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Life Histories:
Problems and Prospects of Longitudinal Designs

The aim of the paper is to provide a general overview of problems and prospects of life history studies based on longitudinal designs and interviews as a data source. The value of life history studies is hereby seen from two angles: as an attempt to unravel an individual's development over time in the context of changing roles, opportunities and constraints and as an attempt to unravel the influence of specific historical conditions on an individual's life course. Longitudinal designs are for the following defined in the broadest sense, as studies which encompass a time perspective, tracing units of observations — such as individuals or aggregates of individuals — over time.

The paper will restrict itself to a discussion of methodological strategies and possibilities of the various longitudinal designs. It will omit statistical and technical details associated with the analysis of the data themselves¹. It hopes to sensitize the reader to the possibilities of bringing time back into sociological analysis and to illustrate the prospects and the problems which are linked with such endeavours. Three basic kinds of longitudinal studies will be discussed: cohort studies, prospective longitudinal studies and retrospective studies on the basis of retrospective questions. Trend studies will not be specifically dealt with in this article, since they do not themselves necessarily incorporate a life history perspective. However, cohort studies are usually based on trend studies and many of their problems are consequently identical. Our discussion of the problems of cohort studies has therefore implications for the study of trends as well.

¹ For recent trends in the development of the methodological literature pertaining to data collection and analytical techniques in general and a critique of the neglect of data quality problems see Scheuch, Erwin K., *Forschungstechniken als Teil der Soziologie heute*, in: Lepsius, M. R. (ed.), *Zwischenbilanz der Soziologie heute*, Stuttgart 1976, pp. 110 passim.

1. Cohorts, Prospective and Retrospective Longitudinal Studies: a Note on Terminology

Before going into details, a clarification of terms is in order. The need for clarification is the greater since the literature is replete with different terminologies and connotations for the same kind of longitudinal designs². The greatest agreement, without doubt, can be found with regard to the term „trend study“. A trend study is usually conceived as a study of the same population, though not necessarily the same individuals, measured at different times with regard to some common variables. Repeated cross-sectional measurements of the population with regard to voting intentions, for instance, would constitute a trend study in this sense.

The terminological agreement is less concerning *cohort* studies. Cohort studies in the broadest sense might be defined as studies of cohorts, i. e. of aggregates of people (within some population) who experienced the same event within the same time interval. Usually birth has been taken as the defining event, but other events, such as entry into an institution within a limited period of time, could be used equally well. When the word cohort is used without modifier, a birth cohort is generally meant³. Many methodological designs are compatible with this kind of conception. Thus, some authors refer to a cohort analysis when different cohorts within a cross sectional survey are compared with each other⁴. Since cohort is identical with age in this case, the true delineation of cohort effects is not possible. Other authors conceive of cohort studies as studies which measure the same individuals of a given cohort at different times (in a panel study for example)⁵. A further version is found among those who use retrospective interviewing in order to reconstruct the past. If the analysis is then based on a differentiation of a cross sectional survey according to cohort or age and the present data are compared with the reconstructed ones on a cohort basis, the term cohort analysis has been applied

² For divergencies in terminological usage see for instance Babby, Earl R., *Survey Research Methods*, Belmont/Cal. 1973, pp. 62 passim; Galtung, Johan, *Theory and Method of Social Research*, London 1967, pp. 84 passim; Goldfarb, Nathan, *An Introduction to Longitudinal Statistical Analysis. The Method of Repeated Observations*, Glencoe/Ill. 1960; Wall, W. D., and Williams, H. L., *Longitudinal Studies and the Social Sciences*, London 1970; Nehnevasja, Jiri, *Analyse von Panel-Befragungen*, in: König, René (ed.), *Handbuch der empirischen Sozialforschung*, Vol. 2, Part 1, Stuttgart 1973, pp. 192 passim; Davies, James A., *Panel Analysis. Techniques and concepts in the interpretation of repeated measurements*, mimeo, Chicago 1963.

³ See for instance Glenn, Norval D., *Cohort Analysis*, Beverly Hills and London 1977; pp. 8 passim; Ryder, Norman B., *The Cohort as a Concept in the Study of Social Change*, in: *American Sociological Review*, 30 (1965), pp. 843–861.

⁴ See for example Butler, David, and Stokes, Donald, *Political Change in Britain*; Harmondsworth 1971, pp. 78 passim.

⁵ See the literature quoted in: Wall, *Longitudinal Studies*.

there as well⁶. Finally there is a version, mostly favoured by those engaging in secondary analysis of surveys. According to this version, cohort studies are studies which compare *different* cohorts as *aggregates* on at least some *common variables* at *different* points in time. The aggregate might hereby consist of the same individuals as in former surveys (census data for example) or they might represent only a sample of the same population and thus not necessarily the same individuals (as in trend surveys)⁷. In the following, we want to use the term cohort studies in this sense. So called cohort studies measuring the same individuals of a given cohort over time on an individual level will be treated as a specific case of prospective longitudinal studies. And so called cohort studies based on retrospective questioning will be referred to as a special case of retrospective studies.

Prospective *longitudinal* studies are studies which involve repeated measurement of the same individuals over time. Panel analyses are an example. Experiments, in which a particular „treatment“ is administered to a portion of the study group between repeated measures of the same subjects, could in principle be seen as of longitudinal design as well. However, as long as the before and after design involves a short time period only, we prefer not to include experiments. Prospective longitudinal studies might take on different forms according to their variables: If the same individuals are repeatedly measured using the *same* variables the term panel analysis is usually applied. If the same individual is repeatedly measured using *different* variables, the term prediction studies is not uncommon. Both kinds of longitudinal analysis usually mix, since even in prediction studies, concerning marital adjustment or delinquency for instance, some variables remain the same in the subsequent measurement waves. Probably for this reason, many authors see the terms panel and longitudinal study as equivalent⁸.

Prospective longitudinal studies might also take on different forms with regard to the time dimension of sampling. One could start from data collected in the past by other researchers and follow them up. One could, of course, also start from the present and proceed to the past for given individuals by taking recourse to archival data. The latter kind of studies have sometimes been called retrospective studies⁹. However, sampling from the past to the present or from the present backwards or from the present to the future does not alter the basic longitudinal design of obtaining repeated measurements on the same individual. Some studies, moreover, have

⁶ E. g. Lane, Angela, The Occupational Achievement Process 1940–1949: A Cohort Analysis, in: American Sociological Review, 40 (1975), pp. 472–482.

⁷ Before the use of surveys for cohort studies, only census data were used. This is still reflected in J. A. Davies' definition from 1963, where the comparison of cohorts is conceived as a comparison of the same individuals. See Davies, Panel Analysis.

⁸ Some authors on the other hand have seen the difference between panel and longitudinal studies in the time dimension: panel studies involving a shorter time span.

⁹ See for instance Goldfarb, Introduction, p. 41; O'Donnell, J. A., The Methodology of Retrospective Studies, paper presented at the Conference on the Epidemiology of Drug Dependence, London 1972.

combined a number of approaches of this sort. For instance in the Danish-Swedish Project Metropolitan which consists of a longitudinal study of youth born in 1960 and which began in 1964, data about child delivery were combined with data collected in a prospective longitudinal design¹⁰. We would therefore prefer to use the term retrospective study for those designs which use retrospective questions in order to reconstruct the life history of individuals.

In *retrospective* or quasi-longitudinal studies the subjects have only one measurement in time but data pertaining to different points in time: individuals are asked to recollect the events, decisions and definitions they brought to the situation in past times. The longitudinal approach in this design is thus one based on the memory of the respondents. Various data collection strategies have been associated with this approach, ranging from more or less unstructured forms of data collection (such as in qualitative interviewing or analysis of specially elicited written autobiographies) to a highly structured, closed interviewing. Samples have accordingly varied between small samples of special social groupings to large samples of the population in general. Finally, retrospective studies have been performed on single surveys or – in a few cases – on trend studies¹¹.

2. Cohort Studies

2.1 Characteristics

The cohort concept, though rather recent in the social sciences, is not entirely new to the literature. Under the label „generation“ it has had some tradition, especially among historians of the art, and foremost in Karl Mannheim's classical treatise on the problem of generations. The other field of application has been in the field of demography where it has been used mainly in the study of fertility¹².

¹⁰ Janson, Carl-Gunnar, Project Metropolitan. A presentation, in: Project Metropolitan, Research Report No. 1, Stockholm 1975.

¹¹ Using trend studies and retrospective questions might be useful in delineating continuous trends in age-limited populations (such as youth) even where the surveys have not been done on a continuous basis. In this case the cumulation of samples allows a cumulation of individuals from different surveys who have made certain experiences in certain years. The limitations brought into the design by having age limits are thus compensated and a description of yearly trends becomes possible. For such a strategy see for example Reuband, Karl-Heinz, Eine neue Drogengeneration? Zur Analyse sozialen Wandels im Bereich abweichenden Verhaltens, in: Angewandte Sozialforschung, No. 5/6 (1978), pp. 321–329.

¹² See Pfeil, Elisabeth, Der Kohortenansatz in der Soziologie, in: Kölner Zeitschrift für Soziologie, 19 (1967), pp. 645–657; Mannheim, Karl, Das Problem der Generationen, in: v. Friedeburg, Ludwig (ed.), Jugend in der modernen Gesellschaft, Köln and Berlin 1965, pp. 23–48.

For both traditions, the crucial aspect of cohorts is the notion that historical influences impinge on given birth cohorts and lead to specific generational effects. „The members of any cohort are entitled to participate in only one slice of life — their unique location in the stream of history. Because it embodies a temporally specific version of the heritage, each cohort is differentiated from the others“¹³. The most common approach is to conceive the period of youth as the period where generation formation takes place. It is in youth where, as Mannheim says, experiences have a tendency to form a „natürliches Weltbild“, a taken for granted world view, which serves as the basic layer of accumulated experience. It is the foundation which acts as a filter, structuring subsequent experiences¹⁴.

The value of the cohort approach is usually seen both from a macrosociological perspective and from a life history perspective. The macrosociological point of view refers to „demographic metabolism“ to the structural transformation caused by the coming and going of generationally differentiated cohorts within a population system¹⁵. Social change, according to this perspective, might be simply due to an exchange of differently influenced and orientated generations. The life-history perspective focuses on the historical and developmental career of the individual. The cohort record is here seen as a *macro-biography*, as the aggregate analogue to the individual life history. By comparing the life courses of different cohorts having undergone different historical experiences, an attempt could be made to separate historically generated generational life histories and history-independent „natural“ courses of individuals' lives, attitudes and behaviors. Although the first systematic presentation of those concepts was given to social scientists at the end of the fifties, it was not until the late 1960's and especially the 1970's that cohort analysis received increasing attention and actually lead to empirical investigations. The reason for this delay is probably due to the rather late introduction of the concept into the social science literature on the one hand, and the lack of available appropriate surveys on the other. With the passage of time and the accompanying enlargement of data archiving, surveys became increasingly available which allowed cohort analyses. It is not unlikely furthermore, that social changes happening in most western countries in the late sixties produced more sensitivity to generational phenomena. It is at least quite noteworthy that the development of student unrest and various forms of countercultures brought a revival in generational thinking within the sociological literature. Studies on youth and countercultures and youth and political rebellion quite often now use the term generation with all its theoretical implications¹⁶.

The usual approach in the study of cohorts, as already mentioned, is to take a number of different surveys collected at different points in time and to divide them into birth cohorts. Simply using a cross-sectional survey is not sufficient, since its

¹³ Ryder, Cohort, p. 844.

¹⁴ Mannheim, Generationen, p. 41;

¹⁵ Ryder, Cohort, p. 843.

¹⁶ See for instance The Journal of Social Issues, 30 (1974), No. 3 and No. 4.

age distribution does not allow separating aging and cohort or „generational“ effects: in this case, age interpreted as cohort, is perfectly correlated with chronological age for all observations. If we have a concentration of conservative attitudes in the older population, for instance, we do not know whether this finding is due to aging or to the impact of the historical period of time in which the individuals were brought up.

Incorporating additional cross-sectional surveys into the design offers a solution when the other surveys have been collected at different points in time and permit a comparison on a cohort basis. Birth age and chronological age become decorrelated under these conditions, thereby providing the two variables to distinguish aging and cohort effects. We can, for instance, now compare the 20–29 years old in 1950 with the 30 to 39 years old in 1960 and treat both as being representative of the same cohort (see Table 1). Such a procedure can only be chosen, of course, if the cross-sectional surveys refer to the same population. This population must be closed: the rate of compositional change due to migration must be rather low. Surveys within a community or a regionally restricted area rather than within the nation therefore usually fall out of this realm: the rate of exchange due to geographical mobility might be too high¹⁷.

Table 1: Illustration of the Logic of Cohort Analysis

Cohorts	Survey Conducted in			← Age
	1950	1960	1970	
A	20–29	20–29	20–29	←
B	30–39	30–39	30–39	
C	40–49	40–49	40–49	
D	50–59	50–59	50–59	
	60–69	60–69	60–69	

¹⁷ It has been proposed to control for place of birth and length of residence in order to check possible biases due to analyzing cohorts on a community basis. See Duncan, Otis D., *Measuring Social Change via Replication of Surveys*, in: Land, Kenneth C., and Spilerman, Seymour (eds.), *Social indicator models*, New York 1975, p. 117. However, migration is selective and we don't know very much about those emigrating. For this reason cohort studies on a community basis

2.2 Aging, Cohort- and Period Effects

Inspection of the cohort table usually permits an idea about the relevance of aging and cohort effects. An *aging* effect is said to exist when comparisons within cohorts (intracohort comparisons) — as indicated by diagonal reading of the table from the upper left to the lower right — show systematic patterns of change irrespective of the cohorts. Pure aging effects exist when each set of cross-sectional data is identical and when intracohort comparisons show the same amount of change with increasing age as the equivalent movements in the cross sectional sections (see Table 2a).

Cohort effects are said to exist when there is an „early imprinting which, while it may be overlaid by other kind of effects, including life cycle ones, during the life span, will always leave its characteristic mark as a deviation of the generation affected from neighboring generational cohorts“¹⁸. Pure cohort effects exist when the cohorts keep their peculiar characteristic in the process of aging and when accordingly no variations exist in the cohort diagonals (see Table 2b).

The third class of effects to be mentioned are *period* effects. Period effects are said to exist when all age and cohort groups are (temporarily) affected by common historical experiences. In cases of pure period effects, as shown in table 2c, changes in all age and cohort categories are the same.

Table 2: Cohort Table Showing Hypothetical Data (Percentage) in Which All Variations is due to:

	a) Aging Effects			b) Cohort Effects			c) Period Effects		
Age	1950	1960	1970	1950	1960	1970	1950	1960	1970
20–29	30	30	30	30	20	10	50	40	30
30–39	40	40	40	40	30	20	50	40	30
40–49	50	50	50	50	40	30	50	40	30
50–59	60	60	60	60	50	40	50	40	30
60–69	70	70	70	70	60	50	50	40	30
Total*	50	50	50	50	40	30	50	40	30

* Standardized to an age distribution with an equal number of persons at each age level.

usually remain problematic. The only exception are those studies which refer to populations with a low rate of migration in the period of observation, such as youth in schools. In these cases problems of migration might not be high.

¹⁸ Converse, Philip E., *The Dynamics of Party Support. Cohortanalyzing party identification*, Beverly Hills and London 1976, p. 74.

In many cases, however, period effects do not operate as simply as is often assumed. They might have different effects on different age and cohort groupings and thus make it problematic to delineate the exact impact of period influences. The launching of a military draft (e. g. during the Vietnam war in the U.S.A.), for instance, affects different age groups than a breakdown in pension schemes. The same kind of event might even have contrary effects in different age groupings. Period effects (as well as the other effects) might hence be interactive and not additive. Besides it should be noted that period effects, when not being rather temporary, might have long lasting effects and thus become generation forming¹⁹.

Period effects have often not been given adequate attention at the beginning of research on cohorts. Studying aging and cohort effects without attention to period effects, however, could have serious consequences. If we compare conservatism in different age and cohort groupings, for instance, and find increasing conservatism with age on the cross-sectional level but a decrease with age on the cohort level, this result must not necessarily mean that there are no aging effects leading to stronger conservatism. The results in this case might have been obtained by the influence of period effects working towards a decrease of conservatism in age and cohort groupings²⁰.

The biggest problem of cohort studies, not fully recognized until recently, is the problem of *underidentification*. What we have are three classes of effects — age, cohort and period effects — and only two diagnostic variables. We obtain the cohort effects, for instance, as an interaction between age and period. We might conversely obtain age as an interaction between cohort and period and obtain period as an interaction between age and cohort. The third effect is hence only found by recourse to the other two effects. In every case, the independent variable to be used for the explanation is a *perfect* function of the other two variables which are to be used as independent or control variables. This confounding of variables makes it technically impossible to delineate the exact influences of the three effects. The table presented as Table 2b for instance showing pure cohort effects could theoretically also have been produced by a mix of aging and period effects each offsetting each other: If an aging effect would have taken place *and* a period effect which caused a ten percent drop in every age and cohort between 1950 and 1960 we would have obtained the same distribution for 1950 and 1960 as in Table 2b. The problem of identification is „indeterminate, at least within the immediate terms of conventional proof through the manipulation of numerical matrices of cohort values, however long the time span of observation may be“²¹. A solution to the problem, as

¹⁹ See Glenn, Norval D., Cohort Analysis; Converse, Dynamics.

²⁰ The gradual growing awareness of the different effects over time can be seen in the discussion of the Crittenden article. See Crittenden, John, Aging and Party Identification, in: Public Opinion Quarterly, 25 (1962), pp. 648–657; Cutler, Neal E., Generation, Maturation, and Party affiliation: a Cohort Analysis, in: Public Opinion Quarterly, 33 (1970), pp. 583–588; Crittenden, John, Reply to Cutler, in: Public Opinion Quarterly, 33 (1970), pp. 589–591.

²¹ Converse, P. E., Party Support, pp. 17 *passim*. For the problem of underidentification see also Glenn, Cohort Analysis, pp. 13 *passim*.

suggested by Philip Converse and Norval Glenn, is to take „side information“ into consideration. Side information might permit at least one of the effects to be ruled out as an influential factor. This ruling out, of course, very often is of a tentative nature. It rests on a certain amount of plausibility. If there is a sharp drop in the number of adherents to a certain attitudinal position in the population within a short span of time, there is good reason to believe that this drop cannot have taken place by an exchange of generations. Period effects must have been operating. It seems reasonable therefore, as Philip Converse has done in one study, to perform the analyses separately for the periods which seem stable and unstable²².

On the basis of „side information“, it often seems possible to come to some conclusions about the impacts of different effects. In some cases it might also be sufficient simply to have some information about the attitudinal or behavioral state of an aggregate regardless of knowing the exact nature of the effects: Seen from a life history point of view, age, cohort and period effects *together* might constitute an important experience in the life course, whatever the role of specific effects is. Choosing a cohort approach also often allows some inferences about changes on the societal level: we might infer from the analysis whether a perceived change, for instance the complete reversal in the relationship between education and capital punishment in W. Germany between 1950 and 1970, is due to specific cohorts only or to a general intracohort change²³. The dependent variables might hereby, as the example suggests, not only refer to percentage distributions, but also to relationship between variables, such as sex, education and some attitudinal variable or between attitudinal variables themselves²⁴.

Cohort approaches might be performed on birth cohorts in general or on subgroups within birth cohorts, for instance on sex and educational groupings. An important presupposition for such a procedure, of course, is that there is little or no movement from one category to the other, as is the case with sex or education. Occupational groupings seem to be less apt for such a procedure, since there is a relatively high amount of intragenerational mobility over the life span, making a strict cohort comparison impossible. In total, then, there are many cases where the cohort approach seems to be quite fruitful for an understanding of historical influences and the life history of individuals.

²² Converse, Party Support.

²³ See Reuband, Karl-Heinz, Die Einstellung zur Todesstrafe im Wandel, in: Steinert, Heinz (ed.), Der Prozeß der Kriminalisierung. Untersuchungen zur Kriminalsoziologie, München 1973, pp. 51–61; Reuband, Karl-Heinz, Sanktionsverlangen im Wandel. Über das veränderte Verhältnis zwischen Schulbildung und Einstellung zur Todesstrafe (forthcoming).

²⁴ See Samuel A. Kirkpatrick for a study choosing attitudinal correlations as a dependent variable: Kirkpatrick, Age and Ideology: a Cohort Analysis of Attitude Constraint in the American Public, paper presented at the 1974 Annual meeting of the American Political Science Association, Chicago, August 29 – September 2 (1974).

2.3 Availability of Data

Cohort studies rest on the availability of comparable trend studies. Comparable trend studies might be originated and followed up in the future. Usually such a procedure does not provide immediate results and gratifications: If we want to follow up the life span and come to conclusions about aging effects in general and historically generated cohort effects on a comparative basis, it takes years and decades to obtain the results. Except in peculiar cases where periods of life only or shorter periods of time are of interest, for instance with regard to youth or times characterized by social movements, shorter spans of observation might be sufficient and even required. In the usual case, where longer time periods are relevant, we have to rely either on a secondary analysis of older surveys alone or on a combination of secondary analyses and primary analyses of surveys which represent *replications* of older surveys. Older surveys still exist to a large extent. The data sets have either been kept in the institutes themselves or have been given to a data archive. Especially in the United States there is still a rich data source going back as far as the 1930s, into the times of economic depression. Surveys spanning a broad time span and containing several identical or nearly identical questions have been conducted by a number of institutes, there, such as the Survey Research Center at the University of Michigan, the National Opinion Research Center (NORC) at the University of Chicago and the Gallup poll²⁵. Of special interest seem to be the Gallup poll surveys in comparison to the other two, and since identical or nearly identical questions have been repeatedly asked, sometimes within a few weeks, a cumulation of surveys can be performed in order to have larger numbers of cases for subgroup analyses. The other two institutes have repeatedly asked only relatively few questions at intervals of several years. In case of the NORC data, moreover, the age has been coded in broad intervals until recently and has thus made cohort comparisons difficult.

Although the Gallup polls are the ones which provide a very rich data source, they are not without drawbacks: Like many of the samples drawn in the 1930s and 1940s the early Gallup polls were deliberately designed to underrepresent certain groupings of the population. „Since the earlier Gallup polls were used primarily to predict the outcome of elections and to provide readings on the sentiment of the electorate between the elections, the samples were designed to represent each population segment in proportion to the votes usually cast in elections rather than in proportion to the number of individuals in it. Since voter turnout was relatively low among females, Southerners, and persons with little education those segments of the population were deliberately underrepresented, and there were no southern blacks in many of the earlier samples.“²⁶ The change in representation took place gradually

²⁵ The following discussion of the U. S. surveys is based on Glenn, *Cohort Analysis*, pp. 34 passim.

²⁶ *Op. cit.*, pp. 34 passim.

in the 1940's and 1950's. The first Gallup omnibus survey to use a sample with proportional sampling of females was in 1944 and the first omnibus survey with proportional representation of Southerners was not earlier than 1953. These changes in sampling procedures must have had effects on results and must therefore be taken into consideration, by weighting, for instance, when comparisons are made. In the 1950's Gallup, like other major survey organizations, switched from quota to random sampling.

In West Germany old data exist as well, though to a much smaller extent. The earliest non-local surveys were done right after the war on behalf of the American military commission by an institute which later became the DIVO institute. In the second half of the 1940's other survey institutes such as the Institut für Demoskopie and EMNID began their work as well. With the exception of the DIVO institute, which was abolished in 1969, the other institutes have continued their work until today. They have repeatedly asked a number of questions and thus have made trend studies possible. The original data sets, however, have only partially survived.

Concerning the survival of the old data the situation in Germany is not the very best. No data from the military government surveys still exist²⁷. With regard to the DIVO institute a few surveys have been collected in the Zentralarchiv für empirische Sozialforschung in Cologne. The same applies to EMNID surveys. The Institut für Demoskopie remains to keep the richest data source with regard to old surveys. In contrast to the other commercial opinion and marketing research institutes it kept most of the original data sets from the beginning. Unfortunately it is not always easy to obtain these data for secondary analysis. The chance of performing trend and cohort analyses on the basis of older survey data alone thus does not look very promising. Under this condition the main road towards the study of trends and cohorts would be to take the old, archived data as a starting point and to conduct new surveys which are partially organized as replications of the older ones.

The preconditions for such strategies are quite satisfactory. The data quality of the older surveys in general does not seem to be too bad. There has been no deliberate attempt to have certain groups excluded or underrepresented as in the early Gallup surveys. The samples of the Institut für Demoskopie and the EMNID institute are usually quota samples which use sex, age and profession as quota criteria after the local sampling points have been determined. This has been so from the very beginning. Later developments have led to internal refinements, for instance with regard to combinations of variables like age and sex. The DIVO institute used random samples.

Regionally all states of West Germany have proportionally been included in the surveys of the diverse institutes from the beginning. Since the Saar was not part of West Germany until 1957 it was not represented in the early surveys. The population of the Saar constitutes a rather small proportion of the West German popula-

²⁷ See Allerbeck, Klaus R., *Demokratisierung und sozialer Wandel in der Bundesrepublik, Opladen 1976*, pp. 11 passim.

tion, however, and its later inclusion does not seem to have had any significant effect on the results.

With regard to the age categorization, which proves to be so important for the construction of cohorts, the situation in the surveys is worse. The Institut für Demoskopie used rather broad categories in the beginning. In 1950, for instance, only four age categories were employed (–30, 31–49, 50–65, 65+). Later, refinements were made. Today the age categorization is according to a five year interval. A similar broad categorization of age used to be common among the other institutes like EMNID and DIVO. EMNID has meanwhile opted for numerical coding.

2.4 Problems of Comparability

Researchers successful enough to locate surveys with questions on comparable topics face a number of problems before they can actually start their research. They have to find out whether true comparability with regard to data collection and measurement techniques exists.

Comparability with regard to data collection might be limited. Quota samples, for instance, differ somewhat from random samples in their composition of respondents: Socially active respondents are usually more prevalent in quota than in random samples²⁸. Even demographic comparability thus does not guarantee comparability beyond demographic variables. Consequently, caution has to dominate the interpretation when patterns of social activity (or variables associated with social activity) are compared in quota and random samples. Knowing the bias might, however, help in taking it into consideration. If a replication of older surveys is done, it might be wise to choose the same kind of sampling procedure: Using the same kind of sampling makes one feel sure that sampling is unlikely to be the cause of the observed differences.

Differences in data collection procedures might also derive from the interviewers. Black interviewers were not employed in American surveys at least through the early 1960's. Some institutes have meanwhile changed their policy and try to achieve racial matching in interviews nowadays²⁹. Since race of interviewer might have effects on the respondents' answers when racially sensitive topics are concerned, the introduction of black interviewers might have caused an artificial change of opinion in surveys among blacks. To make the matter worse, racial interviewer effects could even change when racial matching is not altered: Since respondent-interviewer inter-

²⁸ v. Koolwijk, Jürgen, Das Quotenverfahren: Paradigma sozialwissenschaftlicher Auswahlpraxis, in: v. Koolwijk, Jürgen, and Wieken-Mayser, Maria (eds.), *Techniken der empirischen Sozialforschung*, Vol. 6, München and Wien 1974, p. 92.

²⁹ Glenn, *Cohort Analysis*, p. 32.

actions are colored by general interaction patterns among the races, changes in the relationship might affect respondent-interviewer interactions as well³⁰.

The biggest problem with comparability of surveys, however, concerns question formulation and coding. Changes in question formulations might basically alter the distribution of responses and relationships between variables as well. Implicit differentials in the references of time as mentioned in the question wordings, might also influence the relevance of age, cohort or period effect on a given dependent variable. Compare for instance the subtle difference in the party identification question used by Gallup and the Survey Research Center: „In politics, as of today, do you consider yourself a Republican, Democrat or Independent” vs. „Generally speaking, do you usually think of yourself as a Republican, Democrat, Independent or what?”³¹ Though there is something like functional equivalence of question formulations, the problem of identifying functional equivalence has not yet been solved. The proposal to take equivalent marginal³² distributions at a given point in time as a criterion has been ruled out as invalid in the meantime: Even if marginal distributions are equivalent, relationships between variables might differ³³. Caution also has to be exercised when major changes of potential relevance occur in the prior context of the question. Response categories, finally, seem to be of importance as well. Changes, however slight, could cause a shift to other categories³⁴. It seems wise, then, to replicate questions and response categories exactly as they used to be, even if the formulations and categories do not seem to be ideal to the researcher. Otherwise it might be impossible to determine whether the change (or stability) in the responses is due to a real change or caused by variations in wording.

Open questions lend themselves to an especially large potential bias. Thus, a dramatic drop in antisemitic answers to an open question was found in the United States, for instance, when the surveying task was transferred from one polling agency to another³⁵. Differences in answers to open questions were also found in one of the recent Detroit Area Studies (DAS) when compared with older ones. When the old answers to the questions were recoded by the staff who did the coding of the new surveys, the answers proved to be nearly identical in both points

³⁰ Schuman, Howard J., and Converse, Jean M., *The Effects of Black and White Interviewers on Black Responses in 1968*, in: *Public Opinion Quarterly*, 35 (1971), pp. 44–68.

³¹ See Converse, *Party Support*, p. 35.

³² Klingemann, Hand D., and Pappi, F. U., *Möglichkeiten und Probleme bei der Kumulation von Umfragen*, in: Wildenmann, Rudolf (ed.), *Sozialwissenschaftliches Jahrbuch für Politik*, Vol. 1, München and Wien 1969, pp. 173–190.

³³ Presser, Stanley, and Schumann, Howard, *Question Wordings as an Independent Variable in Survey Research: A First Report*. Paper presented at the American Statistical Associations meeting, Atlanta (August 1975), p. 5.

³⁴ Hyman, Herbert H., *Secondary Analysis of Sample Surveys*, New York 1972, p. 218; Glenn, *Cohort Analysis*, p. 29; Presser, *Question*.

³⁵ See Hyman, *Secondary Analysis*, p. 217.

of time³⁶. The reasons for such divergences might be due to an insufficiently detailed code plan and a too heavy reliance on training and convergences during the prestages of coding or even in the stage of coding. The usual indicators of reliability – intercoder agreement – all too often reflect consensus after verbal socialization rather than consensus by strict application on an elaborated coding scheme itself. Unless exact procedures are found to assure high coding reliability, it might be wise to keep relevant old questionnaires on microfilm so as to allow later recoding.

3. Prospective Longitudinal Studies

3.1 Characteristics

Cohort studies, as described above, are a fruitful instrument for tracing changes on an aggregate level over time. What they do not allow, however, are conclusions about change and stability on an individual level: Cohorts remaining constant in the distribution of attitudinal and behavioral patterns need not remain stable on an individual level as well (Table 3). In fact, it has quite often been shown that stability on an aggregate level is compatible with change on an individual level. And this individual change could be quite dramatic, in the extreme it could imply a complete turnover³⁷.

In view of the possibility that aggregate change or stability does not say very much about the extent of change on an individual level, prospective longitudinal studies on an individual level are highly desirable. They not only allow measuring the extent of change, but also tracing individuals' attitudes and behavior patterns over time and establishing causal relationships between antecedent conditions and subsequent outcomes. Problems of selective exposure and recruitment or recursive influences, such as in cross-sectional studies, are easier to deal with³⁸.

³⁶ Duncan, Otis D., et al., *Social Change in a Metropolitan Community*, New York 1973, pp. 21 passim.

³⁷ For individual turnover and a stability of marginals see for example Converse, Philip E., *Attitudes and Nonattitudes, Continuation of a Dialogue*, in: Tufte, E. R. (ed.), *The Quantitative Analysis of Social Problems*, Reading/Mass. 1970, p. 170; Butler, *Political Change*, p. 221.

³⁸ This does not imply that longitudinal studies are always advantageous to cross-sectional studies. For a more general discussion see Dierkes, Meinolf, *Die Analyse von Zeitreihen und Longitudinalstudien*, in: v. Koolwijk, Jürgen, and Wieken-Mayser, Maria (eds.), *Techniken der empirischen Sozialforschung*, Vol. 7, München and Wien 1977, pp. 133 passim; Goldfarb, *Introduction*.

Table 3: Aggregate and Individual Level Stability:Hypothetical Examples (Absolute Numbers)

Stability on the Aggregate Level

	t ₁		Total
	A	B	
	A	B	
t ₂	40	—	40
B	—	60	60
Total	40	60	100

Q = +1.0

	t ₁		Total
	A	B	
	A	B	
t ₂	—	40	40
B	40	20	60
Total	40	60	100

Q = -1.0

Instability on the Aggregate Level

	t ₁		Total
	A	B	
	A	B	
t ₂	40	20	60
B	—	40	40
Total	40	60	100

Q = +1.0

	t ₁		Total
	A	B	
	A	B	
t ₂	—	60	60
B	40	—	40
Total	40	60	100

Q = -1.0

Prospective longitudinal studies not only have positive methodological aspects, however. They lack a control of cohort and period effects:

1. Longitudinal studies covering a broad time span often rely on one cohort only — sometimes consisting of individuals born within a certain week of a particular year. The problem here is, that we do not know whether other cohorts really undergo the same development. It might well be that individuals who have experienced certain generational imprints, vary from others in their specific ways of life. On cross-sectional studies the problem is not better. Though we now have several cohorts and can follow them up as they age, we do not have any further incoming cohorts, as in repeated cross-sectional sampling for comparisons.

2. The other problem concerns period effects. Without additional information, it is often impossible to separate aging and period effects. Increases of income with advancing age over time might, for example, have been caused by processes associated with the life cycle or they might have been affected by period trends which in-

creased the general income levels in the population. Probably many studies have not paid adequate attention to these period effects and have therefore come to questionable conclusions.

The only possibility of controlling for period effects in a longitudinal design would be to combine it with a repeated cross-sectional design. At first sight this kind of approach might appear to be rather costly. However, if the number of dependent variables deemed important is sufficiently small, the use of omnibus surveys for locating a few questions in trend studies would be sufficient and could keep the costs down. Under certain conditions the problem of assessing period influences could also be solved by taking questions which are repeatedly asked by the big survey organizations as a starting point. Incorporating these questions into one's questionnaire would allow a comparison with the periodically published findings of the survey organizations.

3.2 Possible Designs and Their Problems

Researchers interested in launching a prospective longitudinal study face a number of options and problems³⁹. They might decide to begin an entirely new series of studies or they might decide to follow up a study that has already been begun by other researchers in the past.

Researchers deciding for a new prospective longitudinal study might need a long time perspective. When whole life histories are the subject, it takes years until all the desired data have been collected. The researcher is likely to have lost interest or might have even died before the study's original aims are accomplished. Similar problems might even exist in cases of projects concentrating on certain phases of the life cycle. For this reason the project organization must be such as to safeguard continuity beyond the individual researcher. Depending on the time span, hypotheses and interests might also change during the course of research. It has therefore been suggested that one have a rather broad approach in the beginning and collect as much information as possible in order to have more options for research inquiries at a later date. Such a strategy, however, has its dangers. It might have a too global approach as the result and lack an adequate theoretical concept. Needed is the delicate balance between broadness and selectivity.

Whether the use of local or national samples is preferable, has to be decided individually. Local studies very often offer the „advantage of greater homogeneity in data collection, the possibility of utilizing locally available specialized resources for more thorough examination, and of augmenting samples of the comparatively rare

³⁹ See the discussion in Wall, *Longitudinal Studies*.

categories"⁴⁰. More administrative data are at hand and more easily accessible than national samples would allow.

A different approach to conducting longitudinal studies is to proceed from data which have already been collected. In a number of cases — especially where panel designs were used — addresses might still exist. One could start from them and revive the project by following the individuals who have once been researched. In other cases rather old longitudinal studies encompassing long time spans might exist. Depending on the interest into socio-historic circumstances and their effects, the old data might either be reanalyzed or combined with new, freshly collected data.

Older longitudinal studies available for such purpose are probably more numerous than is usually supposed. In the 1920's and 1930's several longitudinal designs were begun, especially in the United States and mostly with regard to child training and development⁴¹. Others, starting at about the same time, focused on medical public health or — as a number of Swedish ones — on the interplay of social background, intelligence and schooling for one's later career⁴². A few more recent studies have focused on the process of coming into old age or on topics like delinquency. In the latter case administrative data and, here and there, a combination of administrative and interview data have been used⁴³.

Perhaps the most interesting studies are those which have been done in the child training and personality development field. They seem of great interest since many of them go very far back in time and were still in use not too long ago. Their prospects for research seem great: They offer the unique possibility of showing how life chances depend on historical circumstances and on one's location in the social structure. At first sight, however, the merits for social and socio-historic research might seem limited. The studies are based „upon small numbers of subjects chosen on the more or less fortuitous basis of contiguity to the research center and the willingness to cooperate“⁴⁴. Emphasis is placed on a biological model of child growth, on somatic growth and measures of personality attributes. Attitudinal and behaviour patterns receive less attention and socio-cultural and environmental influences are hardly measured⁴⁵. Information about the parents is only partially

⁴⁰ Wall, op. cit., p. 67.

⁴¹ For a list of the early longitudinal studies see W. II, op. cit.

⁴² See Janson, Metropolitan; Goldfarb, Introduction.

⁴³ E. g. Wolfgang, Marvin E., et. al., *Delinquency in a Birth Cohort*, Chicago 1972; Jacoby, Joseph E., et al., *Drug Use and Criminality in a Birth Cohort*, in: *Drug Use in America. Problem in Perspective*. Technical papers of the second report of the National Commission on Marihuana and Drug Abuse, Vol. 1, Washington 1973, pp. 300–372; West, Donald J., and Farrington, David P., *Who Becomes Delinquent*, London 1973.

⁴⁴ Wall, *Longitudinal Studies*, p. 32.

⁴⁵ See Neugarten, Bernice L., Introduction to the Symposium: Models and Methods for the Study of the Life Cycle, in: *Human Development*, 14 (1971), pp. 84 passim; Bloom, Benjamin S., *Stabilität und Veränderung menschlicher Merkmale*, Weinheim 1971, pp. 14, 201 passim (originally published in English as *Stability and Change in Human Characteristics*, New York 1964).

sought. If the parents were interviewed themselves, it used to be the mother – she was apparently seen as the most important figure in the child's world.

Despite these individualistic, heavily psychologically and biologically oriented approaches, however, many studies also contain some useful and substantial information on family life, school and social experience and sometimes even on the larger milieu at that time. Performing a secondary analysis, or – under certain circumstances – a secondary *and* primary analysis of new data could provide new insights. And this insight could be very meaningful to a socio-cultural and historical approach as Glen Elder has shown in a number of brilliant analyses⁴⁶. Hereby special efforts have, of course, to be placed in finding appropriate indicators for the measurement of the impact of historical events: One has to look for the available variables and make the best of them. Elder for instance chooses loss of family income during the depression years as an indicator, which links historical circumstances – economic depression – to the individual's life course: People who recorded a loss of income were treated as being affected by the economic depression as a historical event. Whether the use of this indicator alone is sufficient might be arguable⁴⁷, but this has to be seen against the background of available indicators in the study.

3.3 The Problem of Respondent Loss

Where longitudinal studies are begun or continued the most serious practical problem usually to be solved is retrieving the respondents. Depending on the characteristics of the population, the records with which one is starting, and the time that has elapsed, the number of cases which appear to be lost at the outset is normally quite high. Many researchers have therefore seen longitudinal studies as more or less fruitless endeavours from the very beginning. „However, most of these cases *can* be retrieved“, a review indicates, and „if longitudinal study comes out badly, it usually is because little or no effect was made“⁴⁸. Numerous examples can be quoted where more than 90 % of the subjects were retained. And these

⁴⁶ Elder, Glen H., *Children of the Great Depression*, Chicago 1974; Elder, Glen H., and Rockwell, Richard, C., *Economic Depression and Postwar Opportunity in Men's Lives: A Study of Life Patterns and Health*, in: Simmons, Roberta G. (ed.), *Research on Community and Mental Health*. An annual compilation of research, Greenwich/Conn. 1977.

⁴⁷ See Fürstenberg Jr., Frank F., Review Essay, in: *American Journal of Sociology*, 81 (1975), p. 651.

⁴⁸ Eckland, Bruce D., *Retrieving Mobile Cases in Surveys*, in: *Public Opinion Quarterly*, 32 (1968), p. 53.

studies having such great success rates prove to be by no means unique studies with regard to population samples and design strategy. Even with representative population samples based on random sampling high success rates have been achieved over the years⁴⁹.

There can be no doubt, nonetheless, that some studies — due to sample and design characteristics — have greater chances than others to succeed, regardless of the techniques used to locate respondents. Major factors affecting tracing failures are the size, mobility and dispersion of the sample. Among social groups relatively homogeneous and centrally located populations with high education (such as university students) the researcher probably fairs best. The chance of locating them might be high simply because people tend to stay in these institutions for some time, establish contacts with many people there, and later follow certain relatively homogeneous career patterns. They might, moreover, belong to alumni organization and to professional organizations, whose directories might be searched. High education might furthermore increase cooperativeness.

Of further importance seems to be the elapsed time between contacts either with the researcher himself or some organization whose records are checked by him: Contacting people within relatively short time intervals reduces the chances of losing geographically mobile persons out of sight. In cases of a contact between researcher and respondent the researcher might learn about moves in advance or might at least still obtain information from either the neighborhood or public administration (such as postal service) just in time to follow up the paths of mobile respondents. In cases of deviants (such as criminals or drug users) those heavily engaged in the deviant pattern will have a greater chance of becoming officially visible to one of the organizations dealing with them (such as police, treatment centers, prisons). They will leave more traces in the official records to which the researcher has access⁵⁰.

⁴⁹ Eckland, *op. cit.*, pp. 53 *passim*; Parnes, Herbert S., *Longitudinal Surveys: Prospects and Problems*, in: *Monthly Labor Review*, 95 (1972), pp. 14 *passim*; Wall, *Longitudinal Studies*.

⁵⁰ For a discussion of selective respondent losses in cases of deviance research — especially on drug use — see Nurco, David, et al., *Locating Respondents*, in: Johnston, Lloyd D., et al. (eds.), *Conducting Follow up Research on Drug Treatment Programs*, NIDA Treatment Program Monograph Series No. 2, Washington 1977, pp. 72 *passim*.

3.4 Minimizing Attrition Rates

Systematic reviews of the techniques and practical approaches to lowering attrition rates by choosing appropriate searching procedures have, as yet, been scarce⁵¹. Without doubt, the best way to approach this problem is to think of it in the beginning of the project and to incorporate appropriate devices. Whether the use of volunteers constitutes a solution to the problem — as has been suggested by some writers — however, remains doubtful: Volunteers usually do not constitute a representative sample. They deviate from others in social, behavioral and attitudinal characteristics⁵². Random samples in general seem better suited for the purpose. In this case the most useful approach is to collect extensive biographical information (which could provide cues for later searching procedures) in the first interview. It could and actually should even be done when a longitudinal design is not planned: Doing so opens up the possibility of reinterviews one day, and having extensive biographical information makes the chances of tracking down respondents much better⁵³. Where public records have to be checked in the course of the study — either to locate respondents or to assess certain career patterns — written permission to use these records might be useful: Privacy legislation has made it much more difficult for researchers in many countries to obtain information from available records. In cases where the evaluation of treatment success is of central importance for organizations (such as treatment centers) it has therefore been suggested that people be asked to sign such permissions when entering the institution. Other strategies to lower attrition rates could be to ask the respondents to notify the researcher of any change of address. Respondents might be motivated for such cooperation by keeping them informed about the progress of the project. In a Swiss project, for example, parents whose children were followed up in a longitudinal study are periodically informed by newsletters about some results of the surveys⁵⁴. This kind of feedback might have the effect of increasing the attachment to the project and the degree of cooperation extending to both information about migration and willingness to be interviewed.

⁵¹ For some exceptions see Clarridge, Brian R., et al., *Tracing Members of a Panel: A 17 Years Followup*, Center for Demography and Ecology, University of Wisconsin, CDE Working Paper, No. 72–73; McAllister, Ronald J., et al., *Tracking Respondents in Longitudinal Surveys: Some Preliminary Considerations*, in: *Public Opinion Quarterly*, 37 (1973), pp. 413–416; Maddux, James F., and Desmond, David P., *Obtaining Life history Material about Opioid Users*, in: *American Journal of Drug and Alcohol Abuse*, 1 (1974), pp. 181–198; Eckland, Retrieving; Nurco, Locating respondents.

⁵² See for instance Riegel, Klaus F., et al., *The Prediction of Retest Resisters in Research on Aging*, in: *Journal of Gerontology*, 23 (1968), pp. 370–374.

⁵³ McAllister, Ronald J., et al., *Tracking Respondents*; Eckland, Retrieving; Nurco, Locating Respondents.

⁵⁴ Project directed by Prof. Ries, now at the University of Trier, W. Germany.

Especially in this kind of approach, however, the researcher also has to be extremely careful of not exerting any influence which might cause artificial results.

Whatever strategies are chosen to minimize loss of respondents over time, techniques to locate sample losses have to be employed in most of the studies. Some possibilities exist and have proved fruitful. They will, of course, vary between countries depending on registration systems and the distribution of certain characteristics in the population (such as telephone ownerships). Postal services, including telephone services, public records and private services, including organizational directories, could be used. Public records seem to be the ideal first source to be employed because they are so readily available. One might begin by using the city directories and the telephone directories plus the help of public administrations (such as the *Meldeämter* in Germany) or telephone information operators to find the subjects or relatives. If this fails one might — where available — also use street directories to identify former neighbors. Other sources of help might be post offices, where records of address change may be kept for some time, and in case of deviants, social control agencies with which the individual might have come into contact meanwhile. Finally, neighbors and friends may know about the new address, relatives — especially parents — will certainly do so. The search for new addresses might even be included into the research designs itself. Thus, in a British study of former students, a list of the people graduating with the respondents at the same university was included with the questionnaire and people were asked to fill in current addresses of those with whom they were still in contact⁵⁵.

4. Retrospective Studies

4.1 Characteristics

Retrospective interviewing is often the only possible means to secure life history material on an individual level. If longitudinal studies do not exist, no other method is available. In many cases, moreover, longitudinal studies cannot be performed since the respective groups of interest occur too seldom in the population. Under these circumstances, the inauguration of a longitudinal study on the basis of a representative sample would yield too few cases. But retrospective interviewing is not only an alternative to prospective longitudinal studies. Retrospective interviewing is

⁵⁵ Chishom, Lynne, et al., *Methodological Problems of Quantitative and Qualitative Research: the National Survey of British Graduates*, in: *Angewandte Sozialforschung*, 5 (1977), pp. 196 passim.

usually a fruitful complement to panel and other prospective longitudinal studies, since these studies only provide measurements at selected points in time. The processes that have happened externally and internally to the actor in the meantime cannot be measured except by retrospective assessment.

Retrospective assessment might even be more than a method which fills the gaps other methods leave. Retrospective assessment, if properly done, offers the unique opportunity to unravel the complex process by which patterns of attitudes and behavior are elaborated and transformed in response to external events. It allows the analysis of events impinging on an individual's life course and the definitions which are directed to them, and hence the analysis of interplay of objective and subjective factors. It is the only method „if one wants to know how an action came to be – what the key choices were; what the actor thought he was doing and how he felt about it; what influences were present and what triggered the action; and what outcome the actor expected“⁵⁶.

Finally, retrospective interviewing has been a tool used to collect information about life in earlier historical periods. Interviewing old people has been valued for the richness and vividness of details relating to past days and for its extensive coverage of events and experiences. The respondents have been seen as the carriers of memories of the past – as experts, who can provide material which cannot be secured by ordinary historical approaches. By making people remember their own personal life history and, additionally, the general circumstances at different points in time, attempts are made to reconstruct the past from „oral history“⁵⁷.

4.2 *Early Approaches*

Interest in life histories on the basis of retrospective interviewing is nothing new to the literature. It has quite a long, though interrupted, tradition especially in psychology and sociology. Life history approaches flourished in the 1920's and 1930's in Europe and the United States. In Europe it was Charlotte Bühler who took a major interest in life histories from a psychological perspective. For her, the understanding of a human being as a whole implied the knowledge of his whole life history. Major emphases were placed on a combination of developmental and motivational approaches, on life stages and sequences, on the realization of aims and the inter-

⁵⁶ Kadushin, Charles, Reason Analysis, in: International Encyclopedia of the Social Sciences, Vol. 13, New York 1968, p. 338.

⁵⁷ See for instance Thompson, Paul, *The Voice of the Past. Oral history*. Oxford 1978; Barker, Diana, and Thompson, Paul, *The Comparative Study of Courtship and Marriage in Twentieth Century Britain: A Methodological Discussion*. Paper presented at the 13th Seminar of the Committee of Family Research of the International Sociological Association, Paris 1973.

play of objective and subjective factors⁵⁸. At about the same time in the United States, William Thomas took an interest into life histories from a sociological perspective. For him, life histories based on biographical material constituted the ideal approach to understanding the interplay between objective and subjective factors, and the sequential development of attitudes, behavior patterns and personality traits over time. For him also, any specific act becomes comprehensible only in the light of its relation to the sequence of past events⁵⁹.

Unfortunately, Bühler and Thomas, did not succeed in elaborating their life history approach. Bühler remained conceptually and methodologically in an early stage. The impact of her work on psychology seems to have been minor. Life history studies there are still scarce⁶⁰. Thomas in general provided a better approach systematically and methodologically. However, he failed to integrate his life history approach adequately with his empirical material, and did not go beyond a mere presentation of individual life histories. Quantitative analyses which allow a more analytical approach were not employed. His failure to make his methodology more rigorous and his over-reliance on written autobiographies rather than specially designed interviews probably doomed his approach to failure⁶¹. It has only been in Poland where his collaborator Znaniecki gave the biographical approach a major impetus. Nonetheless, breakthroughs seem to have been rare⁶². In the United States, his approach finally died out with the influence of the Chicago school of sociology.

Apart from the Bühler and Thomas tradition centering on life histories as a whole, there have been only a few other attempts towards a life history approach. In these cases, the approach was more limited, aiming at an understanding of decisions and selected career phases within the life history. Paul F. Lazarsfeld, a former collaborator of Charlotte Bühler, has been one of the most important contributors. In a paper published in 1934 he gives an outline of his approach to understanding marketing decisions. He does so in a way which contains many of the central ideas of Thomas, without probably knowing of them. „The action“, he writes, „is a joint product of factors in the individual and factors in the situation. Explanations must always include both the objective and the subjective, and these are always inseparable interrelationships“. Furthermore: „At each successive stage

⁵⁸ See Bühler, Charlotte, *Der Lebenslauf als psychologisches Problem*, 2nd rev. ed., Göttingen 1959. For later statements on the approach see Bühler, Charlotte, and Massarik, Fred (eds.), *Lebenslauf und Lebensziele*, Stuttgart 1969.

⁵⁹ Thomas, William I., *Person und Sozialverhalten* (ed. by Edmund H. Volkart), Neuwied 1965 (originally published as *Social Behavior and Personality: Contributions of W. I. Thomas to Theory and Social Research*, New York 1951).

⁶⁰ Bühler, Charlotte, *Basic Theoretical Concepts of Humanistic Psychology*, in: *The American Psychologist*, 26 (1971), p. 380.

⁶¹ For a critique see Madge, John, *The Origins of Scientific Sociology*, New York 1962, pp. 52 passim; Fürstenberg, Review Essay, p. 648.

⁶² See Bukowski, Jacek, *Biographical Method in Polish Sociology*, in: *Zeitschrift für Soziologie*, 3 (1974), pp. 18–30; Szczepanski, Jan, *Die biographische Methode*, in: König, Rene (ed.), *Handbuch der empirischen Sozialforschung*, Vol. 4, 3rd ed., Stuttgart 1974, pp. 226–252.

along the time-line . . . we are dealing with a changed person, different by reasons of what has occurred at preceding stages and, also, of course, we have new influences that have come into operation to affect the on-going action"⁶³. Lazarsfeld's conceptualization of what has been termed „reason analysis“ has had some influence on research, mostly among his students at Columbia. In the long run, his approach, however, for whatever reasons, has remained without major impact⁶⁴.

Besides Lazarsfeld there have been approaches to the study of careers in the deviancy field. The most prominent is Howard S. Becker, who, in 1963, stressed the need to have sequential rather than simultaneous models of deviance. Patterns of behaviour develop in orderly sequence, he writes, and we must deal with the sequence of steps, of changes in the individual's behaviour and perspectives, in order to understand the phenomenon. „Each step requires explanation, and what may operate as a cause at one step in the sequence might be of negligible importance at another step“⁶⁵. In developing his approach, which remained relatively rudimentary, Becker might have been influenced by Thomas and his followers working on life histories. We cannot say with certainty⁶⁶. Anyhow, Becker has probably been the only one of those mentioned, who still has some impact on research today – though in a limited way: His career approach is mostly applied to that phase in the delinquent's career which starts *after* law enforcement has got hold of him. Earlier phases are hardly dealt with under a similar perspective.

As a whole then, the abovementioned approaches, centering on life histories or stages in life histories, have not had far reaching influence. They have fallen into disuse to a large extent or have been rather selectively used (as in Becker's case). Systematic further developments have not taken place and, above all, methodological improvements have hardly been made. „Considerable work remains to be done“, writes for instance Charles Kadushin in reviewing the Lazarsfeld approach, „in enhancing and testing the validity of reason analysis, as well as in testing and improving various models of action“⁶⁷. Hence more than 30 years after its development,

⁶³ Kornhauser, Arthur, and Lazarsfeld, Paul F., The Analysis of Consumer Action, in: Lazarsfeld, P. F., and Rosenberg, M. (eds.), The Language of Social Research, Glencoe/Ill. 1955, pp. 393, 396. See also Lazarsfeld, P. F., The Art of Asking Why, in: Katz, D., et al., (eds.), Public Opinion and Propaganda, New York 1954, pp. 765–786.

⁶⁴ See also Lazarsfeld, Paul F., Eine Episode der empirischen Sozialforschung, in: Parsons, Talcott, et al., Soziologie – autobiographisch, Stuttgart 1968, p. 215. The lack of long ranging impact is remarkable. Though some excellent research projects have been based on „reason analysis“ (for instance Rossi, P. H., Why Families Move, 1955) no further developments have taken place. Neither Lazarsfeld himself nor his students seem to have had much interest in it at a later date.

⁶⁵ Becker, Howard S., Outsiders, New York 1973, originally 1963, p. 23.

⁶⁶ Becker does not mention Thomas, but he must have been aware of his approach. See for instance his foreword to C. Shaws' book The Jack Roller, reprinted in Becker, Howard S., Sociological Works. Method and Substance, Chicago 1970, pp. 68 passim.

⁶⁷ Kadushin, Reason Analysis, p. 342.

reason analysis has still not proceeded very far. The same is even more true of the other approaches. Retrospective life history studies have failed to develop a tradition of their own.

4.3 Problems of Recall

The usefulness of retrospective studies for reconstructing life histories largely rests on the validity of the data which might be obtained. However, the validity of recall has only been given scant attention in past approaches to the study of life histories. For W. Thomas and followers „even the highly subjective record has a value for behaviour study . . . for (the subject's) immediate behaviour is closely related to his definition of the situation, which may be in terms of objective reality or in terms of a subjective appreciation“⁶⁸. This might, without doubt, be true for present behavior. But if one intends to go back and to reconstruct the whole life history, such an attitude does not make much sense. Recollections of past subjective definitions of situations might undergo a distortion by memory. For this reason an adequate reconstruction of the life history without considerations of methodological factors must remain problematic. In the other approaches to the study of life histories, apart from the Thomas tradition, problems of recall usually are not even mentioned.

In view of the lack of methodological research directed to the retrospective study of life histories, we have to rely on the rather scattered and still rudimentary findings from the survey research literature dealing with problems of recall. The methodological studies on retrospective interviewing here usually do not pertain to sequences of events or life histories as a whole, but to the recollections of single experiences or events only.

The results of this research on the validity of retrospective interviewing are complex and, at first sight, rather perplexing. Whereas the validity of recall must be seen as high in some cases, it proves to be low in others. Closer looks at the studies reveal a number of factors that intervene and produce varying results. One seems to be the kind of subject: attitudes are probably more difficult to remember than practical matters, behaviour patterns or events⁶⁹ — especially so, if the attitudes are short-term attitudes and not very much an object of reflection. If one realizes how much attitudes fluctuate over time, it really is no wonder that people have difficulties with recall⁷⁰. Recall of attitude data might be somewhat better when it

⁶⁸ William Thomas as quoted in Shaw, Clifford R., *The Case Study Technique. Value of Delinquent Boys own Story*, in: Wolfgang, Marvin E., et al. (eds.), *The Sociology of Crime and Delinquency*, New York 1962, p. 102.

⁶⁹ Barker, D., and Thompson, P., *Courtship*, p. 16.

⁷⁰ On the instability of attitudes see for example Converse, *Attitudes*.

is not the description of attitudes at certain dates which is required, but directions of attitude change. But even here the relationship between perceived and actual attitude change is usually low⁷¹. It might be only among certain segments of the population, as in highly educated educational groupings, that the direction of the change is adequately perceived. Greater ideological involvement could account for this pattern⁷².

Aside from kind of subject, factors associated with the subjective relevance of the topic, affect the validity of recall. Amount of elapsed time, past and present salience and past and present subjective threat have an impact. The validity of data decreases as time increases and saliency decreases. Experiences, which were prominent once are likely to be forgotten if they have little relevance to the respondent's current life. Not all serious events are, however, equally kept in mind. If experiences have been threatening (as in certain cases of surgery) the rate of recall tends to be lower. Recollections of extremely negative experiences are suppressed⁷³. In which direction memory distortions finally go depends on various factors. One has to do with time location, others with normative and cultural expectations and culturally induced frames of reference, against which experiences are evaluated. If one takes continuous states, such as income or certain attitudes, and compares present and past recollected ones by controlling for past conditions, a distortion towards present states can be found, i. e. past income or attitudes are nearer to the present than to the past. The past is colored by the present⁷⁴. With regard to single events (such as being in a hospital) a tendency to shift the reported item into or out of the recall period (telescoping effects) exists. In most cases the effects seem to be in the forward direction. This means, that events are mentioned as having happened in the recall period which actually happened before⁷⁵.

Research also shows that a tendency exists to fulfil normative expectations by distorting actions which are negatively valued with one's reference group. Parents tend to report about their past child-rearing practices in accordance with what is normatively expected by the current child-rearing literature. Alcohol consumption

⁷¹ Fink, T., The Retrospective Question, in: *Public Opinion Quarterly*, 24 (1960), pp. 143-148; Hardin, Elinar, Perceived and Actual Change in Job Satisfaction, in: *Journal of Applied Psychology*, 49 (1965), pp. 363-367.

⁷² Newcomb, Theodore M., et al., *Persistence and Change: Bennington College and its Students after Twenty-Five Years*, New York 1967.

⁷³ Cannell, Charles, and Kahn, Robert L., Interviewing, in: Lindzey, G., and Aronson, E. (eds.), *The Handbook of Social Psychology*, Vol. 2, 2nd ed., Readings/Mass. 1968.

⁷⁴ Cannell, Interviewing.

⁷⁵ Neter, John, and Waksberg, Joseph, Response Errors in Collection of Expenditures Data by Household Interviews: An Experimental Study. Bureau of the Census, Technical Paper No. 11, Washington 1965, p. 12; Cash, Williams S., and Moss, Abigail J., Optimum Recall Period for Reporting Persons Injured in Motor Vehicle accident, U.S. Dept. of Health Education and Welfare, Vital and Health Statistics, Series 2, No. 50, Washington 1972, p. 8. No forward telescoping is found in Cannell, C. F., et al., Reporting of Hospitalization in the Health Interview Survey, Vital and Health Statistics, Series 2, No. 6, Washington 1965, p. 32.

is underreported and the visiting of union meetings is overreported by its members⁷⁶. Whether there is a general tendency to shift negative experiences into the direction of more positive ones and to see the past more positively than it was, as has been suggested, is not quite clear.

Cultural expectations of „what goes with what“ affect recall as well. The recall of behavioral configurations, such as interaction patterns, might therefore often reflect primarily the subject's construction of the reality and not the world as it is⁷⁷. For this reason the reconstruction of past events, especially if not highly associated with the subject himself — as in historical reconstructions by retrospective interviewing — might be problematic.

Finally historical factors could have an impact. They could change from the frame of reference against which experiences are evaluated. Germany serves as an example. One can observe there a continuous trend from indicating a happy childhood to indicating a partially happy childhood over the years. Breakdowns of the results show that this trend also holds for cohorts (Table 4). Apparently a general trend in the population has caused a reevaluation of childhood experiences. Shifting conceptions of what is the desirable child training, as observed in this period, might be the reason⁷⁸.

Table 4: Recollections of Childhood
Percentage Indicating a „Happy Childhood“

Age	Year of Survey		
	1956	1960	1974
16–29	63	58	67
30–44	63	58	57
45–59	57	56	44
60 and older	62	57	43
Total	61	57	53

Source: Weltz, F. (ed.), *Jugend im Sozialisierungsprozeß*. Tabellenband, München 1967, Table VI 1, VI 2 (based on surveys from the Institut für Demoskopie); Noelle-Neumann, E., *Allensbacher Jahrbuch der Demoskopie 1974–1976*, Wien and Zürich 1976, p. 8.

⁷⁶ Cannell, *Interviewing*, p. 545; Wall, W. D., and Williams, H. L., *Longitudinal Studies*, p. 9; Danziger, Kurt, *Socialization*, Harmondsworth 1971, p. 146; Dean, Lois R., *Interaction, Reported and Observed: The Case of One Local Union*, in: *Human Organization*, 17 (1958), pp. 35–44.

⁷⁷ D'Andrade, Roy G., *Cultural Constructions of Reality*, in: Nader, Laura, and Maretzki, Thomas (eds.), *Cultural Illness and Health*, Washington 1973, pp. 115–127; D'Andrade, Roy, *Memory and the Assessment of Behavior*, in: Blalock, W. (ed.), *Measurement in the Social Sciences*, Chicago 1974, pp. 159–186.

⁷⁸ See EMNID Informationen, 26 (1974), p. 7.

A still unsolved problem is whether recall patterns vary according to sociodemographic groupings. Very little information unfortunately exists in this field. And where results are available, they are mixed and contradictory. Some studies, for instance indicate worse recall patterns among lower classes, others do not. Some similarly show effects of age or sex and others do not show any such effects⁷⁹. Probably social categories do not have any effects per se, but only when other recall relevant factors, such as subjective salience, are associated with them.

4.4 *Optimizing Recall*

„Remembered‘, ‚forgotten‘ and ‚never known‘ should not be regarded as absolute categories. Forgotten material can often be recalled with sufficient effort, and personal records are often available if respondents wish to consult them“⁸⁰. Methodological strategies can be developed to cope with the problem more effectively.

One of these strategies concerns the formulation of questions and the building up of question sequences: The rate of recall usually increases as more specific and focused questions are posed and the better a match is accomplished between the categories of the questions and the manner in which recall of events is symbolically structured⁸¹. Stimulation and reinforcement by the interviewer could also help in producing a stronger motivation and more intense searching for recollections of past events. Mail and telephone surveys probably do not turn out equally well in this case because of the great importance of having an interviewer fulfil probing and reinforcing functions⁸². The more time the respondent has to remember, the more

⁷⁹ Brekstadt, Arne, Factors Influencing the Reliability of Anamnestic Recall, in: *Child Development*, 37 (1966), pp. 603–612; Hardin, Einar, and Hershey, Gerald L., Accuracy of Employee Reports on Changes in Pay, in: *Journal of Applied Psychology*, 44 (1960), pp. 169–175; Cukier Robins, Lilian, The Accuracy of Parental Recall of Aspects of Child Development and of Child Rearing Practices, in: *Journal of Abnormal and Social Psychology*, 66 (1963), pp. 261–270. For a discussion of assumed different function played by the memory in different age groups see Lieberman, M. A., and Falk, Jacqueline M., The Remembered Past as a Source of Data for Research on the Life Cycle, in: *Human Development*, 14 (1971), pp. 132–141; Barker, Courtship, p. 17.

⁸⁰ Cannell, Interviewing.

⁸¹ Biderman, Albert D., The Distortions of Victimization Data and Mnemonic Effects, mimeo, Washington 1970.

⁸² For interviewer activity see for example Marquis, Kent H., et al., Reporting Health Events in Household Interviews. Effects of Reinforcement, Question Length and Reinterviews; U.S. Dept. of Health, Education and Welfare, Vital and Health Statistics, Serie 2, No. 45. For the differential effects of personal interview, mail and postal interview see for example Turner, Anthony G., Methodological Issues in the Development of the National Crime Panel Survey: Partial Findings, mimeo., Washington 1972.

recollections are produced. If reinterviewing is done, moreover, often respondents who have been unable to remember past events, now report them. Many of the biases are hereby reduced⁸³. A strategy to be explored – especially if interviewing is done with the same persons over a period of time (as in some interviews by historians) – would be to discuss again some of the events reported on an earlier occasion in order to activate more recollections. Bounded recall and use of anchoring points for the temporal reference period that also order experiences and the round of life („Since New Year's Day“) could be used to reduce telescoping effects⁸⁴.

Finally, it has been found that asking individuals about the experiences of other members of their household (for example with regard to victimization or expenditures) produces less information than asking the other persons themselves. Asking the persons themselves and, under certain conditions, more than one person in the household, would therefore yield the best information; the others could help to recollect the events, experiences and attitudes⁸⁵. Further strategies of obtaining better rates of recall exist and need further explorations. Though the situation with retrospective interviews is not the best in general, retrospective questions are often indispensable. More methodological attention should accordingly be directed to them.

Rearing Practices, in: *Journal of Abnormal and Social Psychology*, 66 (1963), pp. 261–270. For a discussion of assumed different functions played by the memory in different age groups see Liebermann, M. A., and Falk, Jacqueline M., *The Remembered Past as a Source of Data für Research on the Life Cycle*, in: *Human Development*, 14 (1971), pp. 132–141; Barker, *Courtship*, p. 17.

⁸³ Neter, *Response errors*, p. 3; Cannell, *Hospitalization*, p. 42.

⁸⁴ See for example Biderman, Albert D., *Surveys of Population Samples for Estimating Crime Incidence*, in: *The Annals of the American Academy of Political and Social Science*, Vol. 374, No. 21 (1967); Biderman, *Distortion*; Neter, *Response Errors*.

⁸⁵ Neter, *op. cit.*, p. 3, 71; Biderman, *Estimating*; Turner, *Methodological Issues*.