
Health	5.74	4	3	+ 4	+ 24	+ 28	– 12
Spare time	5.53	6	9	0	+ 40	+ 45	– 19
House	5.43	7	5	– 1	+ 19	+ 14	– 12
Standard of Living	5.12	8	4	– 3	+ 36	+ 34	– 26
Education	4.92	9	8	– 2	+ 27	+ 13	– 10
Level of Democracy	4.67	10	11	– 1	+ 25	+ 19	– 24
Comfort from Religion	4.01	11	9	– 3	+ 05	+ 10	– 13

Cluster analysis produces one large cluster and two smaller ones. Factor analysis has shown an underlying general factor accounting for 15% of the sample variance, but it takes a further 19 factors to achieve 60%. The best linear regression we have so far produced accounts for only 37% of the variation in reported overall life-satisfaction, for the whole sample. This rises to 60% for certain sub-groups.

'Oxlife'

The value of the Oxford survey lies principally in the simultaneous use of four separate measures of general life-satisfaction, two of which were used for the first time in the United Kingdom together with anomy and a new semantic differential concerned with 'the sort of person I feel I am'. Instead of 'my present life' the heading for the life-satisfaction semantic differential was 'compared to most people I feel my life is'.

Even allowing for bias due to trainee interviewers, we were surprised to find a low correlation between the scores on this scale and the answers to the question 'taking all things together, would you say you were: very happy, fairly happy, or not too happy? '

Conclusion

The multivariate work we have done so far would seem to justify our 'life-domains' approach, but there do appear to be a large number of distinct dimensions in the data, and we have yet to find a satisfactory dependent variable from among our measures of general life-satisfaction. Our anomy variable is consistently and negatively related to almost all of the satisfaction measures, but even with this, the major part of the variation in overall satisfaction, whichever measure we take as the dependent variable, is left unaccounted for. In future the work must take account of social-psychological syndromes and mental states.

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