PAUL LAZARSFELD—THE FOUNDER OF MODERN EMPIRICAL SOCIOLOGY: A RESEARCH BIOGRAPHY

Hynek Jeřábek

ABSTRACT

Paul Lazarsfeld contributed to unemployment research, public opinion and market research, mass media and communications research, political sociology, the sociology of sociology, the history of empirical social research, and applied sociology. His methodological innovations—reason analysis, program analyzer, panel analysis, survey analysis, elaboration formula, latent structure analysis, mathematical sociology (especially the algebra of dichotomous systems), contextual analysis—are of special importance. This study responds to the critiques of Lazarsfeld's 'administrative research' by Theodor W. Adorno, of 'abstract empiricism' by Charles W. Mills, and of the 'Columbia Sociology Machine' by Terry N. Clark. The paper discusses the merits of the team-oriented style of work presented in Lazarsfeld's 'workshop,' his teaching by engaging in professional activities in social research and methodology, and his consecutive foundation of four research institutes, Vienna's Wirtschaftspsychologische Forschungsstelle, the Newark University Research Center, the Princeton Office of Radio Research, and the Bureau of Applied Social Research at Columbia University in New York. By his manyfold activities, Paul Lazarsfeld decisively promoted the institutionalization of empirical social research. All these merits make him the founder of modern empirical sociology.

One hundred years have passed since the birth of the founder of modern empirical sociology, Paul Lazarsfeld. Without him, sociology today would not know terms and concepts such as panel study, opinion leader, latent structure analysis, program analyzer, elaboration formula, reason analysis, and many others. Lazarsfeld's influence on empirical sociological research, market and public opinion research, and communication research has been much stronger than most of us realize. He belongs to the small set of scholars whose work led to results that in time became so well-accepted that today we consider them to be self-evident.

In the 52 years after the publication of his first book (Lazarsfeld and Wagner

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1924) at the age of 24, up until his death in 1976, Lazarsfeld wrote two dozen scholarly monographs. The most famous were translated into a number of other world languages. Almost all of his works were published in English, others in German, French, and Italian, and some even in Japanese and Korean. He lectured at Columbia University in New York and contributed greatly to the renown of its school of sociology, along with R. K. Merton and R. S. Lynd. In his younger days he had lectured in Vienna and in Newark, New Jersey, and his teaching in post-war Europe primarily took place in Paris at the Sorbonne. In addition, he also spoke at many conferences and taught seminars in the United States and Europe.

He organized, on his own and in cooperation with co-authors, more than twelve symposia and anthologies, published over 300 scholarly articles and a further 300 scholarly studies, some the length of books, for a limited circle of readers. He founded four research institutes, where he educated hundreds and influenced thousands of his own successors.

One of his most famous biographers, Professor Paul Neurath, said of him, 'If a mighty censor for some reason decided to wipe out that man's work by destroying every single line he had ever written, this censor's work would be in vain. Because there would still be the dozens of books and hundreds of articles by his students and the students of his students, all of which still breathe the spirit of this man's work and from which, if not word for word, nevertheless idea for idea it could all be reconstructed again' (Neurath 1998, pp. 517–18). Of how many scholars can that be said?

VIENNA YEARS

Paul Lazarsfeld was born in Vienna on February 13, 1901, and died in New York on August 30, 1976. He grew up in an intellectual Jewish family of active socialists, in a free-thinking environment characterized by solidarity and high demands. His father was a lawyer and his mother a psychologist, and among their family friends they counted important leaders of the Social Democratic Party in Austria. He made the decision to study mathematics at the University of Vienna on the advice of the physicist Friedrich Adler, a convinced and ardent pacifist. Later, he also attended lectures in psychology given by Karl and Charlotte Bühler. In 1925, after graduating from university, he took up the position of a mathematics teacher in a gymnasium in Vienna.

He became the assistant of Charlotte Bühler, above all for his knowledge in mathematical statistics, but he was never a regular employee of the University of Vienna, even though he informally supervised a number of doctoral dissertations. His first research monograph was Jugend und Beruf (1931), which, in an original manner, drew a picture of the proletarian consumers and his behavior as considerably distinct from the consumer habits of the middle class. He set up a research center and found cooperative employees among the students and young graduates from the University of Vienna, some of whom were volunteers, more or less. From 1928 on, a group (Lazarsfeld 1928, p. 237) made up of Marie Jahoda (his first wife), Hans Zeisel, Gertruda Wagner, Herta Herzog, Lotte Rademacher, and a dozen other young and enthusiastic people, worked together under his leadership in the research center. He later selected an executive board, comprised of entrepreneurs and businessmen from Vienna and Lower Austria; and in 1931, he chose its official name—Wirtschaftspsychologische Forschungsstelle (Fleck 1990, p. 62) (Research Center for Business Psychology).

The center dealt with something entirely new—market research. Archival sources show that it carried out surveys on food products such as milk, fats, coffee, chocolate, beer; on consumer goods such as shoes, men's suits, or cologne; and also on laundry services, the rental of American cartoons, and even tourism and visits to the cinema. To meet the need of educating his students at the university and in the research center, Lazarsfeld wrote what was probably the first textbook in Europe on the practical elements of mathematical statistics, aimed at social scientists and entitled Statistisches Praktikum für Psychologen und Lehrer (A Handbook of Statistical Methods for Psychologists and Teachers, 1929). In the winter of 1931/32, the center also carried out the first major research on radio listeners, well-known today as the RAVAG-Study.² A total of 110,000 people provided responses as to which programs they would like to listen to less, to which just as frequently as they did, and which they liked to listen to more often. Lazarsfeld computed 7,000 coefficients for different groups of listeners in order to demonstrate the diversity among the listeners' interests (Lazarsfeld 1996, p. 15 [1932]).

However, the most famous piece of research from this period of Lazarsfeld's life was *Marienthal*—research on a completely unemployed village, and on the consequences of mass unemployment. He collaborated on this with Marie Jahoda and Hans Zeisel (1933). The study is a classic today, considered exemplary because of the richness of methods it used and its wealth of examples. However, the book did not became famous before the 1960s and 1970s; a book written by three Jewish authors in 1933, in the wake of Hitler's rise to power, never even had a chance to reach the libraries in Germany. Only when the book was re-published in the 1960s did it awaken the interest among sociologists that it deserved.

This study was published for the first time in 1996 (Mark 1996).

¹ References to Lazarsfeld's major works, including those he co-authored, are not listed at the end of this article. They can be found in the selected bibliography published in this issue of *IJPOR*, pp. 322–5.

RESEARCH INSTITUTIONS IN THE UNITED STATES

FELLOWSHIP AND NEWARK UNIVERSITY, 1933-1937

Lazarsfeld spoke on the results of the Marienthal research at a psychology congress in Hamburg in 1932. His paper (1932), as well as the Viennese research center's orientation to market research, attracted the attention of the Paris representative of the Rockefeller Foundation, and Paul Lazarsfeld was offered a traveling fellowship in the United States. He spent two years there, visiting universities and research institutes. After the Dollfuss regime had been set up in Austria and the socialist movement banned, Lazarsfeld remained in the United States and never returned to Europe to live.³

In 1935, when he actually emigrated to the United States, Lazarsfeld received the help of Robert Lynd, author of the famous *Middletown* (1929) and at that time the chair of Columbia University's department of sociology. At that time Lazarsfeld founded the Newark University Research Center in New Jersey, the earlier Viennese research institute serving as a model.

The first of Lazarsfeld's publications in the United States dealt with market research (1934, 1935*b*, 1937*a*), unemployment (1932, 1935*c*, 1937*c*, 1938*a*), research methodology (1935*a*, 1937*b*, 1938*b*), and communications research (1937*d*). He wrote for a number of psychology and marketing journals, among them the new *Public Opinion Quarterly*, which he contributed to from the start, and Max Horkheimer's journal of the Frankfurt School.

THE PRINCETON RADIO PROJECT—COMMUNICATIONS RESEARCH

Over the course of at least the next decade, in addition to his important contributions on research methodology, Lazarsfeld concentrated on communications research. In 1937 he was made research director of the famous project that examined the influence of radio broadcasting on listeners (Princeton Radio Project). From 1940 to 1949, he published seven monographs, together with various other authors, devoted to research on the mass media and on interpersonal communication (1940a, 1941b, 1944a, 1944b, 1946, 1948a, 1949b). In connection with this work, a third research institute emerged connected with Lazarsfeld's name—the Princeton Office of Radio Research. However, the Newark team under Lazarsfeld's direction continued to work (Jeřábek 1997).

³ Most of Lazarsfeld's relatives were arrested during the first months of this regime. Following their divorce, his wife Marie and his young daughter Lotte stayed in Austria. Work in the socialist movement led to the arrest of Marie Jahoda in 1936, and only pressure from the international movement managed to save her and secure her emigration to Great Britain.

⁴ At that time he married for the second time, in this case his former close colleague from Vienna and fellow immigrant Herta Herzog.

LAZARSFELD AS METHODOLOGICAL INNOVATOR

In the framework of these institutions, Lazarsfeld began to introduce the methodological innovations that perhaps did the most to transform social science and make, even at first glance, the research of the 1930s distinct from that of the post-war period.

REASON ANALYSIS, MOTIVATION RESEARCH, AND EMPIRICAL ANALYSIS OF ACTION

Lazarsfeld's first original contribution to the research procedures of the empirical sociologist was the method that he called *reason analysis*. He made a first general description of this method in his now famous article of 1935: 'The Art of Asking Why'. In the USA it was first applied in a non-academic context by market research. Later, it was also applied to research on voting preferences.

Reason analysis uses an individual strategy to ascertain the reasons and motives that lead somebody to a particular type of behavior, decision, or deed. It is an individualized case analysis of causes and motives. The methodological symposium *The Language of Social Research* (1955c) includes an entire section called 'The Empirical Analysis of Action' devoted to this investigative approach.

PROGRAM ANALYZER AND MERTON'S FOCUSED INTERVIEW

At the turn of the 1930s to the 1940s, Paul Lazarsfeld, along with Frank Stanton, developed a specific research instrument—the *program analyzer*. This tool served to record the reactions of radio listeners to the parts of a prepared program. It was also used extensively in the *American Soldier* research, where the program in question was a film projection. In this, Lazarsfeld inspired Robert K. Merton to add another element to research methodology in communication. The now famous method of *focus groups* had its forerunner in the *focused interview*, the rules for which were tested and established by Merton, Patricia Kendall, and Marjorie Fiske (Merton *et al.* 1956). Many years later Merton described links and ties between the two methods (Merton 1987).

PANEL STUDY, OPINION LEADERS, AND THE TWO-STEP FLOW OF COMMUNICATION HYPOTHESIS

In 1940, Paul Lazarsfeld, along with Bernard Berelson and Hazel Gaudet, conducted research on how voting preferences are formed in the presidential election campaign. The investigation became famous for three reasons: (1) It was the first systematic, large-scale, and periodically repeated interviewing of the same sample of individuals—today known as the *panel analysis*. (2) Also for

the first time, the researchers formulated the hypothesis of the two-step flow of communication, which argued against the idea of a universal direct effect of the mass media on everybody, no matter how different people might be. (3) Lazarsfeld and his colleagues also defined and identified opinion leaders—the people who take an interest in public goings-on and in information from the print, radio, and other mass media, and who then mediate the opinions and attitudes of the people around them (their followers). In 1944, the results of this research were published in the book The People's Choice. How the Voter Makes up his Mind in a Presidential Campaign. The theoretically most abundant results in research on voting behavior came in the monograph Voting. A Study of Opinion Formation in a Presidential Campaign, which Lazarsfeld wrote with his two colleagues, Bernard Berelson and William McPhee (1954c).

Lazarsfeld's methodological contributions to panel analysis were numerous, beginning with two early papers in *Public Opinion Quarterly* (1938b, 1940b) and a chapter in a textbook of research methods (1951). Then came a section on panel analysis in *The Language of Social Research* (1955c), and an enlarged section on longitudinal data analysis in *Continuities in the Language of Social Research* (1972c). In the late 1970s, the topic still continued to interest Paul Lazarsfeld. One of his last scientific contributions (1978) was the chapter 'Some Episodes in the History of Panel Analysis' in a book on longitudinal research in drug use.

COLUMBIA YEARS AND THE BUREAU OF APPLIED SOCIAL RESEARCH

In 1939, the Princeton years of radio research—brought to life by Hadley Cantril and Frank Stanton—came to an end. The research team moved to New York, the center of the broadcasting business, and Lazarsfeld continued to lead it. At that time, after an agreement between the Rockefeller Foundation, Hadley Cantril, Paul Lazarsfeld, and Robert Lynd, the research center entered into a loose association with Columbia University. In the following years, broadcasting research transformed into the more broadly conceived communications research, and the research center led by Lazarsfeld broadened its activities to include a wider field of topics. In these years Paul Lazarsfeld began his collaboration with R. K. Merton (Merton 1979, 1998a). In the 1940s, interpersonal communication started to emerge as a more important topic than mass media communication, which had dominated the earlier period. Lazarsfeld's first contribution to the field of interpersonal communications was his paper 'The Change of Opinion during a Political Discussion' (1939). But in fact, Merton's study 'Patterns of Influence' (Merton 1949) was the turning point that put interpersonal communication at the top of the agenda of communications research. In 1944, the center was renamed the Bureau of Applied Social Research, known from then, until 1977, under the acronym BASR, or by the familiar term 'The Bureau.'

One of the most influential papers in the field of communications research, from the point of view of theory, was 'Mass Communication, Popular Taste, and Organized Social Action', which Lazarsfeld wrote together with Merton, and which was first published in 1948 (1948b). Lazarsfeld's presidential address to the American Association for Public Opinion Research (AAPOR) in 1950, called 'The Obligations of the 1950 Pollster to the 1984 Historian' (Lazarsfeld 1950a), played a similar role for public opinion research practice. The pollster of 1950, being a specialist in the systematic documentation of attitudes, could greatly strengthen the position of future historians, Lazarsfeld said. The 'dynamics of social change will be much better understood' (Lazarsfeld 1950, p. 637). The testing of the role of opinion leadership and of the hypothesis on the two-step flow of communication took the form of a book—Personal Influence—which Paul Lazarsfeld published together with Elihu Katz in 1955 (1955b). In this research, women spoke about opinion leaders who had influenced their opinions or decisions in four areas of their lives: household marketing, fashion, movie-going, and public affairs.

SURVEY ANALYSIS

During the war, following the still rich program of the research center, Lazarsfeld gradually began to launch what was clearly his most successful masterpiece—the methodology of multivariate statistical analysis of survey samples, or, in brief, survey analysis.

Lazarsfeld's original idea, located at the core of the survey analysis method, is quite frequently referred to as the *elaboration formula*, a detailed analysis or elaboration of concurrently active influences. The essence of the solution lies in the gradual search for deeper and deeper bases in the social reality under observation. Hypotheses on causal links between observed phenomena are submitted to empirical tests while the influence of other observed variables is controlled.

Lazarsfeld's article written in 1946 (first published in 1955), 'The Interpretation of Statistical Relations as a Research Operation' (1955a), explained the essence of the approach. In 1950, he published, along with his third wife, Patricia L. Kendall, an article entitled 'Problems of Survey Analysis' (1950c) in *Continuities in Social Research: Studies in the Scope and Method of 'The American Soldier'* (1950d), in which the principles of the approach are presented in detail.

LATENT STRUCTURE ANALYSIS

By far the most famous of his contributions to the methodology of multidimensional analysis of data is his *latent structure analysis*. Lazarsfeld outlined the principles of this method long before computers came into use in sociology. He formulated the first rough draft of this idea in 1947. Then, in 1950, he dealt with it in more depth in two chapters of the monograph *Measurement and Prediction* (1950b).⁵ He clearly and understandably explained the main idea of this method to non-mathematicians in the symposium paper, 'A Conceptual Introduction to Latent Structure Analysis' (1954a). After a series of articles and studies during the 1950s and 1960s (e.g. Lazarsfeld 1959), he published, along with Neil Henry, a detailed, mathematically conceived book, entitled *Latent Structure Analysis* (1968c).

The essence of the method is the search for response patters to dichotomized questions. The concluding phase in the application of this method involves determining the *latent classes*, within which basic variables are not correlated. These classes are then ordered according to *trace lines*. The approach is in many respects similar to exploratory factor analysis, but Lazarsfeld developed his method specifically for non-numerical data, that is, for nominal or ordinal variables. He elaborated on this method in its dichotomous variant, given the fact that computation difficulties continued to exist as the use of computers was not yet commonplace in sociology.

MATHEMATICAL SOCIOLOGY

Lazarsfeld is rightly considered the co-founder of mathematical sociology. At the beginning of the 1950s, he gained recognition for organizing an extensive series of lectures by mathematically oriented methodologists. Their contributions were then brought together in the first work on mathematical sociology, *Mathematical Thinking in the Social Sciences* (1954a). Ten years later, he and Neil Henry edited the second such collective work to prepare *Readings in Mathematical Social Science* (1966b). Thereafter he worked on the third such work, in Italian, with Vittorio Capecchi: *Metodologia e ricerca sociologica*. *Saggi sociologici* (1967a).

In addition to latent structure analysis, Lazarsfeld's model of the *dichotomical cube* is also of great significance. With the aid of this design, the mutual relationships of three dichotomous variables are examined. A more original problem is presented in the *16-fold table*, which is subordinated more generally

⁵ This book together with Paul Lazarsfeld's review of the first two volumes of *American Soldier* (1949a) serve as good evidence for the in-depth collaboration of Lazarsfeld with Samuel Stouffer's team.

⁶ Therefore nobody was surprised that his son Robert became a mathematician.

to the *algebra of dichotomous systems*. On this subject alone Lazarsfeld published ten scholarly studies between 1961 and 1972; see, for example, 'The Analysis of Attribute Data' (1968a). The most valuable contribution among these lay in the conceptualization of the problem of two dichotomous variables repeatedly affecting a dependent variable at two points in time. Approaching this, he presented the first model for the mathematical assessment of qualitative multi-dimensional data drawn from panel analyses.

THE IDEA OF PROFESSIONAL TRAINING IN SOCIAL RESEARCH

Throughout his entire life Lazarsfeld purposefully and systematically created and maintained the environment of a research workshop, in which he, along with his colleagues, provided scholarly guidance to doctoral students, assistants, and sociological researchers. His efforts to transform BASR into a school of graduate study for sociological researchers culminated in the 1950s, when he came very close to reaching this goal. A sample of his ideas and thoughts on this matter were later published (see Merton 1998a, p. 188). For example 'Proposals to Establish an Institute for Training in Social Research,' which he co-authored with R. K. Merton in 1950, was published in part in 1972 under the title 'Professional School for Training in Social Research' (1972b).

THE LANGUAGE OF SOCIAL RESEARCH AND OTHER METHODOLOGICAL SYMPOSIA

Three anthologies were particularly significant for the teaching and advocation of the methodology of sociological research in the analytical paradigm. We have already mentioned the first of these, *The Language of Social Research*, which was published in 1955 under the editorship of Lazarsfeld and Morris Rosenberg (1955c). The second, in French, was a three-volume publication under the shared title *Méthodes de la sociologie*, compiled by Paul Lazarsfeld and Raymond Boudon, and published in Paris between 1965 and 1970. The first volume of this work, 'Le vocabulaire des sciences sociales', was published in 1965 (b), the second, 'L'analyse empirique de la causalité', came out in 1966 (a), and the third, 'L'analyse des processus sociaux', with Francois Chazel also participating in the compilation, followed in 1970 (b). The third of the anthologies, *Continuities in the Language of Social Research*, was compiled by Lazarsfeld in cooperation with Ann Pasanella and Morris Rosenberg in 1972 (1972c). Within these five volumes of work⁷ is contained almost everything that Paul Lazarsfeld considered to be

⁷ The three French volumes are not translations but an independent editorial undertaking (Neurath 1980, pp. 76–7).

fundamental in supporting the Columbia strategy of social research, and thus for his concept of the analytical research paradigm in sociology.⁸

Lazarsfeld also worked on general methodology, the history of empirical sociological research, and other qualitative issues. Evidence of this is found in the dozens of articles, and in at least two books. The first of these, *Philosophie des Sciences Sociales* (1970a), was put together, with Lazarsfeld's knowledge and permission, by Raymond Boudon, and was focused generally on Lazarsfeld's philosophical and methodological studies. For a second book, *Qualitative Analysis: Historical and Critical Essays* (1972a), Lazarsfeld selected articles from his previous work in order to emphasize that his interests had always lain in sociological knowledge as a whole.

HISTORY OF EMPIRICAL SOCIAL RESEARCH

In the field of history of sociological research, Lazarsfeld participated in the emergence of a brief history of sociography in the early 1930s. It was eventually published under the authorship of his friend, Hans Zeisel, as an appendix to *Marienthal* (1933). In 1962 he published 'Notes on the History of Quantification in Sociology: Trends, Sources and Problems', in which he briefly outlined the subject in its entire breadth (1962a). His opinions on these issues are also to be found in an entire series of articles and papers dating primarily from the period of the 1960s. Together with his students he wrote two important studies: in 1965 with Anthony Oberschall about Max Weber, whose portrait he enriched with the significant endeavors in the field of empirical sociological research from the years 1907 to 1912 (1965a); and in 1968 with David Landau about Adolphe Quetelet, whose importance for the beginnings of sociology he does not hesitate to compare with the role of Auguste Comte (1968d). The continuation of Lazarsfeld's efforts in this field can subsequently be found in books by his younger colleagues A. Oberschall, Susan Schad, S. Cole, and T. N. Clark.

ACADEMIC MIND AND CONTEXTUAL ANALYSIS

In the 1950s Paul Lazarsfeld organized a survey in universities and colleges during the period of McCarthyism. In cooperation with Wagner Thielens Jr., he contributed to the study of attitudes and behavior of university professors and lecturers at a time when academic freedom was being threatened. The monograph *Academic Mind: Social Scientists in a Time of Crisis* (1958) provides a convincing demonstration of contextual analysis. This methodological approach lays emphasis on a combined analysis of data gathered from the responses of

⁸ Among Lazarsfeld's followers I can mention only some: Hans Zeisel, Herbert Hyman, Morris Rosenberg, and Earl Babbie.

individuals (e.g. on the climate of opinion in a given environment), and of global characteristics describing a collective (group) as a whole (e.g. the characteristics of particular university or college worksites). In general terms he addressed this problem along with Herbert Menzel in a methodological paper 'On the Relationship Between Individual and Collective Properties', written in 1956 and made public for the first time in 1961.

APPLIED SOCIOLOGY

In the 1960s and 1970s Paul Lazarsfeld devoted his attention to the application of sociology, its use in many different spheres of social practice, as the co-author of two influential books: *The Uses of Sociology* (1967b) and *An Introduction to Applied Sociology* (1975b). At the same time he worked for UNESCO, predominantly as a teacher, traveling around Europe and giving lectures. He published another book called *Main Trends in Sociology* in those years (1973), which consisted of short methodological and theoretical sections and an overview of the mainstream themes of social research in the late 1960s.

LAZARSFELD'S SOCIOLOGY—CRITICISM AND ANSWERS

DISCUSSION OF PAUL LAZARSFELD'S APPROACH DURING HIS LIFE

Lazarsfeld was, however, also criticized. In the two cases to be mentioned here, he rather served his critics as an easily targeted symbol of his research approach. Theodor W. Adorno, an important representative of the Frankfurt school, referred to Lazarsfeld's research on mass media as 'administrative research'. Lazarsfeld responded in a clearly benevolent and conciliatory manner with an article made public in Horkheimer's journal (1941a). Lazarsfeld's cooperation with Theodore Adorno in research on music, within the framework of the Princeton Radio Project, although it had an unsuccessful termination, reaped interesting results published by Adorno and E. Suchman in the first Radio Research Yearbook (1941b).

The second example of criticism was the famous work of C. W. Mills, *Sociological Imagination* (Mills 1959), in which Mills criticized 'abstract empiricism' and chose, not too wisely in my opinion, Paul Lazarsfeld as its symbolic representative. Rebukes addressed at strict operationalism and the low quality practice of second-level routine social research were aimed unjustly at a person who deserved credit for the successful cooperation between researchers, who shared a wide variety of approaches and used the widest array of qualitative and quantitative research methods. As examples of such cooperation we can cite the above-mentioned *Marienthal* work and the cooperation with Adorno,

his collaboration with Hadley Cantril, Robert K. Merton, and Bernard Berelson in the communications research projects and finally even the verification of qualitative research that Lazarsfeld requested from David Riesmann in *Academic Mind* (1958).

THE CRITIQUE OF LAZARSFELD'S 'COLUMBIA SOCIOLOGY MACHINE'

A third piece of criticism aimed at Lazarsfeld's work came out in the study by Terry N. Clark: 'Paul Lazarsfeld and the Columbia Sociology Machine' (Clark et al. 1998). This study describes a style of work in which everything was subordinate to the result, and in which the individuality of the researchers involved was lost, while only the director's ideas of what research was important counted. Unfortunately, the Columbia school's designation as a 'sociology machine' and the term used for its orientation ('clientelism' as opposed to 'universalism') are not free from evaluative sting. This analysis of the style of work of Lazarsfeld's sociological workshop is thus more of an attack, at times containing elements of a personal nature, than an analytical interpretation of the set-backs in cooperation or an explanation for the exceptional results of the Columbia school.

Among the many reactions to Clark's paper (Clark *et al.* 1998, pp. 324–60), the most important remark was that of R. K. Merton. In a sensitive but emphatic manner Merton addressed Clark in this way: 'Your often illuminating focus on the "Columbia Sociology Machine" leads to an almost complete neglect of the "Columbia Sociological Thought" with the result that your trusting (and not necessarily naive) readers are invited to conclude that "Columbia Sociology" was nothing but a political machine. Otherwise put, the almost total focus on the "socio-political micro-environment" and almost total neglect of the "cognitive micro-environment" threaten to lead your readers into the fallacy of misplaced concreteness' (Merton 1998*b*, p. 326).

Unfortunately, this article is not the place to discuss in detail what the substance of 'Columbia Sociological Thought' was. As far as Lazarsfeld's contribution is concerned, I think, however, the most noteworthy aspect is his search for fundamental dependencies among the many empirically determined relations between social phenomena. To fulfill this aim, Lazarsfeld developed the survey analysis model and latent structure analysis, panel analysis, and reason analysis. His elaboration formula served as the principal tool for the search for the fundamentals of social reality. Lazarsfeld thus started something that is still going on: the improvement of consecutive models to gradually achieve a more profound understanding of the social world.

The extensive discussion of Lazarsfeld's achievements has correctly raised the point that Lazarsfeld's style of work was team-oriented, and that results could not be attributed only to individuals. Moreover, Lazarsfeld never concealed this fact and rather understood it as an advantage in attaining scientific results. Thus, Paul Lazarsfeld cannot be separated from his research school, from his four research institutes, from his research workshops nor from his colleagues.

Lazarsfeld's contribution to the institutionalization of empirical social research is second to none. It may well be considered his most significant heritage to modern sociology, as is evidenced by biographical writings (Neurath 1988a, Sills 1979a, 1987, Barton 1982, Glock 1979) and in this issue by Barton (2001). On basis of this achievement we can rightly refer to Paul Lazarsfeld as the founder of modern empirical sociology.

AWARDS AND APPRECIATION

Paul Lazarsfeld worked at Columbia University until his retirement in 1971. In the 1970s, after his retirement, Lazarsfeld continued in his teaching as a Distinguished Professor at the University of Pittsburgh. He was honored several times for his contribution to the development of sociology. He was elected as President of the American Association for Public Opinion Research (AAPOR) in 1950. In 1954, he was the first person ever to be honored with the AAPOR Woodward Prize. In 1962, Paul Lazarsfeld was granted the honorary title of 'Quetelet Professor of Social Sciences' in remembrance of Adolph Quetelet, a famous Belgian natural and social scientist, statistician, astronomer, and, according to Lazarsfeld, the 'founder of sociology'. In the same year he became President of the American Sociological Association (ASA). He was awarded honorary degrees at many universities (Yeshiva, Chicago and Columbia Universities, University of Vienna). He was the first American to receive an honorary degree at the Sorbonne in Paris. In addition, he was given the Golden Cross of Merit national decoration in Austria. Also, in 1997, Columbia University re-named his former research center the 'Paul Lazarsfeld Center of the Social Sciences' to honor this pioneer work in social research methods.

A number of important books and collections of papers have been written on the work and life of Paul F. Lazarsfeld. Three of these have collected together almost all the papers published on this topic. These volumes include more than 60 papers written by scholars who worked with Paul Lazarsfeld, who knew him well, and who could help in gaining an understanding of his ideas and works. There are many other sources in addition. Above all, there are the papers written by Paul Lazarsfeld's best biographers: Allen H. Barton

⁹ The American collection of papers is Merton, Coleman, and Rossi (1979), the Austrian collection Langenbucher (1990) and the French collection Lautman and Lécuyer (1998).

(1982), Paul Neurath (1980, 1988a, 1992, 1998) and David L. Sills (1979a, 1987). 10

The first English edition of Lazarsfeld's autobiography was published in 1968 (1968b) and serves as a rich source of information for an understanding of Paul Lazarsfeld's work and life. Another important autobiographical source is Lazarsfeld's paper entitled 'Working with Merton' (1975a). 11

The most complete bibliography of Lazarsfeld's books, articles, and even unpublished manuscripts is the published documentation collected by Professor Paul Neurath, who saved and rescued many manuscripts of Lazarsfeld's intellectual legacy and organized them into the Paul Lazarsfeld Archive in Vienna (Neurath 1988*b*, 2001). Many are also printed in the 'American Collection' (Neurath 1979). Publications are mentioned in Sills's biographical articles (Sills 1979*a*, 1987), in Patricia L. Kendall's collection of Lazarsfeld's works (Lazarsfeld 1982, pp. 389ff) and in Raymond Boudon's edition of Paul Lazarsfeld's works (Lazarsfeld 1993, pp. 299ff).

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11 Among the autobiographical sources, the most important are the collection of oral history by Joan Gordon and Ann K. Pasanella, on file at the office of the Oral History Project, Columbia University, and the conversations of Nico Stehr with Paul Lazarsfeld (Stehr 1976).

¹⁰ There are many more biographical sources, not all of which I can list. Among these Raymond Boudon, Alberto Martinelli, David E. Morrison, and Michael Pollak should be mentioned. Some older sources were catalogued by David Sills (Sills 1979*b*). A detailed analysis of the years 1930–49 can be found in Jeřábek (1997).

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BIOGRAPHICAL NOTE

Hynek Jeřábek is associate professor of sociology at Charles University in Prague and senior research fellow at the Institute of Sociology at the Academy of Sciences of the Czech Republic. His field of study includes sociological methodology, history of empirical social research and communications research. He has published several articles on Paul Lazarsfeld and his institutes in *Sociologický časopis* (Vols. 36, 33, 32, 30) (in Czech), and a monograph *Paul Lazarsfeld and the Beginnings of Communications Research* (in Czech, now in the process of translation into English).

Direct all correspondence to Hynek Jeřábek, Charles University, Faculty of Social Sciences, Institute of Sociological Studies, Areál U kříže, 158 oo Praha 5, Czech Republic, Email jerabek@mbox.fsv.cuni.cz