Leo Srole and Ernest Joel Millman

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1954 - 1974

PERSONAL HISTORY & HEALTH

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Leo Srole
Ernest Joel Millman

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Preface

Without the strong and unwavering support of Esther Srole, wife of the late senior author, the present work would have been quite impossible. The equally valuable support of my wife, Ellen F. Pepperberg Millman is lovingly acknowledged. Finally this work might never have been published as one monograph, presenting the totality of the Midtown Longitudinal Study findings regarding the life-span predictors of mental health and other outcomes, without the interest and support of Irving Louis Horowitz.

This work represents the late Leo Srole's final perspectives on adult mental health. As was characteristic of him, it is exploratory, not confirmatory; it raises questions, and does not declare conclusions. Through this work Leo completes his pioneering of the exploration of social age and adult mental health, in particular as the character of social age might have differed for the women and men of the Midtown Longitudinal Study. His description of how the Midtown panel was assembled in 1974 after a twenty year hiatus is an invaluable contribution to longitudinal research.

The title of the monograph, *Personal History and Health*, reflects the nature of most of the research analyses described here, in which the unit of analysis was the individual Midtowner. Such group characteristics as Gender and Generation are represented in these analyses as characteristics of the person, as are such outcomes as mental health and history of somatic disorders.

During the approximately three decades of the Midtown Longitudinal Study, from inception to present, Leo was joined by a host of research collaborators. Many predated my collaboration with Leo, which began in 1976. They are acknowledged in the published reports from the Midtown Longitudinal Study in which they participated. (See the bibliographies of chapters 1-5.)

Leo's associates from 1976 on were also mine, whom I acknowledge here:

Leo Srole, Ph.D. himself provided me with the opportunity to enjoy my first publication, and endorsed the methodical use of path analysis

which structures much of this monograph. His emphasis on discovering *predictors* of adult mental health rather than speculating on cause-and-effect defined what was and what was not possible to achieve with the Midtown Longitudinal Study data set.

The late Anita K. Fischer contributed in countless ways to Leo's work. Her focus on gender differences in mental health became a major impetus of this study.

Three uniquely valuable friends and colleagues from the Teachers College, Columbia University, Social Psychology Program (which no longer enjoys an independent existence) made my participation in the Midtown Longitudinal Study possible, in many ways: Janos Marton, Ph.D. brought me to Leo's attention in 1976, when the study team needed an additional member to implement the life-span path analyses of mental health projected but, until then, never implemented. I had intensively studied path analysis during my graduate program years and had planned to use path analysis in my dissertation, which was underway at the time. Janos has continued to be a staunch friend and an invaluable resource to me through the years. He now directs the Living Museum at Creedmoor Psychiatric Center, in Queens Village, New York. Michael Freund, Ph.D. showed me the ropes concerning the construction and maintenance of large SPSS data archives. He expertly checked my construction of the indices used in the first life-span path analyses and provided friendly support for my efforts during the first three years of my participation in the Midtown Longitudinal Study. Most importantly, Michael worked with his friend Janos to assist Leo in bringing to its final state the computer simulation of the 1954 Psychiatrists' Ratings of mental health, which yielded the primary outcome variable of this study. Michael now edits the weekend edition of the primary liberal newspaper of Austria. Jackson Kytte, Ph.D. constructed the index of Social Network Density. For fifteen months I was employed by him at Antioch University, during which time we worked together on a number of scholarly essays. Jack continues to pursue a career which combines educational administration with social scientific and philosophical pursuits.

Five additional, and most recent, associates of ours remain to be acknowledged. Barry Gurland, M.D., Sidney Katz, Professor of Psychiatry and Director of the Stroud Center for Study of Quality of Life of Columbia University, and principal investigator of numerous research projects, has been a strong supporter of this study for the past two decades. Lirio Covey, Ph.D. constructed this study's 1974 Occu-

pational Level index, a very challenging task. She has been honored as an outstanding research scientist at New York State Psychiatric Institute. James L. Curtis, M.D., Clinical Professor of Psychiatry, Columbia University and Director of Psychiatry, Harlem Hospital Center, has been my employer since 1984 and has been warmly supportive in many ways of my efforts in completing this study. He and all of his clinical colleagues in the Department of Psychiatry have been my mentors in public mental health since 1984. Elmer L. Struening, Ph.D., Director of the Epidemiology of Mental Disorders Research Department, New York State Psychiatric Institute, graciously extended his computer privileges to me so that the final analyses could be computed. "Moose" was a good friend of Leo and Esther, and a colleague of Leo's in the Psychiatric Epidemiology Training Program, Division of Epidemiology, School of Public Health, Columbia University. An expert on program evaluation research of national stature whose most recent of many honors was a celebratory evening at the American Public Health Association's convention in October 1996, he has closely collaborated with James Curtis and me on a follow-up study of intensive case management for discharged psychiatric inpatients. Leo Srole carefully documented all of the sources of support for this study (e.g., in Srole 1980), as follows: The Midtown Longitudinal Study in its first stage (1952–1959) was sponsored by the Cornell Medical College and supported by grants from the National Institute of Mental Health (NIMH no. M515) to the late Thomas A. C. Rennie, M.D., professor of psychiatry, Cornell University Medical College. Supplementary support was acknowledged from the Grant Foundation, the Rockefeller Brothers Fund, the Milbank Foundation, the Littauer Foundation and the Samuel Rubin Foundation. Access to the Midtown I data bank was made possible through the cooperation of Stanley Michael, M.D., and Robert Michels, M.D., Chairman, Cornell Department of Psychiatry. Special acknowledgements of a number of consultants were specified, including Louis Linn, M.D., Jean Endicott, Ph.D., Steven M. Cohen, Ph.D., Donald Treiman, Ph.D., Richard Remington, M.D., W. Edwards Deming, Ph.D., Robert Markush, M.D., Ben Locke, M.S., and Shirley Reff-Margolis, Ph.D., of the NIMH Center for Epidemiological Studies. In its second stage (1972–1982) the Study was first sponsored by the New York State Psychiatric Institute and Columbia College of Physicians and Surgeons, Department of Psychiatry, chaired by Drs. Lawrence C. Kolb, Sidney Malitz, Edward J. Sachar, and most recently John M. Oldham. Its operational grants were from the NIMH Center

for Epidemiological Studies (MH no.13369) and the Foundation's Fund for Research, Fritz Redlich, M.D., President, with Leo Srole as Principal Investigator. Data analyses and reports through 31 May 1981 were supported under grant 32794 from the NIMH Center for Epidemiological Studies and Center for Aging Studies.

We also acknowledge, as users of the New York State Psychiatric Institute's computer facility, the support of Mental Health Research Center Grant MH 39896 from the National Institute of Mental Health.

The Statistical Appendices

When the late Leo Srole and Anita Fischer put together the research design and funding proposals for the Midtown Longitudinal Study, they selected the statistical methods of multiple correlation and regression analysis as the means to explore the basic ideas of this study. However Leo was always uncomfortable with the extensive presentation of statistical tables and figures which these methods entail. In the first presentation of our research on long-term perspectives on adult mental health (Fischer et al. 1979) we chose to relegate the tables and figures to an appendix so that the reader could receive an uninterrupted narrative. This approach has also been taken in this, Leo Srole's final presentation of this study. All of the statistical explanations, details, figures, and tables have been placed in a set of Statistical Appendices. Statistically sophisticated readers who would like to refer to these materials, and perhaps critically evaluate their use and interpretation in this monograph, may obtain them from University Microfilms, Inc. To order, either telephone University Microfilms at 1-800-521-0600 or fax at 1-313-665-5022, and request manuscript LD03613.

References

- Fischer, Anita K., Janos Marton, Ernest J. Millman, and Leo Srole. 1979. "Long-range influences on adult mental health: The Midtown Manhattan Longitudinal Study, 1954-1974," in *Research in Community and Mental Health, Vol. 1*, edited by Roberta G. Simmons, 305-33. Greenwich, CT: JAI Press.
- Srole, Leo with Anita Kassen Fischer. "The Midtown Manhattan Longitudinal Study vs. 'The Mental Paradise Lost' Doctrine." *Archives of General Psychiatry* 37 (February 1980): 209-21.

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Introduction

Prelude: A Tale of Two Towns

Throughout recorded history scientists, philosophers, and storytellers have sought to understand how it is that their fellows can appear to remain the same while at the same time changing all the while. Behavioral scientists have been trying to catch up with the novelists and playwrights who have explored and exposed the dramatic conflicts between human stability and change. The present authors are among the relatively few behavioral scientists who have chosen to follow the progress of a large cohort of people, in this case as they experienced a considerable portion of their adult lives from when they were first studied in 1954 to when they were reinterviewed twenty years later, in 1974.

The rare narrative to be related about these people can best be introduced by noting several of its similarities with the story line of one of the most popular American plays of the twentieth century, *Our Town*, written by Thornton Wilder on the eve of World War II. Although the two works will have obvious divergences, the central convergence is that each sweeps us into an identified social landscape, an entire community, its cast of local characters enlisted to speak for their neighbors.

Mr. Wilder's imaginary "Grover's Corners" is a settlement with 2,642 inhabitants. The community in which our cohort lived when we¹ first made their acquaintance, in 1954, was found teeming with life in a well delineated residential section of New York City, one we called "Midtown." At our arrival, some 172,275 people resided in Midtown. In the light of their contrasting numbers, the two communities could appropriately have been called "Small Town" and "Big Town" respectively, both located in the same region of the United States that the Census Bureau labels "The Northeast." By 1974 only about one in five of this cohort still lived at their original address in Midtown. About an additional one in five had remained in Manhattan, while about one in

five had moved to the other boroughs of New York City. The remaining two-fifths lived outside of New York City in 1974. Although the cohort was geographically dispersed by the end of the third quarter of the twentieth century, they all had shared the experience of residing in Midtown at midcentury and of being a part of the Midtown study.

The printed program of a play usually specifies the historical period on which its curtains open. The actions in the two towns are set several generations apart: One takes place in the early years of this century, the other during the century's third quarter, with Grover's Corners reflecting the rural nature of the region in its town, and Midtown the prevailing urbanism of a half century later. Despite these differences in historical period and geography, the two works have a common agenda, namely one of following their separate casts across a rather sizeable span of time—Grover's Corners for the twelve years 1901–1913, in Midtown for the twenty years 1954–1974.

That agenda, involving a modern kind of "Pilgrim's Progress," is to capture and describe in a summary way, as with a time-lapse camera, the final state of the characters, after all of the factors which produce continuity or change in people's lives have occurred. Here the two enterprises, so different in how they express their reports on peoples' lives, converge on common narrative ground.

Wilder raises his community above the particular details of a conventional locale, by giving it the following inclusive postal address: "Grover's Corners, New Hampshire, the United States of America, Western Hemisphere, Earth, the Solar System, the Universe, the Mind of God."

Although as scientists studying a particular group of people in a limited time period we cannot begin to picture such an all-embracing cosmos, we do seek to understand the larger significance of the Midtown cohort who have been observed in considerable detail, at about the beginning and ending of the third quarter of the twentieth century, through the trained eyes of behavioral scientists. Although Wilder's perceptions were those of the imaginatively expressive artist, there is a parallel between his self-chosen role, vis-à-vis his characters, and our own vis-à-vis our subjects.

The story line of *Our Town* is carried primarily by an unusual character, one seemingly on a higher level than that of the townspeople. He combines the roles of narrator, commentator and play-director-within-the-play, labelled by Wilder as "STAGE MANAGER." (Capitalization follows the play's script; "SM" hereafter is our acronym for him.) SM's

part is largely monologue, addressed to the audience, weaving through the spoken lines of the interacting town characters. What comes through early on is SM's implicit image of himself as an outsider observing the life of the town, in an approximation of the role of the visiting behavioral scientist. For example he confides to his audience, "We want a little more information about the town, kind of a scientific account you might say. So, I've asked Professor Willard of our State University to sketch a few details..." Echoing SM one character remarks, "The day wouldn't come when I wouldn't want to know everything that is happening here."

After the professor has reported some of that locality's features, SM calls on "Mr. Webb," editor of the weekly *Sentinel*, who among other things offers a miniature sociodemographic profile of the town, as follows (we quote Webb verbatim): "We're lower middle class, sprinkling of professional men...ten percent illiterate laborers...Religiously, we're eighty-five percent Protestants, twelve percent Catholics, rest indifferent." He also might have confirmed thus far that in racial composition Grover's Corners is almost entirely white.

Related Midtown details will be reported presently, but other parallels in the descriptive functions of SM and the present authors deserve prior mention. SM situates Grover's Corners with a seemingly exact latitude and longitude, although on a map that conjunction falls well offshore in the Atlantic. On Midtown's part such precision is hardly necessary, for it is a conspicuous district on an island which commands the great harbor where the mouth of the Hudson River opens on the Atlantic. Midtown is one of the island's larger residential quarters, tagged by two postal zip numbers and housing at mid-century a white population some sixty-five times bigger than that reported for Grover's Corners.

Playwright Wilder peoples his stage with 23 characters of ages ranging from adolescent to middle age, accounting for 9 per 1,000 of the village's residents. On the other hand the Midtown study team, of which the senior author was a principal member, originally focussed almost its entire attention on Midtown's midlife cohort, aged 20 to 59, numbering approximately 110,000 inhabitants in 1954.

As its first task, through an average interview lasting about two hours, the Midtown study team collected the confidential testimony of a mathematically randomized, demographically representative cross-section sample of 1,660 of these individuals, accounting for 15 per 1,000 of their total peers of like age.

SM literally “manages” the on-stage appearances of his cast ensemble, and either questions them informally, as he did with the editor and the professor, or temporarily leaves the stage for them to reveal themselves with close role partners in the play.

For the Midtown sample of adults the study team prepared a long and painstakingly designed schedule of questions to obtain comparable kinds of personal information from all 1,660 of them. This “answer completion” format helped each Midtowner to briefly tell their life history in a way that could be compared with the life histories of the other subjects. Staff interviewers were the Team’s personal surrogates in guiding subjects’ testimony on important facets of their lives, past and present, and also its “eyes” in recording observations about each individual’s behavior and feelings during the long session. Taken altogether, what we gathered added up to a confidential collective autobiography.

The Midtown Study was originally expected to yield the equivalent of a one-sitting, composite group portrait of the sample, and was so reported in a large series of journal articles, doctoral dissertations and two monographs, one of the latter in three editions.²

The volume of such publications cannot remotely compare with the post-1938 multiple editions of *Our Town* within book covers, and thousands of live productions by amateur, “little theater” and professional companies in towns and cities as far abroad as the Soviet Union and China, with additional performances seen by millions of movie and television viewers. Thornton Wilder seems to have anticipated that his drama would become an enduring theatrical classic all over the world.

We do not imply any comparison when we add that the Midtown publication record mentioned is as yet incomplete. From the start the latter had been planned and conducted to be complete in itself, in effect a one-act report. As pioneers on the new research frontier beginning after World War II, carrying out one of the largest undertakings of its kind up to that time, the Midtown study team did not remotely conceive the possibility of a study to follow directly in its footsteps.

However as director of the Midtown field staff, the senior author had monitored the incoming interviewing documents for quality control purposes. In the process he discovered that the sampled subjects’ individual personalities were vividly displayed in their recorded testimony, making him want to know them more fully.

To a closing letter of appreciation sent to all interviewed subjects, some had replied with holiday greeting cards bearing additional fam-

ily and personal news. He always answered these notes, which in turn were occasionally followed by other two-way communications, both written and by telephone.³

As a result, while writing the flagship volume of the 1954 study the senior author realized that he had become inextricably involved with the 1,660 subjects.⁴ Inevitably, his thoughts returned to them with the insistent question: How have their further life experiences affected them, as they aged biologically to the accompaniment of long-range changes in their national, local and family settings?

To answer this question an additional follow-up study would be needed. Supporting such a study were two larger trends: First was the appearance of several follow-up investigations of broadly parallel kinds; these had studied life-course ups-and-downs as a process that engages all of us in the role of protagonists.⁵ Second, in the early-1960's Congressional and academic leaders began to recognize their need for a national monitoring program to chart social trends on a regular basis. They felt the need for "means by which our society can assess where we are now and where we have been, and provide a basis of anticipation—rather than prediction—of where we are going in a number of areas critical to our national welfare...Our highly developed national system of economic indicators, which allows us to measure the state of our economy in considerable detail, needs to be supplemented with information on the state of our society in those areas not...within the professional domain of the economist."⁶

Emphasizing the urgency of this need were the consequences of the assassinations of several national political leaders, leaving many people with a sense of national and personal dislocation, as well as producing economic disruptions and even riots. The Midtown study of a large, general urban population, which gave signs of varying considerably in individual well-being, had been conducted in a relatively calm year during the early 1950's. Given the 1954 battery of intensive information available for replication, it therefore could conveniently lend itself to conversion into a baseline for studying the subsequent, cumulative impacts of the period 1954–1974 on the Midtowners.

This was a unique and exciting opportunity: Never before had any scientist been able to assemble so extensive a body of intimate details of the lives of so large and representative a sample population, to be individually followed-up after two decades, a period often taken to define a "generation."⁷ We could not anticipate, however, that this would be so tumultuous and disorderly a period, which ran from Eisenhower's

early White House years through the Vietnam period to the Watergate scandal, ending with the very last day of Nixon's presidency; these historical developments made the follow-up study all the more valuable.

With these thrilling prospects and a new staff, the senior author turned to designing a follow-up investigation—not previously contemplated—as a climatic second act, the two to be designated Midtown I and II (also known as MHIM1 and MHIM2). Of course the latter demanded that we locate and reinterview as many of the 1,660 Midtowners as could be found after an interval of twenty years. The biggest of our unknown study factors, we shall tell the story of this unplanned “needles in the haystack” search in the following chapter.

In terms similar to those of the theater, our original Midtowners were actors on the continuously moving, arena-sized stage of Manhattan. After 1954 several hundred died; several hundred had moved to other stages in New York City; other hundreds were resettled in surrounding counties, in forty states on the continent and in twelve far-flung countries abroad; and several hundred more had completely disappeared. Thus in 1954 about three-quarters of the Midtowners had been immigrants from sites varying distances beyond New York City and national boundaries; by 1974 some three-fifths of those located alive resided outside of Midtown.

However by 1974 a majority of 858 were located alive and could be reinterviewed. Some 163 could not or chose not to be reinterviewed. The remaining 695 people, now aged 40 to 79, are our players in the Study's second act, observed and reinterviewed in their current residences for systematic comparison both with themselves twenty years younger, and with peers then and now.⁸

The setting of the last act of *Our Town* is the local cemetery. Ten chairs, serving as prop grave stones, are occupied by actors representing the dead beneath those markers. Into their midst file the mourners in a burial cortege. To the previous act's theme of “Love and Marriage” this act provides the closure of mortality and intimations of the life beyond.

It is not often that a playwright makes the purposes of his play explicit in the body of the work, as does Thornton Wilder in *Our Town*. In its first act SM relates that construction has begun of a new bank building, which will incorporate a cornerstone for a time capsule of selected documents, including copies (here listed in his own sequence) of “The *New York Times*, the local newspaper, the Bible, the Constitution of the United States, a book of Shakespeare, and one contempo-

rary play.” As explanation for the choice of that particular drama, SM tells us: “Y’know...in Greece and Rome, all we know about the *real* life of the people is what we can piece together out of the joking poems and the comedies they wrote for their theater back then...so I’m going to have a copy of this play [i.e., *Our Town*] put in the cornerstone...so people a thousand years from now—this is the way we were in the provinces north of New York at the beginning of the twentieth century. This is the way we were; in our growing up and in our marrying and in our living and dying.”

Wilder seems to be saying that his play is addressed to audiences of two very separate eras. For people living a thousand years in the future, the drama is projected as a testimonial record, analogous perhaps to the Dead Sea Scrolls speaking for an ancient settlement that called itself “The Community of Qumran.” For us, Wilder’s contemporaries, *Our Town* is a parable about the elementary, commonplace beats of the clock of life, disrupted at irregular intervals by the gains and losses of attachments that accompany the passage of every human from birth to burial and beyond. For the reader approaching the closing curtain of the century, the book now in hand weaves a similar, more intricately laced, tapestry.

Two decades after the opening of *Our Town* on Broadway, the author commented that the play “is an attempt to find a value above all price for the smallest events of our life...” In the present book we follow Mr. Wilder’s example in fixing on one particular “value above all price,” namely that of health and well-being, in a representative company of big towners (past and for the most part present)—and in the final reckoning, perhaps, that of All Towners in the twilight years of their common century.

Midtown Unveiled

A passing bird’s-eye view of Midtown has been rendered in comparison to Grover’s Corners. The purpose of this longitudinal study is to assess the degree to which Midtowners changed biologically, socially and psychologically over the twenty years, beginning in 1954, and to develop a long-range life-span perspective on those changes. We also intend to explore the extent to which changes over the twenty years resemble the differences between two groups of Midtowners, that is those who were 40 to 59 in 1954 and those who were 40 to 59 in 1974. By comparing the differences associated with twenty years of

biological aging with those associated with being a part of the 40 to 59 generation either twenty years sooner or later (that is in 1954 or in 1974) we may discover the extent to which differences among Midtowners which seemingly are due to biological "age" are actually due to social "age," that is the Midtowners' membership in one versus another Generation. We shall also explore the extent to which the differences associated with either biological or social "age" are the same or different for Midtown women and men. To doubly protect their original anonymity we have always kept the identity of their area of residence under the cloak of a shielding code name.

However during the intervening decades most of our reinterviewed Midtowners have moved out of the Study area to new residences, some as far away as other countries. Nevertheless for the sake of narrative continuity between studies I and II we retain their original designation as Midtowners.

Another development has been persuasive in our decision to drop the cloak. Beginning in the late 1940s a backlog of commercial construction planned for Manhattan's Central Business district, but postponed due to World War II, began to be built, at an increasing pace during the subsequent four decades. This resulted in a tidal wave of demand for residential housing in the adjoining areas, which impacted most forcefully on Midtown's pre-WWI tenement rows, many of which have since been remodelled or replaced by high-rent skyscraper apartments. For many New Yorkers, in particular, the long chain of reactions triggered by this massive upgrading process, often referred to as "Urban Renewal," had the dislocating effect of an earthquake, exactly centering on the Midtown study area.

Thus we may now reveal its identity, beginning with an outline of its boundaries.⁹ Starting with the district to its north, East Harlem in ethnic and socioeconomic coloration was markedly different from the Midtown population, 99 percent white in 1954, such that their shared 96th Street border has long been characterized as "a Ghetto Wall," shrinking the normal Manhattan north-south cross-flow of vehicular and pedestrian traffic to trickles.¹⁰

At the opposite border, on a workday to cross vehicle-jammed 59th Street from the south is to transit from one of the nation's biggest and busiest commercial areas into a quiet retreat of apartment "cliff dwellings" and four-story walk-up brownstone houses.

With the confining East River at another of its sides, three of the borders represent what urban sociologists call "natural boundaries," of a type that sharply cut off a city section from its contrasting surroundings.

The Park Avenue border, on the other hand, separates the Study area from a two-block corridor fronting on Central Park that shelters the largest, most homogeneous concentration of residential wealth in all of New York City, and in local weekly newspapers is sometimes perceived as a "Silk Stocking Strip," by comparison with the far more diversified six-block area stretching beyond Park Avenue to the East River.

All in all, with a surface space of some 1.4 square miles, a population density of 123,000 inhabitants per square mile, conspicuous sociocultural diversity, and a considerable variety of specialized shopping outlets and service agencies, the Study area was a compact and partially self-contained residential district, with an identity that is often inclusively tagged in the press as "the Upper East Side." Set on what has been called a "tight little island," it was sociologically a quasi-insular community, consisting of loosely differentiated neighborhoods.¹¹

Midtown has been now defined as a distinct geographical entity, to which we have applied the description "community." The latter is a general term that accommodates a wide variety of human groupings, ranging from, at minimum, a face-to-face neighborhood, to a world-wide "community of nations," that is, President Bush's "New World Order." Here we are using the word's lesser sense of any population whose members are inhabitants of a limited physical locale, one that is either legally incorporated within specified boundaries, or is a named, bounded part of such an incorporated entity.

As an enormously complex but relevant example, Manhattan, up to 1898, was the incorporated "City of New York." After that date it was legally renamed "County of New York" (alternatively the "Borough of Manhattan") within the merged five-borough body of Greater New York.¹² Thus our study area qualifies, under the above definition, as a named section of the island of Manhattan that is officially an incorporated county.¹³

Why Midtown?

We must next address the reader's plausible question: Why, at the very start of the Study, was Midtown, among all possible areas, chosen for an intensive public health survey? Worthy of brief review are three separate considerations that influenced the choice.

1. The National Institute of Mental Health (NIMH) was set up to fund research and personnel training programs in its field, and with a recognition that community investigations were necessary to support its public health objectives.¹⁴ To this end, it was assumed that for com-

parative purposes a variety of community types would have to be surveyed. In fact communities had long been classified by the size of their populations, ranging from the village to the metropolis.

These categories of community were especially important for public health purposes, because through the entirety of Western history they had been associated with sharp contrasts in the frequencies of a variety of human afflictions. The correlation formula ran something like this: The bigger and denser the settlement the more prevalent these disorders appeared to be. In this light, exploration of a big city presented itself as a top priority.

2. Coincidentally, among the first proposals to conduct an epidemiological community study was that submitted to NIMH by the prominent social psychiatrist Dr. Thomas A.C. Rennie. Especially favoring approval of his application were the facts that he was a senior professor in the Cornell Medical College and clinical associate of the New York Hospital; both institutions are parts of a major medical complex based at the eastern edge of the Midtown Study area.

As a further advantage, office quarters for the researchers were offered in the Hospital, such that from 1952 to 1959 the Study team were almost daily observers of, and to some "extracurricular" extent participants in, the local scene. The study greatly profited both from its explicit identification with these two highly visible and eminent medical institutions, and from the senior researchers' formal and informal ties with local leaders, including clergymen, who helped obtain community approval of its research program of confidential interviews with a large sample of resident adults. To our knowledge, few other community studies managed, to the same extent, to mobilize invaluable long-term resident support for such personal explorations.

3. Published Census Bureau data of 1950 showed that the demographic composition of the population within the boundaries of Midtown was, at that time, a close approximation of the 1.2 million white, non-Puerto Rican residents of the borough of Manhattan.¹⁵ In short, on demographic criteria the Midtowners were a reasonably representative cross-section of a much larger white population universe, one that stood at the summit of metropolitan America.

Stated in other words, the Midtown population was a community entity which had a more generalizable, scientific significance than its compact character might suggest, one that transcended its incidental, particular characteristics.

On all three of the above considerations, the choice of Midtown for

a public health investigation was, so to speak, “a natural.” This conclusion received seemingly unanimous support some years later in 1962, when *Mental Health in the Metropolis* was published, to the accompaniment of extraordinary coverage in the daily press, news magazines and professional journals. In none, so far as we know, was the choice of study area in any way challenged.

On the other hand, word-of-mouth criticism did ultimately reach us on the absence of African Americans in the otherwise socioculturally heterogeneous Midtown population. The criticism warrants an open reply in this sequel volume.

1. To have added African-Americans in numbers sufficient for statistical purposes would have required that the Study team break out of its limited budget, and to cross borders into a community entity of a rather contrasting type.

2. In retrospect, even with sufficient funds, some of the Study team, at least, would have been skeptical about its competence and visible acceptability to probe the intimacies of well-being in a highly ghettoized black population.¹⁶

3. In any case, it was a plausible hope that a Midtown-scale study of a metropolitan black community would in due course emerge, as indeed one did.¹⁷

Research Origins and Targets

The present study, MHIM2, originated in the Midtown I (MHIM1) Study. To view MHIM1 investigation in larger perspective, we must pause to review the historical circumstances that had impelled it, indeed had shaped it, and by extension had also shaped its follow-up successor. At the very least, then, such a rearview account will perhaps explain to the reader the motives for doing what we did; just as motives are indispensable to understanding a crime, so are they essential to comprehending the “why” of a research project.

MHIM1 was born out of the labor pangs of World War II. In particular we refer to the lessons America painfully learned after the shocks of Pearl Harbor in attempting, almost overnight, to mobilize the largest military machine in its history. Issues on the fitness of the conscripted manpower were later critically addressed in “The Ineffective Soldier” studies at Columbia University. For our purposes here, the main source of information is its monograph *The Lost Divisions* by Professor Ginzberg and his colleagues.¹⁸

Long before the end of the war, Ginzberg tells us,

...the first alarms were being sounded by those who had become acquainted with the mounting casualty figures which reflected soldiers' breaking down with one or another type of psychiatric disability.¹⁹ These data were not released to the public for fear they would enable the enemy to glean useful information from them about the state of our manpower resources...

Among the distinguished leaders of the psychiatric profession who sounded the alarm were many who had long suspected on the basis of their private practice that for every patient whom they saw there were ten others who, though in need of help, had never consulted a doctor. The war seemed to prove their point. [Other] scattered evidence pointed to the prevalence of mental illness in the American population...

[When] the wartime restrictions on the release of official data were lifted...many startling facts and figures became available to the public for the first time.²⁰

We need not unravel the extremely complicated administrative history behind those "startling" seven-digit totals of the number of selective service "rejections" and inductee "premature discharges" recorded for "physical, mental, emotional, and administrative reasons."

An early outgrowth of these revelations was Congressional establishment in 1948 of the National Institute of Mental Health as a new training, treatment and research funding arm of the U.S. Public Health Service. With the entire national population as its charge, one of the first items on the NIMH agenda was to sponsor investigations of various communities.

The initial series of such studies supported by NIMH were of two major types. One, in a tradition going back to the seventeenth century, was essentially a file count of admissions to mental institutions. This tradition reached its high-water mark in a study by two sociologists of 27,000 Chicago patients admitted for psychoses to state and county hospitals between the years 1922 and 1934.²¹

The second type of community investigation, first supported by NIMH in the early 1950s, was based on the recognition that the large wartime manpower pool called for examination had excluded individuals with psychiatric histories. Therefore, those militarily rejected or discharged on psychological grounds represented a sizeable, previously unidentified portion of the general population, warranting attention as an unrecognized public health problem. On this basis a series of community-wide face-to-face investigations of local people in "all walks of life" was needed.²²

The Midtown Study, the largest of the first four of this type, was in effect an independent expedition to a new scientific frontier, that re-

quired a study team combining an assortment of professional skills never brought together before the War. First in order was psychiatry, the medical specialty serving patients labelled as mentally ill, and principally treated at that time in mental hospital settings isolated from their communities. Accordingly it was no accident that a senior professor of clinical psychiatry in the Cornell Medical College was funded by NIMH to become the director of the MHIM1 Team.

Because it focussed on a large community entity, the Study's second priority called for a social science specialist in community field research. With a background in social anthropology and experience in several of such pre-war American undertakings, the senior author was recruited to serve as the team's senior social scientist and full-time field director.

Added to the team in its early years, on a full-time, part-time, or consultant basis, were representatives of clinical psychology, cultural anthropology, biostatistics, and psychiatric social work. Joined with clinical psychiatry, this mixed group of representatives of autonomous disciplines, each with its own professional turf and vocabulary, were ultimately roped together under the rubric of "behavioral science" into a study team.²³

The spurring lesson of wartime examinations of military-age men, the construction of a powerful new psychiatric agency in the federal government, the pressure of making diverse individual specialists into a team, the mandate to persuade community residents in some numbers to accept personal interviews, and the implicit expectation that the study would yield guidelines for expanding and reorganizing psychiatric services all converged to create an unusually urgent atmosphere that enveloped the newly born MHIM1 as one of the first of its kind.

It was in this pressing atmosphere that the MHIM1 research staff began a process of hammering out a series of state-of-the-art procedural decisions. For the study team to investigate the entire general population of Midtown was not remotely possible. And it was rendered unnecessary by the then recent invention of probability sampling, a statistical technology for systematic, objective selection of a relatively small number of subjects from an overarching population of research interest, who would comprise a representative cross section in miniature of that population (with a known, tolerably small margin of error).²⁴

As a first step, the study team reduced Midtown's birth to late geriatric age range by selecting men and women in the career-involved

midlife age range between 20 and 59 years, bringing down its eligible total from 172,000 to about 110,000. From the latter the team next drew 1,660 representative subjects. These were engaged by the team in home interviews conducted by especially trained New York professionals in such fields as psychology, social work, sociology, and anthropology.

To standardize the interviews from subject to subject, senior Study staff constructed a meticulously worded sequence of questions addressed to their 1,660 respondent-interviewees. The contents of those questions can be visualized as a series of concentric circles that resemble a rifle-practice target. The center of the target was fixed on the concept of "health," one of the most loosely and commonly used words in the language, occupying as well a special position in Western thought. The degree to which it is ever in our thoughts and speech is suggested by the almost universal greeting of two people familiar with each other, who, by way of an update since last meeting, ask each other "How are you (feeling)?" However conventional it may seem, this greeting is the opening of almost all one-to-one conversations, a foreword with the implication of "first things first."

This implication has been paraphrased in Descartes' statement that "health is the chief blessing and fountain of all the other blessings in this life." Although standing in the pantheon with such other universal values as justice, truth, love and freedom, health among Western thinkers has received nothing like the continuing critical examinations that have been made of the other basic goods of life.²⁵

Microbiologist René Dubos of Rockefeller University was in the vanguard of critics of medicine's prevailing, pathology-fixed tunnel vision: "Solving problems of disease is not the same thing as creating health...this task demands a kind of wisdom and vision which transcends specialized knowledge of remedies and treatments."²⁶ We might briefly consider this transcending proposition. In a book edited by a leading medical educator and administrator, Dr. John Knowles, we have been given a knowledgeable estimate of the relative contribution to national health of one of our largest industries, namely the practice just mentioned of "remedies and treatments." There Aaron Wildavsky writes:

According to the Great Equation, we are told, Medical Care equals Health. But the Great Equation is wrong. More available medical care does not equal better health. The best estimates are that the medical system (doctors, drugs, hospitals) affects about 10 percent of the usual indices for measuring health: whether you live at all (infant mortality), how well you live (days lost due to sickness), how long you live

(adult mortality); the remaining 90 percent are determined by factors over which [patient care] doctors have little or no control, from individual life style, to social conditions, to the physical environment. Most of the bad things that happen to people are at present beyond the reach of medicine.²⁷

Thus the 90 percent beyond the help of patient-care physicians defines the area of health left to public health professionals and their research auxiliaries, including behavioral scientists.

To be sure, clinical evidence derived from patients in treatment offers the physician intensive insights into pathologies. However it also imposes a constricted view of the broader horizon of incipient subpathologic and prepathologic levels of health not usually seen in the clinic early enough.²⁸ As we shall presently note, the Midtown investigation from the start measured the entire scope of health differences in its sampled community population.

Toward placing the present research within the full semantic spread of words related to health, the reader might briefly note the etymology of this key concept. Its root is "hal," the eleventh century ancestor of the modern "whole," suggesting a spectrum of deficiencies falling short of wholeness, rather than medicine's traditional either-or dichotomy of the sick and the well. The two derivative terms, "heal" and "well" are the original bases for the modern sharp distinction within the professional structure of medicine between (1) the physician's fee-for-patient-care functions in one-to-one "hands on" settings, and (2) the "public health" functions, many performed at some distance from the individual citizen by publicly supported professionals.²⁹ The latter seek at minimum to reduce or delay a population's need for healing; or, worded differently, to maintain increasing numbers of its people in a state of wellness, by mass education and environmental research and intervention. Metaphorically, it can be said, the latter are "crisis preventers," or "health conservers," as distinguished from their patient-care counterparts who are "crisis managers" for already sick individuals.

Of course the crisis managers apply the criteria of visible "illness" for admission to treatment, but tend to dismiss the rest of the public as being in "the gray state of health corresponding to the absence of full-blown disease."³⁰ The public health "conservers," on the other hand, accept responsibility for monitoring an entire community and its habitat. Systematic research monitoring, called "epidemiology," usually screens a general home-based population for one or more classes of deviations from the wholeness implied by the familiar phrases "in the best of health" or "hale and hearty."

In the Midtown studies, the class that is our primary, but by no means sole concern, is mental or emotional health. Of course this emphasis is related to the immediate contexts of sponsorship by psychiatry departments in the Cornell (MHIM1) and Columbia (MHIM2) faculties of medically-allied professions, and, as already indicated, the principal support by the National Institute of Mental Health. For a number of reasons, including the novelty and public health-policy implications of our findings, this pinpointed center has monopolized most of the MHIM1 data analysis operations and corpus of publications. However, in our sights, through both Midtown I and II, have been a series of three other types of life outcomes, outer rings on our target, their results reported together for the first time within these covers.

This is the entire series, as applied to all of our research subjects:

1. Mental/emotional health
2. Somatic health
3. Intrafamily economic well-being (socioeconomic status, or SES)
4. Extra-family social ties (social network density)

Each of these domains is seen as a ladder of differences among people classed according to how favorable or unfavorable they are to their well-being. And since each level of difference is usually derived from identical sets of information obtained both in 1954 and in 1974, one of our investigative aims is the nature of the panel's twenty-year up-and-down shifts on each of the domain-specific ladders.

To be emphasized is our view that the above domains are analytically, but not substantively, separable behavioral spheres. In reality they are seamless facets in the inclusive oneness of the functioning human being, comprehending the intrapsychic/somatic/interpersonal "trinity" commonly referred to today in medicine and public health as "biopsychosocial."³¹

We would not leave the reader with the impression that the public health orientation and biopsychosocial configuration just outlined were fully formulated in 1954. Like all Western-bred people, the study team at that time had been indelibly impressed early on with the dominant authority of the patient-care physician, and subsequently several of them, including the senior author, had ancillary roles in training medical personnel. However it is relevant to note for the record that four earlier influences were already moving to bring about the comprehensive orientation presented above. In chronological sequence they were:

1. The French sociologist, Émile Durkheim, who demonstrated that the biological human animal, pre-adult or otherwise, can survive only as a social being.³²
2. The Swiss-American psychiatrist, Adolf Meyer, who challenged patient care specialists' fixations on this or that malfunctioning organ rather than the whole person.³³
3. International in origin, the constitution of the World Health Organization, drafted in 1948 by public health leaders, specified as its ultimate objective for the year 2000 "the attainment by all peoples of the highest possible level of health," with "highest level" referring to "a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity."³⁴
4. The Franco-American, scientist-philosopher, René Dubos, whose book *Mirage of Health* was largely a call, supported by wide medical, anthropological and historical learning, to the comprehensive perspective that "apprehends in all their complexities and subtleties the relations between living things and their total environments."³⁵

From the beginning the Midtown study team were mindful of these four influences, and brought them into the Study's targeted framework. However the urgent contextual atmosphere described as enveloping the investigation from birth onward immediately narrowed the innermost circle on their target to the last words in the title of the funding Institute, namely, "mental health."

How to define and measure this elusive quality in a large population had long been a source of professional controversy. One clinical psychiatrist summarized the situation for his fellow specialists as late as 1975:

There is no single definition of mental health that comes anywhere near to encompassing a general professional consensus...mental disease turns out to be as ill-defined as mental health. Its presence or absence is very hard to determine.³⁶

However a partial operational solution to the problem had surfaced from the rival field of psychometrics, in its development of standardized, systematic symptom inventories that had been thoroughly pretested in a variety of populations. A subcommittee of the study team reviewed all the symptom questions in this series of inventories, and with Dr. Rennie as preceptor, selected 83 of these with a "current" time reference, for inclusion in its interview schedule. The sample respondent, then, reported the recent presence or absence of each covered symptom in turn.

The next challenging problem to face us was how to reliably classify this large corpus of information from each Midtown sample mem-

ber. Toward a solution Dr. Rennie avoided the controversial either-or distinction between “sick” and “not sick.” Instead he arranged six classes of symptom-formation clusters on a continuum according to the number and psychic severity of symptoms reported. These were labelled consecutively:

1. No significant symptoms (Well).
2. Mild array of symptoms.
3. Moderate array of symptoms.
4. Marked, life-handicapping symptoms.
5. Severe social-role crippling symptoms.
6. Incapacitating dependence on others.

When statistically imperative Rennie merged classes 4, 5, and 6 into the category of *functionally impaired mental health* (Impaired).

He trained two younger associate clinical psychiatrists in applying this schema to extracts of our respondents' interview records.³⁷ To be emphasized is that the associate psychiatrists each separately read the extracts from the respondents' interviews, and for each part independently assigned them to one of the six Rennie grades of symptom formation.³⁸

This laborious rating procedure was necessary to test the Study's most fundamental theorem: Aspects of sociocultural contextual settings (in both their normative and deviant forms) operating both inside and outside of the family, during childhood and adulthood, have measurable consequences reflected in differences in mental health composition among subgroups within a community population.

This proposition referred to such a wide range of biopsychosocial processes that the senior social scientist for analytical purposes divided it into ten areas. Relative to adult mental health as an outcome, six were determined at birth through one's parentage, and accordingly could not be influenced by the respondent's subsequent mental health³⁹. These were:

1. Age order, as defined by year of birth.
2. Gender.
3. Parental socioeconomic status.
4. Generation in the United States in three groups, immigrants, children, of immigrants, and grandchildren of immigrants and beyond.
5. Religious origin of parents in four groups, Catholic, Protestant, Jewish, and Other.

6. Nationality origin of parents in seven groups, German-Austrian, Irish, Czechoslovakian, Hungarian, Italian, British, and Puerto Rican.

The four remaining areas were largely the result of the respondents' own actions, and therefore interact with their adult mental health:

1. Marital status in four groups, never married, married, divorced-separated, and widowed.
2. Own current socioeconomic status.
3. Pre-Midtown rural-urban provenance in four groups, rural, town, middle-size city, and big city.
4. Own religious affiliation, in four groups, Catholic, Protestant, Jewish, and Other.

In some 300 pages of *Mental Health in the Metropolis*, the senior author and his colleagues studied the ranks of the above groups on the six-level yardstick of current mental health. For the detailed results of these analyses we must refer the reader to that volume.⁴⁰ Here we can share several pivotal findings with the reader.

1. In the sample as a whole a clear majority of respondents fell into the Mild and Moderate levels of symptom formation, with minorities appearing in the extreme Well and Impaired levels. The Mild level in particular had the largest representation, making it the most typical grade in the population.

2. There were remarkable similarities of proportions in the intermediate Mild and Moderate levels across the entire sample population, no matter how it was subdivided according to the ten specified socio-cultural areas.

3. However statistically significant intergroup frequencies in the Well and Impaired levels were found. That is, the Mild and Moderate proportions were more or less the same among our many sociocultural groups. On the other hand, where the proportion of a group in the Well level was relatively large, the proportion in the Impaired level was relatively small, and vice versa. Graphically stated, the two levels behaved differently from each other in contrasting ways, somewhat in the manner of two children perched on opposite ends of a playground see-saw.

In the light of this pattern we devised a new measure, the group ratio of number of Impaired subjects per 100 Well subjects, called the Impaired/Well ratio. Where the total memberships of groups were sufficiently large, this elementary statistic provided a single summary.

4. The most important etiological finding of MHIM1 was this: We first ranked the Midtowners by which of the six levels of the independent variable of parental SES (during the respondent's childhood) they fell into. We then found that Midtowners raised in poverty-level families had in their ranks almost five times as many Impaired people per 100 Well as had Midtowners raised by wealthy or affluent parents (Srole et al., 1975). When grouped by the other independent variables, Generation in the United States, Religious Origin, and National Origin of Parents, Midtowners did not differ in mental health as long as their level of parental SES was controlled (i.e., held constant).

5. This finding presented MHIM2 with its major hypothesis, which can be stated in the form of two propositions:

a. Aspects of families' higher or lower positions in their community's socioeconomic structure influence both the personal life of family members within the family and their interactions with other persons outside the family; this creates drastically different settings for children to grow into and out of.

b. These differences begin to influence children's biopsychosocial development during their most impressionable, formative years.

6. Thus we postulate that, according to their SES position, parents and the family life setting within which they socialize the child play a crucial part in the development of the child's vulnerabilities and resistances to mental health risk factors throughout the entire span of the life cycle.⁴¹

7. We further propose that these processes may be different for children of each gender, in measurable ways. That is, the life cycle antecedents of adult mental health may be different for the Midtown women than for the Midtown men, reaching back to their early life experience and biosocial background (age, gender, and parental SES).

8. We will explore these propositions using the life-cycle data provided by the Midtowners, examining not only similarities and differences in the biopsychosocial antecedents of adult mental health but also of the health-related life-outcomes of severity of somatic disorders and affective symptom formation. These propositions first imply that aspects of the Midtowners' reported early life experiences are associated with their biosocial background characteristics. Secondly, these propositions imply that both biosocial background characteristics and early life experience are associated with health-related life outcomes in adulthood, both in 1954 and in 1974. The complexity of these propositions can be reduced by the actual statistical findings of our investi-

gations, at least in terms of the story of the lifespan development of our Midtowners' health. That is, we do not accept the fundamental theorem as a necessary truth, but rather seek to test it by analyzing the associations we observe over the life cycle of our Midtowners.⁴² We further seek to define the extent to which the life cycle development of the Midtown women's health is similar to or different from that of the Midtown men.

Midtown II's (MHIM2) Research Methods

We will now briefly describe the way in which the Midtown II study of 1974 was carried out. We first established that a follow-up study could be validly done twenty years later by conducting a Trace Operation which located 1,124 of the original 1,660 Midtowners. (A full report on this state-of-the-art project follows this Introduction.) Among those located, 858 were alive and 266 were deceased. Of those found alive, 81 percent (N=695) were reinterviewed in 1974. Among the total unlocated at the close of field work (N=536), we actuarially estimated that 100 had died (mostly the oldest men and women). Among the unlocated Midtowners were 129 women who had been either unmarried or formerly married in 1954. Since they had not only relocated but very likely also acquired new surnames, by marriage or remarriage, they could not be traced.

On the basis of multiple systematic comparisons of the 695 Midtowners who were reinterviewed with the total 1954 sample of 1,660 Midtowners, we have concluded that they are equivalent in both demography and behavior. There are only several departures from this equivalence, of accurately measured and relatively small magnitude. These differences are as might be expected in a follow-up study after a twenty-year duration: the proportion in the oldest age group is lower in 1974 (19 percent) than in 1954 (27 percent); the proportion of lower SES is less in 1974 (25 percent) than in 1954 (33 percent); the proportion of higher SES is greater in 1974 (43 percent) than in 1954 (34 percent), and the proportion of younger women is less in 1974 (21 percent) than in 1954 (27 percent).

5. Whereas the 1954 interview took an average of 90 minutes to complete, the Midtowners were asked a far broader and more detailed range of questions about their somatic, psychological, and social health and well-being in 1974, so that the reinterview took an average of three hours to complete. We sought to assess their ability to deal with unfam-

vorable as well as favorable life experiences in the twenty years from 1954 to 1974.

Thus we made sure that the Midtowners would tell the whole story of how they lived through four most important portions of their life cycle, either in the 1954 or in the 1974 interviews:

- a. Their early life experience, from early childhood to the end of their teen years at age 19. (This area had been intensively explored in the 1954 interview, but some needed additional data was obtained in 1974.)
- b. Their baseline adult characteristics in 1954 (the Midtown I year).
- c. Life cycle developments from 1954 to 1974.
- d. Their terminal adult characteristics in 1974 (the Midtown II year).

The single most important part of the 1974 interview was the repetition of the 83 symptom items from the 1954 interview on which the two psychiatrists had based their ratings of the degree to which the Midtowners had functionally impaired mental health. Since these two psychiatrists were no longer available in 1974, we could not have them repeat their ratings twenty years later. However we were able to use the step-wise multiple regression analysis method to produce a statistically acceptable substitute rating, based upon a weighted composite of twenty-two items which predicted the 1954 psychiatrists' ratings discrete of each other and the remaining 61 symptom items (multiple correlation = 0.83) (Singer 1976). Each item is weighted by the degree to which it predicts the psychiatrists' ratings. These weighted items are then added. The totals are divided into six levels so that the percentage of Midtowners falling into each of the six levels is the same as the percentage which fell into each of the six levels of the psychiatrists' ratings.

In MHIM2 we use only this statistical substitute rating as our measure of adult mental health. The level of this rating based upon the Midtowners' response to the items asked in 1954 is called MH54, while the level based upon their response to the same items asked in 1974 is called MH74. The twenty-two items which were found to satisfactorily reproduce the psychiatrists' ratings were as follows⁴³:

1. Did you ever have a nervous breakdown? (1=Yes, 0=No)
2. When you go out, do you usually prefer to go by yourself? (1=Yes, 2=No)
3. I am bothered by acid (sour) stomach several times a week. (1=Yes, 2=No)
4. Are you ever bothered by nervousness? (1=Often, 2=Sometimes, 3=Never)

5. Do you sometimes feel that people are against you without any good reason? (1=Yes, 2=No)
6. Interviewer rating: R's tension level at start. (1=Nervous, 2=Spontaneous Nervousness, 3=Mostly Relaxed)
7. Behind your back, people say all kinds of things about you. (1=Disagree, 2=Agree)
8. I have had periods of weeks or months when I couldn't take care of things because I couldn't get going. (1=Yes, 2=No)
9. Feelings of grief and sorrow are suitable for children but not for adults. (1=Disagree, 2=Agree)
10. I often have a hard time making up my mind about things I should do. (1=Yes, 2=No)
11. Like a lot of people, do you sometimes drink more than is good for you? (1=Yes, 0=No)
12. Have you ever had a fainting spell? (1=Never, 2=A few times, 3=More than a few times)
13. About your health⁴⁴ now, would you say it is excellent, good, fair, or poor? (1=Excellent, 2=Good, 3=Fair, 4=Poor)
14. I have periods of such great restlessness that I cannot sit long in a chair. (1=Yes, 2=No)
15. To avoid arguments, do you usually keep your opinions to yourself? (1=Yes, 2=No)
16. I have personal worries that get me down physically. (1=Disagree, 2=Agree)
17. Do you ever have any trouble in getting to sleep? (1=Often, 2=Sometimes, 3=Never)
18. Certain kinds of places make me tense such as high buildings, tunnels, or bridges. (1=Disagree, 2=Agree)
19. Do you feel somewhat apart, even among friends? (1=Yes, 2=No)
20. Have you ever been bothered by shortness of breath when you were not exercising or working hard? (1=Often, 2=Sometimes, 3=Never)
21. How often are you worried by loneliness? (1=Often, 2=Sometimes, 3=Never)
22. Have you ever had spells of dizziness? (1=Never, 2=A few times, 3=More than a few times)

MHIM2's Principal Findings

This book is devoted to presenting the principal findings of MHIM2 with respect to mental health and its primary associated biopsychosocial

correlates. While we must leave the intricate details to the body of the book, overall this is what we have found:

1. The average level of mental health remains the same over the twenty-year period. Thus there are no detectible subsequent cumulative impacts of the period 1954 to 1974 on the Midtowners' mental health. In fact a smaller proportion of these reinterviewed Midtowners are Impaired in 1974 than in 1954, and a greater proportion are Well in 1974 than in 1954, but their preponderance in the Mild and Moderate levels of mental health keeps the average level the same.

2. We next examine the extent to which Midtowners' membership in an "earlier" or "later" generation (as defined as whether they were of age 40–59 in 1954 versus in 1974) is associated with their level of mental health.⁴⁵ We find that there is a difference between the two generations of Midtown women, but not between the two generations of Midtown men. A larger proportion of earlier Midtown women had impaired mental health as compared with later Midtown women. In contrast, the two generations of Midtown men had equal average levels of mental health; and about equal proportions of Midtown earlier and later men had either well or impaired mental health.

Thus the MH of the Midtown women changed between two historical generations in a manner not paralleled by the stability of their MH over twenty years of biosocial aging. In contrast the MH of the Midtown men did not change either over two historical generations or over twenty years of biosocial aging. The facts that there was no change in adult mental health observed after twenty years of biosocial aging and that a difference in adult mental health at age 40–59 between two historical generations is observed only among the Midtown women suggest the extent to which adult mental health is rooted in the pre-adult years.

3. We have been quite intrigued by the fact that the two generations of Midtown women differ in their mental health composition at age 40–59 whereas the two generations of Midtown men did not so differ. To attempt to further understand this finding in the context of our data on the whole life cycle, we use multiple regression (or path) analysis to determine the extent to which four types of biopsychosocial antecedents of adult mental health might differently predict the mental health level of the Midtown earlier and later men and women. These types of biopsychosocial antecedents are:

- a. *Biosocial Background:* Age, Gender, and Parental SES.

- b. *Contexts of Childhood Functioning*: Body Damage (the degree of wholeness of physical constitution starting from early childhood), Parental Intrafamily Functioning, Parental Breadwinner Adequacy, and Family-Kin Network.
- c. *Pre-Adult Well-Being*: A combination of measures of the Midtowners' pre-adult physical health, mental health, and social well-being.
- d. *Severity of Somatic Disorders Up To 1954*: Each physical health disorder which Midtowners report in 1974 that they had had by 1954 is weighted by the physician-rated seriousness of that disorder. All of these weights are then summed. Midtowners might score high on this measure either by having had a few physical health disorders rated by physicians as being relatively serious, or by having had many physical health disorders rated by physicians as being relatively mild or moderate in seriousness.

We find that parental SES is associated with the pre-adult well-being and adult mental health of the earlier Midtown women in a way that it is not in either the later Midtown women or in either the earlier or later Midtown men: Among the earlier Midtown women, parental SES predicts their level of pre-adult well-being, which in turn predicts their level of 1954 adult mental health. When the prediction of their MH54 by their level of parental SES is adjusted for their level of pre-adult well-being, it is reduced to virtually zero. Thus among the earlier Midtown women, disadvantageous parental SES set the stage for less favorable than average pre-adult well-being, which in turn led to less favorable than average adult mental health. But among the remaining Midtowners, there is in fact no correlation between parental SES and pre-adult well-being, that is, among the later Midtown women and the Midtown men of both generations, disadvantageous parental SES does *not* set the stage for less favorable than average pre-adult well-being. Yet among both the earlier and later Midtown men and women, pre-adult well-being significantly predicts adult mental health at age 40–59. Thus the *childhood* functioning of the earlier Midtown women who came from socioeconomically disadvantaged families appears to have been uniquely adversely impacted whereas the childhood functioning of the later Midtown women and of the earlier and later Midtown men from socioeconomically disadvantaged families was not adversely impacted. And overall the best predictor of MH54 is childhood functioning (pre-adult well-being).

4. We have also explored in similar fashion the life cycle biopsychosocial antecedents of the adult mental health of our Midtowners in 1954 and in 1974. We have paid particular attention to possible differences in how our biopsychosocial life-span model might differ-

ently predict the adult mental health of the Midtown women vis-à-vis the Midtown men. We have also explored the distribution and antecedents of a number of important biopsychosocial correlates of adult mental health in a way paralleling our investigation of MH.

We note that the field of gender specificity in life course is understandably confusing to those who have studied it in the past twenty years. Depending upon which aspects one might investigate, women and men might appear to have their lives influenced by very similar factors in parallel ways, similar factors but in divergent ways, completely different factors, or some combination. We conclude that to understand an aspect of the life course, both genders must be studied as much in the same way as possible, that is, sampled and measured the same way: for after reviewing all of the analyses on which this monograph is based, we found that, (excluding the predictions of Gender and Gender by Age Level), of 201 statistically significant predictions made by our biographical model, about half or 93 (46.3 percent) are cross-gender, about a third or 65 (32.3 percent) are probably specific to the Midtown women, and about a fifth or 43 (21.4 percent) are probably specific to the Midtown men. The Midtown women are somewhat more likely to have the aspects of their life span studied in this monograph predicted by factors specific to them than are the Midtown men, as the predictions are distributed among the three types (cross-gender, probably specific to the women, and probably specific to the Men) in a ratio of 5:3:2.⁴⁶

* * *

Having summarized in a general way the findings of MHIM2 we turn now to a discussion of the state-of-the-art trace operation which made the restudy possible.

Notes

1. That is, the present senior author and his colleagues of 1954.
2. (a) Srole, Langner et al. 1962; (b) Srole, Langer et al. 1975; (c) Srole, Langer et al. 1978.
3. In one noteworthy instance, the correspondence had an unbroken duration of thirty-four years.
4. This kind of personal change has since been intimated by investigative journalist J. Anthony Lucas in his 1985 best-seller, a meticulous documentation of ten years of racial crisis in inner-city Boston. Lucas there writes, *inter alia*, that he was "drawn" to the "families at the center of my story by [their] engagement with life, which made them stand out from their social context... The realities of urban America, when seen through the lives of actual city dwellers, proved far more complicated than I had imagined."

5. Lidz 1968; Offer and Sabshin 1984.
6. Stevenson 1966: vii–viii.
7. Simonton 1990.
8. It seems to be an uncanny coincidence that the Academy of Motion Pictures Award-winning foreign language film *A Man and A Woman*, released in 1965, has been followed by a sequel entitled *A Man and A Woman: Twenty Years Later*, with the same author-director and the same characters played by the same actors. With his characters now in their mid-fifties the film's director, Claude Lelouch, observed that "theirs is the beautiful age for a love story. The seat of power rests with people of that age, and kids of twenty-five are more old-fashioned than their parents." *New York Times*, 11 October 1985. On another level, the film is viewed by a Hollywood director, Sydney Pollack, as "a way to examine what's happened to you over the years (ibid.)."
9. Of course, the Study Director's original guarantee of confidentiality of the subject's personal identity and information continues inviolate.
10. A more recent manifestation of this ongoing situation is revealing. A huge new "luxury" housing development has been built on the most northern block in the Midtown area, with guest entrances at its southern (95th Street) face, and "service" entrances at its northern (96th Street) face.
11. Among the better known are Carnegie Hill, Gracie Square, Lenox Hill, and Yorkville.
12. To this day, taxi drivers of the five counties and the *U.S. Postal Zip Code Directory* confuse newcomers and tourists by continuing to refer to Manhattan as the "City of New York."
13. The original designation of "Greater New York" has long been dropped from popular use, except by political and Chamber of Commerce officials, to refer to the more inclusive metropolitan region.
14. Kessler and Levin, eds. 1970.
15. For details see Srole, Langner et al. 1962.
16. The pros and cons of that sort of study were subsequently explored in Cedric X (1973: 1–118).
17. Parker and Kleiner 1966.
18. Eli Ginzberg, et al. (NY: Columbia University Press, 1959).
19. Although on leave in late 1942 as a college professor of sociology and anthropology, the senior author was somehow classified by the United States Army Air Force for a slot as a "military psychologist," before long assigned as group therapist on a convalescent hospital ward for aircrew "psychiatric casualties." He thus became a cog in the huge system that was to be definitively analyzed a decade later by Ginzberg and his associates, under the impetus of General Eisenhower.
20. Ginzberg, pp. 58–59.
21. Faris and Dunham 1939.
22. The Psychiatric Director of the Joint Commission on Mental Illness and Health had urged that "to attain a true concept of the national [mental health] problem we need studies...of as many individual communities as possible...to be able to make comparisons between geographic, socioeconomic and cultural areas of the country." (Ewalt 1959: 622)
23. Later they were defined as seeking to order, interweave, and explain the huge array of normative and deviant human actions and reactions in their everyday social settings.
24. By sampling, "information can be drawn at relatively low cost from large populations or social universes," comparable to the "development of the telescope" (Boulding 1964: 70–71).

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25. Parenthetically, at least partly responsible for this conceptual lag has been the phenomenal power-wielding ascendancy of medicine as a techno-scientifically based art (and institution), with a proprietary claim to primacy in the semantics of health. See Starr (1983: 16–21) and Illich (1976).
26. Dubos 1959: 26.
27. Wildavsky 1977: 105.
28. Among these are the “silent” coronary and cerebral infarcts and first-stage cancers of the pancreas.
29. These professionals have been represented by the American Public Health Association since 1872.
30. The matter has been paraphrased by Barbara B. Brown (1984: 2): “Between health and illness there are obscure and ambiguous states of unwellness... These states are not ‘official’ medical or psychological ailments. They are, instead, afflictions abandoned by the healing arts when they decided that you cannot officially feel not-well unless you are certified sick.”
31. Complimentary perspectives are offered in the following references: Engel (1980: 535–544), Schwartz and Wiggins (1986: 1213–21), Antonovsky (1982), Newton et al. (1984: 230–88), and Rutter (1986: 1077–87).
32. This was dramatized in the television documentary film “Our Man in Moscow.” A Russian working for British Intelligence apprehended by the Soviets is sentenced not to death but to solitary confinement, with a public announcement, however, of his execution. While his life is spared, his significant others believed he was dead. The “sociological death sentence” was so intolerable that at the first opportunity the Russian committed suicide.
33. “If science does not see that the time has come to recognize as its central concern the whole of man, as individual and group, it fails to do justice to its greatest task and opportunity” (Meyer 1935: 33).
34. Implicit here are multiple levels on a best-to-worst continuum of health.
35. Dubos 1959: 256.
36. Zusman (1975: 2327–28). Of course the introduction of DSM-III (American Psychiatric Association, 1980) brought about a uniformity in the definition of at least certain mental disorders which would have been impossible to imagine in 1954.
37. The extract was in two parts: part A—The symptomatic information; and part B—The symptomatic information plus their reported sociocultural characteristics. The rationale for this painstaking procedure is explained in the section entitled “Judgmental Bias in Psychiatric Classification,” within the 1978 edition of *Mental Health in the Metropolis*, pp. 161–65. Because our associate psychiatrists’ classifications based on the part B data were a closer approximation to the conventional judgmental operations of psychiatrists in their clinical practice, Dr. Rennie subsequently chose the results of the Class B 1954 classifications to be reported in all MHIM1 publications. However, for computer-driven statistical-analytic reasons discussed below, the MHIM2 results have had to be based only on the replicated Part A symptomatic information of 1974, and have been so reported in all our publications since.
38. For all sample individuals assigned differently by our two associate psychiatrists, the disagreements were systematically adjudicated with Dr. Rennie. The historical development of the mental health measure is presented in Srole (1975: 347–64). This measure has persisted in a somewhat altered form as Axis V in DSM-IV (American Psychiatric Association, 1994). An argument that it selects persons in the community as in need of psychiatric treatment more sensitively than do specific criteria for individual psychopathological syndromes is presented in Vaillant and Schnurr (1988: 313–19).

39. MHIM1 was the first cross-sectional investigation in psychiatric epidemiology to make a sharp distinction between two sets of situational-experiential factors contributing to mental health:
 - a. The independent, antecedent variables, defined by the criterion that each could potentially influence the course of individual mental health development, but could hardly have been influenced by it in return. Examples are age, sex, and parental socioeconomic status, which largely defined the Midtowners' place in the social space of their childhood, one that was beyond their power to alter.
 - b. The reciprocal social variables, defined by the criterion that each can be influenced by the individual's mental health, as well as potentially contribute to it. Examples are marital status and the adult's self-acquired socioeconomic status (Fischer et al., *op cit.*).
40. Srole et al. 1962.
41. Fischer et al., 1979. In mental health diagnostic assessment and treatment planning, these are often referred to as assets and liabilities, or strengths and weaknesses.
42. Here is a recent rejection of the biopsychosocial model in psychiatry as "revealed truth": "The multifactorial or biopsychosocial approach can be considered an improvement only if future research demonstrates that it results in an improvement in both our clinical behavior and our patients' therapeutic outcomes. One of the problems with the multifactorial approach is the difficulty created for treatment planning when etiological priority is not established" (Guscott and Grof 1991: 695-704).
43. Srole and Fischer 1980: 209-21; Srole and Fischer (1989: 35-44).
44. In 1974 this item is worded "general physical health" rather than "health."
45. Wyler et al. 1968: 363-74; 1970: 49-64.
46. See chapter 9 for a summation of our findings for mental health.

References

- American Psychiatric Association. 1980. *Diagnostic and Statistical Manual of Mental Disorders*, 3d ed. Washington, DC: American Psychiatric Association.
- . 1994. *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed. Washington, DC: American Psychiatric Association.
- Antonovsky, Aaron. 1982. *Health, Stress, and Coping*. San Francisco: Jossey-Bass Publishers.
- Boulding, Kenneth E. 1964. *The Meaning of the Twentieth Century*. New York: Harper and Row.
- Brown, Barbara B. 1984. *Between Health and Illness*. Princeton, NJ: Houghton Mifflin.
- Dubos, René. 1959. *Mirage of Health*. New York: Harper and Row.
- Engel, George L. "The clinical application of the biopsychosocial model," *American Journal of Psychiatry* 137 (May 1980): 535-44.
- Ewalt, John R. "A Case for the Community Self Survey," *Public Health Reports U.S.* (July 1959): 622.
- Faris, Robert E. and J. Warren Dunham. 1939. *Mental Disorders in Urban Areas*. Chicago: University of Chicago Press.
- Fischer, Anita K., Janos Marton, Ernest J. Millman, and Leo Srole. 1979. "Long-range influences on adult mental health: The Midtown Manhattan Longitudinal Study, 1954-1974," in *Research in Community and Mental Health, Vol. 1*, edited by Roberta G. Simmons, 305-33. Greenwich, CT: JAI Press.

- Guscott, Richard and Paul Grof. "The Clinical Meaning of Refractory Depression: A Review for the Clinician." *American Journal of Psychiatry* 148 (June 1991): 695–704.
- Illich, Ivan. 1976. *Medical Nemesis: The Expropriation of Health*. New York: Pantheon Books, Random House.
- Kessler, Irving I. and Morton I. Levin, eds. 1970. *The Community As an Epidemiologic Laboratory*. Baltimore, MD: Johns Hopkins Press.
- Lidz, Theodore. 1968. *The Person*. New York: Basic Books.
- Lucas, J. Anthony. 1985. *Common Ground*. New York: A.A. Knopf.
- Meyer, Adolf. "The Birth and Development of the Mental-Hygiene Movement." *Mental Hygiene* 19 (January 1935): 29–36.
- Newton, Nancy A., Lawrence W. Lazarus, and Jack Weinberg. 1984. "Aging: biopsychosocial perspectives". In *Normality and the Life Cycle: A Critical Integration*, edited by Daniel Offer and Melvin Sabshin, 230–88. New York: Basic Books.
- Parker, Seymour and Robert J. Kleiner. 1966. *Mental Illness in the Urban Negro Community*. New York: The Free Press.
- Rutter, Michael. "Meyerian psychobiology, personality development, and the role of life experiences." *American Journal of Psychiatry* 143 (September 1986): 1077–87.
- Schwartz, Michael A. and Osborne P. Wiggins. "Systems and the structuring of meaning: contributions to a biopsychosocial medicine." *American Journal of Psychiatry* (October 1986): 1213–21.
- Simonton, Dean K. 1990. *Psychology, Science, and History: An Introduction to Historiometry*. New Haven, CT: Yale University.
- Singer, Eleanor, Steven M. Cohen, Robin Garfinkel, and Leo Srole. "Replicating psychiatric ratings through multiple regression analysis: The Midtown Manhattan Restudy." *Journal of Health and Social Behavior* 17 (December 1976): 376–87.
- Srole, Leo. "Measurement and classification in sociopsychiatric epidemiology: The Midtown Manhattan Study (1954) and Midtown Manhattan Restudy (1974)," *Journal of Health and Social Behavior* 16 (December 1975): 347–64.
- Srole, Leo and Anita K. Fischer. *Changing lives and well-being: the Midtown Manhattan Panel Study, 1954–1976* (sic). *Acta Psychiatrica Scandinavica* 79 (suppl. 348, 1989): 35–44.
- . "The Midtown Manhattan Longitudinal Study vs. 'The Mental Paradise Lost' doctrine: a controversy joined." *Archives of General Psychiatry* 37 (February 1980): 209–21.
- Srole, Leo, Thomas S. Langner, Marvin K. Opler, and Thomas A. C. Rennie. 1962. *Mental Health in the Metropolis, Vol. 1 of the Midtown Manhattan Study*. New York: Blakiston Division, McGraw-Hill.
- Srole, Leo, Thomas S. Langner, Stanley T. Michael, Price Kirkpatrick, Marvin K. Opler, and Thomas A. C. Rennie. 1975. *Mental Health in the Metropolis: The Midtown Manhattan Study*. Enlarged and revised edition, edited by Leo Srole and Anita K. Fischer. New York: Harper and Row Torchbooks.
- . 1978. *Mental Health in the Metropolis: The Midtown Manhattan Study*. Revised and enlarged edition. Edited by Leo Srole and Anita K. Fischer. New York: New York University Press.
- Starr, Paul. 1983. *The Social Transformation of American Medicine*. New York: Basic Books.
- Stevenson, Earl P. 1986. "Foreword," in *Social Indicators*, edited by Raymond A. Bauer, vii–viii. Cambridge, MA: M.I.T. Press.
- Vaillant, George, and Paula Schnurr. "What is a case? A 45-year study of psychiatric impairment of a college sample selected for mental health." *Archives of General Psychiatry* 45 (April 1988): 313–19.

- Wildavsky, Aaron. 1977. "Doing Better, Feeling Worse: The Political Pathology of Health Policy," in *Doing Better and Feeling Worse: Health in the United States*, edited by John H. Knowles, 105–24. New York: W. W. Norton.
- Wyler, Allen R., Minoru Masuda, and Thomas H. Holmes. "The Seriousness of Illness rating scale." *Journal of Psychosomatic Research* 11 (December 1968): 363–74.
- Wyler, Allen R., Minoru Masuda, and Thomas H. Holmes. "The Seriousness of Illness rating scale: reproducibility." *Journal of Psychosomatic Research* 14 (March 1970): 49–64.
- Cedric X (Clark) ed., "The White Researcher in Black Society," special issue of *The Journal of Social Issues*, 29 (Winter 1973): 1–118.
- Zusman, Jack. 1975. "Primary Prevention," in *Comprehensive Textbook in Psychiatry II*, vol. 2, edited by Alexander M. Freedman, Harold I. Kaplan, and Benjamin J. Sadock, 2327–28. Baltimore, MD: Williams and Wilkins.

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References

Preface

Fischer, Anita K., Janos Marton, Ernest J. Millman, and Leo Srole. 1979. "Long- range influences on adult mental health: The Midtown Manhattan Longitudinal Study, 1954-1974," in *Research in Community and Mental Health*, Vol. 1, edited by Roberta G. Simmons, 305-33. Greenwich, CT: JAI Press.

Srole, Leo with Anita Kassen Fischer. "The Midtown Manhattan Longitudinal Study vs. 'The Mental Paradise Lost' Doctrine." *Archives of General Psychiatry* 37 (February 1980): 209-21.

1 1. Introduction

American Psychiatric Association. 1980. Diagnostic and Statistical Manual of Mental Disorders, 3d ed. Washington, DC: American Psychiatric Association.

----- . 1994. Diagnostic and Statistical Manual of Mental Disorders, 4th ed. Washington, DC: American Psychiatric Association.

Antonovsky, Aaron. 1982. Health, Stress, and Coping. San Francisco: Jossey-Bass Publishers.

Boulding, Kenneth E. 1964. The Meaning of the Twentieth Century. New York: Harper and Row.

Brown, Barbara B. 1984. Between Health and Illness. Princeton, NJ: Houghton Mifflin.

Dubos, René. 1959. Mirage of Health. New York: Harper and Row.

Engel, George L. "The clinical application of the biopsychosocial model," American Journal of Psychiatry 137 (May 1980): 535-44.

Ewalt, John R. "A Case for the Community Self Survey," Public Health Reports U.S. (July 1959): 622.

Faris, Robert E. and J. Warren Dunham. 1939. Mental Disorders in Urban Areas. Chicago: University of Chicago Press.

Fischer, Anita K., Janos Marton, Ernest J. Millman, and Leo Srole. 1979. "Long-range influences on adult mental health: The Midtown Manhattan Longitudinal Study, 1954-1974," in Research in Community and Mental Health, Vol. 1, edited by Roberta G. Simmons, 305-33. Greenwich, CT: JAI Press.

Guscott, Richard and Paul Grof. "The Clinical Meaning of Refractory Depression: A Review for the Clinician." American Journal of Psychiatry 148 (June 1991): 695- 704.

Illich, Ivan. 1976. Medical Nemesis: The Expropriation of Health. New York: Pantheon Books, Random House.

Kessler, Irving I. and Morton I. Levin, eds. 1970. The Community As an Epidemiologic Laboratory. Baltimore, MD: Johns Hopkins Press.

Lidz, Theodore. 1968. *The Person*. New York: Basic Books.

Lucas, J. Anthony. 1985. *Common Ground*. New York: A.A. Knopf.

Meyer, Adolf. "The Birth and Development of the Mental-Hygiene Movement" *Mental Hygiene* 19 (January 1935): 29-36.

Newton, Nancy A., Lawrence W. Lazarus, and Jack Weinberg. 1984. "Aging: biopsychosocial perspectives". In *Normality and the Life Cycle: A Critical Integration*, edited by Daniel Offer and Melvin Sabshin, 230-88. New York: Basic Books.

Parker, Seymour and Robert J. Kleiner. 1966. *Mental Illness in the Urban Negro Community*. New York: The Free Press.

Rutter, Michael. "Meyerian psychobiology, personality development, and the role of life experiences." *American Journal of Psychiatry* 143 (September 1986): 1077- 87.

Schwartz, Michael A. and Osborne P. Wiggins. "Systems and the structuring of meaning: contributions to a biopsychosocial medicine." *American Journal of Psychiatry* (October 1986): 1213-21.

Simonton, Dean K. 1990. *Psychology: Science, and History: An Introduction to Historiometry*. New Haven, CT: Yale University.

Singer, Eleanor, Steven M. Cohen, Robin Garfinkel, and Leo Srole. "Replicating psychiatric ratings through multiple regression analysis: The Midtown Manhattan Restudy." *Journal of Health and Social Behavior* 17 (December 1976): 376-87.

Srole, Leo. "Measurement and classification in sociopsychiatric epidemiology: The Midtown Manhattan Study (1954) and Midtown Manhattan Restudy (1974)," *Journal of Health and Social Behavior* 16 (December 1975): 347-64.

Srole, Leo and Anita K. Fischer. *Changing lives and well-being: the Midtown Manhattan Panel Study 1954-1976* (sic). *Acta Psychiatrica Scandinavica* 19 (suppl. 348, 1989): 35-44.

----- "The Midtown Manhattan Longitudinal Study vs. 'The Mental Paradise Lost' doctrine: a controversy joined."

Archives o f General Psychiatry 37 (February 1980):
209-21.

Srole, Leo, Thomas S. Langner, Marvin K. Opler, and Thomas
A. C. Rennie. 1962. Mental Health in the Metropolis, Vol.
1 o f the Midtown Manhattan Study. New York: Blakiston
Division, McGraw-Hill.

Srole, Leo, Thomas S. Langner, Stanley T. Michael, Price
Kirkpatrick, Marvin K. Opler, and Thomas A. C. Rennie.
1975. Mental Health in the Metropolis: The Midtown
Manhattan Study. Enlarged and revised edition, edited by
Leo Srole and Anita K. Fischer. New York: Harper and Row
Torchbooks.

----- . 1978. Mental Health in the Metropolis: The
Midtown Manhattan Study. Re vised and enlarged edition.
Edited by Leo Srole and Anita K. Fischer. New York: New
York University Press.

Starr, Paul. 1983. The Social Transformation o f American
Medicine. New York: Ba sic Books.

Stevenson, Earl P. 1986. "Foreword," in Social Indicators,
edited by Raymond A. Bauer, vii-viii. Cambridge, MA:
M.I.T. Press.

Vaillant, George, and Paula Schnurr. "What is a case? A
45-year study of psychiatric impairment of a college
sample selected for mental health." Archives o f General
Psychiatry 45 (April 1988): 313-19.

Wildavsky, Aaron. 1977. "Doing Better, Feeling Worse: The
Political Pathology of Health Policy," in Doing Better and
Feeling Worse: Health in the United States, edited by John
H. Knowles, 105-24. New York: W. W. Norton.

Wyler, Allen R., Minoru Masuda, and Thomas H. Holmes. "The
Seriousness of Ill ness rating scale." Journal o f
Psychosomatic Research 11 (December 1968): 363- 74.

Wyler, Allen R., Minoru Masuda, and Thomas H. Holmes. "The
Seriousness of Ill ness rating scale: reproducibility."
Journal o f Psychosomatic Research 14 (March 1970): 49-64.

Cedric X (Clark) ed., "The White Researcher in Black
Society," special issue of The Journal o f Social Issues,
29 (Winter 1973): 1-118.

Zusman, Jack. 1975. "Primary Prevention," in Comprehensive

Textbook in Psychiatry //, vol. 2, edited by Alexander M. Freedman, Harold I. Kaplan, and Benjamin J. Sadock, 2327-28. Baltimore, MD: Williams and Wilkins.

2 2. Midtowners Lost and Found: Search and Assessment—Tactics and Results

Atkinson, Thomas H. "The Stability and Validity of Quality of Life Measures." *Social Indicators Research* 10 (October 1982): 117.

Dumont, Matthew P. "A Diagnostic Parable." *Readings, American Orthopsychiatric Association*, 2 (December 1987): 12.

Kallen, Horace. 1924. *Culture and Democracy in the United States*. New York: Boni and Liveright.

Friedenberg, Edgar Z. *Review of Mental Health in the Metropolis*. Commentary, December 1962, pp. 545-47.

Levi, Primo. 1957. *Survival in Auschwitz*. London: Collier Macmillan Publishers.

Lowenthal, Maijorie F., Paul L. Berkman, and Associates. 1967. *Aging and Mental Disorder in San Francisco: A social psychiatric study*. San Francisco: Jossey-Bass.

Regier, Darrel A., Jerome K. Myers, Morton Kramer, Lee N. Robins, Dan G. Blazer, Richard L. Hough, William W. Eaton, and Ben Z. Locke. "The NIMH Epidemiologic Catchment Area Program." *Archives of General Psychiatry* 41 (October 1984): 933-41.

Vaillant, George E. 1977. *Adaptation to Life: How the Best and the Brightest Came of Age*. Boston, MA: Little Brown & Co.

Veroff, Joseph, Elizabeth Douvan, and Richard A. Kulka. 1981. *The Inner American: A Self-portrayal from 1957 to 1976*. New York: Basic Books.

3 3. Demographic Aspects of Mental Health

Bianchi, Suzanne M. and Daphne Spain. 1986. *American Women in Transition*. New York: Russell Sage Foundation.

Bruce, Martha L., David T. Takeuchi, and Philip J. Leaf. "Poverty and psychiatric status: longitudinal evidence from the New Haven Epidemiological Catchment Area study." *Archives of General Psychiatry* 48 (May 1991): 410-14.

Coser, Rose L., ed. 1964. *The Family, Its Structures and Functions*. New York: St. Martin's Press.

Dohrenwend, Bruce P. "Socioeconomic Status (SES) and psychiatric disorders: Are the issues still compelling?" *Social Psychiatry and Psychiatric Epidemiology* 25 (January 1990): 41-47.

Dohrenwend, Bruce P, Itzhak Levav, Patrick E, Shrout, Sharon Schwartz, Guedalia Naveh, Bruce G. Link, Andrew E. Skodol, and Ann Stueve. "Socioeconomic Status and Psychiatric Disorders: The Social Causation Selection Issue." *Science* 255 (February 1992): 946-51.

Dupuy, Harold J. et al. 1970. "Selected Symptoms of Psychological Distress." *National Center for Health Statistics, series 2, no. 37, p. 5.*

Giele, Janet Z. 1982. *Women in the Middle Years: Current Knowledge and Directions for Research and Policy*. New York: John Wiley and Sons.

Glenn, Norval D. "Cohort analysts' futile question: statistical attempts to separate age, period and cohort effects (Comment on Mason, Mason, Winsborough, and Poole April 1973)." *American Sociological Review* 41 (October 1974): 900-4.

----- "Age, birth cohorts, and drinking: an illustration of the hazards of inferring effects from cohort data." *Journal of Gerontology* 36 (May 1981): 362-69.

Glick, Paul C. "American families: as they are and were." *Social Science Review* 74(3) (April 1990): 139-15.

Hannan, Michael T. and Tuma, Nancy B. "Methods for temporal analysis." *Annual Review of Sociology* 5 (1979): 303-28.

Holzer, Charles E., Brent M. Shea, Jeffrey W. Swanson, Philip J. Leaf, Jerome K. Myers, Linda George, Myrna M.

Weissman, and Phillip S. Bednarski. "The increased risk for specific psychiatric disorders among persons of low socioeconomic status." *The American Journal of Social Psychiatry* 6 (Fall 1986): 259-71.

Hunt, Morton. 1985 *Profiles of Social Research*. New York: Russell Sage Foundation.

Kessler, Ronald C., Cindy L. Foster, William B. Saunders, and Paul E. Stang. "Social consequences of psychiatric disorders, I: educational attainment." *American Journal of Psychiatry* 152 (July 1995): 1026-32.

Kessler, Ronald C. and William J. Magee. "Childhood adversities and adult depression: basic patterns of association in a US national survey." *Psychological Medicine* 23 (August 1993): 679-90.

Klerman, Gerald L., Philip W. Lavori, John Rice, Theodore Reich, Jean Endicott, Nancy Andreasen C., Martin B. Keller, and Robert M. Hirschfield. "Birth-cohort trends in rates of major depression among relatives of patients with affective disorder." *Archives of General Psychiatry* 42 (July 1985): 689-93.

Knoke, David and Michael Hout. Reply to Glenn. *American Sociological Review* 41 (October 1974): 905-8.

Lidz, Theodore. 1968. *The Person*. New York: Basic Books.

Lin, Nan, Alfred Dean, and Walter Ensel. 1986. *Social Support, Life Events and Depression*. Orlando, FL: Academic Press.

Link, Bruce G. and Jo C. Phelan. "Social conditions as fundamental causes of disease." *Journal of Health and Social Behavior* (Extra Issue 1995): 80-94.

McLeod, Jane D. and Ronald C. Kessler. "Socioeconomic status differences in vulnerability to undesirable life events." *Journal of Health and Social Behavior* 31 (June 1990): 162-72.

McLeod, Jane D. and Michael J. Shanahan. "Poverty, parenting, and children's mental health." *American Sociological Review* 58 (June 1993): 351-66.

Martin, Emily. *The Woman in the Body: A Cultural Analysis of Reproduction*. Boston: Beacon Press, 1987.

Mason, Karen O., William M. Mason, H. H. Winsborough, and W. Kenneth Poole. "Some methodological issues in cohort analysis of archival data." *American Sociological Review* 38 (April 1973): 242-58.

Mason, Karen O., William M. Mason, and H. H. Winsborough. "Reply to Glenn." *American Sociological Review* 41 (October 1974): 904-5.

Murphy, Jane M., Donald C. Olivier, Richard R. Monson, Arthur M. Sobol, Elizabeth B. Federman, and Alexander H. Leighton. "Depression and anxiety in relation to social status." *Archives of General Psychiatry* 48 (March 1991): 223-28.

Nydegger, Corinne N. "On being caught up in time." *Human Development* 24 (January-February 1981): 1-12.

Offer, Daniel and Melvin Sabshin, eds. 1984. *Normality and the life cycle: a critical integration*. New York: Basic Books.

Regier, Darrel A., Jerome K. Myers, Morton Kramer, Lee N. Robins, Dan G. Blazer, Richard L. Hough, William W. Eaton, and Ben Z. Locke "The NIMH Epidemiologic Catchment Area Program." *Archives of General Psychiatry* 41 (October 1984): 933-41.

Riley, Matilda W. "Aging and cohort succession: interpretations and misinterpretations." *Public Opinion Quarterly* 37 (Spring 1973): 35-49.

-----, "On the significance of age in sociology." *American Sociological Review* 52 (February 1987): 1-14.

Rodgers, Willard L. "Estimable functions of age, period, and cohort effects." *American Sociological Review* 41 (December 1982): 774-87.

Srole, Leo, Thomas S. Langner, Stanley T. Michael, Price Kirkpatrick, Marvin K. Opler, and Thomas A. C. Rennie. 1975. *Mental Health in the Metropolis: The Midtown Manhattan Study*. Enlarged and revised edition. Edited by Leo Srole and Anita K. Fischer. New York: New York University Press.

Weissman, Gerald. 1987. *They All Laughed at Christopher Columbus: Tales of Medicine and the Art of Discovery*. New York: Times Books, Random House Inc.

Williams, David R. "Socioeconomic Differentials in Health:
A Review and Redirection." *Social Psychology Quarterly* 53
(Spring 1990): 81-99.

4 4. Biosocial Antecedents of Mental Health

Alwin, Duane F. and Robert M. Hauser. "The decomposition of effects in path analysis." *American Sociological Review* 40 (February 1975): 37-47.

Cohen, Jacob. 1969. *Statistical Power Analysis for the Behavioral Sciences*. New York: Academic Press.

Cohen, Jacob and Patricia Cohen. 1983. *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*, 2d ed. Hillsdale, NJ: Lawrence Erlbaum Associates.

Duncan, Otis D. 1975. *Introduction to Structural Equation Models*. New York: Academic Press.

----- . 1969. "Contingencies in constructing causal models," in *Sociological Methodology 1969*, edited by Edgar F. Borgatta, 74-112. San Francisco: Jossey-Bass Inc.

Fischer, Anita K., Janos Marton, Ernest J. Millman, and Leo Srole. 1979. "Long-range influences on adult mental health: The Midtown Manhattan Longitudinal Study, 1954-1974," in *Research in Community and Mental Health*, Vol. 7, edited by Roberta G. Simmons, 305-33. Greenwich, CT: JAI Press.

Greenland, Sander. "Modeling and variable selection in epidemiologic analysis." *American Journal of Public Health* 79 (March 1989): 340-49.

Heise, David. 1969. "Problems in path analysis and causal inference," in *Sociological Methodology 1969*, edited by Edgar F. Borgatta, 38-73. San Francisco: Jossey-Bass Inc. 5

Jencks, Christopher, Marshall Smith, Henry Acland, Mary Jo Bane, David Cohen, Herbert Gintis, Barbara Heyns, and Stephan Michelson. 1972. *Inequality: A Reassessment of the Effect of Family and Schooling in America*. New York: Harper and Row, Colophon Edition.

Kenny, David A. 1979. *Correlation and Causality*. New York: Wiley-Interscience, John Wiley & Sons.

Land, Kenneth. 1969. "Principles of path analysis," in *Sociological Methodology 1969*, edited by Edgar F. Borgatta, 3-37. San Francisco: Jossey-Bass Inc.

Li, Ching C. 1975. Path Analysis—A Primer. Pacific Grove, CA: Boxwood Press.

Srole, Leo, Thomas S. Langner, Stanley T. Michael, Price Kirkpatrick, Marvin K. Opler, and Thomas A. C. Rennie. 1978. Mental Health in the Metropolis: The Midtown Manhattan Study. Revised and enlarged edition. Edited by Leo Srole and Anita K. Fischer. New York: New York University Press.

5 5. Early Life Experiences and Sociodemographic Background

Aldwin, Carolyn M., Avron Spiro, Michael R. Levenson, and Raymond Bossé. "Longitudinal findings from the Normative Aging study: I. Does mental health change with age?" *Psychology and Aging* 4 (September 1989): 295-306.

Anderson, Ronald, Judith Kasper, Martin R. Frankel, and Associates. 1979. *Total Survey Error*. San Francisco: Jossey-Bass, Inc.

Berkeley, Janet L., Liana Israel, and Joseph Stokes. "Health assessment in the Framingham Offspring Study: a research proposal." *Journal of Chronic Disease* 40 (1987 suppl. 1): 169S-76S.

Bradburn, Norman M., Seymour Sudman, and Associates. 1979. *Improving Interview Method and Questionnaire Design*. San Francisco: Jossey-Bass, Inc.

Brewin, Chris R., Bernice Andrews, and Ian H. Gotlib. "Psychopathology and early experience: a reappraisal of retrospective reports." *Psychological Bulletin* 113 (January 1993): 82-98.

Costa, Paul T. and Robert R. McCrae. "Influence of extraversion and neuroticism on subjective well-being: happy and unhappy people." *Journal of Personality and Social Psychology* 38 (April 1980): 668-78.

Cui, Xing-jia and George E. Vaillant. "Antecedents and consequences of negative life events in adulthood: a longitudinal study." *American Journal of Psychiatry* 152 (January 1996): 21-26.

D'Ercole, Ann, Andrew E. Skodal, Elmer Struening, James L. Curtis, and Joel Millman. "Diagnosis of Physical Illness in Psychiatric Patients Using Axis III and a Standardized Medical History." *Hospital & Community Psychiatry* 42 (April 1991): 395-99.

Dawber, Thomas R. 1980. *The Framingham Study: The Epidemiology of Atherosclerotic Disease*. Cambridge, MA: A Commonwealth Fund Book, Harvard University Press.

Erlenmeyer-Kimling, L. and Nancy E. Miller. 1986. *Life-Span Research on the Prediction of Psychopathology*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Fischer, Anita K., Janos Marton, Ernest J. Millman, and Leo Srole. 1979. "Long- range influences on adult mental health: The Midtown Manhattan Longitudinal Study, 1954-1974," in *Research in Community and Mental Health*, Vol. 7, edited by Roberta G. Simmons, 305-33. Greenwich, CT: JAI Press.

Fox, Nathan A. "Of the way we were: Adult memories about attachment experiences and their role in determining infant-parent relationships: A commentary on van Ijzendoorn (1995)." *Psychological Bulletin* 117 (May 1995): 404-10.

Garritty, Thomas F., Grant W. Somes, and Martin B. Marx. "Factors influencing self- assessment of health." *Social Science & Medicine* 12 (March 1978): 77-81.

Hauser, Robert M. and Arthur S. Goldberger. 1971. "The Treatment of Unobservable Variables in Path Analysis," in *Sociological Methodology* 1971, edited by Herbert L. Costner, 81-117. San Francisco: Jossey-Bass, Inc.

Hunt, Sonja M., S. P. McKenna, J. McEwen, Jan Williams, and Evelyn Papp. "The Nottingham Health Profile: subjective health status and medical considerations." *Social Science and Medicine* 15A (May 1981): 221-29.

Landis, Carney and Majorie Bolles. 1942. *Personality and Sexuality o f the Physically Handicapped Woman*. New York: Paul B. Hoeber, Inc., Medical Book Depart ment of Harper & Brothers.

Langner, Thomas S. and Stanley T. Michael. 1963. *Life Stress and Mental Health: The Midtown Manhattan Study*. Glencoe, IL: The Free Press.

Long, Jancis V. and George E. Vaillant. "Natural history of male psychological health, XI: escape from the underclass." *American Journal o f Psychiatry* 141 (March 1984): 341-46.

Morse, Richard B. "Estimating reciprocal effects between psychological distress and perceived health status." Paper presented to the NYS Sociological Association, October 19-20, 1979.

Murphy, Jane M. "Trends in depression and anxiety: men and women." *Acta Psychiatrica Scandinavia* 73 (February 1986): 113-27.

Murphy, Jane M., Donald C. Olivier, Richard R. Monson,

Arthur M. Sobol, Elizabeth B. Federman, and Alexander H. Leighton. "Depression and anxiety in relation to social status." *Archives of General Psychiatry* 48 (March 1991): 223-28.

Phillips, Katherine W., George E. Vaillant, and Paula Schnurr. "Some physiologic antecedents of adult mental health." *American Journal of Psychiatry* 144 (August 1987): 1009-13.

Pinsky, Joan L., Paul E. Leaverton, and Joseph Stokes. "Predictors of good function: the Framingham study." *Journal of Chronic Disease* 40 (1987 suppl. 1): 159S- 67S.

Read, J. Leighton, Robert J. Quinn, and Martha A. Hoefer. "Measuring overall health: an evaluation of three important approaches." *Journal of Chronic Diseases* 40 (1987 suppl. 1): 7S-21S.

Rodin, Gary, and Karen Voshart. "Depression in the medically ill: an overview." *American Journal of Psychiatry* 143 (June 1986): 696-705.

Schliefer, Steven J., Steven E. Keller, Samuel G. Siris, Kenneth L. Davis, and Marvin Stein. "Depression and immunity: lymphocyte function in ambulatory depressed patients, hospitalized schizophrenic patients, and patients hospitalized for herni orrhaphy." *Archives of General Psychiatry* 42 (February 1985): 129-33.

Schwab, John J., Neal D. Traven and George J. Warheit. "Relationships between physical and mental illness." *Psychosomatics* 19 (August 1978): 458-63.

Shedler, Jonathan and Jack Block. "Adolescent drug use and psychological health: a longitudinal inquiry." *American Psychologist* 45 (May 1990): 612-30.

Sperry, Roger W. "Mental phenomena as causal determinants in brain functions." *Process Studies* 5 (Winter 1975): 247-56.

Spitzer, Walter O. "Commentary: Predictors of good function: the Framingham Heart Study and health assessment in the Framingham Offspring/Spouse Study." *Journal of Chronic Diseases* 40 (1987 Suppl 1): 181S-82S.

Srole, Leo. "Social integration and certain correlaries: an exploratory study." *American Sociological Review* 21 (December 1956): 709-16.

Stallones, Reul A. "Epidemiological studies of health: a commentary on the Framingham studies." *Journal of Chronic Diseases* 40 (1987 suppl. 1): 177S- 80S.

Stein, Marvin, Steven J. Schleifer, and Steven E. Keller. 1987. "Psychoimmunology in clinical psychiatry," in *Annual Review of Psychiatry*/Volume 6, edited by Robert E. Hales and Allen J. Frances, 210-34. Washington, DC: American Psychiatric Association.

Thomas, Alexander and Stella Chess. "Genesis and evolution of behavioral disorders: From infancy to early adult life." *American Journal of Psychiatry* 141 (January 1984): 1-9.

Vaillant, George E. "Natural History of Male Psychologic Health: Effects of Mental Health on Physical Health." *New England Journal of Medicine* 301 (December 1979): 1249-54.

----- . 1983. *The Natural History of Alcoholism*. Cambridge, MA: Harvard University Press.

Vaillant, George E. and Paula Schnurr. "What is a case? A 45-year study of psychiatric impairment of a college sample selected for mental health." *Archives of General Psychiatry* 45 (April 1988): 313-19.

Vaillant, George E. and Caroline O. Vaillant. "Natural History of Male Psychological Health X: Work as a Predictor of Positive Mental Health." *American Journal of Psychiatry* 138 (November 1981): 1433-40.

----- . "Natural History of Male Psychological Health, XII: A 45-Year Study of Predictors of Successful Aging at Age 65." *American Journal of Psychiatry* 147 (January 1990): 31-37.

Van IJzendoorn, Marinus H. "Adult attachment representations, parental responsiveness, and infant attachment: A meta-analysis on the predictive validity of the Adult Attachment Interview." *Psychological Bulletin* 117 (May 1995): 387-403.

Veroff, Joseph, Elizabeth Douvan, and Richard A. Kulka. 1981. *The inner American: a self-portrayal from 1957 to 1976*. New York: Basic Books.

Werner, Emmy E. "High-risk children in young adulthood: a longitudinal study from birth to 32 years." *American*

Journal of Orthopsychiatry 59 (January 1989): 72- 81.

Wyler, Allen R., Minoru Masuda, and Thomas H. Holmes. "The Seriousness of Illness rating scale." Journal of Psychosomatic Research 11 (December 1968): 363- 74.

----- . "The Seriousness of Illness rating scale: reproducibility." Journal of Psychosomatic Research 14 (March 1970): 59-64.

6 6. The Midtown Longitudinal Study Panel's Mental Health from 1954 to 1974

Breier, Alan, John R. Kelsoe, Paul D. Kirwin, Stacy A. Beller, Owen M. Wolkowitz, and David Pickar. "Early parental loss and development of adult psychopathology." *Archives of General Psychiatry* 45 (November 1988): 987-93.

Davitz, Joel R. and Lois L. Davitz. 1980. *Making It: Forty and Beyond, Surviving the Mid-Life Crisis*. San Francisco: Harper San Francisco, Division of HarperCollins Publishers, Inc.

Feinstein, Alvan R. 1985. *Clinical Epidemiology. The Architecture of Clinical Research*. Philadelphia: W.B. Saunders Co.

Fienberg, Stephen F. and William M. Mason. 1979. "Identification and estimation of age-period-cohort models in the analysis of discrete archival data," in *Sociological Methodology* 1979, edited by Karl F. Schuessler, 1-67. San Francisco: Jossey-Bass.

Fischer, Anita K., Janos Marton, Ernest J. Millman, and Leo Srole. 1979. "Long-range influences on adult mental health: The Midtown Manhattan Longitudinal Study, 1954-1974," in *Research in Community and Mental Health* vol. 7, edited by Roberta G. Simmons, 305-33. Greenwich, CT: JAI Press.

Gershon, Elliot S., Joel E. Hamovit, Juliet J. Guroff, and John I. Nürnbergger. "Birth-Cohort Changes in Manic and Depressive Disorders in Relatives of Bipolar and Schizoaffective Patients." *Archives of General Psychiatry* 44 (April 1987): 314-19.

Keller, Martin B., William R. Beardslee, David J. Dorner, Philip W. Lavori, Harriet Samuelson, and Gerald L. Klerman. "Impact of severity and chronicity of parental affective illness on adaptive functioning and psychopathology in children." *Archives of General Psychiatry* 43 (October 1986): 930-37.

Kendler, Kenneth S. "Indirect vertical cultural transmission: a model for nongenetic parental influences on the liability to psychiatric illness." *American Journal of Psychiatry* 145 (June 1988): 657-65.

Klerman, Gerald L., Philip W. Lavori, John Rice, Theodore Reich, Jean Endicott, Nancy Andreasen C., Martin B.

Keller, and Robert M. Hirschfield. "Birth-cohort trends in rates of major depression among relatives of patients with affective disorder." *Archives of General Psychiatry* 42 (July 1985): 689-93.

Klerman, Gerald L. and Myrna M. Weissman. "Increasing rates of depression." *Journal of the American Medical Association* 261 (April 1989): 2229-35.

Levinson, Daniel. 1978. *The Seasons of a Man's Life*, edited by Charlotte N. Darrow, Edward B. Klein, Maria H. Levinson, and Braxton McKee. New York: Alfred A. Knopf.

Levinson, Daniel, in collaboration with Judy D. Levinson. 1996. *The Seasons of a Woman's Life*. New York: Alfred A. Knopf.

Link, Bruce G. and Jo C. Phelan. "Social conditions as fundamental causes of disease." *Journal of Health and Social Behavior* (Extra Issue 1995): 80-94.

Riley, Matilda W. "Aging and cohort succession: interpretations and misinterpretations." *Public Opinion Quarterly* 37 (Spring 1973): 35-49.

----- "On the significance of age in sociology." *American Sociological Review* 52 (February 1987): 1-14.

Robinson, Reginald, David F. DeMarche, and Mildred K. Wagle. 1960. *Community Resources in Mental Health*. New York: Basic Books.

Shedler, Jonathan and Jack Block. "Adolescent drug use and psychological health: a longitudinal inquiry." *American Psychologist* 45 (May 1990): 612-30.

Sheehy, Gail. 1995. *New Passages: Mapping Your Life Across Time*. New York: Random House.

Shepperd, James A. "Cautions in Assessing Spurious 'Moderator Effects'." *Psychological Bulletin* 110 (September 1991): 315-17.

Simonton, Dean K. 1990. *Psychology, Science, and History: An Introduction to Historiometry*. New Haven, CT: Yale University.

Srole, Leo. 1979. "Macrosocial and Microsocial Crises and Their Impact on the Midtown Manhattan Follow-up Panel," in *Stress and Mental Disorder*, edited by James E. Barrett

et al., 201-12. New York: Raven Press.

Srole, Leo, and Anita K. Fischer. "The Midtown Manhattan Longitudinal Study vs. 'The Mental Paradise Lost' doctrine: a controversy joined." *Archives of General Psychiatry* 37 (February 1980): 209-21.

----- . 1986. "The Midtown Manhattan Longitudinal Study: Aging, Generations, and Genders," in *Community Surveys of Psychiatric Disorders. Series in Psychosocial Epidemiology* 4, edited by Myra M. Weissman, Jerome K. Myers, and Catherine E. Ross, 77-107. New Brunswick, NJ: Rutgers University Press.

----- . "Changing lives and well-being: the Midtown Manhattan Panel Study, 1954-1976" [sic]. *Acta Psychiatrica Scandinavica* 79 (1989 suppl. 348): 35-44.

----- . 1982. "Gender, generations, and well-being: the Midtown Manhattan Longitudinal Study," in *Life-Span Research on the Prediction of Psychopathology*, edited by L. Erlenneyer-Kimling and Nancy E. Miller, eds., chapter 23. Hillsdale, NJ: Lawrence Erlbaum Associates.

Veroff, Joseph, Elizabeth Douvan and Richard A. Kulka. 1981. *The Inner American: A Self-portrayal from 1957 to 1976*. New York: Basic Books.

Weissman, Myra M., Gammon G. Davis, Karen John, Kathleen R. Merikangas, Virginia Warner, Brigitte A. Prusoff, and Diane Sholomskas. "Children of depressed parents: increased psychopathology and early onset of major depression." *Archives of General Psychiatry* 44 (October 1987): 847-53.

Weissman, Myra M., James F. Leckman, Kathleen R. Merikangas, Gammon G. Davis, and Brigitte A. Prusoff. "Depression and anxiety disorders in parents and children. Results from the Yale Family Study". *Archives of General Psychiatry* 41 (September 1984): 845-52.

Wender, Paul. 1979. "Nurture and Psychopathology: Evidence from Adoption Studies." In *Stress and Mental Disorder*, edited by James E. Barrett et al., 251-64. New York: Raven Press.

9 9. Predictions of Mental Health from Personal History Derived from the MHIM2: Expected versus Observed

Kendler, Kenneth S. "Parenting: a genetic-epidemiologic perspective." *American Journal of Psychiatry* 153 (January 1996): 11-20.

Kendler, Kenneth S. and Lindon J. Eaves. "Models for the joint effect of genotype and environment on liability to psychiatric illness." *American Journal of Psychiatry* 143 (March 1986): 279-89.

Sackett, David, R. Brian Haynes, and Peter Tugwell. 1985. *Clinical Epidemiology: A Basic Science for Clinical Medicine*. Boston MA: Little, Brown and Company.

Starr, Paul. 1982. *The Social Transformation of American Medicine*. N.Y.: Basic Books.