

NURSES, PATIENTS,
and
SOCIAL SYSTEMS

Edited By

JAMES M. A. WEISS

Nurses, Patients, and Social Systems

Edited by

JAMES M. A. WEISS

Nurses, Patients, and Social Systems

THE EFFECTS OF SKILLED NURSING INTERVENTION
UPON INSTITUTIONALIZED OLDER PATIENTS

by

MARTHA M. BROWN, *Project Director*

PATRICIA R. BROWN

JOHN C. GLIDEWELL, PH.D.

RAYMOND G. HUNT

JAMES M. A. WEISS, *Editor*

With a Foreword by

FREDRICK C. REDLICH

UNIVERSITY OF MISSOURI STUDIES VOLUME XLVI

UNIVERSITY OF MISSOURI PRESS

COLUMBIA • MISSOURI

MARTHA M. BROWN, R.N., M.A., *Director of the Project*, is Dean and Professor in the Department of General Nursing Science in the Washington University School of Nursing at St. Louis, Missouri.

PATRICIA R. BROWN, R.N., PH.D., is Associate Dean and Associate Professor in the Department of General Nursing Science in the Washington University School of Nursing.

JOHN C. GILDEWELL, PH.D., is Professor of Educational Psychology in The University of Chicago.

RAYMOND G. HUNT, PH.D., is Professor of Psychology in the State University of New York at Buffalo.

JAMES M. A. WEISS, M.D., M.P.H., *Editor of the Study*, is Professor and Chairman of the Department of Psychiatry in the University of Missouri School of Medicine at Columbia.

FREDRICK C. REDLICH, M.D., is Dean and Professor of Psychiatry in the Yale University School of Medicine at New Haven, Connecticut.

COPYRIGHT © 1968 BY
THE CURATORS OF THE
UNIVERSITY OF MISSOURI
LIBRARY OF CONGRESS CATALOG
CARD NUMBER 67-63381
MANUFACTURED IN THE UNITED STATES OF AMERICA

*“What America needs is not to do things for
our fellow citizens, but to keep open the paths
that allow them to do things for themselves.”*

—LOUIS D. BRANDEIS

E99696

Foreword

THE AUTHORS, a team of nurses, behavioral scientists, and a psychiatrist, tackle a difficult, interesting, and important task: to observe and measure, objectively and under experimental conditions, the impact of skilled nursing care on the behavior of older physically ill patients. Their basic hypothesis maintains that the human interactions which they define as skilled nursing provide a stimulus for the patient to become active, involved, and oriented to reality; these interactions stop psychosocial atrophy and physical decay. In testing this complex proposition, it was found that skilled nursing produces an interchange of positive human resources; it is rewarding to both parties in the nurse-patient dyad. Using resources skillfully, not only does the nurse become competent in the dyadic relationship but the patient becomes less rigid, tense, and defensive, and more able to reinforce a positive interchange.

The authors carried out their experiment by comparing the interactions of patients, matched for age, sex, social status, and other factors, in contact with two groups of nursing personnel. The first group were participants with high nursing skills; the second group was a control group without such skills. The term *skill* in this particular context means active participation, utilizing optimal verbal communication and interaction, without attempts to control and direct, but rather to respond to requests or offers.

The observations were carried out in three settings: The first one, the Beaumont Nursing Home, was a high-level nursing home, an "enriched environment"; the second, Elmwood—a low-level nursing home; the third was an institution on a level between these two and described in less detail. The Beaumont

Nursing Home had the atmosphere of a pleasant hotel and a capacity of 97 beds in mostly single, double, and triple rooms and was surrounded by yards and gardens. The administrative head was a physician closely collaborating with an administrator and a nursing supervisor who had complete authority over ten registered nurses and a large number of licensed nurses and aides. The relationship amongst the staff was harmonious. The general expectation was that the patient would recover and return to his family.

The second institution, Elmwood, was a private home and contained two 23-bed wards, three 5-bed wards, and two single rooms. The wards were crowded, the day rooms and utility rooms inadequate. The atmosphere was dark and dismal. Beds were dirty, and a smell of urine and feces pervaded the rooms. The patients' clothing was torn; their belongings were kept in cardboard boxes beneath the beds; soap was hard to find. Food was poorly prepared, and there was not enough of it. Only one of the 29 employees was a registered nurse. The owner and director seemed most interested in the financial profits of the institution. Employees were grossly inadequate; some of them appeared mentally retarded. The patients at Elmwood seemed medically neglected. They were apathetic except to wish they were not in the nursing home, but they had nowhere to go.

One of the most impressive findings of the study is the fact that skilled nursing produced positive changes, even in the deprived environment of Elmwood, when skilled nurses had an opportunity to work. Yet, the powerful impact of the environment—limitations imposed by the human and nonhuman resources—is dramatically demonstrated.

This study is important in several respects. It successfully measures and describes the effects of professional intervention and behavior. The nurses and other behavioral and clinical scientists who organized and participated in the exploration ought to be congratulated to have undertaken this difficult task, which they carry out with noticeable sophistication. The book should be of particular interest, not only to nurses, but to all members of the mental health professions. It contains incisive messages for the medical profession and health planners. It points to what

should be and could be done for aging patients—most timely, in the era of medicare and medicaid. It should arouse responsible citizens sufficiently that they will not tolerate the disgraceful conditions that exist, not only at Elmwood, but in hundreds of similar institutions in the wealthiest country of the world.

FREDRICK C. REDLICH
Dean, Yale University
School of Medicine

New Haven, Connecticut
April, 1967

Preface

IN GENERAL, one commonly observed consequence upon older patients of continued institutionalization has been described as progressive deterioration, a gradual atrophy of the patients' culturally-valued biological, psychological, and social attributes and functions. Numerous recent studies of hospitals as social systems have indicated that the qualities of the institution itself—its social structure, its policies, the goals and processes and interactions of its personnel and its patients—may be the most significant factors in the rate of such deterioration or whether or not it occurs at all. Clearly, both institutional settings and individual patients differ in these factors and in response to them, but the implications of research and clinical experience are that intervention and change in the social systems of an institution may arrest this deterioration in individual patients and in patient groups and may even reverse the process to promote the patients' physical, emotional, and interpersonal improvement.

We were intrigued by the general thesis that the professional nurse, because of her particular orientation and skills, might play a most significant role in providing such intervention—intervention that would itself provide the older patient with an opportunity and a stimulus to become once again an active, participating, communicating, reality-oriented *person*—a more effective, more productive, more outgoing, healthier, and perhaps even happier member of the larger human society. Our prior concern with older patients and their care and with the institutional settings within which this care was supplied had convinced us that, at least to our subjective (but educated) eyes, the thesis stated above was likely to be a true and valid one, but nowhere in the scientific literature could we find an objective, rigorous,

quantitative, replicable scientific study of relevance to this end. It was the purpose of our research project, then, to investigate the effects of the introduction of skilled nursing care upon chronically ill older patients in a variety of institutional settings.

It has become something of a cliché to speak of interdisciplinary research, but our group of senior investigators truly exemplified all of the best aspects of that overworked phrase. We contributed to and learned from each other, and the result was a rewarding amalgamation of the combined knowledge, skills, and creative capacities of each and all. We all accept responsibility for the defects of this report; we all contributed to whatever virtues it might possess. Since it was impossible to assess the quality and quantity of our respective individual efforts, we agreed to list authors alphabetically. By a happy coincidence, Dean Martha Brown thus assumed both alphabetical and contextual precedence, for in her capacity as principal investigator and project director she provided both initiative and leadership throughout the period of the investigation.

We are indebted also to the nurses, graduate students, secretarial staff, and others listed immediately following, who assisted in the development of the code for nurse-patient interaction and in the collection, processing, and classification of data. The group that worked under the classification *Research Nurse Assistants* included: Helen Bicknell, Marion Chamberlain, Barbara Dooling, Betty Finger, Josephine Jones, Melba Leichsenring, Irene Polert, Barbara Strange, and Ora Ruth Wallis. Evelyn Yama Kimura also served as *Research Assistant*, and Patsy Lile served as *Editorial Assistant*; *Technical Assistants* included: David Aldinger, Sarah Lee Boggs, Susan Frederitzi, Sally Hasting, Patricia Worthington, and Wanda Steinkamp Zentay; *Graduate Assistants in Nursing* included: Bonnie C. Hoffman, Shirley Holstein, Kathryn Geile, Jaqueline Lewis, Marilyn Rubin, and Edith Wilburn; *Secretarial Staff* included: Margaret Betz, Shirley Brewer, Janice Davis, Vera Hess, Cindy Pemberton, and Maureen Schneider.

In addition, we are most grateful to the students and faculties of our respective institutions, whose stimulating suggestions and criticisms contributed to the progress of the study, and to the large number of social scientists whose research and writings

significantly influenced the construction of both our conceptual model and our method.

Dr. Jules Henry, Professor of Anthropology and Sociology in Washington University, also served as consultant and included many of the research group's earlier observations of institutional settings in his recent book, *Culture Against Man* (New York, Random House, 1963).

Finally, we must acknowledge with appreciation the cooperation of the staff members and the patients themselves in the institutions we studied, for without such cooperation the study could never have been undertaken.

This investigation was supported during the period 1957 through 1962 by Research Grant GN-5535 from the National Institutes of Health, U. S. Public Health Service. Additional funds and/or services necessary for the completion of the project, during 1963 through 1966, were provided by the Washington University School of Nursing, the Department of Psychiatry of the University of Missouri School of Medicine, and the St. Louis (Missouri) County Health Department.

One note about the arrangement of the text: For clarity, it appeared useful to provide a brief summary at the end of those particular chapters that contain complex theoretical concepts or statistical conclusions and to include in the appendices rather than in the text those tables and figures of raw or derived quantitative data that were not immediately relevant to the textual material or were concerned primarily with tests of statistical significance.

JAMES M. A. WEISS, *Editor*

Columbia, Missouri
January, 1967

CONTENTS

List of Tables	xvii
List of Figures	xx
I. Preliminary Rationale	1
II. Nurse-Patient Interaction: The Conceptual Model	6
III. Method	19
IV. The Environmental Settings	30
V. Assessments of the Research Data	51
VI. Characteristics of Skilled Nursing Care	62
VII. Experimental Findings	68
VIII. Implications for Nursing Practice, Education, and Research	96
Appendix A Details of Design	119
Appendix B Criteria for Matching Environments of Experimental and Control Areas	124
Appendix C Criteria for Matching Subjects in Experimental and Control Groups	126
Appendix D Reliability of Coding System	128
Appendix E Concurrent Validity of Experimental Observations ..	136
Appendix F Experimental Findings: Supplementary Tables of Data	140
Appendix G Manual for Classification of Nurse-Patient Interaction	147

LIST OF TABLES

1. Mean Percentages of Total Interaction Units During Which Nurse Was "Active" with Patient 64
2. Mean Percentages of Persons Involved of Total Interaction Units in Which Nurse Was Implicated 64
3. Mean Percentages of Various Interactional Relationships Involving Nurse 64
4. Mean Percentages of Various Media Employed by Nurse 65
5. Mean Percentages of Various Types of Involvement When Nurse Was Observing or Active with Patient 65
6. Mean Percentages of Nurse's Responses to Requests and Offers 66
7. Mean Percentages of Degrees of Stereotypy When Nurse Was Active with Patient 66
8. Mean Percentages of Various General Phenomena Occurring When Nurse Was Active with Patient 67
9. Mean Percentages of Total Interaction Units During Which Patients Were Engaged in Observation 71
10. Mean Percentages of Total Interaction Units During Which Patients Were Involved in Interaction, but Temporarily Inactive 72
11. Mean Percentages of Total Interaction Units During Which Patients Were Involved in Active Interactional Participation .. 75
12. Mean Percentages of Total Interaction Units Involving Patient Alone 78
13. Mean Percentages of Total Interaction Units Involving Experimental Patient and Nurse or Control Patient and Nursing Personnel 79
14. Mean Percentages of Interaction Units During Which Patients Engaged in Active Interactional Participation When the Nursing Personnel Were Present 80
15. Active Participation by Experimental Nurse and Patient When Involved in Dyadic Relation 82
16. Active Participation by Control Nursing Personnel and Patient When Involved in Dyadic Relation 83
17. Mean Percentages of Total Interaction Units Involving Use of Nonverbal Functions and Communication by Patients 86
18. Mean Percentages of Total Interaction Units Involving Use of Verbal Communication by Patients 89

19. Mean Percentages of Interaction Units During Which Patient Is Actively Involved in Nondistorted Nonverbal Components of Biosocial Functioning	91
20. Details of Replication I	120
21. Details of Nurse-Patient Assignment (Replication I)	121
22. Details of Nurse-Patient Assignment (Replication II)	122
23. Details of Nurse-Patient Assignment (Replication III)	123
24. Expected and Observed Per Cent of Agreement and Critical Ratio for Code Categories in Replication I, Based on 858 Units of Interaction in Four Sessions with Two Experimental Patients and Two Control Patients	130
25. Expected and Observed Per Cent of Agreement and Critical Ratio for Code Categories in Replication II, Based on 858 Units of Interaction in Four Sessions with Two Experimental Patients and Two Control Patients	132
26. Expected and Observed Per Cent of Agreement and Critical Ratio for Code Categories in Replication III, Based on 858 Units of Interaction in Four Sessions with Two Experimental Patients and Two Control Patients	134
27. Probability Values for Chi-Square Tests of Coded Concurrent Observations for the Experimental Group	137
28. Probability Values for Chi-Square Tests of Coded Concurrent Observations for the Control Group	138
29. Probability Values for Chi-Square Tests of Coded Concurrent Observations When Both Observations Were Recorded from Memory	139
30. Mean Percentages of Total Interaction Units During Which Patients Were Present but not Involved	140
31. Mean Percentages of Total Interaction Units in Which Patients Exhibited Response Failure	140
32. Analysis of Variance of Mean Percentages of Interaction Units Coded "Involved, Temporary Inaction"	141
33. Analysis of Variance of Interaction Units Coded "Active Participation"	141
34. Mean Percentages of Total Interaction Units Involving Experimental Patient and Nursing Personnel or Control Patient and Nursing Personnel (other than Experimental Nurse)	142
35. Mean Percentages of Total Interaction Units Involving Patient and Other Patients	142

36. Mean Percentages of Total Interaction Units Involving Patient and Persons other than Experimental Nurse, General Nursing Personnel, or Other Patients	143
37. Mean Percentages of Total Interaction Units Involving Experimental Patients, Experimental Nurse, and Others or Control Patients, Nursing Personnel, and Others	143
38. Mean Percentages of Total Interaction Units Involving Experimental Patients, Nursing Personnel (Excluding Experimental Nurse), and Others or Control Patients, Nursing Personnel, and Others	144
39. Mean Percentages of Total Interaction Units Involving Experimental Nurse or Nursing Personnel and Others (not Including Experimental or Control Patients)	144
40. Mean Percentages of Total Interaction Units Involving Experimental Nurse Alone or Personnel Alone	145
41. Analysis of Variance of Interaction Units Coded "Active Participation" When Experimental Nurse and/or Nursing Personnel Were Present with Experimental and/or Control Patients	145
42. Analysis of Variance of Nonverbal Functions and Communication	146
43. Analysis of Variance of Verbal Communication	146

LIST OF FIGURES

1. Frequency of "Involved Temporary Inaction" in Experimental and Control Groups	73
2. Frequency of "Involved Temporary Inaction" for Experimental and Control Groups in Each of Three Replications	74
3. Frequency of "Active Participation" in Experimental and Control Groups	76
4. Frequency of "Active Participation" for Experimental and Control Groups in Each of Three Replications	77
5. Frequency of "Active Participation" by Patients When Nursing Personnel are Present, for Experimental and Control Groups in Each of Three Replications	81
6. Frequency of "Active Participation" by Nurse and Patient in Dyadic Relation, for Each of Three Replications (Experimental Group)	84
7. Frequency of "Active Participation" by Nurse and Patient in Dyadic Relation, for Each of Three Replications (Control Group)	85
8. Frequency of "Nonverbal Functions and Communication" in Experimental and Control Groups	87
9. Frequency of "Nonverbal Functions and Communication" in Each of Three Replications	88
10. Frequency of "Verbal Communication" in Experimental and Control Groups	90
11. $r \times k$ Contingency Table	128

CHAPTER I

Preliminary Rationale

THROUGHOUT LIFE, from conception to death, the resources of human beings are constantly subjected to two simultaneous but contradictory processes: development and atrophy. As each new anatomical structure or physiological function appears and grows, another such structure or function disintegrates and, in its time, becomes excluded from the human system. To the eye of the beholder, the processes of development early in life are rapid and dramatic: the development obscures the atrophy. Later in life, however, the processes of atrophy appear to be rapid and tragic: the atrophy obscures the development. It is nevertheless a fundamental assumption of this work that some degree of development in terms of modification or change in some form or function, be it wisdom or wine-tasting, may continue until the moment of death.

These processes of development and atrophy take on cultural values, and the cultural milieu can arrest or facilitate either—development or atrophy—according to its values. At mid-century and in the North American culture, a major feature of *growing* (maturation) is the progressive *development* of valued human resources. The major feature of *growing old* (senescence) is the progressive *atrophy* of valued human resources. All human resources are involved. Physical fitness, neuromuscular skills and the aptitude to develop them, intellectual ideas and the ability to analyze them, emotions and the capacity to express them with concern for the feelings of others, and, finally, motivation to interchange resources with others—all of these are affected by the pervasive atrophy of growing old.

As the chronic diseases occur with increasing frequency and begin to run their often irreversible courses, the speed of the process of atrophy may become accelerated and the extent of it more pronounced. The whole unraveling process appears to become even more accelerated, more pronounced, and more depressing when older persons who are suffering from chronic diseases find themselves set aside from the larger social group to live out their lives—whether in comfort or in pain—in special institutions “with [as the brochure writers like to say] others of their own age.” The potentials for new kinds of human development are buried under preoccupation with the more patent atrophy.

The nature and direction of this process of atrophy define challenges for the professional nurse. When she is taking care of aging patients, a nurse *may* behave consistently in a way that expresses or implies that she expects the interaction to be a rewarding interchange of human resources—an interchange of motives, feelings, ideas, and skills—between the patient and her. In response to this kind of continuing, actively expressed or implied set of positive expectations from a nurse (or anyone else), most patients (or anyone else) will respond with some activity—even negativistic activity, at the very least.

If, however, such a provisional attempt does in fact bring a small reward—perhaps only relief of anxious tension—to both the nurse and the patient, it is likely to be repeated. It is likely to become less random and more predictable and rewarding. If the interchange of resources continues, complementariness may develop. Both nurse and patient become more aware that the patient, on his part, can provide useful human resources which the nurse cannot develop alone, and that the nurse, on her part, can provide useful human resources which the patient cannot develop alone. This interchange of resources then may develop reciprocity; it may become perceived more clearly as a fair and equitable exchange. If all of these conditions develop, and if the physical stamina of the persons involved is sufficient to sustain the activity, it seems likely that the process of atrophy can be arrested and even, perhaps, reversed and that the processes of biological, psychological, and social development can be initiated and even,

perhaps, maintained and augmented. With these hypotheses in mind, we designed an experiment, organized in a series of three replications, to determine the effects of certain forms of nurse-patient interaction upon the physical fitness and the culturally valued psychosocial behavior of older, chronically ill, hospitalized patients.

CONCEPTUAL FRAMEWORK

The conceptual framework for the experiment is based on a unitary assumption regarding the nature of psychosocial systems: that such systems exist and operate through the interchange of resources. The assumption is stated most clearly in terms of several variables that are considered to be of primary significance in the analysis of all systems, whether they be biological, psychological, social, or cultural. Such an analysis may focus first—as did ours—upon psychosocial systems and the interrelated processes of change in which they are involved. It became apparent, however, that the psychosocial systems we studied were constantly influencing and were constantly being influenced by the biological and cultural systems to which they are inextricably linked. In addition, the boundaries between these systems overlap and are difficult to delineate. For example, a nurse might extend the physical mobility of a patient and thereby also extend the range of his psychosocial contacts; this, in turn, might well increase the likelihood of his contributing to or being restrained by a larger cultural system or even by his own biological system. Thus, a conceptual framework was needed that would be applicable both to psychosocial systems in general and to the particular small psychosocial system of special interest in these experiments, that is, the nurse-patient dyad. The derived framework was structured, then, on these basic variables: resources, components, dimensions, interaction processes, and cultural valuation of changes.

Psychosocial systems may differ significantly with respect to the *resources* (both natural and human) available to them. The structural *components* of psychosocial systems (for example, persons, roles) are constellations of resources and may differ significantly with respect to inclusion, involvement, commitment, interchange, control, or other *dimensions* of resources. The *units*

and *sequential processes* of interchange of resources among components of psychosocial systems may differ significantly with respect to the quantity, quality, and nature of the interchanges and in their impact on the development or atrophy of the system. The dynamics of psychosocial systems and their components may differ significantly with respect to the *rate of change*, which, of course, may alter chronological patterns of interaction processes. Changes in psychosocial systems may also differ significantly with respect to the *cultural valuation* of the changes. In mid-century North American culture, psychosocial changes to which positive values are attributed include:

- (1) increased quantity, quality, and specialization of natural and human resources available;
- (2) increased inclusion, involvement, and commitment of resources;
- (3) increased stability and predictability, but decreased rigidity, of the interchange of resources; and
- (4) increased range of choice available to persons, with respect to the conditions of the inclusion, involvement, commitment, and interchange of the resources under their control.

In this study these increases or positively valued changes will be designated *psychosocial development*. The negatively valued, opposite changes will be designated *psychosocial atrophy*. All positively valued changes are not necessarily concomitant; under some conditions, two positively valued changes might even be mutually exclusive. For example, commitment of resources often reduces the freedom of choice about the conditions of interchange. Further, those changes positively valued in North American culture are not necessarily positively valued in all smaller components of the culture, as, for example, in Eskimo villages, in Amish religious communities, or in Missouri nursing homes.

In the experiment, the independent variable *skilled nursing care* and the dependent variable *psychosocial change* are defined and analyzed in terms of the foregoing basic concepts. Each of the basic concepts and terms involved will be explained in more detail in Chapter II.

The terms *psychosocial* and *psychosocial system* are used

often in communicating the nature of the findings of the experiment. Such compounded terms are frequently used as expedient means of communicating the notion of close, interdependent, but distinct organizational units. In this case, the compounded term is intended to symbolize the focus of analysis (and of synthesis) on the individual human being performing a social role within the context of a hierarchy of social systems, all of which respond to him through a person in another social role. Thus, the implications of the term represent a complex set of processes beginning with the nurse-in-role interchanging resources with the patient-in-role as a two-person psychosocial system—a dyad. The dyad also must interchange resources with a slightly larger system, the face-to-face group comprising a room, a dayroom, a ward, or a division. The face-to-face group must interchange resources with the institution, the hospital, or nursing home. The institution must interchange resources with the community, the region, the society, the nation, and so on.

While the focus of analysis will most often be on very small units of interaction within the nurse-patient dyad, the valuations and the concepts of *psychosocial development* versus *psychosocial atrophy* are of course reflections of broader cultural values. The analysis should also demonstrate, then, some of the ways of coping with the particular deviations from broader cultural values that regularly and predictably occur when communities, institutions, or even families must deal with the steadily changing amounts and kinds of human resources available to older persons who are limited by chronic disease. The problem is certainly not one limited to professional nursing practice. It is a cultural problem to which professional nursing practice can offer many resources—motives, feelings, aptitudes, ideas, and skills—but only as many as the institution, its community, and its culture are willing to allocate to the particular problem: the conservation and development of human resources in aging persons.

CHAPTER II

Nurse-Patient Interaction: The Conceptual Model

THE MAJOR GENERAL CONCEPTS to be described are: (1) *resources* relevant to psychosocial systems; (2) structural *components* of psychosocial systems; (3) *dimensions* by which the components of psychosocial systems may be differentiated; (4) *interaction processes*, defined as the interchange of resources among components; and (5) psychosocial development versus atrophy, or the *valuation* of changes in the system and its components. The general concepts then will be applied to the analysis of nurse-patient interaction in some specified institutional settings.

RESOURCES

Resources are generally defined as energy and matter and their organizational forms. Resources are classified in five categories:

1. *Time-space* (the space available to the system at any one point in time, and the time available to the system at any one point in space).

2. *Inanimate objects* (nonliving objects in their natural or man-made forms).

3. *Plants*.

4. *Nonhuman animals*.

5. *Persons* (as biologically defined and as constellations of human resources, including physical fitness and stamina, drives and motives, feelings, aptitudes [including intelligence], ideas, and skills).

COMPONENTS OF PSYCHOSOCIAL SYSTEMS

Psychosocial systems are constructed of subordinate smaller

components or smaller constellations of resources, interrelated by a continuing interchange of resources. Components are classified in three categories:

1. *Persons*.
2. *Roles*—constellations of resources amenable to interchange with other such constellations. (One person may perform many different roles; one role may be performed by many different persons.)
3. *Psychosocial systems*—constellations of persons performing roles.

Psychosocial systems so designated are seen as different from, but overlapping with, the more broadly conceived *social systems*, in that in the former the roles tend to be analyzed, differentiated, and related as they are performed by specific persons. As indicated earlier, the focus of this experiment is upon the nurse-in-role and the patient-in-role. Special attention is given to motives, feelings, ideas, and skills of persons. The interchanges of motives, feelings, ideas, and skills are, in fact, much influenced by the role being performed by the person, revealing the social aspect of the analysis. The roles actually analyzed, however, are those performed by particular people selected for this particular study. Constellations of these people-in-roles form the psychosocial systems under experimental modification. They include the experimental nurse-patient dyad, the control nurse-patient (or personnel-patient) dyad, and the patient-patient dyad. They also include larger groups as these come into contact with the dyads, since psychosocial systems, as previously specified, are themselves components of larger superordinate structural systems. These larger systems are categorized as *social systems*, *societies*, and *cultures*. Constellations of roles-in-groups are designated as *social systems* (or subsystems), and, as usually conceived, social systems may include dyads, groups, organizations, and communities. Constellations of groups, organizations, and communities that interchange resources are designated as *societies*, with only vague boundaries between social systems and societies. Constellations of people interchanging resources according to particular values and beliefs are designated as *cultures*.

DIMENSIONS OF THE COMPONENTS

As indicated previously, the core of the conceptual framework is the identification of the significant dimensions by which components can be differentiated. Both differentiation of many components at one point in time-space and differentiation of the same component at many points in time-space are important.

Dimensions are classified in ten categories:

1. *Inclusion*—the extent of consensual perception within a system and within a component of the system, of the existence of goal-relevant resources available to the system from the component and amenable to interchange with other components within the system.

2. *Acceptance*—the extent to which a given component evokes positive feelings in the other components.

3. *Involvement*—the extent of (a) perception of resources; (b) manipulation, direct or symbolic, of resources by a component; (c) communication with other components concerning resources and terms of employment of interchange; (d) actual employment of resources, involving possible commitment; and (e) actual interchange of resources, involving possible reciprocation.

4. *Commitment*—the extent of likelihood that a component will make resources available to other components at the times, in the places, and in the forms expected by the other components.

Note that *inclusion* implies more than availability. It implies that the resource is perceived as a part of a system, even though it is not necessarily in use and not yet undergoing interchange. *Acceptance* implies that the resource is not only a part of the system but is an emotionally welcome part of it—but still not necessarily in use. Further, *involvement* implies that use, sharing, or interchange is to be desired, if terms can be arranged. It includes, therefore, negotiation, demonstration, and provisional trial of interchange, to establish the terms of interchange. *Commitment* implies that the inclusion, acceptance, and involvement are well enough under way so that mutual expectations have been established and the participants perceive and fill a need to meet the expectations—dependably to make available the

needed resources at the time, in the place, and in the form needed by the psychosocial system.

5. *Competence*—the extent of the quality of goal-relevant resources included in the system and available from a component.

6. *Specialization*—the extent of the limitation on the range of kind of resources available from a component to the system.

7. *Power*—the extent of control of the resources of the system by a component.

8. *Rigidity*—the extent to which the included resources and the terms of interchange remain constant, independent of changes in available resources, changes in motives of individuals, and changes in goals of the system.

9. *Stability*—the extent of the capacity of the components to cope with stress. Stability is distinct from rigidity, since rigidity implies constancy, regardless of associated stress, whereas stability implies the power to “bend”; that is, the nature, manner, and terms of the interchange of resources can be modified with a minimum of stress to deal with new and unexpected situations, such as changes in resources, motives, or goals. The component or the system is more or less stable, to the extent that it can maintain relatively predictable methods of developing consensus about competence, commitment, specialization, and power. The stability arises from the predictability of the methods necessary to adapt to change rather than from the predictability of the nature of the change or of the nature of the adaptation itself. The component can absorb new resources, lose old resources, change the allocation of resources, and change the terms agreed upon under which the interchange of resources occurs. Thereby, stable components, by consensus, may change positions along other dimensions: inclusion, acceptance, involvement, commitment, competence, power, specialization.

Here emerges another implication concerning the management of tensions. Any continuing change—in the resources, the motives of persons, the goals of the system, the agreement on the terms of interchange—involves some tensions. Tensions are generated by the gains and losses of individuals with respect to their own motives and goals. Both regular and temporary relief from such tensions on a periodic basis and some type of sophis-

ticated defenses against the tensions are also characteristic of stable components or systems. The relief or the defenses may temporarily distort reality, but only temporarily, else the system becomes more rigid and less stable.

The final characteristic of the stable component or system is implied by the reference to change by consensus. A relatively wide range of alternatives is available to the component or to the persons involved, with respect to their commitment to any new change in the system. The wider the range of alternatives available, the greater the choice about inclusion, involvement, or commitment. The range of choice is not necessarily correlated with stability. Multiple choices may occur in periods of disintegration; if, however, they occur in combination with the consensual flexibility and the sophisticated tension management described above, the pattern is likely to be characteristic of a stable component system.

10. *Integration*—the extent of the interrelation of the preceding several dimensions. Such interrelation thus serves as an index of the integration of the component into the system, or of the system into the society, or of the society into the culture.

The relationship between inclusion and commitment is a particularly apt example of the integration of the system. If the correlation is high between the resources *included* and the resources *committed*, the most-needed resources are the most dependably provided at the time and place and in the form needed.

The correlation between power and competence is sometimes used implicitly or explicitly as an indication of integration. A high correlation implies that the powerful roles are in fact those roles requiring the most competence and that the most powerful persons are in fact the most competent persons. A low correlation implies that neither are the most competent persons the most powerful nor are the most powerful the most competent.

INTERACTION PROCESSES

The sequences of units of interchange of components are defined as *interaction processes*. The interaction processes constitute the dynamics of the system. In a stable psychosocial system, most of the interaction is predictable. Most people do pretty much what is expected of them, and they find that others do

pretty much what they expect the others to do. On the other hand, no psychosocial system exists without some degree of on-going change in the system. At times people behave in unexpected ways. To a small degree or to a large degree these unexpected requests or offers of interchange of resources are the basic units of the forces for change in a psychosocial system. As indicated previously, such forces for change are resisted in a rigid system; they are encouraged in a new or loosely established system. They are balanced by other changes and adapted to in a stable system. It is the sequence of the units of resource interchange by which the components of a system become more or less included, more or less involved, more or less refined and specialized, more or less committed, more or less random, or more or less predictable.

The unit of interaction is the smallest focus for analysis in this experiment. The dimensions by which units of interaction may be distinguished from one another include the time-space context of the unit (its place in a sequence, its duration, and the mobility of the actors in time and space) and the resources included in any unit of interchange. Units may also be differentiated by the extent of involvement and commitment of each person included in the interchange, from very habitual stereotypic interchanges to highly committed combinations of exhaustive efforts toward achievement.

The unit of interaction may also be differentiated by the degree of initiative involved on the part of the actor. Units are differentiated with respect to the implied power of the actor and the implied autonomy of the other. On the one extreme, the actor may imply very little power on his own part and very great autonomy on the part of the other. On the other extreme, he may imply very great power on his own part and a very low degree of autonomy on the part of the other.

A rough scale of these variables can be found in the most commonplace interactions. When one person *gives an order* to another, he expects the compliance inherent in the giving and receiving of orders. He implies relatively great power for himself, his role, or his system; he implies relatively little autonomy for the person to whom he gives the order.

When one simply *gives direction to another*, he implies competence for himself and, thus, power. Giving directions, however, implies somewhat less power than giving orders and somewhat more autonomy for the other.

Offering suggestions also implies power on the part of the actor but less than giving orders or directions. Further, it implies relatively greater autonomy for the other.

Offering opinions has the same (or even more clear) implication about competencies, as has ordering, directing, or suggesting, but it has no action implications.

Offering simple information implies relatively low power for the actor and high autonomy for the other. It involves no evaluation or action.

Simple *use of a resource* by the other, without reference to the actor, implies the greatest autonomy for the other. The rough scale in decreasing order of power for the actor and in increasing autonomy for the other is, then, giving orders, giving directions, offering suggestions, offering opinions, offering simple information, and direct unilateral employment of a resource.

VALUATION OF CHANGES IN PSYCHOSOCIAL SYSTEMS

As indicated in Chapter I, this experiment was based upon the assumption that some aspects of changes in psychosocial systems are more highly valued than others in present-day North American culture. In this particular meaning, there is a continuum, with highly valued changes being designated *development* and low-valued changes being designated *atrophy*.

Increase in the quantity and quality of the resources available, included, involved, and committed within the psychosocial system is defined as the first aspect of developmental change: the acquisitional value of the culture.

Changes in the refinement and specialization of resources increase both the quality and the goal relevance of the resources: from ore to stainless steel, from general caretaker to specialized nurse.

Development also involves changes in the extent and variety of choices available to the system and its components, concerning the involvement and commitment to a particular interchange of resources (a particular unit of interaction).

Development is seen also in changes in the authenticity of the communicated involvement and in the commitment of one component to another. Authenticity means the extent to which one's commitment can be depended upon: the extent to which one will actually make his particular specialized resource available to another at the place and at the time and in the way agreed upon in communication.

Development is seen also in changes, among the people within the system, in awareness of the balance between dependency and dependability. If one is to have available the specialized resources of others, one must depend upon the others to meet their commitments as to time, place, form, and cost of the resource. If others are dependable and do, in fact, meet their commitments, their freedom of action is to some extent limited by their commitments. On the other hand, if one is dependable, the restrictions on his actions by his commitments may, in fact, increase the range and variety of the particular decisions he may make to meet these commitments and may increase the freedom with which he chooses among the alternatives. For example, the nurse is committed to protect the welfare of her patient; the implied charge to be available at prescribed times and places restricts her freedom of choice about where she will be and what she will do at any particular time. Yet, her specialized training allows her to make many decisions about the protection and the welfare of the patient without asking the patient or others to participate in the decision making. While dependency, freedom, and dependability are related to one another, they are not mutually exclusive. The significant variable is the balance between dependability about resource interchange and freedom of decision about the nature of the terms of the interchange.

Development also involves changes in the continuity of the ongoing evaluation and of the relevance of the resources available and under refinement. There may be almost unlimited subjects about which a nurse and patient can converse, but those subjects that are relevant to the development of the psychosocial system constituted by the nurse-patient dyad may be much more limited in availability.

Development also involves changes in conceptions of complementariness and reciprocity. If a nurse provides a special service for patients, such as handing out cigarettes, both the nurse and the patient may, at first, perceive that the service provided is over and above the call of duty. If, however, the nurse continues to provide cigarettes, the patient will come to expect them, and the norm concerning the reciprocity of the interchange is modified. Once the patient begins to expect the service, it then becomes thought of as the nurse's duty and the patient's right. The fact that the nurse continues to provide the service at a time when it is not considered her duty implies that she is receiving some reward in the interchange and that the reward is the basis for the continuation. Thus, the reciprocity, the mutual reward, becomes established, and that establishment is followed by the establishment of a new complementariness (a new duty on the part of the nurse and a new complementary right on the part of the patient).

INSTITUTIONS, NURSES, AND PATIENTS

In this work the nurse-in-role interchanging resources with the patient-in-role is considered a psychosocial system. The institution, however, is considered a constellation of social systems. For purposes of a working conception of the place of the nurse-patient interchange in these systems, one may consider institutions for the care of chronically ill patients to comprise two main social systems or subsystems: the staff social system and the patient social system.

The staff-patient dyad is the main link between the two systems, the major channel of interchange of resources between the staff social system and the patient social system. It is through this dyad that the staff system stimulates the patient, influences the patient, frustrates the patient, rewards the patient, or helps the patient. It is through the staff-patient dyad that the patient stimulates the staff, frustrates the staff, rewards the staff, or helps the staff.

The staff system and the patient system and the staff-patient linkage may be conceived in terms of the previously presented model. Each has available more or less resources, inanimate, animate, and human. Each may include, accept, involve, and

commit the available resources to greater or less extents. Each may develop more or less competence and specialization; each may develop more or less power, rigidity, and stability.

In some institutions the members of the staff system may and do include, accept, involve, and commit many resources of high quality. In the process, they become competent and powerful. They may also become rigid, resistant to change, and defensively oblivious of their tensions. On the other hand, they may become flexible in their responses to new resources, roles, or rewards and also ready, from time to time, to devise methods of relief from the tensions of the inequities, the frustrations, and the incompetencies with which they must in the long run contend, or cope, or perhaps cure.

In some institutions the members of the patient system have rich resources available, too. They may include, accept, involve, and commit many resources of high quality and, in the process, become a competent, powerful, and self-sustaining system—rigid and vulnerable or flexible and stable, depending on the persons involved and the situations to be met.

Similarly, the same variables apply to the linkage: the staff-patient dyad. Under some conditions the linkage, as essential to both systems as it is, may consist of only superficial and stereotypic interchange. It may, even while it is functioning, be denied almost completely. A staff member may bring a tray of food, place it by the staff-specified bed, and leave it—while there is no patient in the bed. Further, the staff member may return at the staff-specified time and remove the untouched tray—while there is still no patient in the bed and no change in the food on the tray. Such a staff member has provided the needed resources in the time, in the place, and in the form prescribed by his commitment to the staff. His activity reflects almost no commitment to the patient. His activity almost, but not quite, denies the existence of the patient.

The patient, too, may behave so as to deny, as far as possible, the existence of the staff system. Usually, the resources available to patients are quite limited, as compared to the resources available to staff. The patient-controlled resources, however, are never completely a void. Under most conditions the patients may

find good profit in the acceptance, inclusion, involvement, commitment, and control of their motivations, feelings, ideas, aptitudes, and skills. The objects they need may be largely unavailable, but their motives, feelings, ideas, and skills may also be sources of competence, power, and insurance of their own care. The possible interchange of human resources available among the patients always has strong potential developmental significance.

It does seem, however, that motives, feelings, aptitudes, ideas, and skills frequently become closely attached to, and even symbolized by, inanimate objects. An interchange of ideas may not be experienced as consummated unless some objects are interchanged, too. A candy bar can produce a sense of reality in a professed interchange of affection. It can produce even a false sense of reality when the gift is really a deceitful and exploitive attempt to induce the submission of a patient to the control of the staff system or to the control of the patient system. Objects are often considered the most important resources in the staff-patient interchange; human resources may be ignored or denied because of their more subtle, complex, and emotionally involved meanings.

In experience, one may find the staff-patient linkage to be partly independent of the affluence or stability of the two systems. Even a rich and stable staff system can be made almost unavailable to a relatively rich and stable patient system. If the commitments of the staff members are primarily to the staff system; if the rewards for meeting these commitments are from the staff system; if the patient system withholds its resources and rewards from the staff; and if both are rigid systems—then the nurse-patient interchange may be ritualistic and impoverished, even in the midst of affluence of resources in both staff and patient systems.

If the two systems are *both* impoverished, on the other hand, there is little to link. The nurse-patient interchange may involve such pitifully few and cheap resources that it is almost impossible to experience any interchange as rewarding or even satisfying—the interchange is always too little, too lean, too late.

In this research, for the purposes of the experiment, a new

set of resources was attached to the staff system but never necessarily included or committed by the staff system. Skilled nurses were added—skilled nurses with a commitment to devote their allotted time and other resources to the individual patient. In strict terms, their commitment was neither to the staff system nor to the patient system; it was to an external social system—the research team. As the skilled nurse offered her time, motivations, feelings, aptitudes, ideas, and skills to the linkage between the patient and the staff, she was either accepted and included or she was tolerated and excluded; she was rewarded or she was punished; she was assisted or she was frustrated. Depending upon her acceptance, inclusion, and rewards from the two systems, she developed or she withheld mutual involvement and mutual commitment of resources. Sometimes it was a commitment to the patient system only, sometimes to both. Sometimes it did not seem possible to develop any commitment to either system. Under such conditions, commitments were confined to the individual patient and to the external research team.

This new constellation of resources was added to the linkage point between the staff system and the patient system. On an experimental basis it was added to some parts of an institution but not to others. The outcome was then systematically observed in both the parts to see whether the atrophy was arrested or the development accelerated more noticeably in areas where a skilled nurse was attached than in areas where no such attachment was made.

SUMMARY

This theoretical model defines the resources relevant to psychosocial systems in which nurse and patient interchange resources, defines the structural components of the psychosocial systems, identifies the significant dimensions by which the components of the system may be differentiated, defines the interaction processes by which resources are interchanged among components, and poses a definition of development and atrophy in psychosocial systems on the basis of values believed to be prevalent in North American culture in general.

Resources include time-space, inanimate objects, plants, animals, and persons. Human resources include physical fitness and

stamina, drives and motives, feelings, aptitudes, ideas, and skills.

The subordinate components of psychosocial systems include persons and roles. The superordinate entities are groups and organizations in social systems, societies, and cultures.

The dimensions by which the components of psychosocial systems may be differentiated are inclusion, acceptance, involvement, commitment, competence, specialization, power, rigidity, stability, and integration.

The dimensions of a unit of interchange of components include its time-space context (place in sequence, duration, mobility), the resources included, the extent of involvement, the extent of initiative, and the implications of autonomy. The sequences of units of interchange are defined as interaction processes.

The dimensions of development and atrophy in psychosocial systems ("cultural valuation") include the quantity and quality of resources available, refinement of resources, the range of choices available to the components, the allocation of commitments, the balance between dependency, dependability, and freedom of choice, the continuity of the re-evaluation of goals, the relevance of resources, and the changes in the conceptions involving complementariness and reciprocity.

It is proposed that the older patient who is suffering from a chronic disease is likely to be undergoing a process of atrophy rather than a process of development. The experiment tests the hypothesis that, given certain minimum environmental conditions, this process of atrophy can be arrested and even reversed by the introduction of certain nurse-initiated interchanges of resources, which are designated *skilled nursing care*.

CHAPTER III

Method

EXPERIMENTAL DESIGN

THE FOCAL PROBLEM in the design of the experiment was to determine if, all other factors being equal, positively valued psychosocial change of older patients (the dependent variable) occurs in the presence of skilled nursing care (the independent variable) and does not occur to the same degree in the absence of skilled nursing care. In meeting this problem it was assumed that a large variety of factors, known and unknown, may extend or limit the effects of skilled nursing care upon such change in patients and their social systems. It seemed desirable to study such effects under as wide a variety of conditions as possible and thus to give a wide range of applicability to the findings. At the same time, it was necessary that such effects be compared in both an experimental and a control situation—one in which skilled nursing care was present, and the other from which it was absent—to be reasonably confident that any differences in effects were due to differences in the presence or absence of skilled nursing care. Accordingly, all other factors needed to be as similar as possible in the two situations.

These general requirements were met by a split-plot design that arranged the experimental conditions in such a way that a series of three smaller experiments were conducted. Each smaller experiment (replication) provided for two essentially matched groups of subjects, one of these paired groups receiving skilled nursing care and the other not. In this way, experimental conditions could (and did) vary considerably from one replication to another without marked variation in all nonexperimental conditions between paired groups within replications. By this

method, variations in experimental effects across replications also could be observed, and, at the same time, variations due to skilled nursing care could be observed exclusively within the homogeneous replications. The effects of skilled nursing care, therefore, were uncontaminated with variation in experimental conditions. Further, such effects were cumulative across replications, taking advantage of the reduction of chance factors occurring from repetitions of the experiment.

In essence, then, the experiment was designed in split-plot form, with three replications. Each replication contained six pairs of patients matched for age, sex, race, duration of hospitalization, nature of illness, and other factors. The members of these pairs were assigned to experimental and control treatment conditions on a random basis. Further, each replication was divided into two units of three pairs of patients. The experimental patients of one unit received treatment on Mondays, Wednesdays, and Fridays; the other unit on Tuesdays, Thursdays, and Saturdays. Five nurses participated in collecting data, rotating so that each contributed equally to the experimental and to the control group studies. (A more comprehensive description of the experimental design and its manner of implementation is to be found in Appendix A.)

EXPERIMENTAL SETTINGS

Each of the three replications provided in the experimental design was performed in a different institutional setting or environment. These environments differed considerably in their characteristics. The nurse-observers rated each of the institutions according to its tolerance for psychosocial development. The setting in Replication II ("Beaumont Nursing Home") was judged to have the highest tolerance for such development; the setting in Replication I ("Mid-City Hospital and Home") was judged to have the second highest tolerance for such development; and the setting in Replication III ("Elmwood Nursing Home") was judged to have the lowest tolerance for such development. Replication III was considered to be a "deprived" environment, while Replication II was considered to be an "enriched" environment, and Replication I was considered to fall

between the other two. (These environmental settings are described in detail in Chapter IV.)

Environmental data were also collected throughout each replication for qualitative analysis. Such descriptive data were collected to show variations in environments from one replication to the next. These two-hour narrative observations were collected three times a week for a period of six weeks.

PATIENT POPULATIONS

The *first replication* consisted of 12 female patients (six pairs), all resident in Mid-City Hospital and Home, their ages ranging from 53 to 88 years, with a mean age of 69 years. Ten of the patients were white and two were Negro. The length of present hospitalization ranged from less than 1 year to 22 years, with a median length of 9 years. All but one of the patients were born in the United States, and all suffered from chronic medical disorders.

The *second replication* was composed of 12 female patients, all of them white, all resident in Beaumont Nursing Home, their ages ranging from 77 to 94 years, with a mean age of 84 years. The length of present hospitalization ranged from 1 month to 8 years, with a median length of 2 years. Two of the patients were foreign born, and all patients suffered from chronic medical disorders.

Twelve white male patients whose ages ranged from 67 to 92 years, with a mean age of 79 years, made up the *third replication*. All were resident in Elmwood Nursing Home. The length of present hospitalization ranged from 1 month to almost 12 years, with a median length of 4 years. All of these patients also suffered from chronic medical disorders.

PROCEDURE

On the basis of preliminary study, information was available concerning the environmental characteristics and population of each of the three institutional settings used in replications of the study. This information was used for the following procedure:

1. From the wards or comparable areas available, one pair

of areas, both of which had very similar environments, was selected. (See Appendix B.)

2. The patients in both members of the pair of areas selected were surveyed, and those patients not suitable for experimentation because of severe blindness or deafness, extremely limited life expectancy, and so on, were eliminated from consideration.

3. The remaining patients available for study were arranged in pairs so that (a) the members of pairs were as similar as possible in terms of age, sex, race, and other pertinent characteristics, and (b) one member of the pair lived in one area and the other in the matched area of the setting. (See Appendix C.)

4. Six pairs of patients were selected at random for study in each replication.

5. One of the two matched ward areas was assigned at random to the experimental group and the other to the control group. All randomization was accomplished by using standard tables of random numbers and similar techniques.

The next step was the assignment of nurse observers. Three nurses were available on any one day to provide skilled nursing care for the experimental patients, and two nurses were available to observe the control patients. One nurse was assigned to provide care for two patients on alternate days according to the design described above. A comparable procedure was followed in making control group observations. In this manner, one nurse provided skilled nursing care for each experimental patient in sessions lasting 90 minutes each and occurring three times per week over a six-week period. Control patients were observed over comparable six-week periods in thrice-weekly sessions lasting 20 minutes each. The smaller time sample among control patients was justified because of their relatively greater behavioral homogeneity. (Detailed descriptions of criteria and methods for matching subjects and environments and for assignment of nurses are given in Appendices A, B, and C.)

The technique by which data were collected for the study was that of participant-observation. During each replication, each nurse assigned to give skilled nursing care dictated her own participant observations (made in the course of providing nursing care as previously described) in narrative form, immediately

upon leaving the patient. Nurses assigned to observe control patients did so without intervention. These nurses recorded their observations in narrative form at the time of their occurrence.

Two typical samples of narrative protocols follow. Both are from Replication III, on a matched pair of experimental and control patients in matched settings. The first section—approximately 25 minutes—of the experimental protocol and the full 20-minute control protocol are included.*

Experimental Group—Patient: Mr. Abel; Nurse-Participant: Betty Finger; Session No. 7.

9:00 A.M. Mr. Abel was on the porch, standing by the railing. He turned as soon as I had opened the door and stepped out. He smiled broadly and seemed glad to see me, saying, "Well, hello. I didn't think you were going to be here today." I smiled and answered, "Hello. How come you didn't think I was going to be here?" He shrugged and said, "I don't know." He held out his hand, as if to shake hands with me. I put my hand in his and gave him the package of chewing tobacco I had brought. He looked puzzled for a minute. Then he saw the package and smiled broadly. He asked, "What kind did you bring?" I had to look at it and then said, "It says, 'Day's Work' on it." He nodded and said, "That's good."

I noticed that his hands were a lot cleaner than they usually are. I commented, saying, "My, your hands look clean today." He grinned mischievously and said, "Well, I washed up, that's why." I shook my head and laughed. He laughed and turned toward the davenport. We went over and sat down. He held his hands out in front of me and turned them over saying, "Yessir, I washed them, and see, most of that stuff they complain about don't come off." He pointed to the dark areas on some of his fingers, saying, "Part of that's from mulberries. They get stain all over you and you have to wait for it to wear off." I nodded and felt of his fingertips where they are black, saying, "What's all this from, smoking?" He answered, "Yeah, from pinching cigarettes out." I shook my head and said, "It looks like charcoal." He grinned and said, "It probably is, they don't

* All names of patients and ward personnel in these and other reported narrative protocols have been changed to initials or names selected at random from a modified Armed Forces phonetic alphabet list. Names of nurse-participants and nurse-observers are their own, however.

hurt though." I glanced up at his face and smiled, saying, "Did you know that the end of your nose is purple too?" He laughed and said, "Yeah, I know it is. I tried to wash it off, but I guess I got mulberries on it." He chuckled and said, "They ain't seen it yet." I laughed with him. He then said, "I found another mulberry tree out in back yesterday. I finally got out in the back yard and walked around. A great big tree out there. Do you know where it is? It's just loaded with berries." I nodded and said, "Yes, that's right back where we park the cars." He agreed, saying, "Yes, there were some back there yesterday too." He smacked his lips and said, "Boy, I'd like to make a pie. Mulberry pie is really good. But I dassn't collect them and give them to any of the guys around here. They'd just take them home with them." I did not answer this.

He paused, and then he said, "Well, I felt real good yesterday and I feel better today. Now if this would just keep up, things would look better all the time." I answered, "Well, that's good." He looked at me then, as if he were puzzled, and said, "What day is it today?" I answered, "It's the first of June and it's Monday." He shook his head and said, "I guess I really got it mixed up. I didn't know what day it was yesterday but somebody told me it was Sunday. I guess they were right but it still doesn't seem like Monday to me." I nodded and said, "Well, maybe it's because of the holiday." He asked, questioningly, "Memorial Day?" I nodded and said, "Yes, Memorial Day was Saturday. A lot of people had today off too, because the holiday was on a regular day for them. That's sort of common—that they either get Friday off or Monday off to make up for the holiday if it falls on Saturday or Sunday." Mr. Abel shook his head and said, "Well, I guess maybe that's it. They never used to do that much and I'm not used to it."

The black cat came running over to us then and stopped in front of us and yowled. We both grinned, and he said, "There's Tommy." He leaned over, and the cat came up to him. He played with the cat for a minute and then sat up, saying, "That sure is a nice cat. I used to have a cat like that, a Maltese." A small calico female ran by then. He watched her go and then said, "That's a scaredy cat." We both chuckled as the cat had quite a time sneaking around Mr. Queen, who was standing by the head of the porch steps.

The colored boy, who has been working part-time, stuck his head out the door and called to Mr. Abel. I glanced over, as did Mr. Abel. The boy smiled and said, "Oh, that's

all right, I can wait until you're done. I was going to shave him." I turned to Mr. Abel, who didn't seem as though he had heard it, and said, "He wants to know if you want your whiskers shaved off?" Mr. Abel ran his fingers along his face and said, loudly enough so that the boy could hear him, "No, I think it can wait. If that's all right with you, I can wait until tomorrow." The boy smiled and said, "O.K., that's all right with me." He ducked back in the door.

Mr. Ittem came out and went over to stand by Mr. Queen. Mr. Abel started to say something to me, then noticed him and stopped and watched them for a few minutes. Then he said, "That one with the hump [Mr. Queen] is crazy. He don't know which way to go most of the time. And that other one [Mr. Ittem] is the nosiest man here." I merely nodded. Mr. Dock then came out the door and stopped a short distance from us. I looked up at him and said good morning. Mr. Dock answered saying, "It looks like rain." I agreed and said, "Well, the weather forecast predicted rain for today sometime. It was awfully nice yesterday though, wasn't it?" Mr. Abel nodded with a big smile and said, "Well, it was a pretty day yesterday." He paused and then leaned close to me and said in a very low voice, "That fellow right inside the door had a fit this morning." I nodded and said, "You mean Mr. Victor?" Mr. Abel nodded and said, "Yes, I guess that's his name. He got pretty wild. He always does get wild though, they have to keep the porch door locked." I looked a bit puzzled, and he said, "Well, you see, when he gets one of those fits he runs. He runs into walls and everything and if the door is open he runs out and right out over the steps without going down them." I nodded, and he went on saying, "They tie him down so he won't have a chance to hurt himself. They're always real careful with him when he has one of those." He shook his head as if he were feeling sorry for Mr. Victor, and I said, "Yes, it's a hard thing to have." Mr. Abel looked up and said, "Fits?" I nodded, and he said, "Yeah, I guess so, but I ain't never had any." I looked at him and said, "I didn't think you did." He smiled and said, "I know it. Some people say I'm mean enough to have fits though." Then he threw back his head and laughed, and I did too.

9:15 A.M. The cats were parading back and forth in front of us, going from Mr. Queen and Mr. Ittem to Mr. Tare and then to us. I called Tommy [the cat] over and petted him for a minute. Then he ran away to follow Mr. Queen down the porch steps. Mr. Abel chuckled and said,

"I like cats. Some people can't stand them. They just hate them. You know when I had that little house in town I had fourteen or so. I think cats are easy to train. I only had one or two that ever got up on a table and I whopped them once and that was the end of that. I never had any more trouble with them. You know in the back yard I used to have a little shed about six foot square. I used to take an old wooden soap box and cut a hole about so big and I'd put a rag in the bottom and those cats all used to go in there and sleep in a pile." He shook his head and chuckled as if it were a pleasant memory. The black cat was sitting out by one of the trees now and watching the birds. Every time a bird flew over he turned his head to watch it go, nearly falling over in the process. I chuckled and pointed the cat out, saying, "Look at that cat. He's having a time watching the birds go by." Mr. Abel watched for a few moments, laughed, and said, "I don't think any of those cats ever do catch a bird around here. The birds got too many other places to go." He watched the cat for three or four minutes and chuckled each time the cat nearly fell over. He then said, "That cat is a young one. It isn't too smart yet." We both chuckled.

We were quiet for a few minutes and watched the cars go by. Then Mr. Abel said, "I wish the doctor would find out what's wrong with my eye. This left eye has been giving me trouble now for a long time. The doctor told me that he can't see anything wrong with it. But even if he can't see anything I know there's something wrong. It's like having a film over your eye and everything looks blurred." I asked, "How long have you had it?" He paused, and then he said, "Oh, it must be about fourteen years now." He went on to describe how it had started suddenly and how it prevented him from doing much reading. He then pointed to the filling station across the street and said, "I know that that's a clock up there but all I can see any more is a little round white circle." I followed his directions and there is a clock over the door to the filling station. The face of the clock can't be much more than 20 inches in diameter. I was able to see the hands on the clock face clear enough to determine approximately what time it was, but any attempt to read the numbers, which could be no more than an inch or so high, was impossible. I asked, "You mean to tell me that you used to read numbers that small from this distance?" He nodded and said, "Yep. I had real good eye sight. I could see things a long way off that most people couldn't see at all. Most people never believed me." I shook my head and said, "Can you see the hands on the clock now?" He shook his head

and said, "I can see sort of a black bar but I can't see it clear enough to see what direction it is pointing in." He then looked at my watch and pointed out that although he could see the hands on that he still couldn't see the numbers on it. He then repeated that he used to be able to see things like the numbers on the clock face across the street clear and bright.

I asked, "What happened when your eye went bad? Did you have a sick spell or something?" He shook his head No and said, "No, I've never been sick in my life. I got hurt a couple of times. Once I got hurt in a foundry and once I got hurt when I worked in a coal mine. But I never did have anything that you could call being sick. Oh, I had the measles when I was a kid, you know those little German measles. I had little red spots all over me, and I remember my mother tying mittens on me clearly up to my wrists so that I couldn't scratch and she kept me in a dark room." I chuckled as he found this amusing to remember. I then asked, "You mean you only had the measles and you never had anything else, the chicken pox maybe?" He shook his head and said, "No, I never had any chicken pox. I know what they are though. They get kind of big raised pimples and when they fall off, they leave a scar." He described it a little bit more, and I said, "Are you sure you don't mean smallpox?" He answered, "Well, I don't know but I thought they were the same thing." I assured him that they were not and that the smallpox killed many people and almost always left scars behind. I told him that chicken pox weren't quite so severe and were usually over within a week or so. He nodded and said, "Well, maybe I never knew many people who had chicken pox then, because all the ones that I can remember were sick for a long time."

He then described how he had gone to see an eye doctor in town somewhere ten years or more ago who had told him the same thing the doctors out here had told him. I looked at his eyes, but I could see no difference between one pupil and the other. However, it seems to me that something must have happened, because his whole left side is affected. His eye, his hand, and his leg. He went from telling me about his eye to telling me again about the trouble with his knee and how it goes backward on him often and makes it difficult to walk. I listened and only asked if it had gotten worse through the years. He told me that it hadn't, but that it had been quite bad when he first came out to Elmwood. He said it had cleared up during the time that he had been there

so that now he could walk quite well without any canes. We were quiet for a while then, watching the cars and the cats.

Control Group—Patient: Mr. Howe; Nurse-Observer: Ruth Wallis; Session No. 7.

10:05 A.M. Mr. Howe was sitting on the side of his bed, smoking a pipe. He occasionally glanced into the main part of the ward. He seemed to be devoting much of his attention to smoking the pipe and was half dozing as he sat there.

10:10 A.M. Mr. Sugar and another patient were talking. Mr. Howe looked at them briefly and then emptied the pipe in a tobacco can which he got from the bedside table. He put the pipe in the can also and then folded his hands in front of him.

10:11 A.M. Mr. Howe sat looking at the big ward, evidently listening to a conversation between two patients, Mr. Baker and Mr. Love.

10:13 A.M. Mr. Howe looked at the observer, grinned broadly, and then put his feet, shoes and all, on to the bed, turned over on his right side and closed his eyes.

10:15 A.M. Mr. Howe yawned, but his eyes were still closed.

10:20 A.M. Mr. Howe seemed to be sleeping.

10:25 A.M. Mr. Howe's eyes were still closed, and he seemed to be sleeping soundly.

Concurrent observations were made by a second nurse-observer on randomly selected samples of the nurse-patient interactions in both experimental and control groups. These concurrent observations provided a basis for validity checks upon the participant observations. Data concerning these are reported in Chapter V and Appendix E.

Thus, as described, the nurse-observers participating in this study produced a series of narrative observations of interactions with patients and of other activities corresponding to all sessions with all patients throughout the experiment.

Each of these sets of observations was then divided into "interaction units" by the project director, according to a pre-established set of criteria. These interaction units constituted the basic analytical "bits of information" in all later statistical treatments. When each of the narrative observations had been "unit-

ized," each of the resulting interaction units was coded according to a system of categories developed in advance to reflect significant behavioral indices of the psychosocial process.* These coded data were then subjected to the statistical treatment described in Chapter V. In addition, an assessment of intercoder reliability was obtained and is also reported in Chapter V and in Appendix D.

SUMMARY OF METHOD

Eighteen matched pairs of patients were randomly selected from matched environments and studied in a split-plot design carried through three replications. One member of each pair received skilled nursing care, while the other received only that care which is standard in the institutional setting in which he was lodged. Data concerning the effects of these treatments upon the psychosocial development of the patients were collected by nurses acting as participant-observers. Observations were made during sessions of 90 minutes duration (20 minutes for control patients) three times a week for six weeks. Data in narrative form recorded by the nurse-observers were divided into units and ordered to a coding system reflecting significant behavioral dimensions of the psychosocial process.

* Description of the criteria used in "unitization" and a complete description of the coding system and procedures are in Appendix G.

CHAPTER IV

The Environmental Settings

THE THREE DIFFERENT institutional settings utilized in the three respective replications of the experimental design varied in the nature of the psychosocial milieu almost from one extreme to the other. The purpose of this chapter is to provide a general account of the quantity and quality of resources in the social subsystems of each of these extremes of environmental setting. Voluminous amounts of descriptive data originally recorded in narrative form have been reduced to representative summarizing statements, supported in part by direct quotation of on-the-spot observations. In other instances, the summarizing statements were inferred directly from the accumulated data.

The environmental setting for Replication II, called here "Beaumont Nursing Home," provided a milieu at the one extreme (enrichment), in the sense that the components of the social subsystems of both patients and staff had a high potential for inclusion, involvement, and commitment of resources and provided a means for active interchange between patients and staff. The environmental setting for Replication III, called here "Elmwood Nursing Home," provided a milieu at the other extreme (deprivation), in the sense that the resources of the social subsystems of both patients and staff were impoverished, with relatively little interchange in the staff-patient linkage.

MID-CITY HOSPITAL AND HOME (REPLICATION I)

"Mid-City Hospital and Home," as we have called it, the setting for Replication I, falls between the two extremes of environmental affluence and depletion and for this reason is de-

scribed only briefly. As the name implies, this public institution is located in a large metropolitan area. Mid-City is comprised of several large buildings, covering several acres of ground, with a capacity of 1,450 beds. Mid-City provides care for a variety of patients suffering from chronic illnesses. Most patients are elderly. The monthly rates at Mid-City range up to sixty dollars, but most of the patients are indigent and are supported by governmental funds of one sort or another.

The two nursing divisions selected for study are located in separate buildings of this institution. The divisions are composed of wards ranging from 4 to 20 beds. The patients are segregated by sex, from division to division. Within the divisions, patients who are blind or mentally incompetent are segregated from those who are not. The 70-bed division that was chosen by chance to become the experimental area, at the time of this study was staffed by seven attendants who worked during the day, three attendants who worked during the evening, and three attendants who worked during the night. The 57-bed control division was staffed by one registered nurse and eight attendants during the day, three attendants during the evening, and three attendants during the night. The resources of the staff social subsystem were relatively high, but those for the patients' social subsystem and for interchange between the two subsystems appeared to be moderately low, as compared with the resources of the other two environmental settings.

BEAUMONT NURSING HOME (REPLICATION II)

General Description. Beaumont Nursing Home is located in a residential area of a large midwestern city. It has a capacity of 97 beds, distributed in one building on three floors. The rooms are arranged for single, double, and triple occupancy, with the exception of one 7-bed and one 15-bed ward for female patients. Surrounding the building is a large yard where the patients are allowed to be taken for walks. Flower gardens brighten the front of the building, and the grounds are meticulously kept. During the period of the study, this private institution was usually filled to capacity.

The Staff Social Subsystem. When this study was in progress,

the administrative heads consisted of the medical director (who was president of the corporation), the general administrator, and the nursing supervisor, all of whom were on the Board of Directors. Next in the line of command was the housekeeper, who was in charge of all housekeeping, laundry, and the preparation and purchase of food. Both she and the nursing supervisor were responsible to the general administrator; however, the supervisor was coequal in position to the administrator by virtue of her position on the Board of Directors. The general administrator was directly responsible to the medical director.

All nursing personnel were responsible to the nursing supervisor, although the administrator stepped in on nursing matters on occasion. All non-nursing personnel were responsible to the housekeeper.

According to the administrator, there were 10 registered nurses, approximately 40 licensed practical nurses and aides, 4 maids, 3 porters who also acted as orderlies, and 1 general maintenance man employed at the institution. The kitchen help consisted of 2 cooks, 6 female helpers (all of whom could cook), and 4 persons who served trays.

One resident physician lived on the premises and was on call in the evenings and at night. During the day he was a resident in training at a nearby hospital. He also examined patients on admission and once a month thereafter. Each patient also had his own private physician who called regularly. In cases of emergency, the private physician was called immediately.

The administrator said that she always deferred to the nurse supervisor in nursing matters. However, by her own admission, this was not entirely true. In one instance, a patient complained that the maid came in too early to clean and that the nurse came in too late to bathe him. In this example, the administrator told the nurse to bathe the patient earlier and told the maid to clean the room later, an arrangement that apparently worked out to everyone's satisfaction.

When the personnel were questioned as to why they liked to work at the institution, there was unanimous agreement that "it is a nice place to work." The specific benefits that accrued to the nurses were group hospital insurance, vacations with pay, one

meal a day at the Home, and a Christmas bonus. In addition to these specific benefits, there were unwritten privileges, such as being allowed to go into the kitchen at any time and "take what you want to eat." Another major factor mentioned was "the way the management treats you." One nurse compared the nursing home to a large hospital where she had been employed. "I don't have to sign requisitions when I want something. By the time you've spent the time filling out requisitions and traveling up and down the elevators in the big hospital, you've lost a lot of time. Here, I can get what I want in three minutes."

According to this same nurse, the extra time afforded the nurses as a result of having less paper work at Beaumont is spent in giving the patients extra care. "Here, you can spend more time with the patient and do niceties that make him happy. You can spend time with him and talk with him. It is like a family grouping."

Another nurse expressed similar feelings. "You have to go through so many departments in a hospital but here you don't. You're not spending all your time making out slips, so you can give more time to the patients and help the girls [aides]."

Another inducement for working at the institution was explained by a part-time nurse. "What I like about it is that you still have the same patients unless one dies. When you come in, you know who's here and it doesn't take two days to find out who the patients are. I know when I am back after so many days the same patients are here."

Another nurse who had worked at the nursing home six years was asked if the pay induced her to remain. Her answer was direct and clear. "When I started, it was \$6.50 a day. It's \$9.50 now, so you know it's not the money. I can make much more on private duty. I just like the whole set-up."

The method of recruiting personnel was also unique at this nursing home. Although some advertising was done in the local newspapers, most of the persons were hired through personal contacts with personnel already employed at the institution. This was true of both nursing and non-nursing personnel. As the administrator put it, "Sometimes you start with one good one in a family, and then you have two or three from the same family

working for you." It was remarkable how long some of the personnel had worked at the institution. The housekeeper said that one member of the kitchen staff had been at the institution since it had been established and that the shortest length of employment had been three years.

The relationships among the personnel were apparently harmonious. There were admittedly a few squabbles, but one nurse attributed these simply to the staff being a group of women working together. The kinds of assignments and patient load were the main sources of friction among the subsidiary nursing personnel. For example, one aide felt that she had too many patients to feed, while another aide felt that she had all those patients who required a great deal of time to feed. A head nurse described these complaints as being due to personality clashes, but, she said, "There is no undercurrent here."

One striking factor in the atmosphere in this institution was the expectation on the part of the personnel that the patients could recover and go home. The administrator reported that one older patient even got married. In contrast with attitudes of personnel at many other homes for the aged, this institution was not considered by staff members or by patients as the end of the road, a place to go to die.

Some interesting points came up, with respect to the patients' families. According to the administrator, the families, the personnel, and the patients caused the most trouble, in that order. "Most people are prejudiced against nursing homes. Until they find out definitely, they take out their guilt complexes on us. They bring their relatives here in terrible condition. Then they try to tell us how to treat them."

It was also interesting to hear how the patient responded to his family. "A patient might say to us that everything is fine, but he might complain to his family. Some patients say they complain to the family because otherwise the family ignores them. One patient even said we slapped her. I almost had a heart attack when she said that."

Nevertheless, the patients' families did visit frequently, and they occasionally took the patients out for drives in the car, when this was permissible in terms of the patient's physical condition.

When questioned about the kind of staff person it takes to work with old people, employees in every interview reiterated one theme: The staff person must be kind. Other qualities that were mentioned as requisites for working at Beaumont were a liking for people, patience, and sympathy. Several of the nurses said, "You have to be able to control your temper," and, "You should never talk back to a patient," suggesting that perhaps nurses did sometimes lose their tempers with old people and that it was an occasional temptation to talk back to them.

There was general agreement among the nurses that old people are childish and that "they act like children." When questioned as to the specific meaning of these terms, the nurses said that both children and old people are unable to feed themselves; both children and old people are often incontinent of urine and cannot control their bowels; old people dwell on the past and do not look to the future. If an old person sees the nurse doing something for another patient, he or she becomes jealous and the nurse then has to do the same thing for him, said the nurses.

The Patient Social Subsystem. The patients' rooms, the bathrooms, the halls, and the other patient areas were kept immaculately clean. Many of the patients—especially those who had little expectation of being discharged from the institution—had their own furniture in their rooms. There was an abundance of radios and television sets, with one television on every floor for public viewing. A large number of special duty nurses were working (13 at one time during the study). A commodious dining room was located on the first floor, where all ambulant patients assembled for their meals if they so desired.

The food served at the institution was extremely good by any standards. Food preferences and special dietary needs were taken into account. There were special diets for diabetics, for example, as well as for persons with allergies, for persons with no teeth, and for persons requiring tube feedings. Special requests for omelets, steaks, and scrambled eggs were made and honored daily. The housekeeper said that it was not unusual to fill 14 or 15 special diet requests each day. Approximately half of the patients needed help with feeding, and, according to one nurse,

some feedings took a full hour. The maids and the kitchen staff helped with the feedings.

Although all of the food was prepared on the premises, the laundry was sent out. All bed linens were snow-white, and beds were changed daily. The housekeeper reported that 300 bed pads were used each day. The supply of linens was plentiful, and nurses never had to scrimp on the use of linens. The patients were bathed daily, a procedure that added to the amount of linen used.

Without exception, every patient had his own clothing. Moreover, patients had their own toilet articles, cosmetics, jewelry, books, candy, flowers, stationery, pictures, and many other possessions to make their stays more comfortable and home-like.

The administrator complained about one special problem (a problem that seems to be universal in large domiciliary institutions, such as hospitals, hotels, boarding schools, barracks, and dormitories). This was the problem of pilfering, from which Beaumont Nursing Home was not excepted. Stolen articles ranged all the way from small clocks and radios to large fans and articles of clothing. Since the institution chose to make good anything of the patients that was missing, quite stringent steps were taken to control the pilfering. Attempts to control included checks on linen at the change of each shift, and in one case a staff member waited outside, concealed in the bushes, for a suspect to leave the building with stolen goods. Nevertheless, pilfering was a continuing problem.

Recreational facilities were somewhat limited. Once each week there were bingo games, which the patients enjoyed greatly. This was their only source of recreation other than watching television or listening to the radio or reading. At one time, the personnel thought that the patients might enjoy learning to weave and to sew as a means of passing the time. However, this was discontinued shortly after it was started because the patients felt that they were being made to work.

Patient Care. The level of nursing care appeared to be extremely high. In addition to maintaining conscientious standards

of cleanliness, other measures essential in caring for helpless old patients were followed. These included turning bedridden patients every two hours, changing the bed linens every two hours if necessary, and getting the patients up every day if at all possible. One nurse said that out of the 96 patients in the nursing home at that time, not one had a bed sore and that their skin conditions were remarkably healthy. The nurses took considerable pride in the care that their patients received and in the good results that this care provided.

Such care costs money, and indeed, by middle-class standards, it is very expensive to stay at Beaumont Nursing Home. Rates for room and board start at \$225 per month in the larger wards and are said to go to \$500 for a private room. While all nurses in the study thought this to be extremely high, one family member was heard to say that the prices charged at the nursing home are very reasonable, in view of the fact that it had been costing this particular family more than twice as much to keep their mother at home, with the servants and all the other help required. In general, the class of people that are housed in this institution tend to be of the upper-middle or upper socioeconomic levels.

Thus, a hotel-like atmosphere, with nursing care of high quality, is provided at this home for the aged. Linens are changed daily, maid service is provided, meals are prepared to order, and the patient may request almost anything within reason because, as one employee put it, "they pay for it."

Most of these patients, however, are not in Beaumont by choice. They are there because circumstances of ill health or loss of family prevent them from being at home with friends or family. Moreover, they find themselves placed solely amidst "their own kind"—the aged and the infirm—a realization that appears to be unpalatable to many patients. Although some of the patients may look forward to going home, many of them have nothing more to anticipate than long days of eating, sleeping, and watching television, with an occasional visit from a friend or relative and bingo once a week. But, as some patients indicated, if one must be in a nursing home, Beaumont appears to be one of the best, if not the very best, in the metropolitan area.

ELMWOOD NURSING HOME (REPLICATION III)

General Description. Elmwood, a private home for the aged, provided the setting for the third replication of the study. Located in the outskirts of a large midwestern suburban area, the Home is surrounded by a community made up of a peculiar mixture of rural and urban elements. The physical structure is an old white frame house situated on a spacious but unkept plot of ground located far back from a road busy with traffic. From the highway, the paint appears white, but it changes to a color closer to gray as it is approached.

Although the nursing home is divided into two sections, located about one mile apart, the study was confined to that part known as Elmwood B. A hut at the rear of the premises of Elmwood B, housing retarded children, was not included as part of the study.

At the time this study was being made, Elmwood B had 109 beds and was owned by a practical nurse. The patient census consisted of 49 males and 59 females and included a segregated ward for Negroes. Rates, according to the owner, varied from \$132 to \$152 per month on other than life-care basis. Life-care plans, whereby the patient turned over his financial assets to the owner, were in operation for a number of the patients, but were described only in very vague terms.

The first floor of Elmwood B contained the two 23-bed wards used as experimental and control areas in the third replication of the study. In addition, there were three 5-bed wards and two single rooms. The single rooms were scarcely large enough for a bed. There were no bedside tables or chairs in the single rooms. In some rooms, the beds were so close together that patients had to file between them sideways. The dayroom was a small chamber near the center of the building, furnished with a linoleum rug, a television set that did not work, a crudely constructed heavy table, and four straight chairs. The office, a very crowded narrow room, contained the medications and a few charts and cards containing both correct and incorrect items of information about the patients.

The kitchen was quite small in relation to the number of patients fed. The kitchen opened into a rather dirty and ugly

graveled court. This exit was a thoroughfare for traffic between the main building and the other buildings in the rear. Two stairways, two small bathrooms, and a very small tub room and utility room completed the facilities for the first floor. The second floor, not utilized in the study, was even more crowded. The poor lighting throughout gave the place a dark and dismal atmosphere.

The Staff Social Subsystem. The first in command at Elmwood B was the owner, a practical nurse who served as administrator. The next in command was another practical nurse, who supervised the actual nursing, kitchen, and laundry activities. She had approximately 29 people to assist her. The number is "approximate," because some of these assistants were patients, and it was often difficult to find out which "employee" was a patient working to provide partial payment for room and board and which was a regular employee. One of the 29 assistants was a registered nurse who worked during the night and lived in a trailer at the back of the premises. On Tuesdays the nurse remained on duty during the morning, so that she could assist a physician who visited the home at that time. Since the personnel sometimes shifted between Elmwood A and Elmwood B, it was difficult to determine who and how many people worked where. Attempts to obtain such information by interview were thwarted by the owner's making the interviewer wait three to four hours for a scheduled appointment and then attempting to control the interview by incessant chatting. When direct questions were posed, relevant responses were often clouded by very long circumstantial accounts of how well the owner liked older patients and how much she had done for them.

In spite of such claims, the owner seemed most interested in the financial aspects of the operation. Much of the information she gave in the initial interview in regard to the care and treatment of her charges was grossly incongruent with observed data. It was not clear whether or not the other practical nurse or the registered nurse also had a financial interest in the home; however, since one member of the project's research staff was approached by the owner to engage in another financial venture, this appeared to be, possibly, a way the owner kept her top staff interested in the profit motive. The following information is a

direct quotation from the second interview with the owner. "I'm sure gonna get rid of my place in R—. You know, it's just too far to go back and forth from E— to R—. But then I could fix it up. Why, you know my uncle in Chicago has a gold mine. He has a place for alcoholics and does he clean up! He gives shots that make them sick and then they don't get drunk anymore. What's the name of that drug?" [I said I couldn't recall the name of the drug either, and she went on.] She said, "We could sure clean up on that, honey. Why, if I had a nurse to give those shots we could have a gold mine." ["I don't know much about that kind of thing," I said. "Besides, I'm all tied up."] She dropped the subject.

Some of the regular employees who were not patients appeared to be mentally retarded. Most of the female aides were Negro, but there were two or three white aides. The aides and maintenance helpers were paid at irregular intervals, and they often complained bitterly that pay checks "bounced." Sometimes they were paid by the owner's endorsing to them checks that had been given to her by patients' relatives. In some cases, these checks bounced also.

Some employees were hired from the nearby area. In this area, a suburb of the large city, most businesses were owned and operated by families in the community, with little other industry than several nursing homes to offer employment to residents in the area. In most cases, however, the people employed at Elmwood B lived on the premises, although exactly where on the premises remained a mystery.

The personnel's stamina was exceedingly difficult to discern because it was frequently difficult to determine whether a given person's status was that of employee or patient. The male employee and the male patient roles were especially difficult to differentiate, either by observation of tasks performed or by interview. Apparently, some working patients served as a mixture of maintenance man, janitor, orderly, and patient. The known practical nurses appeared to be in good health. The registered nurse volunteered that she was 64 years old, and she complained often of "stomach trouble." Some aides were dressed in slightly better attire than the patients, often in some type of uniform

that, however, seemed to vary from day to day. Absenteeism after payday was said to be high, and an aide commented that "most of them got drunk." One aide who worked during the night slurred her speech and drooled until it was almost impossible to understand her.

The feelings or attitudes of the employees toward the patients appeared to be either hostile or indifferent. The following observation, for example, was more or less representative of employee-patient interactions:

Mr. P., a patient, said to Mike, apparently an employee, "He's loose." Mr. P. was referring to Mr. J., an aged blind patient. Mike looked over to Mr. J., who was feeling his way around, apparently trying to find his way back to 4 North. Mike said, "I don't care, if he wants to get hurt, I don't care. It ain't my fault." Mike started to mop the floor. Mr. J. was walking about, running into bedside tables; he finally got over to 4 North. Mr. J.'s trousers were wet. Mr. Z., another patient, called, "Blind man." Mr. J., holding onto a bed, called, "Mary, Mary." He seemed desperate for Mary. Mr. H., another patient, yelled gruffly, "Watch out, you're going to fall." Mike said to Mr. P., "I'm not going after him." Mr. J. was then out of sight, and Minnie, an employee, called to Mr. J., "What are you doing in here? Mike! Mike!" She pointed to Mr. J. and said, "That man's getting dangerous. He's dangerous."

Mike dropped his mop and ran over to 4 North. In a few minutes, I saw Mike holding with one hand Mr. J.'s hands in back of him. With the other hand, Mike kept hitting him in the back with his knuckles. Minnie was in back of Mike and kept yelling loudly, "He's getting to be dangerous. He's downright dangerous."

Mr. J. kept yelling, "I can't stand it. I can't stand it." By this time, Mike had Mr. J. sitting on his chair. Minnie was watching Mike. She laughed and said, "You have to tie him like a young baby, that's what." By this time, Ida, another aide, came on the scene and she laughed, too. Minnie, looking at Mr. J., said, "He's as feeble-minded as he can be. . . ."

Mike continued to restrain Mr. J. Mike was having difficulty putting the leather restraints on Mr. J. because Mr. J. kept pulling away from Mike. Mr. J. said, in a very pathetic voice, "All right, all right, Mary."

Mike, by this time, had the first restraint around Mr. J.'s

left arm. He had it on so tight that you could see the circulation was cut off to the lower part of the arm. The veins from the elbow to the shoulder were standing out. I noticed that Mr. J.'s right arm was not like this.

Mr. J. said very loudly and angrily, "I'm getting damn tired." Ida stood there and laughed. . . . Mr. J. tried to get loose, and Mike slapped him on the arm. Both Ida and Minnie laughed. I was getting sick. . . .

Mike was tying on the second restraint around Mr. J.'s arm. Mr. J. stopped pulling and, in a pathetic tone of voice, said, "Mary, stop misbehaving—I'm not doing anything. I want you to behave, Mary."

By this time, Mike had tightened the restraint. . . . Mr. J. yelled, "You're hurting me, you're hurting me."

Mike yelled at Mr. J., "Shut up, I'll put this where I want to. . . ."

Mr. J. said, "I'll knock you down," and Ida said, "You'll get knocked down."

Mr. J. yelled, "Too tight, too tight."

Mike continued to make the restraint tighter and said, "Don't tell me what to do."

Mr. J. shouted, "I told you to leave me alone. Leave me alone." Mr. J. continued, "Give me my shoes."

Mike then took the end of the restraint and swatted Mr. J. on his bare shoulders. Both Ida and Minnie watched and laughed.

Mike tied the restraints by a rope to the foot of the bed. Mike then took a cigarette from his pocket, waved it in front of Mr. J.'s face and asked Mr. J., "Got a light, Mister?" Mike was laughing. Mike then leaned so hard on Mr. J.'s shoulder that he yelled, "Quit that." Mike said, "Oh, I thought you was a post." Mike then used his elbow and jabbed Mr. J. in the back.

Mr. J. yelled, "Quit that! Quit that!"

Mike then put both hands on Mr. J.'s cheeks and acted like he was going to hit him real hard but, thank God, he didn't.

Mr. J. kept yelling, "Quit that, quit it now!"

By this time, I was practically frozen to my chair. Mike then walked away and continued mopping. Minnie started to make Mr. J.'s bed and she kept nudging him with her elbow. Mr. J. yelled, "Quit, quit that!" Mr. J. had some freedom with his hands, and he grabbed Minnie by the arm. She jerked away, nudged him again with her elbow, but kept out of his reach. (The other patients made no comments

in relation to Mr. J.'s predicament during the above interaction.)

The employees were interviewed, but often were guarded and evasive, or hid behind references to religion or "the good Lord." When asked how they would describe their patients from a personality point of view, one aide replied: "Oh, most of 'em are kind of crazy. You know, they wander around and get into things. They don' know wad they're doin'."

Another aide described the patients as being mentally ill and then elaborated, "You know, they forget." The practical nurse who supervised the other employees (and whose attitude in interactions with patients had been observed as being relatively harsh) replied to the project director: "Oh, the poor little dears are just forgetful—that's all. We never know when they're going to be like that. . . . They're like children, you know."

The registered nurse had a somewhat different response, stating: "Why, they're mostly feeble-minded and elderly. There's not much difference between these oldsters and our retarded children."

When asked "What do you like most about your work?" the registered nurse said that she was in this work for the money. The practical nurse replied by saying how much she liked the patients and that the good Lord intended her to do this kind of work.

An aide answered this question (what she liked most about her job) by saying, "I'm a Christian and maybe I'll be like that some day." Another said she liked *everything* about her job.

When asked what she liked *least* about her job, one aide responded that she didn't like the 13-hour shifts. Another said there was nothing she disliked. The practical nurse said she disliked "taking the scum out of the poor dears' mouths after they died."

The registered nurse seemed more open in her comments. She said the thing she liked least about her job was listening to "vile talk." "Why, one night I was in the ward and that old man called me a dirty cock-sucking son-of-a-bitch. I told him to shut up and he just kept on. Well, you know what I did? I just got a pitcher of water and I just poured it right in his face. Boy! He

shut up after that. I told Mrs. B. [the owner] about it the next day and she raised Cain because we might get reported. Well, that didn't bother me none. I'd do it again. I can always work someplace else and that wouldn't bother me none either."

When the employees were asked what they did when the patients got upset, some said they fed them a jelly sandwich; some said they told them to shut up; others said that they poured cold water on them.

While low-visibility skills were performed poorly and even harshly, there was no evidence that manual skills were performed any better. Bedmaking, a basic manual task, was described by several observers as incompetent or sloppy for both empty and occupied beds.

The Patient Social Subsystem. In general, there were few procedures or devices used for the patient's protection. There was only one fire extinguisher on the first floor, and patients usually draped clothes on this, so that it was frequently not visible. Restraints were sometimes used, but erratically and without rationale. Patients were also subjected to inadequate nutrition and poor sanitation. Supervision was irregular: a patient who escaped during the morning was not missed until late evening.

It was on the local voting day that the owner was first visited by the project director. Cars drove up to the entrance of the Home, and patients who appeared to be very sick were taken to the local voting places. The owner went on at great length about how she thought everybody should vote and how she went to a lot of trouble to see that the patients had the opportunity. Some of these patients, on a subsequent visit, were found to be very disoriented. One lucid patient said, "They told us who to vote for and that they could tell by a secret method if we didn't vote like they told us. If we didn't, they said, they would put us out in the cold."

With the exception of one teen-aged patient, all the male patients on the first floor of Elmwood B were over 55 years of age. Approximately two-thirds of the patients could walk without assistance, and most of the others were in wheel chairs or could get about with some type of appliance. Very few were confined to bed or were unable to help themselves get about the

ward. Some patients were sufficiently mobile to walk to a little store on the highway. The round trip was equivalent to about two city blocks.

The patients were visited once a week by a physician who made rounds on approximately 100 patients in about one hour. Occasionally he checked someone's blood pressure, and occasionally he listened to a patient's chest with a stethoscope. With one exception, each chest examination was completed in less than twenty seconds. During the entire time, a high fan was roaring so that one could not hear normal conversations from a distance of more than three feet. The physician's usual question was, "Feet swollen?"

When the patients became acutely ill, they were sent to either the city or the county general hospital. One death occurred during the six-week period.

At Elmwood, when this study was made, the walls were in need of paint. Bedding was frequently found torn, and in some beds cotton was coming out of the mattresses. Observers had to be careful where they walked to avoid puddles of urine and feces. Some attempt was made to mop, and the cleaning equipment was kept in sight most of the time. One observer reported: "The beds looked rather uncomfortable, sagged in the middle, and each had a relatively thin mattress. The linens were grayed and dingy looking, and some of the beds were smeared with dried feces. Faded blankets were folded at the foot of the bed. Some beds had spreads and others did not. The upper half of the windows were covered with dark green cotton curtains and there were no shades. The floor was dark with wet spots. I noticed several men spitting on it. The ward smelled strongly of urine and almost made me sick."

Few of the beds were protected by plastic or rubber sheets to keep them dry. In some cases, when a plastic sheet was on a bed, it was torn and almost unusable. When the beds became very wet, the mattresses were turned over with the damper side toward the floor. Sheets were not routinely changed, although during the six-week period of the study they were all changed once. When sheets were soiled by urine, they were usually placed over the foot of the bed or the back of a chair to dry. Often there

were no clean sheets available for beds that had been soiled with feces. The linen cabinet was a hodgepodge of clothing, restraints, and unironed clothing tossed on the shelves. No attempt was made to sort linen or to arrange it on the shelves.

Most of the patients' clothing was torn and had not been ironed after washing. The men complained that they had no way to hold up their trousers because there were no belts, buttons, suspenders, or workable zippers available.

Soap was difficult to find. Female patients were required to do extra work for soap, although it was not observed that male patients were required to do so. Rags were not plentiful, but when they could be found they were used as washcloths.

Empty coffee cans served several purposes. The men used them for urinals and also for spittoons. Upon occasion, confused patients emptied the urine and then filled the cans with water and drank from them. Ordinarily, however, discarded glass food jars were used for drinking pitchers. Water glasses were not provided.

Objects for communication with the outside world were available. Some patients had their own radios, and there were two television sets on the first floor. Programs were frequently chosen in accord with the preferences of the staff, however. Patients were permitted magazines and newspapers. Usually the magazines were old and had been donated by an organization. Patients who were mobile were permitted to buy papers at the store on the highway if they could afford it. The men's interest in outside affairs seemed confined to two topics, the weather and baseball games. Upon one occasion the topic of the weather led to a heated discussion about which state had the better climate, California or Florida. Information about baseball games was restricted to "Who won?" and "What was the score?" Once a patient commented upon the number of deaths during the Memorial Day weekend, and another asked, "Who won the race at Indianapolis?"

Letters and packages from friends and relatives were infrequent and visitors were few, even on weekends. A total of two or three visitors per week to the whole institution seemed to be

about average during the period in which the study was conducted.

The patients' personal possessions were kept in suitcases or cardboard boxes beneath their beds. Apparently this procedure was against fire regulations, but no other place was provided. Although the men did not seem to guard most of their possessions very carefully, there was one possession they protected with avidity: this was money. Money was counted several times each day and carefully hidden on the body or some place about the bed. Usually the patient would try to hide when counting his money; apparently, he wanted no one to know he had it. Upon one occasion, an observer noted an aide apparently stealing a patient's billfold by cunningly concealing it with a dust cloth.

Food was a very highly prized commodity. Patients were unusually thin and frequently complained of being hungry. The food was poorly prepared in a very unsanitary kitchen, and it consisted of small portions of high-carbohydrate foods such as potatoes, macaroni, cereal, bread, navy beans, and kidney beans. The vegetables were likely to be canned peas or sauerkraut. Fresh fruit or vegetables were never served, although sometimes dried fruits were. The diet appeared to be very low in protein, and when protein foods were served, they consisted of provender such as neck bones or hot dogs. There were a number of complaints about being hungry, as exemplified by the following observation:

Mr. S., a patient, was sitting on the edge of his bed, eating a piece of bread as if he had never had any before in his life. Mr. K., another patient, walked over to Mr. S. and demanded, "Where did you get that bread?"

Mr. S. replied, "From breakfast, where do you think?" There was a moment of silence, and then Mr. S., ordinarily a rather lucid patient, started to yell very loudly, "Get dynamite—blow this God-damn place up. The bastards around here! It's worse than starvation. This God-damn Home. They take your God-damn money from you and they don't give a good God-damn care how you get along. This damned place! Blow their God-damn heads off! They get your money, the son-of-a-bitch, it's a starvation home—it's an aggravation home. That's all you get around here." Then Mr. S. continued to eat his bread.

Innumerable descriptions were given by the observers of the unappetizing and poorly nutritive food on the trays served to the patients. The patients complained bitterly. The complaints, however, were not about how the food was prepared or served but rather that there just was not enough of it.

The pastures adjacent to the Home contained horses and cattle that belonged to the owner of the Home. Other than to provide an occasional topic of conversation with the patients, they seemed to serve no function. However, since a number of the patients had grown up on farms in the Midwest, this scenery may have been more homelike than the cheap housing developments characteristic of the adjoining suburban area.

Innumerable cats haunted the outside court located at the rear of the building. They were fed from a dishpan, which was filled with garbage and set on the ground for their consumption. Three or four dogs, shaggy and mangy looking, hung around, close to the kitchen door. The dogs were sometimes let in at night, to sleep in the dayroom.

Inside the Home, the nonhuman animals consisted primarily of flies, mosquitoes, roaches, and other such pests. A spray was used occasionally in an attempt to control the number of insects, but without much success. Apparently, the unsanitary conditions that prevailed were not perceived as causes of an increase in insect life.

The six-week period during which data were collected at Elmwood B occurred in late spring. The weather was hot, humid, and sultry. The heavy showers and the hot sun that followed made the weather conducive to the rapid growth of plants of all kinds, especially weeds and tall grass. There were no ornamental plants inside the Home, and, in spite of the fact that it was spring, there were no flowers on the grounds. The grass close to the Home was kept mowed but not trimmed. Several mulberry trees filled with ripe berries grew in the yard. Patients frequented the area to pick the berries from the ground or low branches and eat them immediately. The premises had several pine and cedar trees that emitted a pleasant fragrance. The field in front of the front lawn and to the sides and rear of the Home was filled with tall grass and weeds.

In the rear of the Home, ornamental plant life was almost nonexistent. The back yard and the court were made up of dirt, which turned to mud during the hard rains.

In contrast to most institutions that have some sort of time schedule to get the work done, Elmwood used few schedules and few routines. The physician visited once a week and "looked at the sick ones." Some type of food was served three times each day, but the time of service varied more than in most institutions. Two people worked in the kitchen, and the food was served when the preparation was considered complete. There were no schedules for baths, linen changes, cleaning, or other such activities. In only one room a clock and calendar hung on the wall, so only mobile and sighted patients could ascertain easily the exact time and the date. The personnel seemed to work an indefinite number of hours per day, and there seemed no fixed time for them to come and go. Consequently, there were few clues with which a patient could orient himself to time, other than by listening to the radio. No attempt was made by the personnel to assist patients in this respect. Several of the patients, however, did try to keep themselves oriented. One patient owned a clock and kept it above his bed. It was not unusual to find his bed surrounded by others who came to learn the time. This patient often checked his clock with the observers' watches before winding it.

Apparently boredom with one's self, one's activities, and one's surroundings brought a focus upon how the time dragged for some patients. Observers were often questioned about what time it was. When given the time, the patient might reply (as did one), "I get tired of sitting around here all day."

Talk of future events rarely referred to anything beyond "tomorrow," but, on one occasion, a patient mentioned that he expected a visitor on Memorial Day, which he thought was "day after tomorrow." Talk of the past was usually stimulated by a reference from the nurse or from the personnel. Otherwise, the past was seldom mentioned by patients.

In general, the patients seemed quite apathetic. They did not converse much with one another or with employees, except when they quarreled. They expressed little concern for the wel-

fare of each other. Most of them seemed to hate the institution but apparently felt that there was little they could do to better it. They showed little interest in themselves, and when one did, he was thwarted by the employees. For example, one patient made several requests for a clean shirt, but no one made any effort to fill the request; in fact, the patient was told to shut up. The patients' main concern was getting enough food and, for those with a little cash, counting their money. Otherwise, they waited hopelessly (but not patiently) for whatever might come next.

As noted earlier, the patients had few interests in the outside world. While several patients mentioned that they wished they were not in the Home, there was no mention of where they would like to be. Apparently, there was no place for them to go. Most better nursing homes are too expensive for this group of patients, most of whom had as income only welfare checks, small pension checks, and/or social security checks. In some cases, relatives paid for part of their care.

Thus, the environment at Elmwood B showed a scarcity of positively valued resources, and little inclusion, involvement, or commitment was made of the resources that did exist. Although the county health department offered the Home assistance, the administrator did not include this offer as a potential resource. The system was highly unpredictable, except for the fact that the patients had lost or had given to the Home all their financial resources and therefore had no choice but to remain.

CHAPTER V

Assessments of the Research Data

RESEARCH FINDINGS can be no more convincing and trustworthy than the basic data upon which they rest. Therefore, conscientious investigators are obligated to include, in their comments, discussion of the validity and reliability of the data that enter into their analyses and support the conclusions they present—especially when they believe the latter might have direct and important pragmatic applications.

For these reasons, we shall describe as simply as possible in this brief chapter our assessment of the reliability and validity of our data. The detailed statistical analyses upon which the statements here are based can be found recorded in tabular form in Appendices D and E, along with fuller description of the analyses themselves.

RELIABILITY OF THE INTERACTION CODING SYSTEM

As noted earlier, the data for this study were collected by nursing personnel acting in the dual role of nurse and observer. As participant-observer, the nurse provided raw data in the form of narrative protocols in which she undertook to describe fully the patients' behavior and interaction. Analysis of these data necessitated that they first be reduced to a set of coded categories, as described in Chapter III.

The adequacy (validity) of the nurse-observers' descriptions of the patients will be discussed later in this chapter. At this point our concern is centered upon the reduced or coded data, in terms of the extent to which different persons viewing the same description of behavior (from the perspectives of the coding scheme) will classify it in the same way. If they cannot so classify

the data, of course, the conclusion would be justified that this system of categorization does not, in fact, index objective behavioral or interactional attributes but only subjective judgments that reflect the characteristics of the observer rather than those of the behavior. If such is the case, the research findings are open to question, because a repetition of the study with different coders, even with comparable raw data, would be as likely as not to produce different results. Clearly, then, the stability or reliability of the coding operation is fundamental to any subsequent analyses of the reduced data.

Procedures for Testing Reliability. Reliability of the coding operation was evaluated separately for each item or category in the coding system and independently for each replication of the experiment. To accomplish this evaluation, designated samples were taken from the total mass of raw data generated by the experiment. Specifically, two experimental and two control patients were selected at random from each of the three replications. For each of these patients one narrative protocol representing one interaction session was selected, also at random. Thus, the raw narrative protocols from a total of twelve interaction sessions were selected for coding—two each from the experimental and control conditions in each of the three replications.

The content of the selected protocols, each representing an observer's descriptions of a patient's behavior and interactions, was then unitized (segregated into discrete interaction cells) according to the predetermined set of criteria described in Appendix G. The discursive narrative protocols were thereby reduced to multiple arrays of disjunctive *interaction units*. Each of these interaction units was then coded independently by three coders familiar with the coding category format used.* Agreements among the three coders, taken two at a time, were then determined and tested for significance separately for each item in the coding system within each of the three replications. Details of the statistical analysis are given in Appendix D.

Results and Conclusions of Reliability Test. The results of

* It should be noted that each coder responded to the same array of interaction units, so the reliability of "unitization" is not in question. All unitizing was done by the same person, and the units coded were constant over all coders.

these analyses are reported for each replication in Tables 24, 25, and 26 in Appendix D. It will be seen that on each item, in each replication, and for each pair of coders, the significances of differences between observed percentages of agreement and the percentages expected by chance reach at least the .01 level. In most instances the *p*-value associated with the critical ratios is much smaller than .01.

It will also be noted that in all instances the observed agreements are more frequent than the expected and that, if anything, agreement increases from the first to the third replication. Moreover, in only two instances do the observed percentages fall below 90 (88 and 89) per cent, and in almost all instances they are in excess of 95 per cent.

Obviously, then, these results indicate that the various interaction units to which the narrative protocols were reduced, were coded according to the theoretically derived system of categories used, with a high degree of reliability. The coded data may therefore be taken to be notably stable for purposes of subsequent analyses.

VALIDITY OF THE EXPERIMENTAL OBSERVATIONS

To have demonstrated high reliability for the coding procedures that put raw data into appropriate form for analysis is an important step, but such high reliability of the coding system does not necessarily support the essential adequacy or validity of the narrative behavioral records, from which the interaction units were drawn. In brief, one must also ask whether the raw narrative data were in fact representative of the behavior and interactions of the patients that were studied or were distorted by subjective biases of nurse-observers. To answer this question presents several challenging difficulties that have their origins in both the forms and the procedures by which the raw data were gathered.

For instance, at least in the experimental condition, the nurse participant-observer could not record her observations at the same time she was providing care for the patient. Since her interaction with the patient was the essential condition involved, she could record her observations only after leaving the patient's

presence. Consequently, a variable time interval was necessarily interposed between the actual occurrence and observation of a given instance of behavior and its recording. This set of circumstances introduced some rather complex difficulties regarding the validity of the *post hoc* narrations recorded by the participant observers.

The essence of these difficulties has to do with the fact that *validity*, in the present context, refers basically to the accuracy with which the recorded narrative observations represent the actual behavior of the patient as it transpired during the observation period (that is, during the experimental nursing care session). In other words, How well did the nurse-observer observe what was happening? How well did her *post hoc* records represent the observations she made at the earlier time of interaction? To what degree might her recollection of events after a time lapse ranging from a few minutes to perhaps an hour or two introduce error into the data?

Clearly, then, thorough investigation of the validity of these data is complicated by the introduction of quite knotty criterion problems respecting (a) any test of the accuracy of experimental observations, and (b) tests of the memorial aspects of the observers' records (the effect of time lapse between observation and subsequent recording of events observed). Inability to separate fully these two potential sources of error, plus some other specific factors associated with the mode of data collection in this study, rule out the utilization of routine validation procedures.

With these qualifications in mind, and recognizing that the criterion problem could not be entirely resolved, it appeared that the most suitable approach to an analysis of the accuracy of the experimental observations would be, on balance, to assess their concurrent validity. Because the experiment made use of independent concurrent observers whose observations *could* be recorded as the patient's behavior took place, it was possible to check the effects of both personal bias and memory functions by comparing records in this latter condition with those in the experimental condition. In addition, a fortuitous occurrence (to be reported later in this study) permitted an additional check of a

complementary nature. Accordingly, the first task was to compare the observations produced by the participant observers with the analogous ones produced independently by second observers (the concurrent observers) who recorded observations *as events took place* instead of after the fact. The degree of agreement between these two sets of observations would then provide at least a provisional index of the validity of the experimental observations.

It should be noted that the design of the study also affords another partial control for the criterion problem described above. Since the study entailed the use of a control condition in which both participant and concurrent observations were recorded as the patient's behavior occurred, the effects of memorial functions could be studied by comparing agreements of participant and concurrent observations in this condition with those in the experimental condition that entailed the time lapse discussed earlier.

PROCEDURES FOR CONCURRENT VALIDATION

Concurrent observers, then, were introduced into both experimental and control conditions. These nurses uniformly recorded observations during the observation period. However, owing to peculiarities of the research environments, it was not possible to follow consistent procedures of concurrent observation over all three replications. Therefore, the exact procedure varied among replications.

Procedure for Replication I. In this setting, five 10-minute concurrent observations were obtained within the experimental condition, but none were possible within the control condition. Of the five sets of observations obtained, two were unusable. In one of these the concurrent observer was unable to hear the verbalization of the patient; in the other the concurrent observer was unable to take notes during the interaction and so recorded her notes from memory (the "fortuitous occurrence" noted earlier and described in detail later). Thus, a total of three usable sets of 10-minute concurrent observations was obtained from the experimental condition only, in Replication I.

Procedure for Replication II. In this setting, no concurrent observations were obtained within either condition, because all

patients in this replication were housed in private rooms, making it impossible for the concurrent observer to obtain data unobtrusively.

Procedure for Replication III. In this setting, seven 30-minute concurrent observations within the experimental condition and eight 20-minute concurrent observations in the control condition were obtained. All of these proved usable.

Thus, a total of 240 minutes of concurrent observation was obtained for the experimental condition and a total of 160 minutes of such observation was obtained for the control condition. These observations were then compared with participant observations representing the same sessions (as described below and in more detail in Appendix E).

After all observational data had been collected, it was found that direct unit-by-unit comparisons between paired participant and concurrent observations could not be made. This restriction resulted from observers' differences in the recording of data, such that individual units of interaction were not consistently comparable. For instance, while one observer might have recorded observations in detail, another may have used broader, summary-type statements. An illustration of these differences is given in the following excerpts from two narrative protocols:

Experimental Group—Patient: Mrs. King; Nurse-Participant: Patricia Brown; Session No. 18.

I picked up the coffee carton that was sitting on Georgia's [Mrs. King's] table, shook it, and said, "Finish your coffee?" She said, "Yes." I took a piece of paper from my pocket and tore it in half and began to write down my name and address because, while I gave Georgia a bath, she told me to give her my name and address either today or tomorrow so she and Mrs. Essy could write to me. As I did so, Georgia looked over and saw that Ruth [the nurse-observer] was writing. She laughed and said that Ruth was writing down that she had wanted her to leave her dress at the hospital.

Charley the janitor entered, and Georgia asked if he wanted us to leave, but he said, "No." He sat down over by Mrs. Peter's bed, in her chair. Georgia told Charley, pointing to the bed behind her, "We're going to get rid of this old woman back here." She said they'd had another one in the

room just like her. Georgia said, "We're going to take her out and tie her to the clothes line." She said that Wilhelmina Jiggs [another patient] remembered the other woman. Wilhelmina looked up. Georgia pointed back towards Mrs. Obo's bed to let Wilhelmina know that she was talking about her. Wilhelmina looked towards Mrs. Obo's bed, made a face and said, "Oh," and made a gesture with her hand. Mrs. King had told me yesterday that Mrs. Obo had left a pile as big as a cow's near her bed, and that one of the aides had to come in and clean it up with a shovel. Charley was looking out the window. He was smoking a cigar. Georgia said, "Bet he's mad 'cause I haven't bought him a cigar all week." I said, "Oh."

Experimental Group—Patient: Mrs. King; Concurrent Nurse-Observer: Ruth Wallis; Session No. 18.

10:50 A.M. Georgia King was sitting in her wheel chair, facing the door. Pat [the nurse-participant] was sitting in a chair near the head of the bed, facing Mrs. King. Mrs. King was saying something to Pat which I couldn't hear. This was interrupted when Mrs. Jiggs put a piece of candy in her mouth and then held up an extra piece, evidently offering it to Mrs. King. Mrs. King said, "Thanks, Wilhelmina. I just had some coffee."

Charley, the janitor, came into the room, and Mrs. King looked at him and said, "Do you want us to move?" Charley said no, that he didn't, and then went over and sat down in an extra chair by Mrs. Peter's bed. Evidently to Charley, Mrs. King said, "I'm mad. We got an old woman in here that we're going to kill." She pointed to Mrs. Obo's bed. Then she said, "Yesterday morning, you ought to have seen the mess in here." Charley nodded his head and said, "Yes, I know." Wilhelmina Jiggs evidently was listening to this conversation, and she laughed out loud. At this Mrs. King said, "Wilhelmina don't care if we do kill her." Then Mrs. King began talking about some other woman, evidently a patient. She said, "We had another woman in here just like her," and then I couldn't hear the rest of the conversation. Then Mrs. King looked at Pat and then looked at me and said, "She's going to write down what I said." Then she said something else to Pat which I couldn't hear.

One other phenomenon made it difficult to compare protocols on a unit-to-unit basis. The coding system was so constructed that every unit of interaction had to be coded under each coding

category. Obviously, then, in many or most instances, for any unit of interaction most categories would not apply. Hence, that unit would be recorded under those classifications as "not applicable." Only under those classifications specifically relevant to the item in question would the interaction unit be otherwise categorized.

This system of coding introduced some difficulties. For example, one observer might indicate that a patient's role in the interaction was that of "listening" (*involved temporary inaction* in the coding system), while for the other observer this category might be recorded as "not applicable," since the fact that the patient was listening might not have been apparent in the position of, say, the concurrent observer. This kind of event occurred with some frequency.

Despite these quite pervasive variations in the mode of observer recording, each observation was unitized and coded. Frequencies were then obtained for each coding category (modified as described in Appendix E) for each unitized observation taken separately. These frequencies were then tested by chi-square for agreement between each set of paired participant and concurrent observations. A high proportion of agreement, of course, would indicate that the observers were observing (or at least recording) the same phenomena and would constitute presumptive evidence for the validity of the participant observations used as raw data. (Details of the statistical analysis are reported in Appendix E.)

RESULTS AND CONCLUSIONS OF TESTS FOR CONCURRENT VALIDATION

In determining at what point chi-square would be significant, in the sense of indexing agreement, a probability value of .50 or greater was selected. That is to say, any value of chi-square reflecting odds equal to or greater than 50 in 100 against a hypothesis of sampling from different populations was taken as indicating reasonable agreement.

For the experimental condition, 183 independent chi-square tests were performed on coded data drawn from the ten matched observations. Of these, 95 had p -values equal to or greater than .50. On the other hand, 38 had p -values equal to or less than .05. Thus, for this condition, 52 per cent of the analyses performed

reflected significant agreement, whereas 21 per cent reflected (according to conventional criteria) significant disagreement. The remaining 27 per cent of the analyses, with probabilities less than .50 but greater than .05, were considered indeterminate.

Control condition data were similarly analyzed; 140 chi-square tests were performed on the total of eight paired observations. Of these, 109 had p -values equal to or greater than .50 (78 per cent) with only eight at .05 or lower (6 per cent). (The results are reported in detail in Appendix E.)

These analyses are interpreted as signifying a fairly high degree of agreement between pairs of participant and concurrent observers in the control condition and a relatively lower degree of interobserver agreement in the experimental condition. Had we been willing to be less rigorous in our method of analyzing the data, however, and included all those sets of paired participant and concurrent observations in which agreement was perfect because both raters recorded a unit as "not applicable" under particular coding categories, the percentage of significant agreement would appear substantially higher, especially in the experimental condition.

Examination of the detailed analyses reveals considerable variation in the amount of agreement obtained from coding category to coding category. For example, there is a range from almost complete agreement for the code category *Mobility* to almost complete lack of agreement (in the experimental condition) for the category *Self: Recipient*. Clearly, then, the categories in the coding scheme differ widely in terms of the agreement with which observers either observe or record the appropriate behavior. However, it must be pointed out that in some instances the concurrent observer (necessarily stationed outside of the immediate physical area of nurse-patient interaction) had considerable difficulty seeing and/or hearing the details of interaction. Obviously, this difficulty would affect certain categories differentially, and it is probably another factor attenuating the amount of interobserver agreement, especially in the experimental condition.

One might wish that a clear-cut conclusion as to the validity of these observational data could follow. In common with most

research data dealing with complicated human interactions, however, none does. Differences in the sheer mechanics of observing and recording must prejudice the adequacy of the concurrent observer as a simple criterion for the validity of the experimental observations. Another limitation to the adequacy of this device has to do with the fact that often the concurrent observer was unable to see and/or hear what was taking place. Gross scanning of the data indicates that, as a result, the participant observer many times recorded, in effect, more information and, therefore, under such circumstances, may well have provided a more accurate record of the process of interaction than did the concurrent observer (who functioned as the criterion in the validity tests).

Perhaps more rigorous pretraining might have reduced these discrepancies somewhat, but the fact should be noted that the two observers were, in a manner of speaking, observing different situations. For the participant observer the situation comprised chiefly the patient, whereas for the concurrent observer the situation involved more specifically *both* the patient and the nurse-observer. These variations undoubtedly produced differences in the observations of the two observers, but in precisely what manner and to what degree can only be surmised from the illustrative excerpts from narrative protocols reproduced earlier in this chapter and in Chapter III.

All factors considered, though, it appears probable that most of the interobserver disagreement that occurred in the experimental condition arose from the time interval between observation and recording of the participant observer's data. Comparison of control and experimental data shows considerably more agreement in the control condition, in which both observations were recorded as the observation session proceeded. Further, Table 29 in Appendix E reports a comparison of two observers not included in the main analyses (the "fortuitous circumstance" again). In this instance both observers made their recordings after the fact, that is, from memory, and agreement was very high.

Thus, agreement tends to be quite satisfactory either when both observers made their recordings as the interaction took place or when both did so from memory. Exactly what the nature

of the loss attributable to memory lapse might be cannot be clearly determined. However, it is apparent that the participant-observers did not introduce highly idiosyncratic bias or imagination into the observations. In point of fact, when everything is taken into account, the concurrent validity of our data is probably considerably higher than it might superficially seem to be from simple statistical analysis.

SUMMARY

In this chapter questions pertaining to the confidence that may be reposed in the data upon which the results and conclusions offered in succeeding chapters depend have been discussed. First, the coded data proved to be highly reliable, as indexed by the consistently high agreement observed among multiple coders independently classifying the behavioral interaction units. Second, assessment of the validity of the experimental observations turned out to be more complicated than had been anticipated and, as a result, less definitive. For example, the adequacy of the concurrent observer as a direct criterion for the patient's actual behavior is certainly less than perfect because of inherent differences in the participant and concurrent modes of observation. Analysis suggests, however, that the participant observers in the experimental condition were in fact producing data imperfectly (but nevertheless reasonably) representative of the observations made earlier and, therefore, imperfectly (but again reasonably) representative of the patient's actual behavior. When all available sources of information are considered, the evidence indicates that the deficiencies in the observational data consist mainly in their being somewhat less than complete accounts of what actually took place during the observational sessions, in consequence of simple loss of information occasioned by the lapse of time between observation and recording. Therefore, although the data derived from the observations of the nurse-participants (especially in the experimental condition) are not ideal, it does appear scientifically justifiable to treat them as adequate for the purposes of the larger study.

CHAPTER VI

Characteristics of Skilled Nursing Care

PRESUMPTIVE DEFINITION OF SKILLED NURSING CARE

AT THIS POINT, the reader must wonder just what was the nature of the "skilled nursing care" introduced by the experimental design into the "enriched," the "deprived," and the "in-between" social systems in the institutional settings described earlier. *Skilled nursing care* was presumptively defined as the introduction of certain nurse-initiated interchanges of resources that might operate to arrest or reverse the process of psychosocial atrophy and to enhance the process of psychosocial development in patients. The degree of change in the desired direction would then be a function of the nurse's ability to employ nursing techniques, communications, and feelings that are related to intimate activities of daily living and that deal specifically with: (1) the bio-social requirements inherent in all people, plus those bodily requirements unique to patients with biologic health problems resulting from disease, disability, or disordered function; (2) the psychological requirements common to all persons, plus the idiosyncratic requirements of individual patients; and (3) the cultural requirements related to individual human beings with status and membership in a given group.

For this study, skilled nurses were required to have had a minimum of one year of graduate nursing education at the master's level and one year of special training in individualized comprehensive care of chronically ill, aging, and aged patients, as well as in the techniques of participant observation. With this background, the specific day-to-day activities of the research nurse were self-ordered and autonomous.

It should be made clear at this point that the research nurse

caring for experimental patients gave no medications and carried out no major treatments. In most institutions that provide care for aged chronic patients, one nurse or aide is assigned to give all medications and treatments, and intervention by the research nurse might have led to confusion and possible harm to the patient. The actual functions of the experimental nurse were confined to those described here and below.

OPERATIONAL DESCRIPTION OF THE SKILLED NURSE'S ACTIVITIES

To obtain an empirical description of the independent variable—what factors in effect constitute skilled nursing care—our interest centered upon those interaction units, of the total universe of units, during which the experimental nurse (Nx) was in some form of active participation with the experimental patient (Ptx). Thus, for this purpose all coded data were analyzed to produce a comprehensive description of the character of those interaction units meeting both of two criteria: (1) both nurse and patient were involved (other persons might also be involved), and (2) both nurse and patient were participating actively in relation to one another.

Data were analyzed separately for each replication and were averaged across individual nurses within each replication. Obviously, only data from experimental conditions were analyzed, since control conditions did not entail the provision of skilled nursing care.

In all three replications, the nurse participated *actively* with the patient, that is, she sent socially standardized interpretable signals towards the patient, in about one-third to two-fifths of the total interaction units (see Table 1).^{*} In the very great majority of interaction units in which the nurse was included, only she was involved in a nurse-patient dyad. Rarely was the nurse involved with persons other than the patient (see Table 2).

In her interactional relationships, the nurse participated actively (as defined above) more than two-fifths of the time; almost all of the remaining time (half to three-fifths) was occupied in *involved temporary inaction*, that is, in giving attention to the signals of another—most often the patient—directed to her,

^{*} The cell entries from which these and the following figures derive were all calculated in the form of mean percentages.

TABLE 1

MEAN PERCENTAGES OF TOTAL INTERACTION UNITS DURING
WHICH NURSE WAS "ACTIVE" WITH PATIENT

Category	Rep. I	Rep. II	Rep. III
Nurse Active with Patient	33.28	43.96	37.22

TABLE 2

MEAN PERCENTAGES OF PERSONS INVOLVED
OF TOTAL INTERACTION UNITS IN
WHICH NURSE WAS IMPLICATED

Persons Involved	Rep. I	Rep. II	Rep. III
Ptx and Nx	80.35	89.55	93.06
Ptx, Nx and Others	1.92	0.74	0.36
Nx and Others	7.86	5.09	3.04
Nx Alone	0.84	0.46	1.26

TABLE 3

MEAN PERCENTAGES OF VARIOUS INTERACTIONAL
RELATIONSHIPS INVOLVING NURSE

Interactional Relationship	Rep. I	Rep. II	Rep. III
Involved Temporary Inaction	59.24	51.02	58.40
Active Participation	40.25	48.87	40.07
Other	0.48	0.18	1.46
TOTAL	99.97	100.07	99.93

or attentively anticipating or reflecting upon such signals (see Table 3). The media employed by the nurse in these interchanges were primarily verbal communication (67 to 82 per cent) and, secondarily, nonverbal communication, involving functions such

as bedmaking or feeding the patient (14 to 31 per cent). Gestures, such as smiling, waving, frowning, etc., unaccompanied by verbal communication, were comparatively rare (see Table 4).

TABLE 4
MEAN PERCENTAGES OF VARIOUS MEDIA EMPLOYED BY NURSE

Media	Rep. I	Rep. II	Rep. III
Verbal Communication	72.46	62.89	74.04
Nonverbal Communication	21.32	30.89	13.73
Gestures & Bodily Movements	3.38	2.12	3.95
Both Verbal & Gestures	2.78	4.08	8.24
TOTAL	99.94	99.98	99.96

Information (discussion without attempts to direct or control) was the most common type of involvement in the nurse-patient dyad—about three-fifths of the time. *Employment* (manipulation without discussion) occurred less frequently—about one-sixth to one-third of the time. *Suggestion and/or Direction* and *Perception* (observation without manipulation or discussion) were very infrequent (see Table 5). In those instances in which the patient made a request or an offer, the nurse's response was a *positive* one in better than nine-tenths of the interchanges (see

TABLE 5
MEAN PERCENTAGES OF VARIOUS TYPES OF INVOLVEMENT
WHEN NURSE WAS OBSERVING OR ACTIVE WITH PATIENT

Types of Involvement	Rep. I	Rep. II	Rep. III
Perception	1.12	0.08	3.60
Employment	23.66	32.78	15.57
Information	60.92	55.02	63.99
Suggestion and/or Direction	2.65	2.26	2.82

Table 6), but only rarely were the interchanges *stereotypic* (automatic forms of greeting, apology, etc., such as "good morning," "thank you," or "I'm sorry") (see Table 7).

TABLE 6

MEAN PERCENTAGES OF NURSE'S RESPONSES TO REQUESTS AND OFFERS

Responses to Requests and Offers	Rep. I	Rep. II	Rep. III
Positive Response to Request	92.89	97.12	96.00
All Other Responses to Requests and Offers	7.11	2.88	4.00

TABLE 7

MEAN PERCENTAGES OF DEGREES OF STEREOTYPY WHEN NURSE WAS ACTIVE WITH PATIENT

Degrees of Stereotypy	Rep. I	Rep. II	Rep. III
Stereotypic	3.00	2.22	2.05
Nonstereotypic	75.57	66.81	84.10

The striking feature of an overview of the mean percentages of specific kinds of phenomena taking place when the skilled nurse was participating actively with the patient is the variety of interactions that occurred (see Table 8). Talking about objects and biosocial functions, employing objects and biosocial functions, talking about cultural and psychological functions or about the patient's self or one's self or other persons, and talking about other content, or transferring, requesting, and offering, were all common to the nurse-patient interchanges.

It should be noted also that, in this study, skilled nursing care was provided by the same nurse for the same patient for 1½ hours three times per week over a period of six weeks. Probably this constancy factor also enabled the nurse to maximize her skills in the interaction processes.

TABLE 8
 MEAN PERCENTAGES OF VARIOUS GENERAL PHENOMENA
 OCCURRING WHEN NURSE WAS ACTIVE WITH PATIENT

Category	Rep. I	Rep. II	Rep. III
Transferring, Requesting, and Offering	13.79*	13.84*	12.50*
Talking about Objects	28.22	23.99	27.30
Employing Objects	18.83	28.13	12.58
Talking about Persons	13.05	12.14	18.70
Talking about Past or Future	5.20	4.75	7.28
Talking about Self	7.19	8.62	8.67
Talking about Aspects of Patient's Self	9.07	7.82	8.56
Talking about Biosocial Functions	26.29	21.11	24.96
Employing Biosocial Functions	17.82	27.76	12.11
Talking about Psychological Functions	6.53	7.59	6.46
Talking about Cultural Functions	14.36	13.99	17.84
Talking about Other Content	14.62	12.75	20.81
Expressing Behavioral Manifestations	3.87	4.72	7.66
*Weighted means			

SUMMARY

Operational analyses appear to indicate that the skilled nurse, in her interactional relationships, is involved chiefly in nurse-patient dyads, in which she participates actively or is occupied in "involved temporary inaction"; that she utilizes, primarily, verbal communication without attempts to direct or control and, secondarily, nonverbal functions; that she most often responds positively to requests or offers; and that she includes a considerable variety of specific types of interchanges in her day-to-day contacts with the patient.

CHAPTER VII

Experimental Findings

WHAT, THEN, do the data demonstrate? From the basic postulate that human interaction is the fundamental requirement and primary instrument for man's psychosocial growth and development, our analysis in Chapter II of the essential features of systems of human social interaction indicated the hypothesis that the psychosocial atrophy common to institutionalized older patients might be reversible through the medium of skilled nursing intervention. Accordingly, an experiment was designed to test that hypothesis, and we are now ready to examine the results of that effort.

Any study that, like this, deals so intensively and intimately with so broad an array of interpersonal phenomena observed over a fairly long span of time generates an enormous mass of data. To describe all of these data would, in all likelihood, make it well-nigh impossible to separate the salient findings from those of less interest. Therefore, this chapter records only those results that relate most directly and unequivocally to the central concerns of the research, as described in terms of the conceptual model set forth in Chapter II.

It should be made clear, however, that it is not our intention in this chapter to offer a detailed and comprehensive appraisal of that conceptual model. As a schema, the model was formulated in order to provide systematic guideposts around which to organize experimental design, a meaningful set of pegs upon which to hang results, and a theoretical frame of reference with relevance beyond the immediacies of this particular investigation, in terms of which the practical issues

implied in the study could subsequently be interpreted. Our main concern is with the fate of institutionalized older patients and with the pertinence of skilled nursing care to that fate. From the perspectives of that concern, the conceptual model is merely a useful guide.

Actually, this concern with older patients and their care was multifaceted, as the structure of the experiment must imply. We were, to be sure, chiefly interested in the general consequences of skilled nursing intervention for the psychosocial development of older people, but we were also interested in the institutional settings within which this care is supplied.

For one thing, preliminary investigation indicated that these settings varied considerably in the degree to which they routinely foster either psychosocial development or psychosocial atrophy. From this point of view, some environments could be expected to be better than others; surely the descriptions in Chapter IV of deprived and enriched environments testify eloquently to the validity of such an expectation.

Since the first assumption was that institutional settings would differ in their intrinsic capacities to stimulate or retard the psychosocial development of older patients, it seemed logical to expect that introducing skilled nurses into such settings would not have a uniform effect. Instead, any effects from the nursing variable would most probably depend in part upon the already existing quality of the setting in which this variable operated. To be specific, it was anticipated that skilled nursing care would have a relatively greater effect upon patients in a deprived environment, if for no other reason than because these patients had at the start so few resources upon which to draw. It would also be reasonable to think of skilled nursing care as constituting a greater change in the nature of the deprived environment than in that of the enriched one, so that differences in patients' responses might be taken to be a function of differences in the magnitude of environmental change. However, such considerations may be subsumed under the primary aim of this study, namely, to determine if the psychosocial atrophy common to the institutionalized older patient suffering from disease could be arrested and even reversed through the medium

of certain nurse-initiated interchanges of resources within an interactional system that included both the nurse and the older patient.

Formation of a Nurse-Patient Dyad. From the point of view of the conceptual orientation, the fundamental requisite to any such psychosocial process had to be the establishment of a nurse-patient dyad. In other words, it was essential that there be formed at least a minimum psychosocial system, including both patient and nurse, within which an interchange of resources could progress. The nurse's first task, then, was to establish a relationship that *included* the patient. If she could not do so, neither she nor her skills could affect the patient as a person. However, simple inclusion of the patient in a relationship, while crucial, could not alone suffice. The conceptual model indicates that it was essential for the patient to become *involved* in the relationship, *accept* it, and ultimately become *committed* to it. One pertinent behavioral dimension, for example, refers to the role played by the experimental patient in interaction. This was coded according to seven categories of role behavior ranging from *present, but not involved*, through *failure to respond*, to *participation (active)* (plus a *not present or not applicable* category). Mean percentages of total interaction units involving each of these categories of performance are presented in Tables 9 through 11, and 30 and 31 in Appendix F. Three categories in the coding system (*excluded nonparticipation*, *exclusion of others*, and *not present or not applicable*) were coded too infrequently to be considered of significance and are therefore omitted from analysis. In other words, as might be expected, the vast bulk of interaction units involved the presence of the patient in some form of interaction.

Differences between experimental and control patients as to time spent in the passive activity of simple observation (see Table 9) were analyzed separately for each replication, using the Wilcoxon Signed-Rank test. Each of these tests was significant at well beyond the .001 level ($z = -4.39$, $n = 49$; $z = -5.86$, $n = 48$; $z = -5.83$, $n = 53$). It is apparent from Table 9 that in each replication the control patients spent a considerably

TABLE 9

MEAN PERCENTAGES OF TOTAL INTERACTION UNITS DURING WHICH PATIENTS WERE ENGAGED IN OBSERVATION

Conditions	Sessions									Total
	01	03	05	08	10	12	13	17	18	
<u>Experimental</u>										
Rep. I	1.2	0.8	0.5	1.6	1.5	0.8	0.7	0.8	1.2	1.0
Rep. II	0.3	0.03	0.1	0.05	0.1	0.3	0.05	0.2	0.2	0.1
Rep. III	1.8	1.0	2.4	1.4	1.4	1.5	3.1	1.6	1.4	1.8
<u>Session by Treatment</u>	1.1	0.6	1.0	1.0	1.0	0.8	1.3	0.9	0.9	1.0
<u>Control</u>										
Rep. I	4.8	29.4	18.1	12.0	26.0	6.9	4.1	5.0	11.5	13.1
Rep. II	9.0	6.1	3.2	3.9	7.3	8.3	3.3	3.9	4.5	5.5
Rep. III	27.7	28.9	15.7	26.3	30.9	30.7	21.5	29.3	40.5	27.9
<u>Session by Treatment</u>	13.8	21.5	12.3	14.0	21.4	15.3	9.6	12.7	18.8	15.5
<u>Session</u>	7.5	11.0	6.7	7.5	11.2	8.1	5.5	6.8	9.9	8.2

greater proportion of time than did the experimental patients merely observing events in their surroundings rather than in any form of interaction. It is also apparent from inspection of Table 9 that there were no notable trends in this activity across the several observation sessions in either group. It might, however, be pointed out that the control patients in Replication II (the enriched environment) spent much less time in this pursuit than did the control patients in either of the other replications, while those in Replication III (the deprived environment) spent a greater amount of time so occupied than did either of the others. The same general tendency is apparent for the experimental patients.

An analysis of variance was performed on the data presented in Table 10, with the results reported in Table 32 in Appendix F, showing significant differences both between treatment effects (experimental-control comparisons) and between replications,

TABLE 10
MEAN PERCENTAGES OF TOTAL INTERACTION UNITS DURING WHICH
PATIENTS WERE INVOLVED IN INTERACTION,
BUT TEMPORARILY INACTIVE

Conditions	Sessions									Total
	01	03	05	08	10	12	13	17	18	
<u>Experimental</u>										
Rep. I	32.4	35.6	40.2	39.1	33.5	38.8	38.0	41.1	40.8	37.7
Rep. II	41.9	45.7	46.1	48.9	45.8	47.9	46.6	46.3	47.0	46.2
Rep. III	38.2	41.7	38.8	40.7	41.8	40.7	38.5	41.3	42.0	40.4
<u>Session by Treatment</u>	37.5	41.0	41.7	42.9	40.4	42.5	41.0	42.9	43.3	41.5
<u>Control</u>										
Rep. I	22.2	8.5	20.3	13.0	5.9	14.9	12.2	18.1	19.9	15.0
Rep. II	20.4	21.1	18.6	26.7	27.2	27.4	16.2	17.0	27.5	22.4
Rep. III	5.4	14.2	8.6	8.6	10.4	16.8	9.6	13.2	2.1	9.9
<u>Session by Treatment</u>	16.0	14.6	15.8	16.1	14.5	19.7	12.7	16.1	16.5	15.8
<u>Session</u>	26.8	27.8	23.7	29.5	27.4	31.1	26.9	29.5	29.9	28.6

with a tendency for these two to interact approaching significance. These results are also plotted in Figures 1 and 2 and demonstrate that, in general, the experimental patients spent a substantially greater portion of time *involved, though temporarily inactive* (listening, etc.) in the interaction, than did the control patients. In the same way, the subjects, both control and experimental, in the enriched environment of Replication II spent a greater portion of time in this manner than did patients in either of the other two replications.

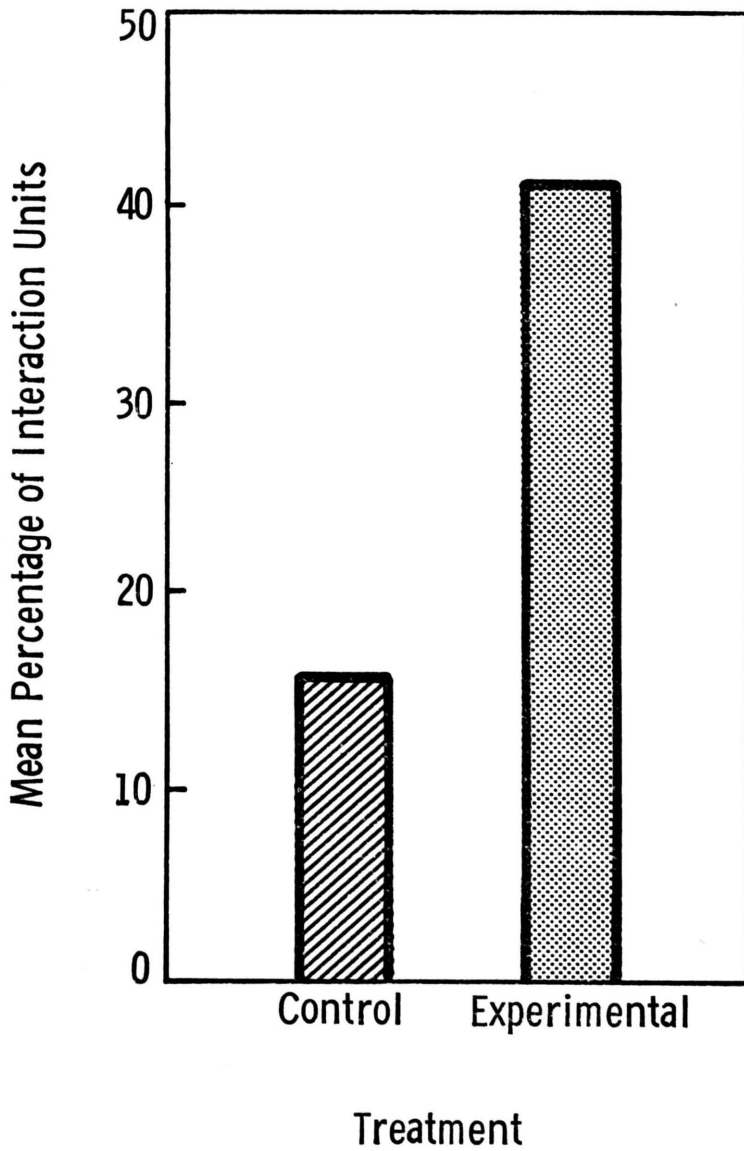


FIGURE 1. Frequency of "Involved Temporary Inaction" in Experimental and Control Groups

The tendency for skilled nursing care to interact with the patients in the particular settings utilized in this study (the replications \times treatments interaction) is plotted in Figure 2. This figure shows that the proportionate effect of skilled nursing care

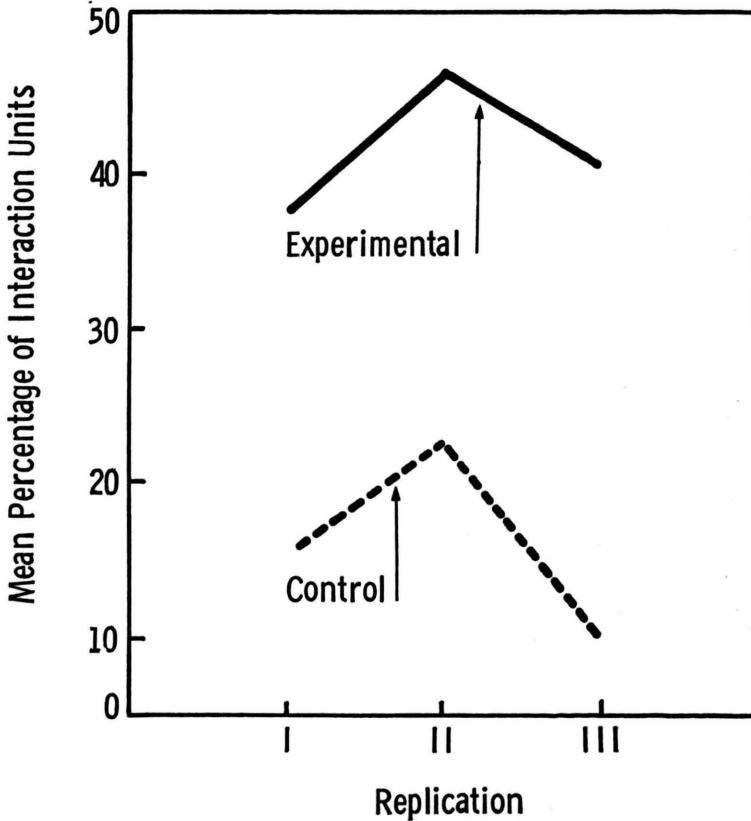


FIGURE 2. Frequency of "Involved Temporary Inaction" for Experimental and Control Groups in Each of Three Replications

with respect to the amount of time spent by patients in *involved temporary inaction* is greatest in the deprived environment of Replication III.

TABLE 11
 MEAN PERCENTAGES OF TOTAL INTERACTION UNITS DURING WHICH
 PATIENTS WERE INVOLVED IN ACTIVE INTERACTIONAL PARTICIPATION

Conditions	Sessions									Total
	01	03	05	08	10	12	13	17	18	
<u>Experimental</u>										
Rep. I	60.5	49.9	51.7	51.4	54.7	51.4	48.5	44.8	48.4	51.3
Rep. II	46.5	49.3	48.4	46.8	47.0	44.0	48.4	48.2	48.0	47.4
Rep. III	56.9	53.5	54.0	50.9	54.3	51.9	52.7	52.1	49.5	52.9
<u>Session by Treatment</u>	54.6	50.9	51.4	49.7	52.0	49.1	49.9	48.4	48.6	50.5
<u>Control</u>										
Rep. I	24.5	14.9	14.5	28.0	17.2	24.6	18.3	21.1	22.5	20.6
Rep. II	28.9	21.9	26.5	25.8	26.9	22.4	20.0	22.0	26.6	24.5
Rep. III	7.6	13.3	9.2	9.4	10.3	15.6	14.2	17.3	3.0	11.1
<u>Session by Treatment</u>	20.3	16.7	16.7	21.1	18.2	20.8	17.5	20.1	17.4	18.7
<u>Session</u>	37.5	33.8	34.0	35.4	35.1	35.0	33.7	34.2	33.0	34.6

Table 11 summarizes the proportion of time spent by patients actively participating in interaction. Results of an analysis of variance performed on these data are presented in Table 33 in Appendix F. Significant differences were found between treatment effects (experimental-control comparisons) and in the interaction between these effects and replications. The differences between replications approach significance. These findings are presented graphically in Figures 3 and 4. It is quite clear from Table 11 and Figure 3 that the introduction of skilled nursing care is accompanied by a much greater frequency of active participation by patients in interaction. A tendency is indicated in Figure 4 for the frequency of *active patient participation* to be generally somewhat lower in Replication III (deprived environment) than in the others. Figure 4 shows clearly the strong tendency for these two variables (skilled nursing care

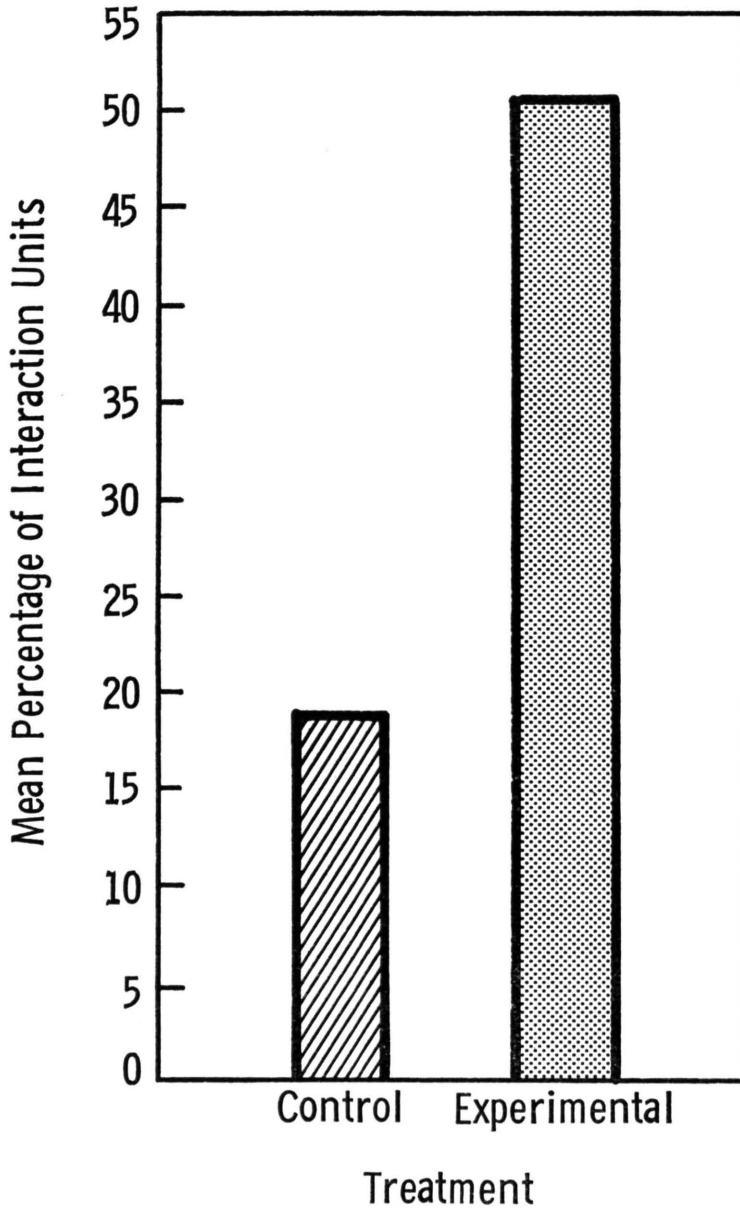


FIGURE 3. Frequency of "Active Participation" in Experimental and Control Groups

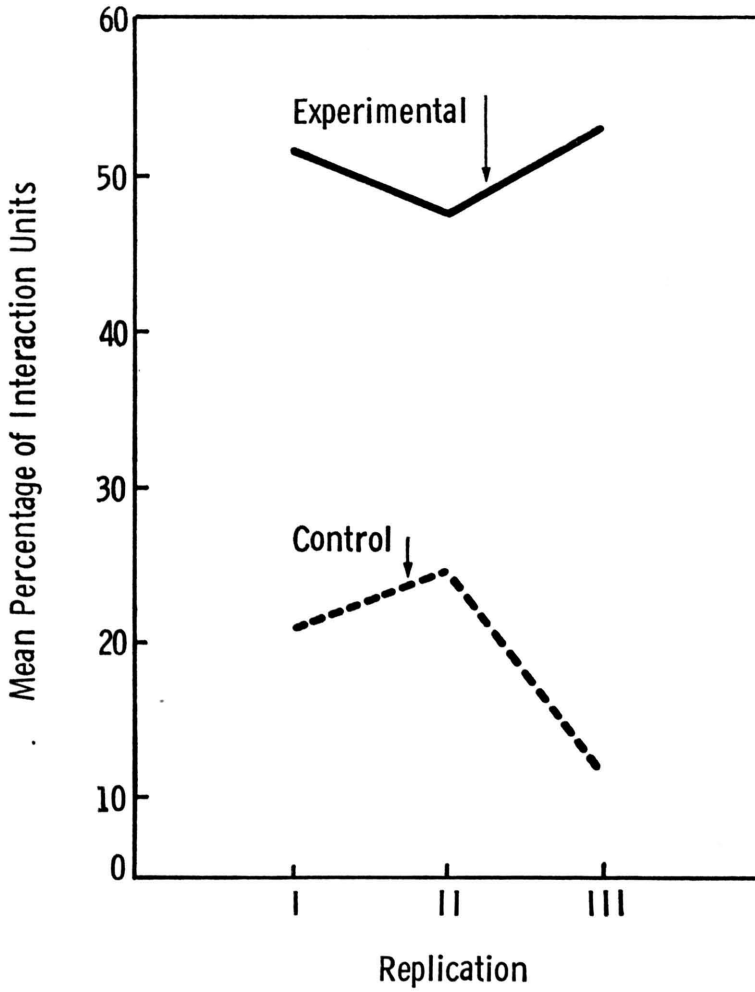


FIGURE 4. Frequency of "Active Participation" for Experimental and Control Groups in Each of Three Replications

and the context in which it is presented) to interact in respect to the production of active interactional participation among the older patients studied. Replications I and especially III are affected more, relatively, by the introduction of skilled nursing care than is enriched Replication II.

Thus, it is clear that providing institutionalized older patients with skilled nursing care operates sharply to increase the amount of time spent by them in active interactional involvement. It is also obvious that institutional settings differ sharply in the extent to which they elicit such interactional involvement. Enriched settings appear to facilitate this kind of behavior more effectively than do deprived settings, but only in an absolute sense, for while the extent of active interactional involvement of patients in the deprived environment is lowest of all groups, this group is affected proportionately more by the introduction of nursing care.

Persons Involved in Interaction. Each interaction unit was also coded according to the persons involved in it. For example, *patient alone; patient and nurse; patient, nurse, and others; nurse alone*, etc. Ten such categories were employed, and the mean

TABLE 12
MEAN PERCENTAGES OF TOTAL INTERACTION UNITS
INVOLVING PATIENT ALONE

Conditions	Sessions									Total
	01	03	05	08	10	12	13	17	18	
<u>Experimental</u>										
Rep. I	0.1	0.5	0.4	0.1	1.0	0.3	0.7	1.2	0.1	0.5
Rep. II	0.2	---	---	---	---	---	0.2	---	---	0.4
Rep. III	---	0.2	---	0.4	0.3	0.7	0.6	0.2	0.7	0.3
<u>Session by Treatment</u>	0.1	0.2	0.1	0.2	0.4	0.3	0.5	0.5	0.2	0.3
<u>Control</u>										
Rep. I	48.7	76.6	57.1	55.7	76.9	59.9	62.4	60.2	54.2	61.3
Rep. II	49.8	55.2	53.2	46.2	43.1	47.4	62.9	60.3	42.8	51.2
Rep. III	87.0	71.5	82.3	81.8	79.0	67.1	75.8	69.5	95.0	78.8
<u>Session by Treatment</u>	61.8	67.8	64.2	61.2	66.4	58.1	67.0	63.4	64.0	63.8
<u>Session</u>	31.0	34.0	32.2	30.7	33.4	29.2	33.8	31.9	32.1	32.0

percentages of interaction units involving each of these categories are reported in Tables 12 and 13 and in Tables 34 through 40 in Appendix F.

Simple inspection of these tables (especially Tables 12 and 13) reveals clearly that the greatest proportion of the experimental patient's time was spent in some form of interaction with

TABLE 13
MEAN PERCENTAGES OF TOTAL INTERACTION UNITS INVOLVING
EXPERIMENTAL PATIENT AND NURSE OR CONTROL PATIENT AND
NURSING PERSONNEL

Conditions	Sessions									Total
	01	03	05	08	10	12	13	17	18	
<u>Experimental</u>										
Rep. I	89.0	70.8	85.0	81.6	77.4	80.8	78.2	75.9	84.4	80.3
Rep. II	84.4	92.6	90.4	92.6	90.3	85.6	92.2	87.6	90.2	89.6
Rep. III	94.8	94.7	93.8	91.8	95.1	91.9	92.8	90.6	92.0	93.1
<u>Session by Treatment</u>	89.4	86.1	89.7	88.6	87.6	86.1	87.7	84.7	88.8	87.6
<u>Control</u>										
Rep. I	21.7	13.6	20.1	10.4	0.7	6.0	14.8	17.4	13.3	13.1
Rep. II	11.7	23.0	17.8	12.5	19.1	35.5	4.3	17.4	18.3	17.7
Rep. III	4.3	8.5	---	7.1	2.8	---	1.9	6.5	---	3.4
<u>Session by Treatment</u>	12.6	15.0	12.6	10.0	7.5	13.8	7.0	13.8	10.6	11.4
<u>Session</u>	51.0	50.5	51.2	49.3	47.6	50.0	47.4	49.2	49.7	49.5

the nurse who supplied skilled care, whereas most of the control patient's time was spent alone and, to a much lesser degree, with personnel, other patients, and others.

As might be expected, the three replications entail considerable variation in respect to the persons involved in interaction. Control patients in the deprived setting spent the greatest portion of their time (79 per cent of coded interaction units) in solitary activity, considerably more than any other group. Patients in the enriched setting spent the smallest proportion of their time alone and a relatively greater amount of time in interaction with various other persons.

Processes Within the Nurse-Patient Social System. It is clear from these results that the skilled nurse was able to establish conditions conducive to the formation of an inclusive dyad involving the patient, within which positively valued resource interchanges could take place. One might now ask, "In those situations in which the experimental nurse is present with the experimental patient and the regular nursing personnel are present with the control patient, will the frequency of active participation be greater for the experimental patients or for the control patients?" This question relates to a more particularized set of conditions than those covered by the preceding analyses; data relevant to it are presented in Table 14. Results of analysis of variance of the data in Table 14 are presented in Table 41 in

TABLE 14

MEAN PERCENTAGES OF INTERACTION UNITS DURING WHICH PATIENTS ENGAGED IN ACTIVE INTERACTIONAL PARTICIPATION WHEN THE NURSING PERSONNEL WERE PRESENT

Conditions	Sessions									Total
	01	03	05	08	10	12	13	17	18	
<u>Experimental</u>										
Rep. I	64.0	61.2	57.1	58.4	63.0	57.1	56.4	51.6	53.9	58.1
Rep. II	52.5	51.6	51.9	48.8	50.0	47.4	51.0	50.8	49.7	50.4
Rep. III	58.3	56.0	56.5	54.6	55.9	54.6	56.2	55.0	53.1	55.6
<u>Session by Treatment</u>	58.3	56.3	55.2	53.9	56.3	53.0	54.6	52.5	52.2	54.7
<u>Control</u>										
Rep. I	33.8	18.7	21.9	20.8	---	1.7	22.8	21.9	2.2	16.0
Rep. II	19.1	25.6	27.5	24.5	29.9	39.5	11.3	32.3	12.4	24.7
Rep. III	18.3	24.6	---	17.8	5.6	---	16.7	9.4	---	10.3
<u>Session by Treatment</u>	23.8	22.9	16.5	21.0	11.8	13.7	16.9	21.2	4.9	17.0
<u>Session</u>	41.0	39.6	35.8	37.5	34.0	33.4	35.7	36.8	28.6	35.8

Appendix F. As indicated, the effects of treatment and the interaction between treatments and replications are significant. The experimental patients exhibited a great deal more active participation in interactional relations than did the control patients, a result consistent with findings already noted.

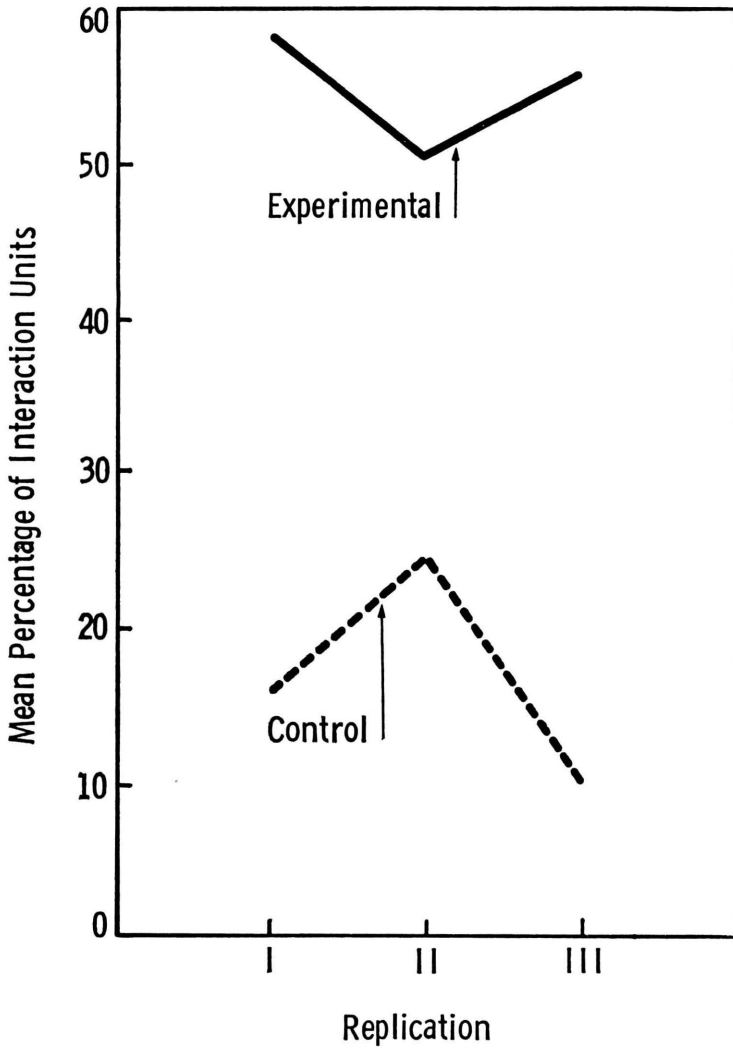


FIGURE 5. Frequency of “Active Participation” by Patients When Nursing Personnel Are Present for Experimental and Control Groups in Each of Three Replications

The interaction between skilled nursing care and the setting in which it is administered, indicated by the significant treatment \times replication interaction in Table 41, is graphed in Figure 5. The curves indicate that the frequencies for the control and experimental patients in the three replications are inverted, relative to one another. Again, this finding suggests strongly that patients in the different settings are differentially sensitive to the effects of skilled nursing care, with those in the poorer environments proportionately more affected.

One might then ask, "In the experimental group, when the nurse and patient are involved as a dyad, will the patients be active a greater proportion of the time than will the nurse, and in the control group, when the nursing personnel and the patient are involved as a dyad, will the reverse be true?" This question is of some importance, since the advent of "milieu therapy" has emphasized as a basic function of the skilled nurse a process of stimulating the patient to relate actively with his environment.

TABLE 15
ACTIVE PARTICIPATION BY EXPERIMENTAL NURSE AND
PATIENT WHEN INVOLVED IN DYADIC RELATION

Conditions	Sessions									
	01	03	05	08	10	12	13	17	18	Total
<u>Experimental Patient</u>										
Rep. I	64.0	61.2	57.1	58.4	63.0	57.1	56.4	51.6	53.9	58.1
Rep. II	52.5	51.6	51.9	48.8	49.9	47.4	51.0	50.8	49.7	50.4
Rep. III	58.3	56.0	56.5	54.6	55.9	54.6	56.2	55.0	53.1	55.6
<u>Session by Treatment</u>	58.3	56.3	55.2	53.9	56.3	53.0	54.6	52.5	52.2	54.7
<u>Experimental Nurse</u>										
Rep. I	33.3	37.5	42.8	38.1	37.0	43.1	43.0	45.9	45.4	40.7
Rep. II	46.6	47.8	47.0	50.1	48.4	52.5	48.9	48.9	50.1	48.9
Rep. III	33.2	40.3	37.9	40.7	40.4	44.3	39.1	42.0	43.1	40.1
<u>Session by Treatment</u>	37.7	41.8	42.6	43.0	41.9	46.6	43.7	45.6	46.2	43.2
<u>Session</u>	48.0	49.1	48.9	48.4	49.1	49.8	49.1	49.0	49.2	49.0

The relevant data are reported in Tables 15 and 16. Sign tests between the mean proportion of interaction units involving patient activity and those involving nurse activity were performed separately for each replication within the experimental groups. For Replication I the difference is significant ($z = 3.67$; $p = < .001$) and in the predicted direction, as is true for Replication III ($z = 5.04$; $p = < .001$). For Replication II the difference obtained is in the predicted direction, but it fails of statistical significance ($z = .68$; $p = .25$). These data are plotted in Figure 6. This finding, of course, suggests the operation of the same kind of interaction effect observed in earlier analyses.

A similar series of Sign tests was performed on the control group data, but the results were not significant. However, inspection of Table 16 shows that the data tend in the predicted direc-

TABLE 16
ACTIVE PARTICIPATION BY CONTROL NURSING PERSONNEL
AND PATIENT WHEN INVOLVED IN DYADIC RELATION

Conditions	Sessions									Total
	01	03	05	08	10	12	13	17	18	
<u>Control Personnel</u>										
Rep. I	44.7	14.7	28.8	35.6	16.7	15.0	22.4	27.9	14.4	24.5
Rep. II	13.7	21.5	37.3	40.4	47.0	35.0	19.6	30.6	20.9	29.6
Rep. III	15.0	20.3	---	15.5	11.1	---	16.7	23.9	---	11.4
<u>Session by Treatment</u>	24.5	18.8	22.0	30.5	24.9	16.7	19.6	27.4	11.8	21.8
<u>Control Patient</u>										
Rep. I	33.8	18.7	21.9	20.8	---	1.7	22.8	21.9	2.2	16.0
Rep. II	19.1	25.6	27.5	24.5	29.9	39.5	11.3	32.3	12.4	24.7
Rep. III	18.3	24.6	---	17.8	5.6	---	16.7	9.4	---	10.3
<u>Session by Treatment</u>	23.8	22.9	16.5	21.0	11.8	13.7	16.9	21.2	4.9	17.0
<u>Session</u>	24.1	20.9	19.2	25.8	18.4	15.2	18.2	24.3	8.3	19.4

tion in each replication, that is to say, unlike the patients in the experimental condition, the control patients tend to be slightly less active than do the nursing personnel when both are involved in dyadic relation. A graph of these data is found in Figure 7. Thus, the general tenor of these findings seems supportive of an affirmative answer to this second question.

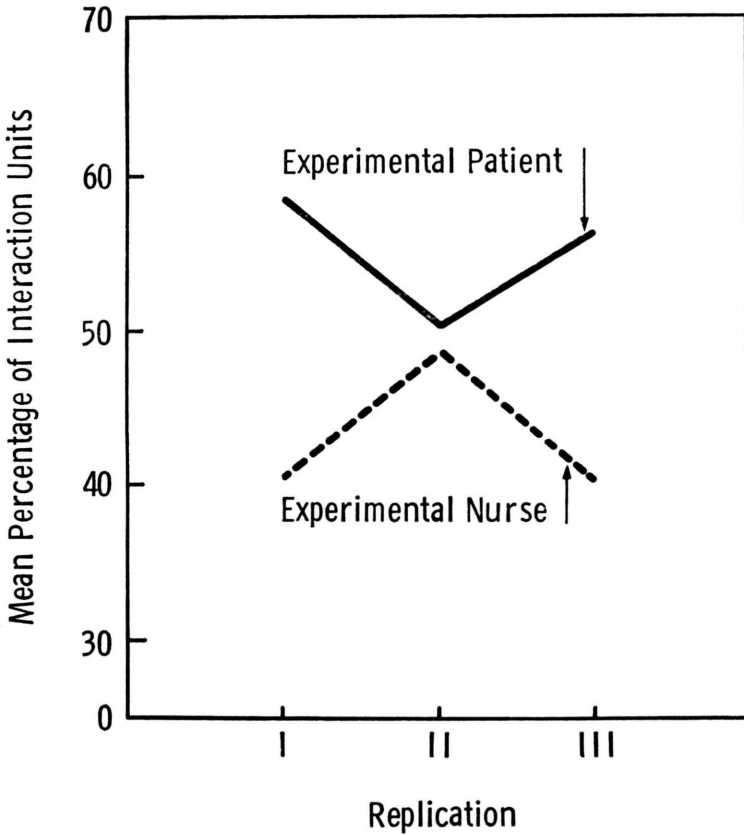


FIGURE 6. Frequency of "Active Participation" by Nurse and Patient in Dyadic Relation for Each of Three Replications (Experimental Group)

Is the frequency of communication, both verbal and non-verbal, greater in the experimental groups? Data concerning frequencies of nonverbal communication are found in Table 17 and those concerning verbal communication in Table 18. Analysis of variance of the nonverbal communication data (see Table 42 in Appendix F) reveals significant differences between experimental and control conditions and among the three replications of the experiment. It is evident that frequencies of nonverbal

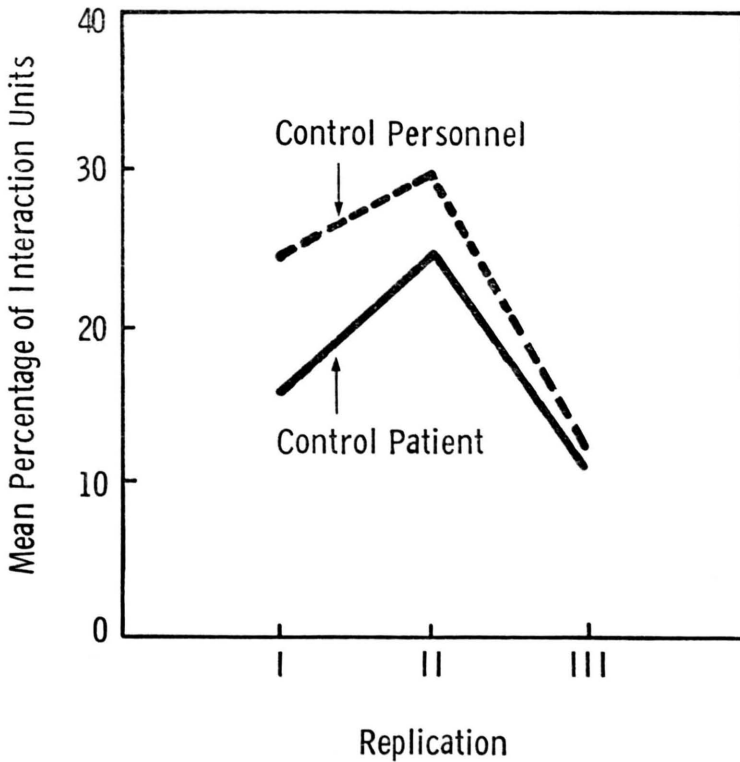


FIGURE 7. Frequency of "Active Participation" by Nurse and Patient in Dyadic Relation, for Each of Three Replications (Control Group)

TABLE 17

MEAN PERCENTAGES OF TOTAL INTERACTION UNITS INVOLVING USE
OF NONVERBAL FUNCTIONS AND COMMUNICATION BY PATIENTS

Conditions	Sessions									Total
	01	03	05	08	10	12	13	17	18	
<u>Experimental</u>										
Rep. I	18.6	23.0	29.6	20.2	19.7	21.8	21.4	18.9	27.0	22.2
Rep. II	9.4	9.8	13.4	12.7	14.7	13.1	15.8	14.0	15.3	13.1
Rep. III	10.4	18.0	13.9	18.8	18.3	25.4	21.8	22.0	16.9	18.4
<u>Session by Treatment</u>	12.8	16.9	18.9	17.2	17.6	20.1	19.6	18.3	19.7	17.9
<u>Control</u>										
Rep. I	5.4	14.2	21.7	12.9	25.6	4.6	5.5	12.5	6.3	12.1
Rep. II	7.0	15.1	9.9	4.6	13.6	5.1	2.5	10.9	21.5	10.0
Rep. III	4.8	20.5	3.3	2.3	3.0	5.4	12.7	1.2	29.2	9.2
<u>Session by Treatment</u>	5.7	16.6	11.6	6.6	14.1	5.0	6.9	8.2	19.0	10.4
<u>Session</u>	9.2	16.8	15.3	11.9	15.8	12.6	13.3	13.2	19.4	14.2

communication were generally greater among the experimental patients. Such frequencies were lowest in Replication II and highest in Replication I (see Figures 8 and 9).

Analysis of variance of the verbal communication data (see Table 43 in Appendix F) reveals that the difference between experimental and control conditions approaches significance and in the predicted direction (see also Figure 10). In addition, a slight tendency seems to exist for the three replications to differ among themselves in a manner reverse to that for nonverbal communication, with Replication II showing the highest frequencies of verbal communication. It seems reasonable to conclude, therefore, that skilled nursing intervention stimulates increased communication by the patients, and that those in an enriched setting tend more to emphasize verbal communication, while those in deprived settings are more likely to utilize nonverbal modes.

Finally, since the skilled nurse in her interchanges might be expected to maintain or improve the patient's mental health and

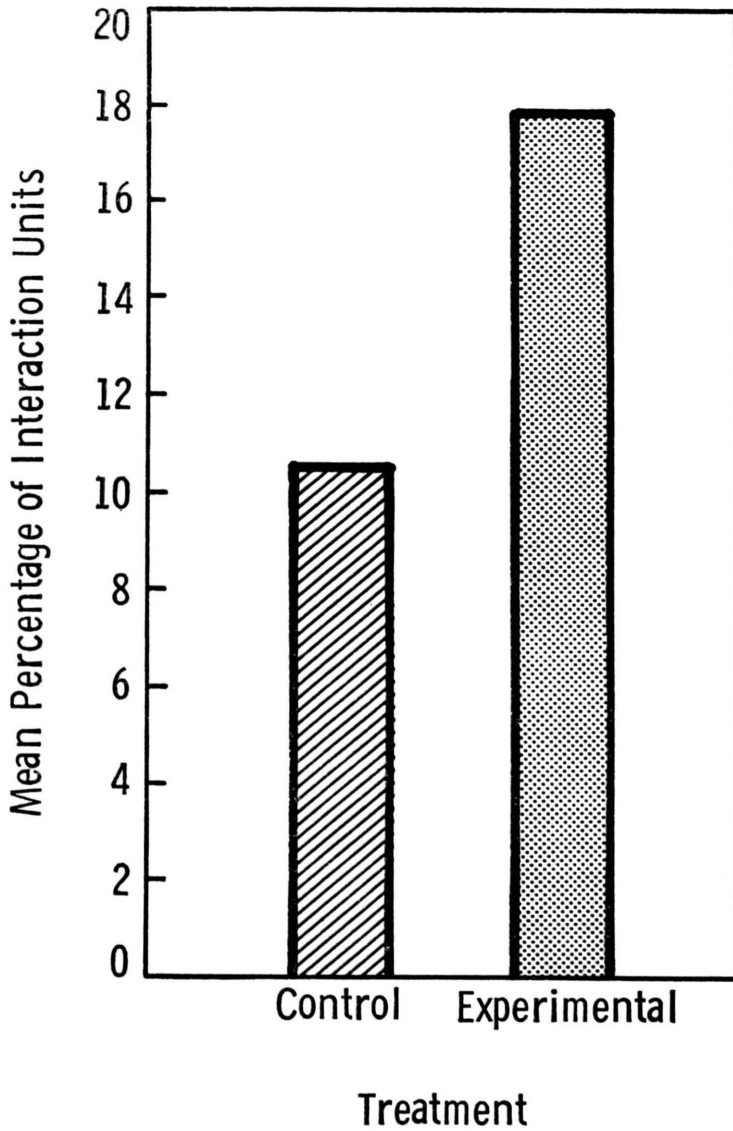


FIGURE 8. Frequency of "Nonverbal Functions and Communication" in Experimental and Control Groups

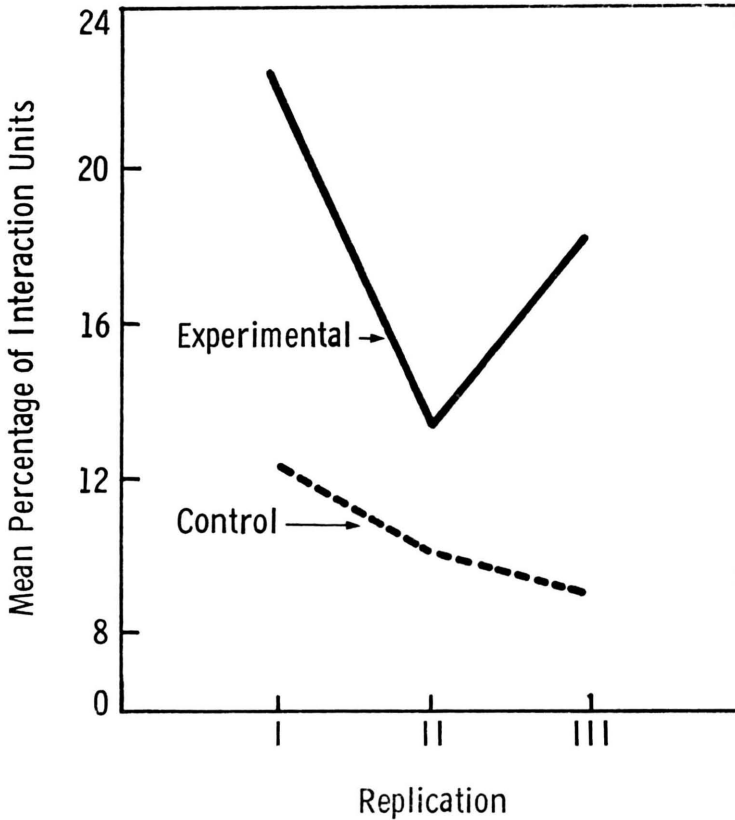


FIGURE 9. Frequency of "Nonverbal Functions and Communication" in Each of Three Replications

even perhaps organically-determined mental processes, one might ask, "Will the patients provided with skilled nursing care show a greater tendency to maintain a sharper reality orientation in relation to biosocial functions (such matters as 'care and maintenance,' 'housekeeping,' 'recreation,' etc.)? Will the frequency with which patients are involved in nonverbal, nondistorted com-

TABLE 18
 MEAN PERCENTAGES OF TOTAL INTERACTION UNITS INVOLVING
 USE OF VERBAL COMMUNICATION BY PATIENTS

Conditions	Sessions									
	01	03	05	08	10	12	13	17	18	Total
<u>Experimental</u>										
Rep. I	81.4	77.0	71.2	79.4	80.2	78.2	78.4	81.1	72.7	77.7
Rep. II	90.6	90.0	86.5	87.3	85.1	87.0	84.2	86.0	84.7	86.8
Rep. III	89.6	82.0	85.7	80.6	81.2	74.4	78.2	78.0	83.0	81.4
<u>Session by Treatment</u>	87.2	83.0	81.2	82.4	82.2	79.8	80.3	81.7	80.2	82.0
<u>Control</u>										
Rep. I	61.2	35.8	61.7	53.8	41.0	62.1	44.5	70.8	60.4	54.6
Rep. II	59.7	51.6	56.3	62.0	71.4	78.2	64.2	55.8	61.8	62.3
Rep. III	45.2	62.8	30.0	47.7	47.0	61.2	53.9	65.4	20.8	48.2
<u>Session by Treatment</u>	55.4	50.0	49.3	54.5	53.1	67.2	54.2	64.0	47.7	55.0
<u>Session</u>	71.3	66.5	65.2	68.5	67.6	73.5	67.2	72.8	63.9	68.5

ponents of biosocial functions be greater in the experimental group?"

Data bearing upon this hypothesis are presented in Table 19, and Wilcoxon tests of experimental-control comparisons revealed the evident differences to be highly significant in all replications ($z = -5.29$; $p = < .001$; $z = -5.92$; $p = < .001$; $z = -6.06$; $p = < .001$). Hence, the answers to the above questions are affirmative. Skilled nurses indeed help patients to improve their orientation to gross reality; the fact that the greatest absolute improvement occurred in Replication II suggests that verbal communication may play a most important part in this function.

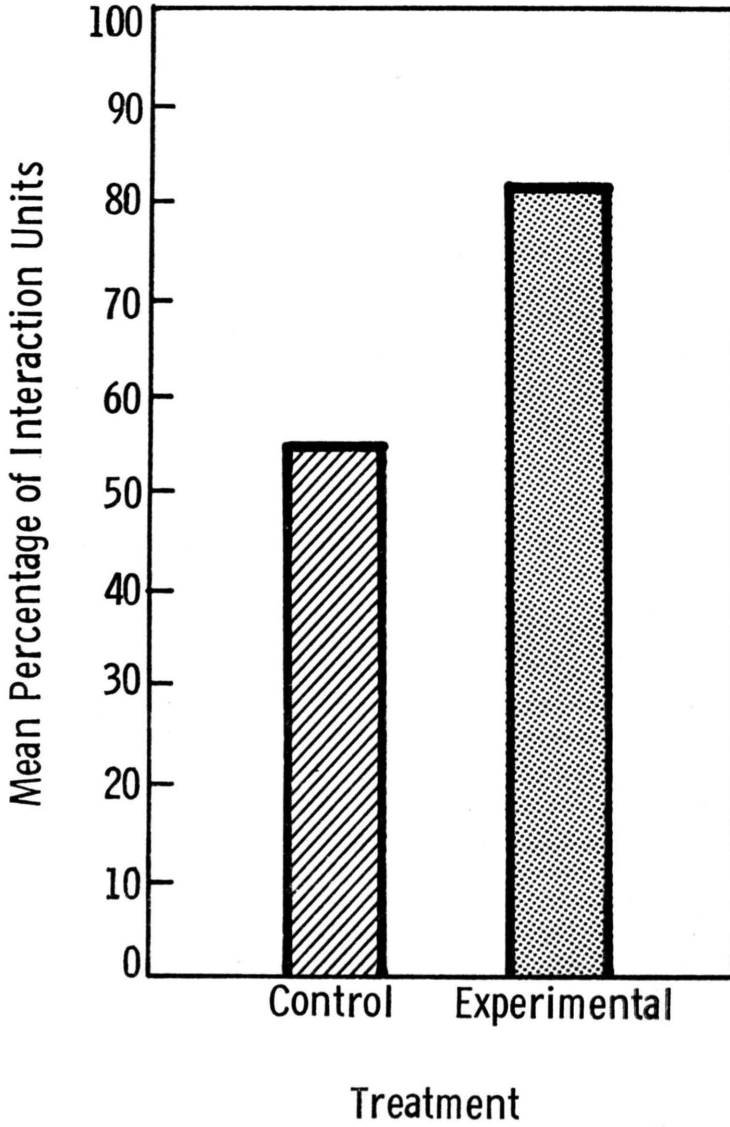


FIGURE 10. Frequency of "Verbal Communication" in Experimental and Control Groups

TABLE 19
MEAN PERCENTAGES OF INTERACTION UNITS DURING WHICH PATIENT
IS ACTIVELY INVOLVED IN NONDISTORTED NONVERBAL
COMPONENTS OF BIOSOCIAL FUNCTIONING

Conditions	Sessions									Total
	01	03	05	08	10	12	13	17	18	
<u>Experimental</u>										
Rep. I	65.4	63.1	69.8	68.5	73.7	71.6	63.8	68.4	68.3	68.1
Rep. II	76.7	85.1	87.1	84.0	83.5	86.6	83.2	74.6	71.0	81.3
Rep. III	63.1	76.8	68.3	91.6	87.8	90.3	72.7	78.2	68.9	77.5
<u>Session by Treatment</u>	68.4	75.0	75.1	81.4	81.6	82.8	73.2	73.7	69.4	75.6
<u>Control</u>										
Rep. I	4.2	25.0	33.3	50.0	16.7	---	25.0	16.7	---	19.0
Rep. II	16.7	40.3	16.7	16.7	22.2	16.7	12.5	15.0	16.7	19.2
Rep. III	16.7	4.2	12.5	16.7	---	---	---	16.7	---	7.4
<u>Session by Treatment</u>	12.5	23.2	20.8	27.8	13.0	5.6	12.5	16.1	5.6	15.2
<u>Session</u>	40.4	49.1	48.0	54.6	47.3	44.2	42.9	44.9	37.5	45.4

SUMMARY

RELATION OF EXPERIMENTAL FINDINGS TO CONCEPTUAL MODEL

In terms of the conceptual model, what actually happened in this experiment? Specially trained skilled nurses were introduced into three different environmental settings, each an institution whose major function was to care for chronically ill older

patients. One of these institutions was organized of staff and patient social systems that were relatively rich in mutual resources and in the capacity for interchange; one institution was moderately rich in staff resources but relatively poor in patient resources and in the capacity for interchange; and one institution was miserable in all respects.

The concern in each case was to provide, under controlled conditions, intervention that might arrest or reverse the process of psychosocial atrophy in the patients—intervention that might provide an opportunity for increased interchange of culturally valued human resources through involvement in and commitment to a stable, predictable, and flexible nurse-patient dyad. Such an interchange of aptitudes, skills, ideas, feelings, and motives should, it was postulated, result in increases in positively valued resources and behavior (psychosocial development) in the patients.

From the point of view of the milieu therapist, the amount of nursing care provided was relatively small. An individual patient in the experimental setting was seen by the assigned nurse-participant for only 1½ hours three times per week for a period of six weeks. From the point of view of the psychotherapist, the regular ward nurse, and the nurse-administrator, the nurse-participant's activities were not in any sense orthodox. She did not give medications, or carry out major physical treatments, or spend much of her time with paperwork. Instead, she became involved chiefly in nurse-patient dyads, in which she participated actively or was occupied in *involved temporary inaction* (for example, listening to the patient's communications). She utilized primarily verbal communication, but without attempts to direct or control and without attempts either to be completely non-directive, since she responded positively to requests or offers in most instances and included a wide variety of specific types of interchanges in her day-to-day contacts with the patients.

Technically, the nurse-patient dyads were psychosocial systems, since they consisted of constellations of specific persons performing the roles of the nurse-participant-observer or of the patient. At times, however, we have referred to such dyads as

social systems, since they also represented in miniature the prototype of constellations of roles-in-groups. But such dyads could not be true psychosocial or social systems unless the relationship in the experimental situation permitted and encouraged an interchange of goal-relevant resources that could not occur in the control situation.

In fact, in each replication this interchange did occur. The experimental patients, as contrasted to the control patients, spent most of their (observed) time in some form of interaction rather than in the noninteractional passive pursuit of simple observation. There was, then, consensual perception within the system of the existence of available, interchangeable, goal-relevant resources: resources of the components were *included*. The introduction of skilled nursing care into the experimental wards was associated, with a much greater frequency than occurred in the control wards, with active participation by the patients in interaction and with much less of their time spent in solitary pursuits. Even allowing for the more regular presence of the experimental nurse as compared to the control ward nursing personnel, this was true, for the experimental patients spent much more of their time, when their nurses were present, in active participation in interactional relations than did the control patients when their usual ward nursing personnel were present. Finally, under the same conditions, the experimental patients were stimulated to be active a greater proportion of the time than were their nurses, with the reverse occurring in the control patient-nurse systems. Thus, the skilled nurses obviously evoked positive emotional acceptance in the patients, and the human resources provided were communicated, manipulated (in the technical sense), employed, and reciprocally interchanged: the resources of the components became *involved* in the system.

The frequency of communication, both verbal and non-verbal, was much greater in the experimental groups, and the patients in these groups spent more time involved in listening to verbal communication than was true for patients in the control groups. The participants in the experimental condition thus established mutual expectations that skilled nurses would provide

competent, stable, specialized, nonauthoritarian, flexible, and integrated interchange of resources at the time, in the place, and in the form required to maintain the nurse-patient psychosocial system; in other words, the resources of the components became *committed* to the system. To this end, it should also be noted that the skilled nurse increased the ability of the experimental patients to orient themselves to gross reality (nonverbal, nondistorted components of biosocial functions); that is, intervention by the skilled nurse eventuated in a system of interaction that facilitated a realistic employment of nonhuman as well as human resources, contributing to the maintenance of a stable and prospectively more productive bio-psycho-social development of institutionalized older patients who are suffering from chronic illness.

At the same time, the experimental findings illustrated vividly the differential capacities of different institutional settings to produce similar effects naturally. Enriched environments generally fostered positively valued bio-psycho-social change; deprived environments distinctly inhibited such development. However, the introduction of skilled nursing care most often produced the greatest impact, as might be expected, in those environments where the prior level of active interactional involvement of patients was lowest.

One last point: The fact that the skilled nurse was able to establish an interactional unit that included the older patient and to which he became involved and committed is not important solely for its instrumental value; humanistically, it is important in its own right. Simply to engage these persons in a genuine and viable human relationship is, by itself, something about which society should care. Such values must not be ignored simply because of the formality of the narrative mechanics of objectively-oriented scientific procedures. The skilled nurses involved in this research—a group specially trained in the individualized comprehensive care of chronically ill older patients—were able to achieve these goals by involving the patients in nurse-patient dyads with a special emphasis on continuing verbal communication. Subjectively, these nurses noted improvement

and progress, under this program, for the experimental patients in all settings and in all spheres: social, psychological, and biological. The implications of these findings, both objective and subjective, may therefore be of considerable practical and theoretical importance to the medical, sociological, psychological, and educational professions, as well as to the nursing profession, in terms of practice and future research.

CHAPTER VIII

Implications for Nursing Practice, Education, and Research

THE NEED FOR A NURSING NOMENCLATURE AND SYSTEM OF CLASSIFICATION

CONCEPTUALLY, nursing is a primitive discipline, one that only in recent years has attempted to formulate theoretical bases for its academic and clinical policies and procedures. Nursing, as yet, has no standard nomenclature nor any classification system fully cogent to the diagnosis of nursing problems or the description of nursing situations. Faye Abdellah's outline¹ of twenty-one nursing problems has been helpful, but it appears true that nursing is at present unprepared to go beyond rudimentary levels of descriptive conceptualization and that much more exploratory research is necessary before further progress can be made.

In large degree, nursing's conceptual deficiencies are traceable to its failure to build empirical foundations for its practices; even the simplest correlations between nursing measures and specific patient responses have little validation based on research. Thus, nursing badly needs some empirical dedication as a groundwork for conceptual development. For now, thinking on the matters of nomenclature and classification probably must remain open and flexible, and nursing must orient itself first toward discovery rather than toward explanation and theory building, which might better wait for a more substantial descriptive base.

In the meantime, however, not only is it impracticable to construct satisfying nursing theories, it is extremely difficult even to communicate relevant research findings to practitioners.

¹ F. G. Abdellah, A. Martin, I. L. Beland, and R. V. Matheney, *Patient-Centered Approaches to Nursing* (New York, The Macmillan Company, 1960), pp. 16-17.

The nurse-researcher, then, not only has no descriptive framework peculiar to nursing with which to operate, but is also faced with the need to communicate observations in some coherent manner. Under such conditions she is left with a choice from among four alternatives: (1) research may be pursued without any theoretical perspective; (2) some theory, along with its terminology and classification schemas, may be borrowed from another field and adapted or extended to nursing contexts; (3) a new-fashioned theory may be improvised for the purposes of the immediate investigation; or (4) an eclectic conceptual model, providing a guide to appropriate observations and a language for their subsequent interpretation, may be systematically fashioned from various pertinent sources. Although this last choice represents a compromise, it appeared to be the most expedient and efficient alternative in the present study.

This approach provided a generalizable means by which to communicate the results of our research; at the same time it provided the freedom to explore various facets of clinical nursing without being restricted by more formal theoretical structures. Thus, even though the research data cannot demonstrate what specific stimulus provided by the nurse-participant brought about specific responses from the patients, we can, in a general way, make use of our experimental results, seen in relation to the conceptual model that guided us, to discuss the implications for nursing practice.

THE PLAN FOR NURSING INTERVENTION

Described in its most general form, it was the task of the research nurses in the study to plan and implement skilled nursing care. In order to accomplish this task, it was necessary that the nurse make note of the resources available to the nurse-patient dyad as these were found in the setting, in the patient, and in the nurse herself.

The Setting for Nurse-Patient Interaction. In a variety of ways, preceding chapters have vividly documented the importance of the setting in which nursing care is provided. Even in the context of contemporary emphasis upon milieu factors in

patient care,² the nurse-participants really were unprepared for the magnitude of the influence of such factors in relation to research problems such as ours. After all, nurses commonly are taught, if only by implication, that to produce desired changes in patients it is necessary only that the nurse possess the requisite personal skills; the institutions in which the skills are to be practiced rarely are considered important in the therapeutic plans delineated in academic nursing instruction.

To be sure, public health nurses long have argued that the nature of the setting does indeed make a difference in nursing care, and more recently psychiatric nurses have been influenced by such an orientation, but this counsel has been utilized only occasionally in respect to variations in intrahospital environments. A major implication of our research, however, is that nursing practice that ignores the settings in which it is employed is much less likely to be effective than practice carefully designed to complement, supplement, and otherwise put in action the resources available in the patient's institutional environment.

In this connection, it is clear that not only may features of the institutional setting generally affect the efficacy of particular nursing practice, but they may inhibit or fully negate it, or conspire to block its implementation completely, or even lead to a range of needlessly undesirable consequences. Therefore, plans for nursing care programs must consider more carefully than they have in the past what resources are available in the setting and what feasible means exist for their utilization. This is, of course, more easily said than done, and nurses responsible for making such plans will need to be prepared for the discovery that initiation of certain nursing measures in the patient's behalf might depend upon prior modification of the institutional setting in which such measures are to be administered. The fully effective nurse will be the one who develops an understanding of the dynamics of institutional functioning and of social milieu to the end that she herself may become a more potent agent of change.

² A. Wessen, ed., *The Mental Hospital as a Social System* (Springfield, Ill., Charles C Thomas, Publisher, 1964). This volume is a substantial example of current discussions of milieu, as they pertain to hospital functions and patient care.

It is obviously important, then, for the nurse to ascertain the resources that are available in her institutional and community environment and the possibilities for their use in patient care. One such resource that is frequently overlooked, for example, is the relationship between the nurse and her nursing colleagues. Traditionally, nurses seem to have been peculiarly prone either not to perceive or to disregard possibilities for collaboration with colleagues in the nursing endeavor; rarely do nurses actively consult with one another over nursing diagnoses or over plans for nursing intervention. As one result, nurses frequently fail to involve other nurses as valuable institutional resources upon which to capitalize for the benefit of the patient.

The Nurse as a Resource. Ask a nurse to enumerate the resources she employs in caring for her patients, and more than likely her list will include thermometers, stethoscopes, needles and syringes, bedpans, and other "high-visibility" equipment and instruments. Seldom, if ever, will it occur to the average nurse to consider herself or another nurse, as persons, as resources available for *planned* use in patient care. Yet, the fact is that even when she only incidentally provides emotional support for a patient, or offers him suggestions and directions, or merely gives him information, she is employing herself as a resource, albeit as a comparatively "low-visibility" human resource. Underscoring the significance of such utilization is our finding that the dependable presence of the nurse with the patient formed the occasion for emergence of clinically beneficial human relationships, which provided interchanges through which nursing measures, broadly conceived, could be applied to the modification in the direction of health of older patients' psychosocial atrophy.³

If encouragement of human relationships is granted as a valid nursing goal, it needs to be remembered that for its achievement sheer physical proximity of nurse and patient is a basic requirement for interpersonal inclusion and involvement. Our data, for instance, demonstrated that the experimental nurse

³ Compare with C. H. Cooley's and John Dewey's earlier stress on the primary group as a key to human social development, in their respective books *Social Organization* (New York, Charles Scribner's Sons, 1909) and *The Public and Its Problems* (New York, Henry Holt & Company, 1927).

was with the patient most of the time; control nursing personnel were seldom with control patients. It is true, of course, that the settings in which care was provided would have influenced in a variety of ways the ability of the nurse to spend time with the patient. Our experimental nurses had only a single patient to care for, whereas the nursing personnel caring for control patients were assigned to a number of patients. This fact by itself made it difficult for any of the control nursing personnel to spend as much time with a given patient as did the skilled nurse. Still, the control nursing personnel were provided with some time that they could have given to individual patients; instead, they chose to expend most of it in congregating in areas remote from patients. Furthermore, our observations of the activities of the control nursing personnel were made during the hours when patients were being prepared for the day, so that one might have expected to see a high level of direct patient-personnel contact—higher, anyway, than was observed. The experimental skilled nurses, for their part, might have avoided interaction with patients by consuming large amounts of time reading charts, securing supplies and equipment, or engaging in other indirect nursing practices, but they chose not to. The principal point here is that, although properties of the nurse's work environment may make it either difficult or easy for her to devote time to *direct* contact with the patient, recognition of the desirability of using herself as a nursing resource and subsequent provision of a nursing plan for the actualization of that recognition can compensate for some of the institutional inadequacies that might prevail and/or ensure against a failure to capitalize upon the resources of more inherently beneficent settings.

The point that needs repeated emphasis is that, too often in nursing practice, traditional high-visibility functions and resources are stressed organizationally and their routine use rewarded, while less traditionally sanctioned but equally important low-visibility functions and resources are unheeded, with the consequence that their occasional use goes unrewarded and is even punished in some settings. As a sharply contrasting alternative, our data suggest the explicit organizational recognition

that the skilled nurse, per se, has many special resources—aptitudes, ideas, motivations, and feelings—to offer patients. Organizational structures that use nursing skills to implement their objectives need to broaden and humanize their perspectives on the nature of nursing skills and to provide encouragement, by means of institutional legitimacy as well as by direct reward, in education and practice for integration of the nurse-resource into nursing regimens.

However, mere organizational notice of the relevance of the nurse to nursing practice is unlikely alone to ensure her effective employment in patient care. Apprehension of the nurse as a vital human resource is essential as a starting point, but subsequent use of that resource, as does any other, demands discipline to maximize its utility. The nurse must be integrated into a broad-gauge nursing plan; in the end, it will be this plan that will describe the limits for the outcome of patient care. An indispensable feature of such a plan is provision of time for contact between nurse and patient. However, our data strongly suggest the desirability of careful organization of this time to accomplish some constancy of nurse-patient interaction. Shifting nurses from patient to patient or from ward to ward will not permit easy or common development of interpersonal trust and regard. One important factor in our experimental conditions, it will be recalled, was that nurses spent a set and regular amount of time on regular days over a period of six weeks with the same patients. Frequent, unexplained, or capricious change in the plan for nursing care can attenuate the stability of the psychosocial environment, which is essential to the patient's willingness to risk an engagement with it. Of course, the nurse and her supervisors must be prepared to revise a nursing plan as new information becomes available in the course of applying the plan. Indeed, the plan should include some means for monitoring its effects and for generating and processing information relevant to its modification. This means that the nurse may need to learn to attend to and discriminate among some rather subtle and covert behavioral changes, in her attempts to evaluate a patient's level of bio-psycho-social development.

The plan for nursing care, then, must be flexible and adapt-

able to change in the patient and in knowledge about him. At all times, dynamic change in the processes of bio-psycho-social development in patients should constitute the basis for appropriate changes in the plan. In older patients, processes of atrophy may be readily evident and may obscure present and potential signs of development. Early detection by the nurse of both these processes of atrophy and these possibilities for development may make possible the early treatment and arrest of the degenerative process. Thus, the nurse will need to be diligent in watching for negatively valued behavioral manifestations, but, at the same time, she must search with determination for evidences of more positively valued human resources resident in the patient and available for incorporation into the evolving plan for care.

The Patient's Resources and His Perception of Them. When a human being becomes ill, he reduces his contribution of resources to the social system of which he formerly was a part. Generally, the magnitude of this reduction will be in some rough proportion to the severity of illness, but in the face of illness the sick person (especially the older sick person) may perceive his resources (his positive ones at least) to be diminished, whether in fact they are or not. Such a perception leaves the patient with little more in the way of resources than his illness or disability itself. His crippled self-image functionally disables him from productive participation in essential human intercourse, with the all-too-common consequences seen in many of our institutions for the sick aged. Preoccupied with his helplessness, the person's interests may turn almost exclusively inward; orientation to reality and to the larger social system may become increasingly tenuous and fragile.

The nurse can act as counterweight to these trends. She can play an active part in guiding the patient's perceptions of himself and of the world. She can learn when and for how long the patient's perception may be turned inward and be restricted to the limited world of self, and when and how the patient may be helped to extend his perception to a larger social order. Especially, she can learn how to recognize and nurture the patient's remaining positive resources and how to help the patient to recognize them and channel them, via the nurse-patient rela-

tionship, into attachment to the larger social system and into enhancement of simple self-respect.

Although the phenomenon was more conspicuous in the deprived environment than in the more affluent ones, most patients in all three settings of the study tended to display varying degrees of contempt for one another. It seemed difficult for them to look upon their fellow patients as valuable human beings, capable of useful performance and deserving of respect. Instead, it was as though their perceptions were fixed upon signs of atrophy for which they held contempt, contempt that generalized from such signs to the person who manifested them. If patients are preoccupied with their own atrophy, it may be because they can find no positively valued resources within themselves and, so, find themselves contemptible. If patients have no awareness of positive resources in themselves, they may have no frame of reference for discerning such resources in others. Assuming, then, that disdain for others will vary inversely with the favorableness of self-perception—and there is reason in work like Elizabeth Alfert's⁴ to trust this assumption—the nurse's task of helping the patient to improve his evaluation of his inner strengths may be of paramount importance, if the patient himself is to achieve development rather than atrophy and to utilize the human resources available to him toward that end.

The nurse's perception of a patient's resources, both the positive resources of development and the negative resources of atrophy, constitutes the nurse's diagnosis of the patient's nursing needs and the foundation from which she may strive to engineer change in the patient's self-perception. Once diagnosed, the patient's nursing needs describe an array of general premises in terms of which the nurse can formulate specific objectives of care for a given period of time. Formulating these objectives as directly as possible maps the course toward health and provides the observer with stable criteria for appraising the progress made by nursing care toward that goal. This approach to the evaluation of patient care is similar to that used by the teacher

⁴ E. Alfert, "Two Components of Assumed Similarity," *Journal of Abnormal and Social Psychology*, 56 (1958), 135-38.

who looks for changes in the degree of achievement of his students as a means for assessing his teaching techniques.

Focusing upon the patient in order to measure the quality of nursing care is perhaps a somewhat new idea in nursing, although it is less novel among some of the other health professions. Evaluations of this type might well help nurses perceive new clues for cause-effect relationships in nursing care; nurses might become "set" to notice that, whenever they perform some specific function with or for some particular class of patient, the patient makes some determinate pattern of response. Such a set and the regularities it might reveal also provide a starting point for systematic and searching investigations of nursing practices and patient care in general. With the use of computers and structured methods for making observations of patients and social systems, a great amount of data concerning nurse-patient relations could be made available for analysis, with obvious beneficial implications for patient welfare, hospital practice, and the nursing profession generally.

But even without the use of computers and rigorous scientific techniques, nurses can formulate plans for patient care by orienting themselves toward some definite points of reference, such as the dimensions of the observational code used in this research. Doing so would offer the nurse a way of constructing rational plans for nursing care and for observing and evaluating changes in the patient. For instance, a nurse might decide that her goal for the day with a particular patient is to increase that patient's mobility. Having done so, she may institute such nursing measures as she judges likely to work toward that end, having provided herself with a frame of reference for observing the patient's responses and for judging whether his mobility has in fact increased or decreased. So simple a strategy has the merit of providing the nurse with a stable and systematic basis for developing, evaluating, and revising nursing care plans. By extending this strategy through time and across other behavioral and bio-psycho-social dimensions (including some not noted in our code), a comprehensive, rational, flexible, and patient-centered plan for nursing care may be formulated according to a model that may have the added virtue of making clear some

generalizable consistencies in patient response to nursing regimens. These generalizations may contribute to the organization of a new theoretical framework for clinical nursing.

Reciprocity in the Nurse-Patient Relationship. Because of its great practical significance for most nurses who are charged with caring for many more than a single patient, it should be pointed out that there is every reason to construe the nurse-patient relationship as a reciprocal one, as an exchange of resources for mutual benefit. Just as the nurse can and must expend resources to benefit the patient as well as herself, so can the patient use his positive resources to help his nurse and by doing so actually augment his sense of personal adequacy. For example, a patient who has little strength in one arm and leg may use his unaffected side to help the nurse or aide make his bed. Together, the nurse and patient approximate a whole person, and reciprocity becomes both socially useful and managerially useful—and probably therapeutic as well. Reciprocity in the nurse-patient interaction, however, will depend upon careful differential identification by the nurse of the patient's positive and atrophied resources and upon the nurse's accepting the task of helping the patient to perceive his own resources.

TIME-SPACE AS A RESOURCE

It has already been noted that probably one of the most consequential implications for nursing practice arising from this research has to do with our procedure of making the skilled nurse available to the patient consistently over a period of time. The resultant benefits to the patient of this arrangement have led to the conclusion that organization of nurse-patient relations different from that which is customary in most institutions is a simple nursing reform likely to produce invaluable returns. Nurses may not need to spend long periods of time with an individual patient—although some minimal time is certainly required—but it is critical that they see the same patients consistently. Actually, our findings suggest that even relatively short but planned and regular periods of activity with patients are superior to random nurse-patient contacts or to spaced contacts with different nurses each time.

Some degree of constancy seems to be fundamental to helping patients maintain their orientation to person, place, and time. It was noted, for example, that patients who were moved about frequently (from bed to bed or room to room) quickly became confused and had difficulty remembering the names of their neighbors. It was also noted that patients often became very upset when they did not have the same nurses on duty on nights and evenings. The rotating shift has long been advocated in nursing, but our experiences indicate that, at least for institutionalized older patients, it would be more beneficial to maintain greater constancy of personnel in the patient's environment by having the same staff follow the same tour of duty over a fairly extended period of time and by having those who relieve staff persons always relieve the same person.

Older patients also have a strong need to know what to expect from staff persons, and when. Lunch served consistently at a certain time, a bath given at a scheduled time, the nurse seen regularly at a certain time, all seemed to help the experimental patients maintain orientation toward reality. A measure of ritual in such matters as placing the patient's clothing in the same place or providing an exact spot for his glasses not only helped to keep him oriented, but also seemed to reduce anxiety. Older patients, at best, may have some difficulty in perceptual consensus; anything that makes their cognitive tasks easier should be encouraged, and, obviously, anything that produces mental confusion should be excluded.

The constancy factor seems to apply to nurses as well as to patients. Just as patients found it more comfortable to have the same nurses take care of them, so did nurses find it rewarding to care for the same patients. In the enriched environment we studied, constancy was a more or less routine practice; members of that nursing staff stated that one of the reasons they liked their work was the fact that they could count on knowing what to expect when they returned from their days off. Unless someone died or was newly admitted, they would have the same patients to care for. That constancy is a source of job satisfaction might be carefully noted by hospital and/or nursing home administrators concerned with staffing problems and, since staff

morale has important implications for patient care (as Stanton and Schwartz have described⁵), by supervisors responsible for organizing programs for care of patients.

It then should be obvious that nurses or aides cannot be assigned to one ward for one day and to another on the next if the formation of interpersonal relationships with patients is to be a goal. To achieve such a goal it is essential that the same nurse be assigned regularly to the same patients. How else can the nurse efficiently perceive the patient's natural and social resources and accurately assess those available in his immediate surroundings? How else can the patient come to perceive the human resources offered by nurses? Without constancy of contact, nursing is likely to become custodial rather than professional or therapeutic in orientation.

In the matter of assignment of nursing staff to patients there is one other important issue: the common practice of delegating care of chronically ill or older patients to relatively untrained aides or attendants. This is plainly an indefensible practice, for these are patients whose nursing needs are likely to be among the most difficult to diagnose, and, at the same time, they are the patients who most seriously require a careful nursing plan designed to meet those needs. A maximum, not a minimum, of skill should be applied to the diagnosis of needs and formulation of nursing plans for such patients, and the professional nurse is the person most suited to the task. However, it is essential that the professional nurse work directly with patients if she is to do this job well. Nurses in nursing homes and in chronic disease units need to spend more time giving direct care, especially to new patients, and in evaluating and re-evaluating patients' needs. It may be that other functions, at present performed by skilled nurses, could be delegated to less skilled personnel, so that the professional nurse could return to her historically-valued role of a direct participant in the nurse-patient dyad. Alternatively, if the clinical nurse specialist can effect significant changes in patients' behavior by using her skills for an hour and thirty minutes three times a week, then perhaps institutions

⁵ A. H. Stanton and M. S. Schwartz, *The Mental Hospital* (New York, Basic Books, 1954).

for the chronically ill and aged may wish to explore the use of different patterns of care by utilizing some direct professional nursing care on a part-time basis or, perhaps, for periods of six weeks or so, and then observing the patients to evaluate how long the effects last. Planning for another short period of skilled nursing care might serve to re-evaluate the patient's condition and resources and set him on another course of action in utilizing his own resources again.

NURSING INTERVENTION AND SOCIAL CLASS

Of the three settings in which we worked, the only one where our nurses were able from the beginning to relate easily and effortlessly with patients was the one environment which was neither deprived nor enriched. That is to say, the setting in which our nurses most readily became assimilated was that in which the patients most nearly fitted the middle-class standards and expectations of the nurse. In each of the other settings our typical nurse experienced at least some difficulty in establishing comfortable relations with the patients. In the enriched environment the patients tended to treat nurses more as servants than as professional people. For their part, the nurses had difficulty clarifying their role definitions vis-à-vis patients who were wearing strings of pearls and talking of trips to Europe. On the other hand, in the deprived environment, our nurses were appalled and dismayed by patients who seemed unconcerned when their dirty bed linen was changed only once in a six-week period.

Schools of nursing usually teach students that, in principle, all patients should be treated alike, regardless of race, color, creed, personality, or social class. In terms of the broad goals of patient care and of the quality of care, the essential morality of this principle must remain indisputable. However, in relation to nursing procedures, if patients are to retain their autonomy as individuals, the particulars of nursing care need to be adapted to the patient's personal and cultural needs and characteristics. For example, if a patient of an upper socioeconomic class has been accustomed to using many pieces of silverware during dinner, why should he be rigidly restricted in hospital to a knife, fork, and spoon? Or, if a laboring class patient is not accustomed

to wearing a long-sleeved shirt and tie, what substantial gain can result from insisting upon his wearing them? In themselves these may seem unlikely examples, but they make obvious the fact that the nature and evaluation of resources must tend to be relative to the cultural setting in question. A positive resource in a deprived environment may be a negative resource in an enriched one, and vice versa. A positive resource in a middle-class setting may be negative in a lower-class context. Nurses will need to become more attentive to the possibility of resource transformation as a function of cultural and environmental variation. This approach is especially germane to considerations of the nurse herself as a resource in relation to the setting and the patient in it, although the nurse may be forewarned that even what the individual patient regards as his chief physical complaint may not be perceived as a handicap or as a negative human resource by others in a different socioeconomic stratum.

Little research has been done in nursing to relate differences in the effects of particular nursing procedures to membership in different socioeconomic groups. Yet, the nurse confronts varying sets of problems each time she moves from one class context to another. The typical hospital ignores these diversities, treating all patients as if they hold middle-class values and emphasizing conformity to middle-class expectations. Physicians are beginning to pay attention to these problems, however, and nursing now must face realistically the cultural variations relevant to its operations. Nursing students, if not at the undergraduate level then certainly in graduate programs, should be introduced to the actualities of social stratification and to the differential problems and resources these present to nurses planning to provide effective and useful care for all patients.

The socioeconomic background of the nurse has significance of another kind. In the usual school of nursing, students from middle-class families are taught middle-class perspectives by, in general, middle-class teachers. It is small wonder, therefore, that the typical graduate nurse defines her role as she does. Since childhood, the nurse has, most likely, been taught that hard work is requisite for salvation; upon entering school she is indoctrinated into the specific virtue of keeping busy at all times.

Consequently, the practicing nurse has tended to become functionally walled off from the immediacy of direct patient care by preoccupation with paper work and busy work because she has been taught that this is her real job; this is what her supervisors consider to be her real job, and this is the job for which she gets rewarded. The decision-making and problem-solving functions inherent in creative nursing care are emphasized in neither teaching nor practice.

As a result of the present study we are convinced that nurses and nursing schools need to change their conceptions of the nature of the nurse's task. The skilled nurse has invaluable human resources to offer patients—resources that are being wasted in quasi-traditional definitions of nursing roles. It is now possible and necessary to envisage revolutionary changes in nursing concepts and values. Actually, it is strange we should consider them revolutionary, for it turns out to be a very important health-oriented activity for the nurse merely to sit and converse with a patient, and such a practice benefits both the patient and the nurse.

THE EVALUATION OF NURSING CARE

Of considerable concern to most practitioners of nursing is evaluation of the nurse's efforts in relation to the individual patient's response. The basic question is, Was the care effective? Setting standards for judging the quality of care is difficult because, for one thing, what might be effective for one patient might not be, or might be less so, for another. In planning for the care of patients, therefore, it would seem that in the interest of subsequent assessment one should first determine the directions, for each of a number of dimensions of nursing care, toward which movement in patient care should take place.

The dimensions of our research code may provide an appropriate and convenient, if provisional, set of dimensions in terms of which change in the patient's care can be planned and its results monitored. Of course, in practice, for each dimension in her care plan the nurse would have to determine the direction toward which change should take place, in the light of her appraisal of individual circumstances. For example, the dimension

range of interaction might need to be increased for some patients and decreased for others at specific times and places and for particular durations. For a patient who has just had major surgery, the nurse's goal might be to decrease the patient's contacts with his friends and relatives while increasing the patient's interaction with a very skilled nurse and minimizing it with nursing aides. Similar sliding goals might also be formulated with respect to *biosocial functions* and other dimensions of the code. At any rate, using an array of such dimensions, directions of change in the patient's care and condition may be charted, both as objectives of nursing care and as points of ready reference for evaluation of any given nursing measure, in terms of the direction and the degree of change its introduction produced.

MOTIVATING THE NURSE PRACTITIONER

In the research study, the same staff of nurses was maintained for completing the nursing care given in all three institutions. As the study progressed, the motivation of these nurse-participants to provide care steadily increased. Part of this increase was clearly due to recognition and prestige factors. Graduate students accorded the nurse researchers considerable esteem and wanted to know what they could do to "get on the staff." The fact that a federal research grant had been awarded also provided a certain amount of prestige to the group.

Utilizing such prestige factors might be helpful in other situations. One factor might be that nurses who administer direct patient care could receive higher salaries than those who sit at the desk. Opportunity for contact with other prestige groups such as physicians might be extended for those nurses who give actual patient care. Increased professional autonomy is the most important factor, however. In the nursing groups, nearly everyone can tell the ward nurse what to do and how to do it. By contrast, a qualified physician is free to treat a patient according to his diagnosis of the patient's needs as long as he practices within the accepted code of ethics and avoids gross incompetence in his performance. Yet, in nursing, the nurse is not only told what to do and how to do it by a number of supervisors, physicians, hospital administrators, and others in related disciplines,

but she is also told when to do it. Skilled nurses may be more helpful to patients if they are allowed and encouraged to be more self-ordered, with reference to matters of nursing care. If the social system on the nursing unit provides most rewards when the nurse withholds her available resources to the patient and allocates them instead to administrative functions, it is not always pleasant or even possible to give any direct patient care. In other cases, when some nurses are freed by the institution so that they may perform direct patient care, the time spent with patients is not increased because of the nurse's own misperceptions of or desires about her optimal functioning.

It seems likely that those in control of hospital social systems and nursing education institutions need to re-evaluate and redesign assignment of prestige factors and rewards so that direct patient care will again be recognized as a primary function of the professional nurse and of greatest importance in the bio-psycho-social improvement of patients. Clearly, this shift constitutes a potentially explosive interprofessional issue, but it is a critical one. Nursing researchers need to seek out meaningful ways to enhance the prestige of nurse clinicians and to provide incentives for innovation in direct care.

The "Feminization" of Nursing Environments. Another problem is tangentially related to the issue of professional autonomy for the nurse. Despite the opportunity for such autonomy in the research settings, the nurse-participants found they missed having a number of qualified male physicians with whom they could work in the institutions involved. Aside from the obvious lack of competent medical care, it gradually became apparent that the lack of physicians was also part of a more general and more subtle insufficiency typical of such institutions, namely, a shortage of men. All three institutional settings operated with predominantly female staffs. Regular representation of any other than males of lower status was especially lacking in them. Nurses enmeshed in all-female staffs found such environments depressing.

Means should be found to correct such conditions by introducing more male employees of higher status into these institutions, perhaps as male social workers, administrators, and so

on. Not only might this addition provide the patients with opportunities for more normal interaction, but it might make these institutions places in which professional nurses might work more happily.

IMPLICATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

The present study has served to demonstrate that bio-psycho-social development of the older institutionalized patient is enhanced by the presence of skilled nursing care; in short, that skilled nursing can make a difference in the health of these aging persons. Nevertheless, some important questions remain to be answered by future research. Eight variables appear to be worth special note, as follows:

Age of Nurse. The age of the experimental nurse was not a variable in our study; it is recommended, however, that in future research it be made one. The skilled nurses in the present study all were young—in their middle twenties to early thirties. It may be that the consequences of skilled care are affected differentially by the age of the nurse in relation to the age of the patients involved.

Age of Patient. All of the patients in our samples were aging or aged—from 53 to 94 years old, with a median age well over 70. Although it seems highly probable that the presence of the skilled nurse would have the same or similar effects upon chronically ill patients of different age groups, such an assumption remains to be proved.

Period of Time for Nurse Assignment. It is also recommended that effects of assigning nurses to patients for differing time periods be studied. The six-week period selected for this study was essentially an arbitrary choice, based in part on data from our pilot study that suggested that significant changes in psychosocial development occurred during that period of time. It is a fair question whether the same amount of change could have been produced in a shorter period of time or whether more change would have occurred had the skilled nurse spent more time with the patient.

Assuming that patients do not have infinite potential for change, it appeared from our earlier pilot study data that pla-

teaus—points beyond which the effort required to produce change is not equal to the amount of change induced—are reached at various periods, one of these being at six weeks. However, this time period may well vary, depending on the nature of the patients, the nurses, and their interaction, on the intensity and spacing of the nurse-patient contacts, and on other variables.

Patients with Different Medical Diagnoses. Future research with different kinds of patients may also reveal differentials for change among the different patients, related to the nature, severity, and chronicity of their illness.

Maintenance of Effects of Skilled Nursing. In view of the fact that the most important constellation of resources in this study was that formed by the nurse-in-role and the patient-in-role dyad, it would also be interesting to see whether the process of psychosocial development can be maintained after withdrawal of the skilled nurse, for example by the formation of patient-patient dyads. Contemporary research on milieu therapy and on the therapeutic community in mental institutions has indicated that the relationships which psychiatric patients form with one another have great therapeutic potential. However, older patients appear to hold others of their own age in rather low esteem, even in contempt. It may be that such patients do not regard one another as having potential for the development of a relationship, but there is no theoretical reason why the principles of milieu therapy should not be effective among this group if adequate direction is provided, and the evidence from some hospitals indicates that this approach is indeed helpful.

After-Effects of Skilled Nursing. Our research design did not provide for follow-up study of patients, because of a variety of technical difficulties. It is obvious, however, that future research is indicated to determine how lasting are the effects of such an intensive-care program. Furthermore, in order that the whole range of effects of skilled nursing care can be studied, patients should be observed at intervals, during the study, when the skilled nurse is not present. Observations made in the physical absence of the skilled nurse, but while she is still providing care, could then be compared with observations made after the

withdrawal of the skilled nurse from the situation. Such a procedure might afford a more sensitive check on the effect of the nurse's mere physical presence.

The "Hawthorne Effect." One other limitation of the present study has to do with the "Hawthorne effect," the term used to describe the psychological reactions, of people who are placed in a specialized research setting, simply to the conditions of the study itself—that is, to the novelty of the situation or to the special interest they receive. This "effect" was first described in experiments at the Hawthorne plant of the Western Electric Company in Chicago almost four decades ago. Indeed, our experimental patients were well aware of the differential treatment they received, and it is possible—although unlikely—that the results were more influenced by that awareness than by any specific resources the skilled nurse contributed.

It is extremely difficult to control this type of bias in this kind of study, but it can be done. For example, it is possible to conceive of a "placebo" or "dummy" treatment that could be applied to a control group to provide an equivalent exposure to the nurse's time and interest, in which the nurse might do no more than read to the patient throughout each total "treatment" period.

Since our data indicate that the experimental patients were much more involved, when the experimental nurses were present, in active interactional participation than were the control patients, when their usual ward nurses were present, it seems probable that the simple presence of *a* nurse is not the crucial factor. If, however, the important element is what the nurse *does* (as suggested by our operational analyses indicating the experimental nurse's commitment to regular, active participation in nurse-patient dyads with an emphasis on verbal communication, without attempts to direct or control, with positive responses, and with a considerable variety of specific types of interchanges utilized), the question remains as to whether formal nursing education is a necessary condition to achieve such results. Again, it may be that other persons of sufficient enthusiasm, ability, and education—but without any formal nursing qualifications—could be trained in a shorter period of time in

these specific techniques, to perform in a similarly effective manner. Such a conclusion, however, is in no way indicated by our present data, and it remains to be tested.

Revision of the Code. After considerable use and careful study of the coding system employed in this research, we feel that certain changes in the code would render it more useful as a research instrument. As developed, the code described in Appendix G has many values and can certainly be adapted to a variety of psychosocial research situations. However, our experience indicates that some revision would make this technique even more helpful. The revision concerns the ordering of categories within dimensions of the code. If code categories within dimensions were ordered according to a scale reflecting psychosocial development, more immediately useful data could be generated. In other words, not only would each dimension of the code, for example, *persons involved*, reflect a significant aspect of development, but categories within each dimension would represent progress in development along a continuum from atrophy to development, as set forth in the conceptual model. This proposed revision would entail a reordering of categories within dimensions and also a re-examination of dimensions to see that they properly reflect variables of the model.

SUMMARY

It is evident from this study that the use of the skilled nurse and her special techniques has an appreciable effect on enhancing the psychosocial development and on arresting or reversing the psychosocial atrophy of older patients in institutions. As evidence of psychosocial development rather than atrophy, our findings revealed that, as compared with control patients, the patients receiving such care became more included, involved, and committed to interaction in the social system; they exercised more control over their social interactions; they employed resources more appropriately; and they developed a more positive emotional attitude toward their interpersonal environment.

By the same token, the skilled nurse herself became more included, involved, and committed to interaction in the social system; exercised less power over the interaction; made her-

self available to the patient as a person offering resources, including motives, feelings, ideas, aptitudes, and skills; committed herself to be with the patient at specified times, on specified days, and over a specified period of time; and she did this within the limitations of differing amounts of institutional tolerance for change.

This study also indicated that the freedom with which the skilled nurse may attempt to enhance the psychosocial development of the patient is a function of the institutional tolerance for change. Therefore, it appears that a fundamental skill required of the nurse is to accommodate her plans for nursing care to the specific institutional milieu.

Such results have important implications for the various social systems involved in providing or educating for health care. Of these implications the most basic is delineated in the need for new emphasis on and prestige for direct nursing care of patients, with a communication-oriented focus. The nurse-patient dyadic relation has been demonstrated to have singular value in the bio-psycho-social development of patients, and the lack of provision of such care may well be one of the most significant factors in the bio-psycho-social atrophy so prevalent in our institutions for older patients today. Such atrophy is a form of degeneration and death; the time has come when society can help these older patients return to living.

APPENDIX A

Details of Design

Rotation of Nurses. Three nurses were available on any one day to provide skilled nursing care for experimental patients; two nurses were available to observe the control patients, and one to study the environment. Hence, one nurse provided skilled care for two patients, on alternate days. Accordingly, the six experimental patients were divided into two experimental units of three. One unit was provided care on Monday, Wednesday, and Friday; the other unit on Tuesday, Thursday, and Saturday. The six control patients also were divided into two units of three. One unit was observed on Monday, Wednesday, and Friday; the other unit on Tuesday, Thursday, and Saturday.

It was deemed desirable to have two nurses contribute to the observation of control patients. Accordingly, two nurses alternated between observing controls and providing care for experimental patients, and two other nurses alternated between experimental patients and observations of the environment. For example, in the first replication, assignment was as follows:

TABLE A

<u>Time</u>	<u>Monday</u>			<u>Tuesday</u>		
	<u>Exper.</u>	<u>Con.</u>	<u>Env.</u>	<u>Exper.</u>	<u>Con.</u>	<u>Env.</u>
9:00 - 9:20	ABC	D	E	ADE	B	C
9:20 - 9:45	ABC	X	E	ADE	X	C
9:45 - 10:05	ABC	D	E	ADE	B	C
10:05 - 10:40	ABC	X	E	ADE	X	C
10:40 - 11:00	ABC	D	E	ADE	B	C

X = break and travel time

Such assignments were rotated after each replication, thus:

TABLE B

	Exp.		Con.		Env.	
	MWF	TTS	MWF	TTS	MWF	TTS
1	ABC	ADE	D	B	E	C
2	ABE	BCD	C	A	D	E
3	ADE	DBC	B	E	C	A
4	CDE	EAB	A	C	B	D
5	BCD	CAE	E	D	A	B

In this fashion, each nurse contributed equally to each of the three sorts of observation: experimental groups, control groups, and environment. The sequential order of the observation of control patients was varied so that each of the three patients was observed the first third of the time, etc. (See Tables 20 through 23.)

TABLE 20

DETAILS OF REPLICATION I

		Ward 1		Ward 2	
		Experimental		Control	
		Nurse	Patient	Nurse	Patient
Replication I	Unit 1	A	1	D	7
		B	2	D	8
		C	3	D	9
	Unit 2	A	4	B	10
		D	5	B	11
		E	6	B	12

TABLE 21
 DETAILS OF NURSE-PATIENT ASSIGNMENT
 (REPLICATION I)

		Monday			Tuesday			Wednesday			Thursday			Friday			Saturday		
		Exp	Con	Env	Exp	Con	Env	Exp	Con	Env	Exp	Con	Env	Exp	Con	Env	Exp	Con	Env
1st	1*	A 1	D 7		A 4	B10		A 1	D 8		A 4	B11		A 1	D 9		A 4	B12	
Week	2	B 2	D 8	E	D 5	B11	C	B 2	D 9	E	D 5	B12	C	B 2	D 7	E	D 5	B10	C
	3	C 3	D 9		E 6	B12		C 3	D 7		E 6	B10		C 3	D 8		E 6	B11	
2nd	1		D 8			B11			D 9			B12			D 7			B10	
Week	2		D 9	E		B12	C		D 7	E		B10	C		D 8	E		B11	C
	3		D 7			B10			D 8			B11			D 9			B12	
3rd	1		D 9			B12			D 7			B10			D 8			B11	
Week	2		D 7	E		B10	C		D 8	E		B11	C		D 9	E		B12	C
	3		D 8			B11			D 9			B12			D 7			B10	
4th	1		D 7			B10			D 8			B11			D 9			B12	
Week	2		D 8	E		B11	C		D 9	E		B12	C		D 7	E		B10	C
	3		D 9			B12			D 7			B10			D 8			B11	
5th	1		D 8			B11			D 9			B12			D 7			B10	
Week	2		D 9	E		B12	C		D 7	E		B10	C		D 8	E		B11	C
	3		D 7			B10			D 8			B11			D 9			B12	
6th	1		D 9			B12			D 7			B10			D 8			B11	
Week	2		D 7	E		B10	C		D 8	E		B11	C		D 9	E		B12	C
	3		D 8			B11			D 9			B12			D 7			B10	

*Sequence of observation - controls only

TABLE 22
 DETAILS OF NURSE-PATIENT ASSIGNMENT
 (REPLICATION II)

		Monday			Tuesday			Wednesday			Thursday			Friday			Saturday		
*		Exp	Con	Env	Exp	Con	Env	Exp	Con	Env	Exp	Con	Env	Exp	Con	Env	Exp	Con	Env
1st	1*	A13	C19		B16	A22	E	A13	C20		B16	A23	E	A13	C21		B16	A24	
Week	2	B14	C20	D	C17	A23	E	B14	C21	D	C17	A24	E	B14	C19	D	C17	A22	E
	3	E15	C21		D18	A24		E15	C19		D18	A22		E15	C20		D18	A23	
2nd	1		C20			A23			C21			A24			C19			A22	
Week	2		C21	D		A24	E		C19	D		A22	E		C20	D		A23	E
	3		C19			A22			C20			A23			C21			A24	
3rd	1		C21			A24			C19			A22			C20			A23	
Week	2		C19	D		A22	E		C20	D		A23	E		C21	D		A24	E
	3		C20			A23			C21			A24			C19			A22	
4th	1		C19			A22			C20			A23			C21			A24	
Week	2		C20	D		A23	E		C21	D		A24	E		C19	D		A22	E
	3		C21			A24			C19			A22			C20			A23	
5th	1		C20			A23			C21			A24			C19			A22	
Week	2		C21	D		A24	E		C19	D		A22	E		C20	D		A23	E
	3		C19			A22			C20			A23			C21			A24	
6th	1		C21			A24			C19			A22			C20			A23	
Week	2		C19	D		A22	E		C20	D		A23	E		C21	D		A24	E
	3		C20			A23			C21			A24			C19			A22	

*Sequence of observation - controls only

TABLE 23
 DETAILS OF NURSE-PATIENT ASSIGNMENT
 (REPLICATION III)

		Monday			Tuesday			Wednesday			Thursday			Friday			Saturday		
		Exp	Con	Env	Exp	Con	Env	Exp	Con	Env	Exp	Con	Env	Exp	Con	Env	Exp	Con	Env
1st	1*	B25	E31		C28	D34		B25	E32		C28	D35		B25	E33		C28	D36	
Week	2	C26	E32	A	A29	D35	B	C26	E33	A	A29	D36	B	C26	E31	A	A29	D34	B
	3	D27	E33		E30	D36		D27	E31		E30	D34		D27	E32		E30	D35	
2nd	1		E32			D35			E33			D36			E31			D34	
Week	2		E33	A		D36	B		E31	A		D34	B		E32	A		D35	B
	3		E31			D34			E32			D35			E33			D36	
3rd	1		E33			D36			E31			D34			E32			D35	
Week	2		E31	A		D34	B		E32	A		D35	B		E33	A		D36	B
	3		E32			D35			E33			D36			E31			D34	
4th	1		E31			D34			E32			D35			E33			D36	
Week	2		E32	A		D35	B		E33	A		D36	B		E31	A		D34	B
	3		E33			D36			E31			D34			E32			D35	
5th	1		E32			D35			E33			D36			E31			D34	
Week	2		E33	A		D36	B		E31	A		D34	B		E32	A		D35	B
	3		E31			D34			E32			D35			E33			D36	
6th	1		E33			D36			E31			D34			E32			D35	
Week	2		E31	A		D34	B		E32	A		D35	B		E33	A		D36	B
	3		E32			D35			E33			D36			E31			D34	

*Sequence of observation - controls only

APPENDIX B

**Criteria for Matching Environments of
Experimental and Control Areas**

I. Patients

Total number

Sex: number of males; females

Race: number of Negro; white; other

Segregation: type and number

Diagnostic type: medical; surgical; other

Disability: blindness; other

Sex: male; female; mixed

Personality (social orientation)

Other

Mobility

Patients confined to bed: number

Patients out of bed: number

II. Physical Setting

Room capacity: number

Single rooms

Double rooms

Rooms for 3-6 patients

Rooms for 7 patients or more

Places of congregation: number

Recreational sections

Lounges

Halls (segments)

Dining room

Bathrooms

private

semiprivate (up to 3)

public

Others (O.T. shops, lounges, beauty shops, etc.)

Audiovisual and mass media communication

Radio: number and location

Private

Public

Television: number and location

Private

Public

Intercom system: present or absent

Magazines: number and type

Private

Public

Newspapers: number

Private

Public

III. Personnel: number

Chief nurse

Supervisors

Head nurses

Practical nurses

Aides or attendants

Special nurses

Sitters

Volunteers

Housekeeping aides

Other: visiting physician; residents; occupational therapist

IV. General Impressions and/or Atmosphere

(+ = good; 0 = average; - = unfavorable)

Odor

Order

Cleanliness

Lighting

Decorative Scheme

Personnel attitude toward patients

Personnel attitude toward observers

Personnel attitude toward one another

APPENDIX C

**Criteria for Matching Subjects in
Experimental and Control Groups**

I. Orientation

Orientated—not usually confused; may forget

Orientated—with periods of confusion

Disorientated—confused for long periods

Cannot or will not talk

II. Interactional Pattern

Initiates interaction indiscriminately

Interacts with others

Keeps to self but interacts with others

Refuses to interact

Cannot interact

III. Affect

Effusively friendly

Normal

Antagonistic—unfriendly

Apathetic, withdrawn, depressed, weepy

Belligerent

IV. Mode of Mobility

Walks without assistance

Walks with assistance

Mobile in wheel chair or walker

Immobile unless moved by others

V. Range of Mobility

Extremely mobile

Moderately mobile

Limitations: self-imposed; externally imposed

None

VI. Physical and Social Characteristics

Age
Sex
Race
Religion
Education
Occupation
Birthplace
Length of hospitalization
Marital status
Family members
Diagnosis

VII. Exclusion Categories*

Room capacity
Terminal state
Special nurses
Language difficulty
Impairment of sight, hearing, or voice

* One of the problems in the selection of the patients was the question of possible contamination between the members of the experimental and the control groups. The researchers tried to control for this within the limits of the institutional structure and of the number of patients available, by the selection of subjects for the two groups who had minimal or no contact with one another.

APPENDIX D

Reliability of Coding System

Details of the statistical analyses of the intercoder reliabilities of the nurse-patient interaction classification, discussed generally in Chapter V, are reported here. To effect the analyses summarized in the tables that follow, the coded data were arranged in a series of contingency tables representing responses in each category in the coding system, with one rater assigned to the columns and another to the rows. This procedure was followed for each combination of two coders, for each category, separately for each replication.

An illustration might be helpful in order to clarify what was done: Let us suppose that Coder A classified a particular interaction unit

		<i>Coder B</i>			
		Y	X	Z	n
<i>Coder A</i>	X	+			
	Y		+		
	Z			+	
		n			N

FIGURE 11. $r \times k$ Contingency Table

$r \times k$ contingency table in which the marked diagonal cells reflect intercoder agreements; n equals the marginal totals found by summing the frequencies in given rows or columns, and N equals the total frequency of tallies in the table. Multiplying the n 's for the X column and X row and dividing this product by N gives the chance frequency associated with the XX diagonal cell. Following this procedure with the appropriate n 's, chance frequencies can be estimated for the remaining diagonal cells (or for any other cells in the table).

within a given specific category, X, in the coding system.* Then, let us also suppose that Coder B classified the same interaction unit within the same coding category, X. In short, they agreed in coding that unit. Using a table like that shown in Figure 11, we would then enter a tally in the extreme upper left-hand corner cell, indicating that Coder A had classified the particular interaction unit as X (row X) and that Coder B had also done so (column X). If Coder A had classified the unit as X, and if Coder B had disagreed and classified it as Z, we would then enter a tally in the cell corresponding to row X, column Z, or the extreme upper right-hand corner cell.

Following this procedure, each contingency table is filled with tallies, and the frequency of agreement in coding for each coding category and for each pair of coders, summed across interaction units, then is given by the diagonal cells in the table; tallies in any other cells reflect disagreements. The simple sum of the diagonal frequencies yields the total frequency of agreement in the use of coding categories, convertible to percentage of agreement by dividing this frequency by the total number of tallies in the table.

Determining the frequency or percentage of agreement for a category, however, does not by itself assure us that this frequency might not have occurred by chance. The coding can be assumed to be reliable only if it can be shown that the obtained frequency of agreement is greater than could be expected to occur by chance. The best estimate of these chance frequencies is given by the means of the products of the marginal totals corresponding to each of the diagonal cells in the contingency table (see Figure 11). These were calculated, giving the expected (chance) frequencies associated with each diagonal cell, which, when summed and divided by the total frequency of tallies in the table, yielded the percentage of total agreement in the use of a coding category that might be expected on a chance basis, that is, following random coding.

Critical ratios were then computed to determine the significance of differences between observed and theoretical (chance) percentages of agreement for each code category separately, within each replication, and for each combination of coders. Inspection of the Tables 24, 25, and 26, reporting these data, shows that in no instance does the significance of the difference between observed and expected frequencies fall below the .01 level. In other words, the chances are uniformly less than 1 in 100 that differences as great or greater than those found could have arisen by chance. Indeed, most often, the odds favoring chance occurrence of the obtained differences are much poorer than 1 in 100.

* Actually, X would be a subcategory of a larger class. For example, X might be a *particular* kind of activity within an "activity" classification.

Last, it will be noted that in every instance the observed agreements are more frequent than the chance expectation (as they should be, of course) and that, if anything, agreement increases from the first to the third replication. Moreover, in only two instances do the observed percentages fall below 90 (88 and 89), and in almost all instances they are in excess of 95 per cent.

TABLE 24

EXPECTED AND OBSERVED PER CENT OF AGREEMENT AND CRITICAL RATIO FOR CODE CATEGORIES IN REPLICATION I, BASED ON 858 UNITS OF INTERACTION IN FOUR SESSIONS WITH TWO EXPERIMENTAL PATIENTS AND TWO CONTROL PATIENTS

Code Categories	Pairs of Coders								
	1 & 2			1 & 3			2 & 3		
	Ex	Ob	CR	Ex	Ob	CR	Ex	Ob	CR
Persons Involved	58	95	22.0	59	96	22.0	58	97	23.2
Interactional Relationships (Ptx)	36	96	36.6	36	96	36.6	35	97	38.0
Interactional Relationships (Nx)	38	98	36.1	38	97	35.5	38	97	35.5
Interactional Relationships (Pg)	79	98	13.7	79	98	13.7	79	99	14.8
Duration	95	99	5.4	96	99	5.7	95	99	5.4
Media	45	99	31.8	45	99	31.8	46	98	30.6
Stereotypy	53	99	27.1	52	98	26.9	52	98	26.9
Time	80	97	12.5	82	97	11.5	81	96	11.2
Mobility	48	97	28.6	48	96	28.1	48	95	27.5
Transfers, Requests, and Offers	74	98	16.0	74	98	16.0	74	97	15.3
Responses to Requests and Offers	84	98	11.2	85	97	9.8	85	98	10.7
Types of Involvement	37	96	35.8	38	95	34.3	37	96	35.8
Objects: Identification	36	96	36.6	35	96	37.4	36	97	37.2
Objects: Location	48	96	28.1	48	97	28.6	48	98	29.2
Objects: Distortion	50	96	26.9	50	97	27.5	50	98	28.1
Persons: Identification	75	96	14.2	74	97	15.3	75	96	14.2
Self: Actor: Identification	70	92	14.0	69	91	13.9	69	93	15.2
Self: Actor: Membership	96	99	4.5	95	98	4.0	96	99	4.5
Self: Recipient: Identification	86	96	8.5	86	96	8.5	86	96	8.5
Self: Recipient: Membership	95	99	5.4	96	98	4.5	95	99	5.4
Functions: Biosocial: Identification	29	88	38.1	29	89	38.7	28	92	41.8
Functions: Biosocial: Distortion	45	93	28.2	45	93	28.2	45	96	30.0

TABLE 24

EXPECTED AND OBSERVED PER CENT OF AGREEMENT AND CRITICAL RATIO FOR CODE CATEGORIES IN REPLICATION I, BASED ON 858 UNITS OF INTERACTION IN FOUR SESSIONS WITH TWO EXPERIMENTAL PATIENTS AND TWO CONTROL PATIENTS

(CONTINUED)

Code Categories	Pairs of Coders								
	1 & 2			1 & 3			2 & 3		
	Ex	Ob	CR	Ex	Ob	CR	Ex	Ob	CR
Functions: Psychological: Identification	93	96	3.4	91	97	6.2	93	97	4.6
Functions: Psychological: Distortion	93	96	3.4	92	97	5.4	93	97	4.6
Functions: Psychological: Performance	93	96	3.4	92	97	5.4	93	97	4.6
Functions: Cultural: Identification	79	98	13.7	79	96	12.2	79	97	13.0
Functions: Cultural: Membership	97	99	3.4	97	98	1.7	97	99	3.4
Functions: Cultural: Distortion	80	98	13.2	79	97	13.0	79	98	13.7
Functions: Cultural: Performance	79	97	13.0	79	96	12.2	79	97	13.0
Other Content	75	93	12.2	78	95	12.7	75	92	11.5
Affect	57	99	24.8	57	99	24.8	57	99	24.8
Behavioral Manifestations	89	99	9.7	89	99	9.4	90	99	9.5

TABLE 25

EXPECTED AND OBSERVED PER CENT OF AGREEMENT AND CRITICAL RATIO FOR CODE CATEGORIES IN REPLICATION II, BASED ON 858 UNITS OF INTERACTION IN FOUR SESSIONS WITH TWO EXPERIMENTAL PATIENTS AND TWO CONTROL PATIENTS

Code Categories	Pairs of Coders								
	1 & 2			1 & 3			2 & 3		
	Ex	Ob	CR	Ex	Ob	CR	Ex	Ob	CR
Persons Involved	73.0	99.0	19.7	73.0	99.0	19.7	73.0	99.0	19.7
Interactional Relationships (Ptx)	40.0	99.0	40.4	40.0	99.0	40.4	40.0	99.6	40.8
Interactional Relationships (Nx)	46.0	99.6	36.2	46.0	99.0	35.8	45.0	99.0	36.5
Interactional Relationships (Pg)	88.0	99.9	12.4	88.0	99.9	12.4	88.0	99.8	12.3
Duration	98.7	99.9	3.6	98.8	99.8	3.2	98.8	99.9	3.6
Media	62.0	99.8	26.2	62.0	100.0	26.4	62.0	99.8	26.2
Stereotypy	62.0	99.3	25.9	63.0	99.6	25.4	63.0	99.0	25.0
Time	80.0	96.0	13.4	80.0	96.0	13.4	82.0	97.0	13.2
Mobility	54.0	99.8	31.0	54.0	99.6	30.8	54.0	99.7	30.9
Transfers, Requests, & Offers	65.0	98.0	23.2	65.0	97.0	22.5	66.0	98.0	22.7
Responses to Requests & Offers	76.0	98.0	17.3	76.0	98.0	17.3	76.0	98.0	17.3
Types of Involvement	46.0	97.0	34.5	45.0	96.0	34.5	46.0	97.0	34.5
Objects: Identification	38.0	95.0	39.6	38.0	95.0	39.6	38.0	95.0	39.6
Objects: Location	50.0	97.0	31.5	50.0	96.0	30.9	49.0	97.0	31.5
Objects: Distortion	51.0	97.0	30.9	51.0	96.0	30.2	51.0	97.0	30.9
Persons: Identification	68.0	95.0	19.4	67.0	97.0	21.4	68.0	97.0	20.9
Self: Actor: Identification	70.0	93.0	16.9	72.0	94.0	16.5	72.0	94.0	16.5
Self: Actor: Membership	95.0	99.0	6.2	95.0	99.0	6.2	95.0	99.0	6.2
Self: Recipient: Identification	84.0	96.0	11.0	85.0	95.0	9.4	86.0	96.0	9.7

TABLE 25

EXPECTED AND OBSERVED PER CENT OF AGREEMENT AND CRITICAL RATIO FOR CODE CATEGORIES IN REPLICATION II, BASED ON 858 UNITS OF INTERACTION IN FOUR SESSIONS WITH TWO EXPERIMENTAL PATIENTS AND TWO CONTROL PATIENTS

(CONTINUED)

Code Categories	Pairs of Coders								
	1 & 2			1 & 3			2 & 3		
	Ex	Ob	CR	Ex	Ob	CR	Ex	Ob	CR
Self: Recipient: Membership	97.0	99.0	3.9	96.0	99.0	5.2	96.0	99.0	5.2
Functions: Biosocial: Identification	44.0	92.0	32.4	42.0	92.0	34.0	41.0	94.0	36.3
Functions: Biosocial: Distortion	51.0	93.0	28.2	51.0	93.0	28.2	50.0	95.0	30.2
Functions: Psychological: Identification	91.0	96.0	5.9	90.0	97.0	7.8	91.0	97.0	7.1
Functions: Psychological: Distortion	91.0	96.0	5.9	90.0	97.0	7.8	91.0	97.0	7.1
Functions: Psychological: Performance	91.0	96.0	5.9	90.0	97.0	7.8	91.0	97.0	7.1
Functions: Cultural: Identification	76.0	96.0	15.8	76.0	96.0	15.8	78.0	98.0	16.3
Functions: Cultural: Membership	96.0	99.0	5.2	95.0	99.0	6.2	96.0	99.0	5.2
Functions: Cultural: Distortion	78.0	97.0	15.4	78.0	97.0	15.4	79.0	98.0	15.7
Functions: Cultural: Performance	77.0	96.0	15.2	78.0	97.0	15.4	79.0	98.0	15.7
Other Content	66.0	95.0	20.6	67.0	96.0	20.7	67.0	95.0	20.0
Affect	68.0	99.0	22.3	68.0	99.6	22.7	68.0	99.6	22.7
Behavioral Manifestations	93.0	100.0	9.2	93.0	99.9	9.1	93.0	99.9	9.1

TABLE 26

EXPECTED AND OBSERVED PER CENT OF AGREEMENT AND CRITICAL RATIO FOR CODE CATEGORIES IN REPLICATION III, BASED ON 858 UNITS OF INTERACTION IN FOUR SESSIONS WITH TWO EXPERIMENTAL PATIENTS AND TWO CONTROL PATIENTS

Code Categories	Pairs of Coders								
	1 & 2			1 & 3			2 & 3		
	Ex	Ob	CR	Ex	Ob	CR	Ex	Ob	CR
Persons Involved	73	99.5	16.4	73	99.7	16.5	73	99.8	16.5
Interactional Relationships (Ptx)	42	99.4	31.7	41	99.5	32.5	41	99.8	32.7
Interactional Relationships (Nx)	41	99.0	32.2	41	99.0	32.2	41	99.5	32.5
Interactional Relationships (Pg)	100	100.0	.0	100	100.0	.0	100	100.0	.0
Duration	97	100.0	4.8	97	100.0	4.8	97	100.0	4.8
Media	55	99.0	22.9	55	99.0	22.9	55	99.7	23.3
Stereotypy	59	99.0	22.2	59	99.0	22.2	59	99.0	22.2
Time	60	95.0	19.6	62	93.0	17.4	64	95.0	17.6
Mobility	82	99.8	12.6	83	99.0	11.7	83	99.0	11.7
Transfers, Requests, & Offers	62	98.0	20.2	62	99.0	20.8	62	99.0	20.8
Responses to Requests & Offers	81	99.0	12.5	81	99.0	12.5	81	99.0	12.5
Types of Involvement	42	97.0	30.4	42	97.0	30.4	42	97.0	30.4
Objects: Identification	47	97.0	27.3	46	97.0	28.0	47	97.0	27.3
Objects: Location	52	97.0	24.6	51	96.0	24.6	52	96.0	24.0
Objects: Distortion	54	97.0	23.6	54	96.0	23.1	54	97.0	23.6
Persons: Identification	61	95.0	19.0	61	94.0	18.4	61	95.0	19.0
Self: Actors: Identification	75	95.0	12.7	74	95.0	13.0	75	96.0	13.0
Self: Actors: Membership	93	99.0	6.4	92	99.0	7.0	93	99.0	6.4
Self: Recipient: Identification	87	97.0	8.1	87	97.0	8.1	88	99.0	9.2

TABLE 26

EXPECTED AND OBSERVED PER CENT OF AGREEMENT AND CRITICAL RATIO FOR CODE CATEGORIES IN REPLICATION III, BASED ON 858 UNITS OF INTERACTION IN FOUR SESSIONS WITH TWO EXPERIMENTAL PATIENTS AND TWO CONTROL PATIENTS

(CONTINUED)

Code Categories	Pairs of Coders								
	1 & 2			1 & 3			2 & 3		
	Ex	Ob	CR	Ex	Ob	CR	Ex	Ob	CR
Self: Recipient: Membership	96	100.0	5.6	96	99.5	4.9	96	99.5	4.9
Functions: Biosocial: Identification	51	93.0	23.0	51	93.0	23.0	50	95.0	24.6
Functions: Biosocial: Distortion	56	93.0	20.3	56	93.0	20.3	55	96.0	21.4
Functions: Psychological: Identification	94	97.0	3.4	94	97.0	3.4	96	99.0	4.2
Functions: Psychological: Distortion	94	97.0	3.4	94	97.0	3.4	96	99.0	4.2
Functions: Psychological: Performance	94	97.0	3.4	94	97.0	3.4	96	99.0	4.2
Functions: Cultural: Identification	74	94.0	12.4	73	95.0	13.6	75	97.0	13.9
Functions: Cultural: Membership	88	97.0	7.6	87	97.0	8.1	88	98.0	8.4
Functions: Cultural: Distortion	75	95.0	12.7	75	96.0	13.3	76	97.0	13.4
Functions: Cultural: Performance	75	95.0	12.7	74	96.0	13.7	76	97.0	13.4
Other Content	58	92.0	18.8	56	93.0	20.3	58	93.0	19.3
Affect	64	99.0	19.9	64	98.0	19.3	65	98.0	18.9
Behavioral Manifestations	86	99.8	10.9	86	100.0	11.0	86	99.8	10.9

APPENDIX E

**Concurrent Validity of Experimental
Observations**

The tables that follow record the results of tests of agreement between participant and concurrent observers discussed in Chapter V. For these analyses certain of the individual code categories used in the research proper were combined. For instance, in the general coding system (see Appendix G) there are multiple classifications for *Objects*, *Objects: Location*, and *Objects: Distortion*. For purposes of analysis these were combined, since in any given unit of interaction, when an object was coded it was also coded for location and for distortion. Furthermore, as another illustration, under the general classification *Objects* the code format provides 16 categories of unrelated objects, for example, insects, pests, and rodents, food and drink, etc. It seemed reasonable to combine miscellaneous low-frequency categories under such a general classification to produce fewer and higher-frequency classes.

Similar procedures were followed for other multiple classification items in the system, *Self: Actor*, *Self: Recipient*, *Functions: Biosocial*, *Functions: Psychological*, and *Functions: Cultural*. In short, low-frequency subcategories were combined, when possible, to yield a smaller number of higher-frequency classes, and larger multiple classifications were collapsed upon their generic headings.

As direct unit-by-unit comparisons were not feasible (see Chapter V), it was decided that a useful, even if indirect, validity test could be made by assuming that, if paired observers were observing and/or recording the same things, their records, when unitized and coded, should yield about the same frequencies of units coded within the various categories in the system. In other words, there should be no differences between the two coders in the frequency with which categories were used in coding their records. Hence, our assessment of validity amounted to a test of the similarity of the frequency distributions of code category use between pairs of coders.

After each observer's records had been unitized and coded, frequencies were obtained for each code category. These frequencies between each set of paired participant and concurrent observations were then tested for agreement by chi-square. The results and conclusions of tests for concurrent validation are reported in Chapter V and in Tables 27 and 28. Cell entries in these tables are in the form of probability values corresponding to chi-square calculated for com-

parisons appropriate to each cell. Open cells represent comparison for which chi-square was not computed, because of insufficient frequencies (fewer than five). Notice might be taken of the fact that a cell entry of 1.00 indicates perfect agreement among observers.

TABLE 27

PROBABILITY VALUES FOR CHI-SQUARE TESTS OF CODED CONCURRENT OBSERVATIONS FOR THE EXPERIMENTAL GROUP

Code Category	Probability Values										
Persons Involved	<u>1.00</u>	.05	.30	---	.30	.05	<u>.80</u>	<u>1.00</u>	<u>.80</u>	---	
Interactional Relationships (Ptx)	.10	.30	<u>.50</u>	.20	.30	.05	.10	.10	<u>.90</u>	<u>.90</u>	
Interactional Relationships (Nx)	.02	<u>.90</u>	<u>.50</u>	.20	.20	.01	.10	.05	<u>.80</u>	.30	
Interactional Relationships (Pg)	<u>1.00</u>	<u>.50</u>	.20	---	---	---	<u>.90</u>	<u>1.00</u>	---	<u>1.00</u>	
Duration	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	---	---	---	---	---	---	
Media	.30	.30	.10	.05	.30	.05	<u>.99</u>	.10	.02	<u>.95</u>	
Stereotypy	<u>.80</u>	<u>.50</u>	.05	.30	<u>.80</u>	.05	<u>.50</u>	<u>.70</u>	.30	.30	
Time	---	.30	---	<u>.50</u>	<u>.90</u>	<u>.70</u>	.20	<u>.70</u>	<u>.95</u>	.90	
Mobility	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	.30	<u>1.00</u>	<u>1.00</u>	<u>.50</u>	<u>1.00</u>	
Transfers, Requests, & Offers	---	<u>.95</u>	---	<u>.90</u>	<u>.80</u>	.20	<u>.90</u>	<u>.90</u>	<u>.50</u>	.30	
Responses to Requests & Offers	---	<u>.80</u>	---	<u>.99</u>	.30	.10	<u>.50</u>	<u>.99</u>	.10	<u>.50</u>	
Types of Involvement	<u>.90</u>	<u>.50</u>	.02	.20	.30	.30	.05	.30	<u>.50</u>	<u>.80</u>	
Objects	.20	.30	<u>.50</u>	<u>.80</u>	.30	.30	<u>.80</u>	<u>.80</u>	<u>.90</u>	<u>.70</u>	
Persons	---	.30	---	<u>.80</u>	.20	.30	.30	<u>.95</u>	.05	<u>.70</u>	
Self: Actor	---	.001	---	<u>.50</u>	.02	.01	<u>.80</u>	.001	<u>.70</u>	<u>.50</u>	
Self: Recipient	---	---	---	.02	.001	---	.001	.001	.001	.001	
Biosocial Functions	<u>.50</u>	.02	.02	<u>.70</u>	.02	<u>.50</u>	<u>.70</u>	.30	<u>.70</u>	<u>.70</u>	
Psychological Functions	.001	---	.001	.05	<u>.80</u>	.001	.001	<u>.70</u>	.001	<u>.50</u>	
Cultural Functions	---	.001	---	.10	<u>.50</u>	<u>.80</u>	<u>.80</u>	<u>.50</u>	<u>.50</u>	.30	
Other Content	---	<u>.50</u>	---	<u>.50</u>	<u>.99</u>	.30	<u>.50</u>	<u>.80</u>	<u>.95</u>	<u>.80</u>	
Affect	<u>.50</u>	<u>.70</u>	.05	.10	<u>.95</u>	---	.20	.30	.10	.30	
Behavioral Manifestations	---	---	---	.02	<u>.50</u>	---	.01	<u>.70</u>	---	.001	

Note: Underlined figures are p-value of .50 or greater. P-values are based upon df ranging from 1 to 3. For explanation of open cells, see text.

TABLE 28

PROBABILITY VALUES FOR CHI-SQUARE TESTS OF CODED CONCURRENT
OBSERVATIONS FOR THE CONTROL GROUP

Code Categories	Probability Values							
Persons Involved	<u>.50</u>	---	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>.70</u>	<u>.80</u>	<u>1.00</u>
Interactional Relationships (Ptx)	<u>.05</u>	<u>.95</u>	<u>.90</u>	<u>.50</u>	<u>.10</u>	<u>.50</u>	<u>.30</u>	<u>.70</u>
Interactional Relationships (Nx)	<u>.99</u>	---	<u>.99</u>	<u>1.00</u>	<u>1.00</u>	<u>.70</u>	<u>.80</u>	<u>1.00</u>
Interactional Relationships (Pg)	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>
Duration	---	---	<u>1.00</u>	---	---	---	---	<u>1.00</u>
Media	<u>.99</u>	<u>.50</u>	<u>.90</u>	<u>.70</u>	<u>.70</u>	<u>.30</u>	<u>.30</u>	<u>.30</u>
Stereotypy	<u>.05</u>	---	<u>.50</u>	<u>.70</u>	<u>.70</u>	<u>.70</u>	<u>.02</u>	<u>.20</u>
Time	---	---	---	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>
Mobility	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	---	<u>1.00</u>
Transfers, Requests & Offers	---	---	---	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	---	<u>1.00</u>
Responses to Requests & Offers	<u>1.00</u>	---	---	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	---	<u>1.00</u>
Types of Involvement	<u>.99</u>	<u>.50</u>	<u>.50</u>	<u>.70</u>	<u>.70</u>	<u>.30</u>	<u>.80</u>	<u>.30</u>
Objects	<u>.90</u>	<u>.30</u>	<u>.20</u>	<u>.80</u>	<u>.20</u>	<u>.30</u>	<u>.30</u>	<u>.50</u>
Persons	---	<u>.70</u>	<u>.30</u>	---	<u>.50</u>	<u>.50</u>	<u>.20</u>	---
Self: Actor	<u>1.00</u>	---	<u>.20</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>
Self: Recipient	---	---	<u>.30</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>
Biosocial Functions	<u>.50</u>	<u>.50</u>	<u>.30</u>	<u>.50</u>	<u>.80</u>	<u>.95</u>	<u>.80</u>	<u>.50</u>
Psychological Functions	<u>1.00</u>	---	<u>.10</u>	<u>1.00</u>	<u>1.00</u>	---	<u>1.00</u>	<u>1.00</u>
Cultural Functions	<u>1.00</u>	<u>.30</u>	<u>.05</u>	<u>1.00</u>	<u>.30</u>	<u>.30</u>	<u>.05</u>	<u>1.00</u>
Other Content	<u>.02</u>	<u>.50</u>	<u>.50</u>	<u>.80</u>	<u>.70</u>	---	<u>.99</u>	---
Affect	<u>.05</u>	---	<u>.50</u>	<u>.70</u>	<u>.70</u>	<u>.95</u>	<u>.05</u>	<u>.20</u>
Behavioral Manifestations	<u>1.00</u>	---	---	<u>1.00</u>	---	---	---	<u>1.00</u>

Note: Underlined figures are p -values of .50 or greater. p -values are based upon df ranging from 1 to 4. For explanation of open cells, see text.

In order to facilitate interpretation of the data set forth in Tables 27 and 28, the obtained cumulative per cent distributions of chi-square for the experimental and for the control conditions were plotted along with the theoretical chi-square distribution for one degree of freedom. Comparison for the resulting curves suggests a higher proportion of low chi-square values in the control condition than would be expected on the assumption that random error would produce variations in observations among observers that would yield a distribution of chi-square values corresponding to the theoretical chi-square distribution. The converse of this appears to be true of comparisons for the experimental condition, at least in part (but see Chapter V).

Finally, Table 29 reports an analysis of agreement between two observers, both of whom made their recordings from memory (see Chapter V).

TABLE 29

PROBABILITY VALUES FOR CHI-SQUARE TESTS OF CODED CONCURRENT OBSERVATIONS WHEN BOTH OBSERVATIONS WERE RECORDED FROM MEMORY

Code Category	Probability Values
Persons Involved	---
Interactional Relationships (Pt _x)	<u>.70</u>
Interactional Relationships (Nx)	<u>.90</u>
Interactional Relationships (Pg)	<u>1.00</u>
Duration	<u>1.00</u>
Media	<u>.98</u>
Stereotypy	<u>.70</u>
Time	---
Mobility	<u>1.00</u>
Transfers, Requests, and Offers	---
Responses to Requests and Offers	---
Types of Involvement	<u>.50</u>
Objects	<u>.95</u>
Persons	---
Self: Actor	.30
Self: Recipient	---
Biosocial Functions	<u>.70</u>
Psychological Functions	.30
Cultural Functions	.30
Other Content	---
Affect	<u>.50</u>
Behavioral Manifestations	---

Note: Underlined figures are p-values of .50 or greater. p-values are based upon df equal to 1 or 2. For explanation of open cells, see text.

APPENDIX F

Experimental Findings: Supplementary Tables of Data

TABLE 30

MEAN PERCENTAGES OF TOTAL INTERACTION UNITS DURING
WHICH PATIENTS WERE PRESENT BUT NOT INVOLVED

Conditions	Sessions									
	01	03	05	08	10	12	13	17	18	Total
<u>Experimental</u>										
Rep. I	3.5	6.6	5.6	5.6	7.4	6.6	10.4	8.9	6.2	6.7
Rep. II	8.6	3.1	3.8	2.8	4.1	4.0	2.6	4.3	2.3	3.9
Rep. III	2.4	1.6	2.0	3.3	0.7	2.0	1.6	3.1	1.2	2.0
<u>Session by Treatment</u>	4.8	3.8	3.8	3.9	4.0	4.2	4.9	5.4	3.2	4.2

TABLE 31

MEAN PERCENTAGES OF TOTAL INTERACTION UNITS IN WHICH
PATIENTS EXHIBITED RESPONSE FAILURE

Conditions	Sessions									
	01	03	05	08	10	12	13	17	18	Total
<u>Experimental</u>										
Rep. I	0.1	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.03	0.2
Rep. II	0.3	0.2	0.1	0.4	0.5	0.4	0.4	0.3	0.3	0.3
Rep. III	0.2	0.05	---	0.2	0.5	0.2	0.2	0.3	0.3	0.2
<u>Session by Treatment</u>	0.2	0.2	0.1	0.2	0.4	0.3	0.3	0.3	0.2	0.2
<u>Control</u>										
Rep. I	0.3	---	1.1	0.6	---	---	0.9	0.3	---	0.4
Rep. II	0.8	0.7	0.9	0.5	1.5	0.4	---	0.3	1.6	0.7
Rep. III	---	0.3	---	0.2	---	0.6	0.4	---	---	0.2
<u>Session by Treatment</u>	0.4	0.3	0.6	0.4	0.5	0.3	0.4	0.2	0.5	0.4
<u>Session</u>	0.3	0.3	0.4	0.3	0.4	0.3	0.4	0.2	0.4	0.3

TABLE 32
ANALYSIS OF VARIANCE OF MEAN PERCENTAGES OF INTERACTION
UNITS CODED "INVOLVED, TEMPORARY INACTION"

Source	d.f.	M.S.	F	p
Main Plots:				
Replication	02	2,691.173	18.624	.0005 > p
Session	08	80.244		
R x S	16	128.392		
e ₁ Pairs Within	135	144.496		
Sub Plots:				
Treatment	01	53,409.778	306.563	.0005 > p
R x T	02	483.079	2.772	.10 > p > .05
S x T	08	41.678		
T x S x R	32	40.650		
e ₂ Error	119	174.221		

TABLE 33
ANALYSIS OF VARIANCE OF INTERACTION UNITS CODED
"ACTIVE PARTICIPATION"

Source	d.f.	M.S.	F	p
Main Plots:				
Replication	02	571.752	2.373	.10 > p > .05
Session	08	62.048		
R x S	16	95.895		
e ₁ Pairs Within	135	240.877		
Sub Plots:				
Treatment	01	81,738.809	285.027	.0005 > p
R x T	02	2,449.193	8.540	.0005 > p
S x T	08	67.780		
T x S x R	32	36.250		
e ₂ Error	119	286.775		

TABLE 34

MEAN PERCENTAGES OF TOTAL INTERACTION UNITS INVOLVING
EXPERIMENTAL PATIENT AND NURSING PERSONNEL OR CONTROL
PATIENT AND NURSING PERSONNEL
(OTHER THAN EXPERIMENTAL NURSE)

Conditions	Sessions									Total
	01	03	05	08	10	12	13	17	18	
<u>Experimental</u>										
Rep. I	1.6	4.9	3.4	5.7	5.1	5.0	2.8	4.2	1.6	3.7
Rep. II	2.6	2.1	2.2	1.7	2.9	2.8	1.8	2.9	2.8	2.4
Rep. III	2.1	0.8	0.3	0.5	0.8	0.6	0.2	1.4	0.6	0.8
<u>Session by Treatment</u>	2.1	2.6	2.0	2.6	2.9	2.8	1.6	2.8	1.7	2.3
<u>Control</u>										
Rep. I	21.7	13.6	20.1	10.4	0.7	6.0	14.8	17.4	13.4	13.1
Rep. II	11.7	23.0	17.9	12.5	19.1	35.6	4.3	17.4	18.4	17.7
Rep. III	4.3	8.5	---	7.1	2.8	---	1.9	6.5	---	3.4
<u>Session by Treatment</u>	12.6	15.1	12.7	10.0	7.5	13.8	7.0	13.8	10.6	11.4
<u>Session</u>	7.4	8.8	7.3	6.3	5.2	8.3	4.3	8.3	6.1	6.9

TABLE 35

MEAN PERCENTAGES OF TOTAL INTERACTION UNITS
INVOLVING PATIENT AND OTHER PATIENTS

Conditions	Sessions									Total
	01	03	05	08	10	12	13	17	18	
<u>Experimental</u>										
Rep. I	2.6	10.1	2.2	1.8	4.5	1.8	4.3	2.6	2.4	3.6
Rep. II	0.3	0.2	0.3	0.3	0.5	0.9	1.0	1.2	1.1	0.6
Rep. III	0.1	0.3	0.2	0.6	0.7	1.0	1.3	0.5	0.4	0.5
<u>Session by Treatment</u>	1.0	3.5	0.9	0.9	1.9	1.2	2.2	1.4	1.3	1.6
<u>Control</u>										
Rep. I	14.4	7.8	10.2	13.0	19.9	4.8	7.6	11.6	11.0	11.2
Rep. II	24.0	14.3	19.6	26.0	21.6	14.2	17.7	8.5	23.2	18.8
Rep. III	3.7	15.6	3.1	11.1	18.2	29.2	13.1	18.7	4.2	13.0
<u>Session by Treatment</u>	14.1	12.6	11.0	16.7	19.9	16.0	12.8	12.9	12.8	14.3
<u>Session</u>	7.5	8.0	5.9	8.8	10.9	8.6	7.5	7.2	7.0	7.9

TABLE 36

MEAN PERCENTAGES OF TOTAL INTERACTION UNITS INVOLVING PATIENT AND PERSONS OTHER THAN EXPERIMENTAL NURSE, GENERAL NURSING PERSONNEL, OR OTHER PATIENTS

Conditions	Sessions									
	01	03	05	08	10	12	13	17	18	Total
Experimental										
Rep. I	0.2	0.2	0.8	0.8	1.4	0.05	0.8	2.7	0.8	0.9
Rep. II	0.8	0.2	0.9	1.2	0.2	2.6	0.2	2.3	0.8	1.0
Rep. III	0.2	0.05	1.0	0.05	1.3	0.5	---	1.7	0.1	0.5
Session by Treatment	0.4	0.1	0.9	0.7	1.0	1.0	0.3	2.2	0.6	0.8
Control										
Rep. I	9.8	1.3	0.9	13.4	2.5	28.7	8.4	9.6	18.1	10.3
Rep. II	14.5	5.3	9.3	14.6	15.4	0.9	15.0	12.5	15.6	11.5
Rep. III	4.9	3.7	14.6	---	---	3.8	9.2	5.3	0.8	4.7
Session by Treatment	9.7	3.4	8.3	9.3	6.0	11.1	10.9	9.1	11.5	8.8
Session	5.1	1.8	4.6	5.0	3.5	6.1	5.6	5.7	6.0	4.8

TABLE 37

MEAN PERCENTAGES OF TOTAL INTERACTION UNITS INVOLVING EXPERIMENTAL PATIENTS, EXPERIMENTAL NURSE, AND OTHERS OR CONTROL PATIENTS, NURSING PERSONNEL, AND OTHERS

Conditions	Sessions									
	01	03	05	08	10	12	13	17	18	Total
Experimental										
Rep. I	0.7	3.7	1.1	2.5	1.6	3.3	1.2	2.0	1.1	1.9
Rep. II	1.0	0.5	1.3	0.6	0.2	0.7	0.4	1.0	1.1	0.7
Rep. III	0.1	0.4	0.1	0.4	0.3	0.4	0.3	1.0	0.2	0.4
Session by Treatment	0.6	1.6	0.8	1.2	0.7	1.4	0.6	1.3	0.8	1.0
Control										
Rep. I	1.2	0.7	2.3	4.9	---	---	0.3	0.8	---	1.1
Rep. II	---	2.2	---	0.2	0.4	---	---	1.0	---	0.4
Rep. III	---	---	---	---	---	---	---	---	---	---
Session by Treatment	0.4	1.0	0.8	1.7	0.1	---	0.1	0.6	---	0.5
Session	0.5	1.3	0.8	1.4	0.4	0.7	0.4	1.0	0.4	0.8

TABLE 38

MEAN PERCENTAGES OF TOTAL INTERACTION UNITS INVOLVING
EXPERIMENTAL PATIENTS, NURSING PERSONNEL (EXCLUDING
EXPERIMENTAL NURSE), AND OTHERS OR CONTROL PATIENTS,
NURSING PERSONNEL, AND OTHERS

Conditions	Sessions									Total
	01	03	05	08	10	12	13	17	18	
<u>Experimental</u>										
Rep. I	---	0.2	0.05	---	0.1	0.1	---	---	---	.05
Rep. II	---	---	---	---	---	---	---	---	---	---
Rep. III	---	---	---	---	---	---	---	---	---	---
<u>Session by Treatment</u>	---	0.1	0.01	---	0.02	0.02	---	---	---	.01
<u>Control</u>										
Rep. I	1.2	0.7	2.3	4.9	---	---	0.3	0.8	---	1.1
Rep. II	---	2.2	---	0.2	0.4	---	---	1.0	---	0.4
Rep. III	---	---	---	---	---	---	---	---	---	---
<u>Session by Treatment</u>	0.4	1.0	0.8	1.7	0.1	---	0.1	0.6	---	0.5
<u>Session</u>	0.2	0.5	0.4	0.8	0.1	0.01	0.05	0.3	---	0.3

TABLE 39

MEAN PERCENTAGES OF TOTAL INTERACTION UNITS INVOLVING
EXPERIMENTAL NURSE OR NURSING PERSONNEL AND OTHERS
(NOT INCLUDING EXPERIMENTAL OR CONTROL PATIENTS)

Conditions	Sessions									Total
	01	03	05	08	10	12	13	17	18	
<u>Experimental</u>										
Rep. I	5.5	8.5	5.8	6.6	7.9	7.7	11.0	9.7	8.1	7.9
Rep. II	10.0	3.9	4.7	3.3	5.5	6.6	4.0	4.4	3.4	5.1
Rep. III	2.3	2.1	3.0	4.6	1.3	4.6	3.6	3.2	2.6	3.0
<u>Session by Treatment</u>	6.0	4.8	4.5	4.8	4.9	6.3	6.2	5.8	4.7	5.3
<u>Control</u>										
Rep. I	3.0	---	5.6	2.0	---	---	6.2	---	3.3	2.2
Rep. II	---	---	---	0.5	0.4	1.3	---	---	---	0.2
Rep. III	---	0.6	---	---	---	---	---	---	---	0.1
<u>Session by Treatment</u>	1.0	0.2	1.8	0.8	0.1	0.4	2.0	---	1.1	0.8
<u>Session</u>	3.5	2.5	3.2	2.8	2.5	3.4	4.1	2.9	2.9	3.1

TABLE 40
MEAN PERCENTAGES OF TOTAL INTERACTION UNITS INVOLVING
EXPERIMENTAL NURSE ALONE OR PERSONNEL ALONE

Conditions	Sessions									
	01	03	05	08	10	12	13	17	18	Total
<u>Experimental</u>										
Rep. I	0.2	0.6	1.2	0.7	1.0	0.5	0.8	1.2	1.4	0.8
Rep. II	0.6	0.5	0.2	0.2	0.4	0.8	0.4	0.5	0.5	0.4
Rep. III	0.4	1.4	1.5	1.8	0.3	0.3	1.1	1.2	3.4	1.3
<u>Session by Treatment</u>	0.4	0.8	1.0	0.9	0.6	0.5	0.8	1.0	1.8	0.8
<u>Control</u>										
Rep. I	---	---	1.5	---	---	0.6	---	---	---	0.2
Rep. II	---	---	---	---	---	0.8	---	---	---	0.1
Rep. III	---	---	---	---	---	---	---	---	---	---
<u>Session by Treatment</u>	---	---	0.5	---	---	0.5	---	---	---	0.1
<u>Session</u>	0.2	0.4	0.7	0.5	0.3	0.5	0.4	0.5	0.9	0.5

TABLE 41
ANALYSIS OF VARIANCE OF INTERACTION UNITS CODED
"ACTIVE PARTICIPATION" WHEN EXPERIMENTAL NURSE
AND/OR NURSING PERSONNEL WERE PRESENT WITH
EXPERIMENTAL AND/OR CONTROL PATIENTS

Source	d.f.	M.S.	F	P
<u>Main Plots:</u>				
Replication	02	692.416	1.930	.30 > p > .10
Session	08	481.608	1.342	.30 > p > .10
R x S	16	279.693		
e ₁ Pairs Within	135	358.786		
<u>Sub Plots:</u>				
Treatments	01	115,256.478	315.712	.0005 > p
R x T	02	2,977.356	8.156	.001 > p > .0005
S x T	08	265.297		
T x S x R	32	174.035		
e ₂ Error	119	365.068		

TABLE 42
ANALYSIS OF VARIANCE OF NONVERBAL FUNCTIONS AND
COMMUNICATION

Source	d.f.	M.S.	F	<u>p</u>
<u>Main Plots:</u>				
Replication	02	852.396	3.536	.05 > p > .025
Session	08	319.625	1.326	.30 > p > .10
R x S	16	192.349		
e ₁ Pairs Within	135	241.041		
<u>Sub Plots:</u>				
Treatments	01	4,534.526	16.051	.0005 > p
R x T	02	394.268	1.396	.30 > p > .10
S x T	08	241.744		
T x S x R	32	104.513		
e ₂ Error	119	282.502		

TABLE 43
ANALYSIS OF VARIANCE OF VERBAL COMMUNICATION

Source	d.f.	M.S.	F	<u>p</u>
<u>Main Plots:</u>				
Replication	02	1,463.661	1.82	.30 > p > .10
Session	08	308.840		
R x S	16	263.501		
e ₁ Pairs Within	135	805.068		
<u>Sub Plots:</u>				
Treatments	01	29,231.501	3.13	.10 > p > .05
R x T	02	468.695		
S x T	08	375.850		
T x S x R	32	218.590		
e ₂ Error	119	9,343.452		

APPENDIX G

**Manual for Classification of
Nurse-Patient Interaction**

CONTENTS

APPROACH TO CLASSIFICATION OF NURSE-PATIENT INTERACTION . . .	153
Readiness to Interact	153
Interchange of Resources	153
Control of Resources in Interaction	154
Distortion	154
CODE DIMENSIONS AND SUBCLASSES	155
GENERAL INFORMATION IN REGARD TO CLASSIFICATION OF NURSE-PATIENT INTERACTION	162
Unit Code Form and General Procedure	162
Unitization	162
OVERVIEW FOR DIMENSIONS OF NURSE-PATIENT INTERACTION CLASSIFICATION	162
Identifying Information	162
Sequence	163
Persons Involved	163
Interactional Relationships	164
Duration	164
Media	164
Degrees of Stereotypy	164
Time	164
Mobility	164
Transfers, Requests and Offers	164
Responses to Requests and Offers	164
Types of Involvement	164
Objects: Identification	164
Objects: Location	164
Objects: Distortion	164
Persons: Identification	164
Self: Actor: Identification	164
Self: Actor: Membership	164
Self: Recipient: Identification	165
Self: Recipient: Membership	165
Biosocial Functions: Identification	165
Biosocial Functions: Distortion	165
Psychological Functions: Identification	165

CONTENTS
(continued)

Psychological Functions: Distortion	165
Psychological Functions: Performance	165
Cultural Functions: Identification	165
Cultural Functions: Membership	165
Cultural Functions: Distortion	165
Cultural Functions: Performance	165
Other Content	165
Affect	165
Behavioral Manifestations	165
DIMENSION OF PERSONS INVOLVED—COLUMN 19	166
DIMENSION OF INTERACTIONAL RELATIONSHIPS—COLUMNS 20, 21, AND 22	167
DIMENSION OF DURATION—COLUMN 23	169
DIMENSION OF MEDIA—COLUMN 24	169
DIMENSION OF DEGREES OF STEREOTYPY—COLUMN 25	171
DIMENSION OF TIME—COLUMN 26	172
DIMENSION OF MOBILITY—COLUMN 27	173
DIMENSION OF TRANSFERS, REQUESTS, AND OFFERS— COLUMN 28	174
DIMENSION OF RESPONSES TO REQUESTS AND OFFERS— COLUMN 29	175
DIMENSION OF TYPES OF INVOLVEMENT—COLUMN 30	177
DIMENSION OF OBJECTS: IDENTIFICATION—COLUMNS 31-32	179
DIMENSION OF OBJECTS: LOCATION—COLUMN 33	182
DIMENSION OF OBJECTS: DISTORTION—COLUMN 34	182
DIMENSION OF PERSONS: IDENTIFICATION—COLUMNS 35-36	182
DIMENSION OF SELF: IDENTIFICATION—COLUMNS 37-38 AND 40-41	184
DIMENSION OF SELF: MEMBERSHIP—COLUMNS 39 AND 42	188
DIMENSION OF BIOSOCIAL FUNCTIONS: IDENTIFICATION— COLUMNS 43-44	189
DIMENSION OF BIOSOCIAL FUNCTIONS: DISTORTION—COLUMN 45	192

CONTENTS
(continued)

DIMENSION OF PSYCHOLOGICAL FUNCTIONS: IDENTIFICATION— COLUMN 46	193
DIMENSION OF PSYCHOLOGICAL FUNCTIONS: DISTORTION— COLUMN 47	194
DIMENSION OF PSYCHOLOGICAL FUNCTIONS: PERFORMANCE— COLUMN 48	195
DIMENSION OF CULTURAL FUNCTIONS: IDENTIFICATION— COLUMNS 49-50	195
DIMENSION OF CULTURAL FUNCTIONS: MEMBERSHIP— COLUMN 51	197
DIMENSION OF CULTURAL FUNCTIONS: DISTORTION— COLUMN 52	197
DIMENSION OF CULTURAL FUNCTIONS: PERFORMANCE— COLUMN 53	198
DIMENSION OF OTHER CONTENT—COLUMNS 54-55	198
DIMENSION OF AFFECT—COLUMN 56	202
DIMENSION OF BEHAVIORAL MANIFESTATIONS—COLUMNS 57-58 ..	203

APPROACH TO CLASSIFICATION OF NURSE-PATIENT INTERACTION

The observations dictated by the nurse-observer are divided into units of interaction, and each unit is assigned a set of code numbers reflecting those characteristics of the unit that are significant for study.

With respect to the patients, the significant characteristics are those considered to be manifestations of psychosocial change. With respect to the nurses and hospital personnel, the significant characteristics are those reflecting stimulation (or inhibition or reversal) of the process of psychosocial change. The code categories are not considered to be exhaustive.

In general, the code reflects manifestations of:

- (1) readiness to interact;
- (2) interchange of resources in interaction;
- (3) control of resources in interaction; and
- (4) distortion of resources in interaction.

Readiness to Interact. While the individual's readiness to enter into interaction is not directly observable as such, many manifestations of it can be seen.

The following manifestations appear to be codible and to include phenomena that may also reflect the inhibition or reversal of such readiness to interact:

- (1) persons involved;
- (2) role with respect to others;
- (3) verbalization;
- (4) stereotypy;
- (5) mobility; and
- (6) frequency and duration. (Duration in minutes was coded to control for variations in length of time over which a unit of interaction continued.)

Interchange of Resources. Interaction varies with respect to the resources involved in the process and to the content of the interaction. The significant resources of a social system (see Chapters I and II of text) appear in the code as separate dimensions. A given unit of interaction may bring different combinations of these resources into focus. The code also provides for identifying the subclasses of resources involved in each unit of interaction.

Another manifestation of psychosocial change is reflected in the integration of the individual components into the interchange arrangements of the social system. Psychosocial development within a social system involves the interchange of resources within the system. By definition, the lowest level of interchange involves the *request* for control of the object; next, the *offer* to share the object; and, finally, the actual *transfer* of the object. Any unit of interaction may be cate-

gorized as involving a request, offer, or transfer.

Responses to requests and offers also indicate the integration of the person into the interchange arrangements of the system. For this study such responses are coded separately as: *no response*, *refusal*, *noncommittal response*, *postponement*, and *positive response*.

Control of Resources in Interaction. The following are steps in establishing the capacity for some form of control over the resources in a social system:

- (1) perception;
- (2) employment;
- (3) information; and
- (4) suggestion and/or direction.

With respect to *perception*, the interaction may involve simply the awareness (perception) of the existence of an object, or a person, or a function, without any functional use or employment of the object, person, or function. With respect to *employment*, the interaction may involve the employment of the object itself in its normal function, without apparent recognition of, identification of, or information about the object or function, as when an injection is administered without comment to or from the persons involved. With respect to *information*, the interaction may involve acquiring information about the object, person, or function. Such information includes clarification, repetition, confirmation, and orientation. With respect to *suggestion or direction*, the object, person, or function may be involved in the interaction because somebody has given a suggestion or a direction concerning such object, person, or function. The giving of suggestion or direction is conceived as reflecting the final degree of control by taking some initiative to govern or regulate the same aspect of the social system.

For purposes of identifying areas characterizing nursing care, three classifications of functions were developed. Functions were seen as having biosocial, psychological, and cultural aspects.

Distortion. The objects and/or functions involved in an interaction may be distorted in terms of their usual forms or employments. For example, some activities are pursued without recognition or use of their usual functions. Such nonfunctional activities are seen when a patient stares out of a window for hours, when another person talks endlessly without being attended to, or when repetitive stereotyped activities are followed without apparent purpose. These nonfunctional activities are identified by a special code category.

In general, the conceptual model indicates that psychosocial development, as opposed to psychosocial atrophy, will be associated with increased readiness to interact, increased interchange of resources in interaction, increased control of resources in interaction, and decreased distortion.

CODE DIMENSIONS AND SUBCLASSES

COLUMN

- 1-15. *Identifying Information*
- 16-18. *Sequence*
19. *Persons Involved*
1. Pt alone (Ptx)
 2. Ptx and Nx
 3. Ptx and Pg
 4. Ptx and other Pt
 5. Ptx and others (not Nx, Pg, or other Pt)
 6. Ptx, Nx, and others
 7. Ptx, Pg and others (not Nx)
 8. Ptx, other Ptx, and others (not Nx or Pg)
 9. Nx and others (not Ptx)
 0. Nurse alone
 - Y. NEC
20. *Interactional Relationship (Ptx)*
1. Present but not involved
 2. Observation
 3. Excluded nonparticipation
 4. Response failure
 5. Involved temporary inaction
 6. Participation (active)
 7. Exclusion of others
 - Y. Not present or not applicable
21. *Interactional Relationship (Nx)*
1. —
 2. Observation
 3. Excluded nonparticipation
 4. Response failure
 5. Involved temporary inaction
 6. Participation (active)
 7. Exclusion of others
 - Y. Not applicable
22. *Interactional Relationship (Pg)*
1. —
 2. Observation
 3. Excluded nonparticipation
 4. Response failure
 5. Involved temporary inaction
 6. Participation (active)
 7. Exclusion of others
 - Y. Not applicable
23. *Duration*
1. Not extended (less than 1')

- 2. Extended (1 to 10')
- 3. Extended (over 10')
- 24. *Media*
 - 1. Verbal communication only
 - 2. Nonverbal functions only
 - 3. Gestures and bodily movements and expressions only
 - 4. Both 1 and 3
 - 5. Silence or pause (includes staring or watching)
 - Y. Response failure
- 25. *Degrees of Stereotypy*
 - 1. Stereotypic
 - 2. Jokes and sayings
 - 3. Wishes
 - 4. Probability
 - 5. Conditional reference
 - 6. Comparisons
 - 7. Other nonstereotypic
 - Y. For activities and not applicable
- 26. *Time*
 - 1. Past—indeterminate
 - 2. Past—outside hospital
 - 3. Past—inside hospital
 - 4. Future
 - Y. For activities
 - Y. For present
- 27. *Mobility (Ptx)*
 - 1. Lying in bed
 - 2. Sitting on chair, wheel chair, bed (dangling feet), or other chair substitute
 - 3. Standing, not moving
 - 4. Moving in wheel chair
 - 5. Walking with help
 - 6. Walking without help
 - Y. Not applicable
- 28. *Transfers, Requests, Offers*
 - 1. Noncommittal transfer
 - 2. Transfer
 - 3. Request
 - 4. Offer
 - Y. Not applicable
- 29. *Response to Requests and Offers*
 - 1. No response to request
 - 2. Refusal of request
 - 3. Noncommittal response to request
 - 4. Postponement of request
 - 5. Positive response to request

6. No response to offer
 7. Refusal of offer
 8. Noncommittal response to offer
 9. Postponement of offer
 0. Positive response to offer
 - Y. Not applicable
30. *Types of Involvement*
1. Perception only
 2. Employment
 3. Distorted information
 4. Information about . . .
 5. Suggestion or direction for . . .
 - Y. Not applicable.
- 31-32. *Objects: Identification*
1. Human and material waste products
 2. Insects, pests, and rodents
 3. Food and drink
 4. Service items
 5. Hospital furnishings
 6. Clothing
 7. Personal items
 8. Money and money equivalents
 9. Gifts
 10. Correspondence and cards
 11. Hospital communications
 12. Recreational and diversional objects
 13. Mass-communication objects
 14. Home furnishings and structure
 15. Other naturally occurring phenomena
 16. Other man-made
 - Y. Not applicable
33. *Objects: Location*
1. Inside hospital
 2. Outside hospital
 - Y. Not applicable
34. *Objects: Distortion*
1. Not distorted or functional
 2. Distorted or nonfunctional
 - Y. Not applicable
- 35-36. *Persons: Identification*
1. Patient (Ptx)
 2. Patient (other)
 3. Nurse (Nx)
 4. Nurse (other Nx)
 5. Control observer
 6. Personnel (nursing)

7. Personnel (other)
8. Family (Ptx)
9. "They" (inside hospital)
10. "They" (other)
11. Historical, public figures
12. Friends
13. Others
14. Ptx and Nx
15. Ptx and Pg
16. Ptx and other Pt
17. Pg and other Pt
18. Ptx and family
19. Ptx and others
20. Nx and Pg
21. Visitors
22. Nurses in general
23. Nx family and friends
24. "Everybody"
25. Both 6 and 7
26. Both 2 and 4
27. Both 3 and 4
28. Both 2 and 5
29. Both 5 and 6
30. Both 2 and 3
31. Pg family and friends
- Y. Not applicable

37-38. *Self: Actor*

1. Expectation of death
2. Expectation to live and life span
3. Age
4. Health, disease, disability, condition
5. Negative health
6. Positive health
7. Lack of knowledge
8. Knowledge
9. Self-identity
10. Self-sufficiency
11. Lack of self-sufficiency
12. Physical appearance
13. Negative physical appearance
14. Positive physical appearance
15. Feelings, personality
16. Negative feelings, personality
17. Positive feelings, personality
18. Nonmembership
19. Role differentiations

- 20. Role differentiation with negative evaluation
- 21. Role differentiation with positive evaluation
- 22. Other
 - Y. Not applicable
- 39. *Self: Membership: Actor*
 - 1. Race
 - 2. Religion
 - 3. Political
 - 4. Economic
 - 5. Family
 - 6. Vocational
 - 7. Social-recreational
 - 8. Educational
 - 9. Military
 - Y. Not applicable
- 40-41. *Self: Recipient*
See 37-38 (same)
- 42. *Self: Membership: Recipient*
See 39 (same)
- 43-44. *Functions: Identification: Biosocial*
 - 1. Biological function
 - 2. Patient self-maintenance
 - 3. Patient self-care
 - 4. Nursing maintenance
 - 5. Nursing care
 - 6. Housekeeping and maintenance
 - 7. Recreation and diversional
 - 8. Safety (only talking about)
 - 9. Physician's care
 - 10. Both 2 and 8
 - 11. Both 4 and 8
 - 12. Both 2 and 4
 - 13. Both 6 and 8
 - 14. Other
 - Y. Not applicable
- 45. *Functions: Biosocial: Distortion*
 - 1. Nondistorted or functional
 - 2. Distorted or nonfunctional
 - Y. Not applicable
- 46. *Functions: Identification: Psychological*
 - 1. Privacy
 - 2. Identity
 - 3. Ptx autonomy
 - 4. Nx support, reassurance, praise, approval, encouragement
 - 5. Nx friendly negative evaluation
 - Y. Not applicable

47. *Functions: Psychological: Distortion*
1. Nondistorted or functional
2. Distorted or nonfunctional
Y. Not applicable
48. *Functions: Psychological: Performance*
1. Currently not being performed
2. Currently being performed
Y. Not applicable
- 49-50. *Functions: Identification: Cultural*
1. Ownership
2. Lack of ownership
3. Availability of (human) cultural resources
4. Absence of (human) cultural resources
5. Communication
6. Absence of communication
7. Nonmembership
8. Role differentiation
9. Role differentiation with negative evaluation
10. Role differentiation with positive evaluation
Y. Not applicable
51. *Functions: Membership*
1. Race
2. Religion
3. Political
4. Economic
5. Family
6. Vocational
7. Social-recreational
8. Educational
9. Military
Y. Not applicable
52. *Functions: Cultural: Distortion*
1. Nondistorted or functional
2. Distorted or nonfunctional
Y. Not applicable
53. *Functions: Cultural: Performance*
1. Currently not being performed
2. Currently being performed
Y. Not applicable
- 54-55. *Other Content*
1. Weather
2. Time
3. Hospital structure and environment
4. Places
5. Physical appearance (not self)
6. Negative physical appearance (not self)

7. Positive physical appearance (not self)
 8. Knowledge (not self)
 9. Lack of knowledge (not self)
 10. Health, disease, disability, or condition (not self)
 11. Negative health, disease, disability, or condition (not self)
 12. Positive health, disease, disability, or condition (not self)
 13. Personality and/or feelings (not self)
 14. Negative personality and/or feelings (not self)
 15. Positive personality and/or feelings (not self)
 16. Death (not self)
 17. Age
 18. Changes (in general)
 19. Politics (not self)
 20. Other social issues and problems
 21. Religion (not self)
 22. Linguistics
 23. Education (not self)
 24. Abstractions
 25. Both 1 and 2
 26. Both 2 and 4
 27. Both 2 and 3
 - Y. Not applicable
56. *Affect: Identification (Actor's)*
1. Confusion
 2. Definite negative affect
 3. Undifferentiated negative affect
 4. Positive affect
 5. Humor
 - Y. For activities
 - Y. Not applicable
- 57-58. *Behavioral Manifestations*
1. Laughter
 2. Crying or tearful
 3. Smiling
 4. Frowning
 5. Whispering or "under her breath"
 6. Withdrawal
 7. Kissing, hugging, patting
 8. Shaking hands
 9. Waving
 10. Sighing
 11. Singing, humming, whistling
 12. Moaning, groaning, yelling
 13. Swearing and vulgarisms
 14. Hitting, biting, etc.
 - Y. Not applicable

GENERAL INFORMATION IN REGARD TO CLASSIFICATION
OF NURSE-PATIENT INTERACTION

Unit Code Form and General Procedure. Each unit of interaction was coded on an 8½" x 6½" form, referred to as a *unit code form*, and a copy of the content of the unit was typed in the space as shown in the illustration on page 163. The appropriate code category numbers for the unit were entered in the cells corresponding to the dimension to which they applied. For any one unit of interaction, every cell had an entry.

When the categories of a dimension did not apply to the unit, the letter Y was entered. Y was used to mean *inapplicable* throughout all dimensions of the code, unless it was otherwise indicated. When there was not enough information concerning a unit, as when the observer could not see or hear, X was coded.

When coding in general, the highest number under each dimension had priority.

Example: If one unit of interaction contained both information, Item 4, and a suggestion, Item 5, it would be coded as Item 5, the higher number.

Incidental activities that had no obvious personalization relevance were not coded.

Examples: "I entered her room at 9:00 A.M."

"I left at 11:00 A.M."

"I walked to her bedside and looked at the flowers";

"The aide walked down the hall."

Throughout the coding system the symbol Ptx referred to the patient under study (experimental or control); the symbol Nx referred to the experimental nurse; and the symbol Pg referred to the nursing personnel employed by the institution.

Unitization. Units of interaction were relatively small and homogeneous. By definition, one unit ended and another began whenever there was a change in any one of the dimensions of the code.

OVERVIEW FOR DIMENSIONS OF NURSE-PATIENT
INTERACTION CLASSIFICATION

Identifying Information. The series of columns appearing at the top of the form (1-15) were used to identify the following:

COLUMN

- 1-2 Card referred to the IBM cards and was coded as 01 for the first set, 02 for the second set, etc.
- 3 Replication was coded as 1, 2, or 3, referring to the first, second, or third replication.
- 4 Treatment was coded as 1 for experimental and 2 for control.
- 5 Unit was coded as 1 for Monday, Wednesday, and Friday, and 2 for Tuesday, Thursday, and Saturday.

- 6-7 Patient identification was coded from 1 to 36 and referred to the number assigned to the patient under study.
- 8 Sex was coded as 1 for male and 2 for female.
- 9-10 Session was coded from 01 to 18 and referred to the number of the session being coded.
- 11-12 Age was coded for the age of the patient in the interaction.
- 13 Nx was coded from 1 to 5 and referred to the nurse who made the observation.
- 14 C¹ was coded from 1 to 3 and referred to the first coder of the unit.
- 15 C² was coded from 1 to 3 and referred to the second coder of the unit.

TABLE C
UNIT CODE FORM

CARD	Rep	Tr	Un	Pt Id	Sex	Sess	Age	Nx	C1	C2
1 2	3	4	5	6 7	8	9 10	11 12	13	14	15
0 1	1	1	1	0 1	2	0 5	5 6	1	2	Y

I (Nx) smiled and said to the Ptx, "You look much better today."

Sequence	Per	Rel'ship	Dur	Med	Str	Tm	Mob	TRO	Resp	TI	Objects
16 17 18	19	20Ph 21Nx 22Pg	23	24	25	26	27	28	29	30	31 32 33L 34D
0 0 5	2	5 6 Y	1	4	7	Y	2	2	Y	4	Y Y Y Y

Pers	Actor Self	Recp Self	Func Bio	Func Psych	Funct Cult
35 36	37 38 39M	40 41 42M	43 44 45D	46 47D 48P	49 50 51M 52D 53P
Y Y	Y Y Y	0 6 Y	Y Y Y	4 1 2	Y Y Y Y Y

O Cont	A	B Man
54 55	56	57 58
Y Y	4	0 3

Sequence. The sequence of the units of interaction was identified so that adjacent units could be combined for analysis when required or so that sequential patterns could be identified and compared. The series of numbers began with 1 for the first unit and continued serially through the last unit of any particular session.

Persons Involved. This dimension was developed in order to make a record of the range of persons involved in any particular unit

of interaction. Code numbers were assigned to certain individuals and to certain combinations of individuals.

Interactional Relationships. This dimension was intended to make clear the relationships between the persons involved in the interaction and their roles with respect to others. These relationships were coded separately for the patient, the nurse, and the personnel.

Duration. This dimension was developed to provide an index of the relative length of time over which a unit of interaction continued.

Media. This dimension was intended to signify whether the unit of interaction was verbal, nonverbal, or both. It also identified those periods in which communication did not take place as, for example, a period of silence.

Degrees of Stereotypy. This dimension was intended to separate verbal stereotypic and nonstereotypic interactions. Further, it identified various degrees of stereotypy.

Time. This dimension identified verbal interactions that referred to past or future time.

Mobility. This dimension identified the subject's mobility in every unit of interaction.

Transfers, Requests, and Offers. This dimension identified any transfer, request, or offer of resources.

Responses to Requests and Offers. This dimension identified the manner in which a person responded to any offer or request made by another person.

Types of Involvement. This dimension was developed to identify how objects, persons, self, and functions were involved in the content of interaction.

Objects: Identification. This dimension was developed to identify the subclasses of objects involved in the content of interaction.

Objects: Location. This dimension was intended to identify whether or not the objects in the content of interaction were located inside or outside the hospital setting.

Objects: Distortion. This dimension was intended to identify whether or not the objects in the content of interaction were distorted.

Persons: Identification. This dimension was developed to identify the subclasses of persons involved in the content of interaction.

Self: Actor: Identification. This dimension was developed as a special aspect of persons and was to identify the subclasses of self involved in the content of interaction. (This dimension was applicable when the active person in the interaction was talking about aspects of himself.)

Self: Actor: Membership. This dimension was developed to identify the subclasses of role in those instances in which role was coded in the dimension of self.

Self: Recipient: Identification. See *Self: Actor: Identification*. (This dimension was applicable when the active person was talking about aspects of self that referred to the recipient involved in the unit of interaction.)

Self: Recipient: Membership. See *Self: Actor: Membership*.

Biosocial Functions: Identification. This dimension was developed to identify the subclasses of biosocial functions involved in the content of interaction.

Biosocial Functions: Distortion. This dimension was intended to identify whether or not the biosocial functions involved in the content of interaction were distorted.

Psychological Functions: Identification. This dimension was developed to identify the subclasses of psychological functions involved in the content of interaction.

Psychological Functions: Distortion. This dimension was intended to identify whether or not the psychological functions involved in the content of interaction were distorted.

Psychological Functions: Performance. This dimension was intended to identify whether or not the psychological functions involved in the content of interaction were currently being performed or whether or not they were merely being "talked about."

Cultural Functions: Identification. This dimension was developed to identify the subclasses of cultural functions involved in the content of interaction.

Cultural Functions: Membership. This dimension was developed to identify the subclasses of role in those instances in which role was coded in the dimension of cultural functions.

Cultural Functions: Distortion. This dimension was intended to identify whether or not the cultural functions involved in the content of interaction were distorted.

Cultural Functions: Performance. This dimension was intended to identify whether or not the cultural functions involved in the content of interaction were currently being performed or whether or not they were merely being "talked about."

Other Content. This dimension was developed to identify categories that could not be classified as objects, persons, aspects of self, or functions.

Affect. This dimension was intended to identify the types of affect that were involved in each unit of verbal interaction.

Behavioral Manifestations. This dimension identified particular types of behavioral manifestations that accompanied or were in addition to verbal interaction.

COLUMN 19

DIMENSION OF PERSONS INVOLVED

Description of Subcategories

1. *Patient alone*
2. *Patient and experimental nurse*
3. *Patient and personnel* (The term *personnel* is intended to include hospital nursing personnel, including nurses, aides, and other persons responsible for the nursing care of the patient.)
4. *Patient and other patients*
5. *Patient and others* (*Others* here excludes the experimental nurse, nursing personnel, or patients. Where any one of these three is involved the unit should be coded 2, 3, or 4.)
6. *Patient and experimental nurse and others* (*Others* here includes any other person, in addition to the patient and the experimental nurse.)
7. *Patient and personnel and others* (*Others* here does not include the experimental nurse.)
8. *Patient and other patients and others* (*Others* here does not include the experimental nurse or nursing personnel, because where such are included the unit should be coded either 6 or 7.)
9. *Experimental nurse and others* (*Others* here may be singular or plural and may include anybody other than the experimental patient.)
0. *Nurse alone*
- Y. *Not elsewhere classified* (This is intended to include any persons involved, the combination of which cannot be coded under any of the categories from 1 through 0.)

Details of Coding Persons Involved

Only those persons who are actively involved in a unit will be coded under the dimension *Persons Involved*. Under *Interactional Relationships*, only those persons who are involved will be given a role.*

Persons who are present or in the area but not involved in the interaction will be coded Y under *Interactional Relationships* and not included in *Persons Involved*.

Y means NEC (not elsewhere classified) and as such is applicable here only. Y is to be used as *not applicable* elsewhere in the code, unless otherwise indicated.

When communication is going on and more than one person is in the room, the other people in the room are not included under *Persons Involved* until they actually join in the conversation.

* For excluded nonparticipation, the person being excluded will not be coded under *Persons Involved*, but will be given the role of excluded nonparticipation under *Interactional Relationships*.

If the Ptx addresses someone other than the Nx, then under *Persons Involved* the Nx is not included, and her role is Y under *Interactional Relationships*.

If the Ptx is present but not involved under *Interactional Relationships*, then Ptx cannot be included under *Persons Involved*.

When both the nurse and the patient are involved in an interaction, and one is watching the other, code both as involved under *Persons Involved*, and code the person being watched under *Persons*.

When coding control patients the following subcategories will be used:

1. Pt alone
2. -----
3. Pt and Pg
4. Pt and other patient
5. Pt and others (not Pg or other patient)
6. -----
7. Pt, Pg, and others
8. Pt, other patient, and others (not Pg)
9. Pg and others (not Pt)
0. Pg alone
- Y. NEC

COLUMNS 20, 21, and 22

DIMENSION OF INTERACTIONAL RELATIONSHIPS

Description of Subcategories

1. *Present but not involved* (Ptx only) is intended to signify that the patient under study is present in the situation but not involved in any of the ways listed below (2 through 7).
2. *Observation* is intended to signify that the person involved is attending to a set of signals that are not being directed toward him.
3. *Excluded nonparticipation* is intended to signify that the person involved is being excluded from some communication or interaction that concerns him.
4. *Response failure* is intended to cover any failure to respond to a set of signals directed toward the person by another person.
5. *Involved temporary inaction* is intended to signify that one person is giving attention to the signals of another when these signals are directed toward that person, or to signify that one person is attentively anticipating or reflecting upon a set of signals sent toward him by another person.
6. *Participation (active)* is intended to signify that one person is actively sending socially standardized interpretable signals toward some other person.

7. *Exclusion of others* is intended to signify that the person involved is actively excluding some other person from an interaction that concerns the other person.

Details of Coding Interactional Relationships

When *response failure* is coded under *Interactional Relationships*, the role of the person who should have been responded to is *involved temporary inaction*.

Example: "I (Nx) said nothing in response to Mrs. Ward's (Ptx) statement," would be coded as *response failure* for the nurse and *involved temporary inaction* for the patient.

Three-way conversations are limited to those in which it is clearly stated that more than one person is being addressed, and the roles of the persons addressed are *involved temporary inaction*, and under *Persons Involved* all three are included.

When the Ptx is involved in an interaction that does not include the nurse, such as Ptx and Pg, Ptx and other patient, and Ptx and others, the nurse's role is coded as Y under *Interactional Relationships*, and she is not included under *Persons Involved*.

The role of *observation* is limited to those instances in which special mention is made of observation, staring, etc. (It does not include listening.)

Examples: We sat and watched the Pg make a bed.

She stared out the window.

Response failure will be coded only when mention is made of it in the observation.

Under *Interactional Relationships (Ptx)*, the category *not involved* is to be coded when the patient is present, but not involved. *Not involved* is to be used when there is a possibility that the patient could have been involved but was not.

When the patient is not present, his role is coded as Y. The patient's role is also coded as Y if he is present, but could not have been involved, as when sleeping.

Under *Interactional Relationships (Nx) and (Pg)* the category *not involved* is not applicable, and if the Nx or Pg are not involved in the interaction, they will be coded as Y whether or not they are present. The category number (1) will be left open under *Interactional Relationships (Pg)* and *Interactional Relationships (Nx)*.

When the persons involved in the interaction are nurse alone or patient alone, Y (inapplicable) is to be coded under *Interactional Relationships*.

The exception to this is when the patient is watching or observing someone or something, in which case his role is that of *observation*.

When two people are engaged in an activity, and both are active at the same time, code *active participation* for both persons.

Examples: We made the bed together.

We played cards.

When two or more persons say the same thing at the same time, for example, when both say, "Good morning," the two persons involved are coded as *active participation* and the interaction is treated as one unit.

The category of *observation* will be coded for staring and/or watching only. It will not be used for the control observer's role of observation.

The control observer will not be coded under *Persons Involved* until she becomes involved in the interaction.

The categories of *exclusion of others* and *excluded nonparticipation* go hand-in-hand in coding.

The role of the person who is actively excluding some other person from an interaction that concerns him is *exclusion of others*.

The role of the person who is being excluded from some communication or interaction that concerns him is *excluded nonparticipation*.

Example: If two personnel were discussing a patient in his presence, as though he weren't there, their roles would be *exclusion of others*, and the patient's role would be *excluded nonparticipation*.

These two categories do not apply to those situations in which the topic of conversation does not concern the third person.

In the control situation, under *Relationship*, the column for Nx (21) will be coded for the role of Pg, and the column for Pg (22) will be coded for Pg when a second Pg enters the situation.

Other patients and control observers or other experimental nurses will not have a role under *Relationship*.

COLUMN 23

DIMENSION OF DURATION

Description of Subcategories

1. Not extended (less than 1 minute)
2. Extended (1 to 10 minutes)
3. Extended (over 10 minutes)

Details of Coding Duration

Duration will be coded for every unit of interaction, according to the relative length of the unit.

COLUMN 24

DIMENSION OF MEDIA

Description of Subcategories

1. *Verbal communication* refers only to any sounds originating from the larynx, such as laughing, crying, and talking.
2. *Nonverbal functions* refer only to those functions not accompanied by verbal sounds, that is, bedmaking, eating, sleeping, playing cards, etc.

3. *Gestures and bodily movements and expressions* refer only to significant nonverbal communication, such as smiling, waving, frowning, etc.
4. *Both 1 and 3* include both verbal communication and non-verbal gestures and bodily movements and expressions.
5. *Silence or pauses* refer to those periods in the interaction in which a function and/or communication is not going on. Observing and watching are also included in this category.
- Y. *Response failure* refers to those interactional units in which no response was made to a set of signals.

Details of Coding Media

Do not code *gestures and bodily movements and expressions* that are incidental to communication unless they are included under *Behavioral Manifestations*.^{*}

Do not code: I looked up . . .

He leaned closer . . .

Do code: I smiled . . .

He frowned . . .

Code *gestures and bodily movements and expressions* when they constitute the totality of the interaction.

Examples: She scratched her head.

He tapped his foot.

She twisted her hair.

Response failure will be coded in the following instances (examples are in parentheses):

Nx, "It sure is warm today."

(Ptx made no reply.)

Other patient, "Yes, she is a good patient."

(Ptx did not comment.)

Ptx watched me make her bed.

(But did not say anything.)

Ptx watched the aide walk down the hall.

(But did not say anything to her.)

Whenever the Ptx talks to anyone, the communication is coded in all possible dimensions.

When the Nx or Pg talk to anyone other than the Ptx or to each other, code only through the *response* dimension.^{*}

When anyone other than the Nx, Pg, or Ptx talk, code only through *response* dimension.^{**} (In the control group, code only control patient and control personnel for all dimensions.) The control observer will not be coded for content.

^{*} Code nodding or shaking the head, even though it is not included under *Behavioral Manifestations*.

^{**} Always code affect.

When the Nx talks to the Pg and the Ptx is not present, code only through the *response* dimension.

Do not code conversations that occur during breaks.

Code everything the control patient says or does.

Code everything the control personnel says or does to the control patients.

Do not code the control observer or other patients beyond the *response* dimension.

Activities and *communication* will be coded separately.

Example: For the next ten minutes I explained to her why she should elevate her legs, while I bathed her.

This would be coded as two units: one for *communication* and one for the *activity*.

When another patient says something that was not understood by the observer, this will be coded X through the dimension of *Transfers*, as X for affect, and as Y for the remaining dimensions.

COLUMN 25

DIMENSION OF DEGREES OF STEREOTYPY

Description of Subcategories

1. *Stereotypic* refers to greetings, good-byes, and automatic forms of apology. *Examples:* "Good morning." "Goodbye." "Pardon me." "I'm sorry." "Thank you." "You're welcome." This category also includes profanity, "Damn it, hell, etc."
2. *Jokes and sayings* refers to stereotypic phrases and stereotypic forms of jest. *Examples:* "You better believe it." "Rolling stones gather no moss."
3. *Wishes* refers to statements denoting desire, yearning, or longing. *Examples:* "I wish I could go home." "I wish my sister would visit me." "I hope I live till next June." "I want to be free."
4. *Probability* refers to statements denoting likelihood. *Examples:* "Maybe my family will come." "Perhaps we can go outside." "Probably it will rain." "Possibly you could visit me Sunday."
5. *Conditional reference* refers to statements containing or implying a condition. *Examples:* "If the rain stops, I will go home." "If I publish my article, I'll buy you a present."
6. *Comparisons* refers to statements that denote degrees of quality, quantity, or relation. *Examples:* "My sister can do it just as good as the nurses." "You do that better than the other nurse."
7. *Other nonstereotypic* refers to other communication that cannot be included in the above categories.

Details of Coding Degrees of Stereotypy

Automatic forms of apology such as "excuse me" or "I'm sorry" will be coded as a *stereotypic transfer*. An apology which is more involved will be coded as a *nonstereotypic transfer* and in detail according to the other dimensions.

When coding *conditional reference*, code only the dependent aspect of the unit.

Example: "If I publish my article, I'll buy you a present."

Code only "I'll buy you a present."

"If it stops raining, I'll go for a walk this afternoon."

Code only "I'll go for a walk this afternoon."

This dimension is inapplicable when coding *activities*. Code as Y for *activities*.

Stereotypic transfers, such as greetings and good-byes, thank you and pardon me, will be coded through the dimension of *Transfers, Requests, and Offers* only. However, when a stereotypic transfer is given in response to a request or offer, it is coded through the *Response* dimension.

When coding *comparisons*, code only the grammatical subject of the unit.

Examples: "My sister can do it just as good as the nurses can."

Code "sister."

"My home was much nicer than this hospital room."

Code "home furnishings."

"It's looking better," is not a comparison. (This is an implied comparison.)

"It looks better than it did Saturday," is a comparison.

"I am taller," is not a comparison.

"I am taller than she is," is a comparison.

COLUMN 26

DIMENSION OF TIME

Description of Subcategories

1. *Past indeterminate* refers to those statements about the past in which it is not possible to determine *past outside the hospital* or *past inside the hospital*. It therefore includes reference to past both inside and outside the hospital.
2. *Past outside the hospital* refers to any reference to the past that occurred before the present hospitalization.
3. *Past inside the hospital* refers to any reference to the past that occurred during the present hospitalization (starting with yesterday).
4. *Future* refers to any reference to the future (starting with tomorrow).

Details of Coding Time

This dimension is coded for *verbal interaction* only and is to be

coded as Y (inapplicable) when coding *nonverbal activities*.

Examples of past indeterminate:

"I used to read a lot."

"I used to spend my spare time knitting."

"My sister used to play cards with me."

Examples of past outside the hospital:

"When I was a youngster I was active in sports."

"I used to live in California."

Examples of past inside the hospital:

"My sister used to visit me every Sunday."

"Yesterday I had three visitors."

Examples of future:

"Tomorrow is my birthday."

"My niece is going to Europe next summer."

COLUMN 27

DIMENSION OF MOBILITY

Description of Subcategories

1. *Lying in bed* (this category is intended to designate when the Ptx is lying in bed but not dangling his feet from the side of the bed).
2. *Sitting on chair, wheel chair, bed, or other chair substitute, and dangling* (this category is intended to designate when the Ptx is in a sitting position and includes when he is dangling his feet from the side of the bed).
3. *Standing not moving* (this category is intended to designate when the Ptx is in a standing position but not moving).
4. *Moving in wheel chair* (this category is intended to designate when the Ptx is moving in a wheel chair with or without assistance from some other person).
5. *Walking with help* (this category is intended to designate when the Ptx is walking with assistance from some other person or with the use of a cane).
6. *Walking without help* (this category is intended to designate when the Ptx is walking without assistance from some other person).

Details of Coding Mobility

Mobility will be coded as *employment of patient self-maintenance* under *Biosocial Functions*. No objects will be coded, except when the patient is moving in a wheel chair or using a cane or walker. *Hospital furnishings* under *Objects* are coded in such instances.

When coding a unit of interaction in order to indicate a change in the patient's mobility, do not code *employment of objects* (chair, bed, etc.).

Examples: "He sat down in a chair."

"She got into bed."

Mobility will be coded as *employment of patient self-maintenance*, provided the patient is not being assisted by the nurse or personnel, etc. Both *patient self-maintenance* and *nursing maintenance* will be coded if the patient is being assisted.

When a patient pushes a wheel chair while walking, *mobility* will be coded as *walking without assistance*, and *wheel chair* will be coded under *Objects* as being employed.

A change in *mobility* that is made in response to a request or offer will be coded through the *Response* dimension.

The patient's *mobility* is to be coded for every unit of interaction, including communication and activities, except when the patient is out of the room and not accompanied by the nurse. *Mobility* will be coded as Y in these instances.

COLUMN 28

DIMENSION OF TRANSFERS, REQUESTS, AND OFFERS

Description of Subcategories

1. *Noncommittal transfers* involve noncommittal communication not made in response to a request or an offer, such as "O.K.," "Fine," "All right," "Yeh," "Really," and nodding the head.
2. *Transfers* involve actual interchange of communication, objects, functions, etc. This category includes giving, receiving, trading, serving, supporting and attacking.
3. *Requests* involve the asking for communication, objects, functions, etc.
4. *Offers* involve those interactions in which interchange is only proposed.

Details of Coding Transfers, Requests, and Offers

"That's good," "That's fine," "That's right," "You're right," "That's a good idea," are coded as *noncommittal transfers* except in the following instances:

1. When given in response to a request or offer, code as an *ellipsis*.
2. When Nx support is obviously being performed, code as a *transfer of information* about "that" and support currently being performed.

"Oh do you?" "Oh really?" "Oh is it?" "Is that right?" etc. are coded as *noncommittal transfer*.

When part or all of a statement made by one person is repeated by the second person without the addition of new information, it will be coded as a *noncommittal transfer*.

Examples: Nx says, "It certainly is a beautiful day," and Ptx replies, "It certainly is."
Ptx says, "She is a very nice person," and Nx replies, "Yes, she is a nice person."

Gestures and bodily movement and expressions will be coded as *transfers*.

Noncommittal transfers will be coded for such things as, "Well, maybe so," "Okay," "All right," "Yeah," "Fine," etc., provided they are not given in response to a request or an offer. Code only through the dimension of *Transfers, Requests, and Offers*.

Examples: I (Nx) said, "Well, maybe we can compromise and call the dress gray-green." She (Ptx) replied, "Well, maybe so." This reply would be coded as a *noncommittal transfer* under the dimension *Transfers, Requests, and Offers*, and would be coded as Y for the remainder of the content except affect. *Noncommittal transfers* are not considered to be stereotypic.

The Nx said, "I'm going to get the bath water." Ptx replied, "Fine."

Nx said, "It's a good day to sleep." Ptx said, "Yeah."

Code "I'll see," as a *noncommittal transfer* under *Transfers, Requests, and Offers*.

Request for information includes asking for communication. When the actual purpose of a request is for communication, it will be coded as *request for information*.

Examples: "Do you take a shower or a tub bath here?"
 "Why did you stop crocheting?"
 "What did I do with those handkerchiefs?"
 "Did you sleep well last night?"
 "Do you like to read?"

Suggestions or directions will always be coded as *transfers*.

Whenever *employment of an object or function* is coded under *Types of Involvement*, *transfer* will be coded under *Transfers, Requests, and Offers*, even though the Nx, Pg, and Ptx is alone.

Examples: We played cards.

Nx handed a comb to Ptx.

Ptx sat crocheting.

COLUMN 29

DIMENSION OF RESPONSES TO REQUESTS AND OFFERS

Description of Subcategories

1. *No response to request* (This category is used where the previous interaction involved a request, and the following material indicates no evidence of a response by the person of whom the request was made.)
2. *Refusal of request* (This category is used to designate an active refusal to give a positive response to a request, or an active refusal of the thing requested.)
3. *Noncommittal response to request* (This is intended to in-

- clude those responses in which it is not possible to infer whether the request will be fulfilled or not.)
4. *Postponement of request* (This category is intended for use in those cases in which the person responds to the request by postponing action.)
 5. *Positive response to request* (This category is intended to cover all cases in which the person gives a positive response to a request.)
 6. *No response to offer* (This category is used when the previous interaction involved an offer, and the following material indicates no evidence of a response by the person to whom the offer was made.)
 7. *Refusal of offer* (This category is used to designate an active refusal of the thing offered.)
 8. *Noncommittal response to offer* (This is intended to include those responses in which it is not possible to infer whether the offer will be accepted or not.)
 9. *Postponement of offer* (This category is intended for use in those cases in which the person responds to the offer by postponing action.)
 0. *Positive response to offer* (This category is intended to cover all cases in which the person gives a positive response to a request.)

Details of Coding Responses to Requests and Offers

When a *request for information*, etc., is answered with an *ellipsis*, the response is to be coded for content whether or not it is a *refusal*, *noncommittal*, *postponement*, or a *positive response*.

Example of a positive response:

"Are these your clothes?" Answer: "Yes." This is coded as though the response were "Yes, those are my clothes."

If the response is ambiguous, then it is coded as a *response to a request*, a *transfer*, and X for the remainder of the content that applies.

Example: "Would you like your bath now or later?" Answer: "Yes."

When no response is given, it is coded through the dimension of *Responses to Requests and Offers* only.

Code only one *response* (the first) to a given offer or request. Subsequent remarks in different units will be coded as *transfers*.

"I guess so," "It doesn't matter" are *noncommittal responses to requests*.

When a response is given, it is coded as a *positive response* if it doesn't fall into the categories of *refusal*, *noncommittal response*, or *postponement*, whether or not the response was given in a positive manner.

- Examples:* Question: "Do you like candy?"
 Response: "No."
 This would be considered a positive response.
 Question: "How's the weather?"
 Response: "Lousy."
 This would be considered a positive response.

COLUMN 30

DIMENSION OF TYPES OF INVOLVEMENT

Description of Subcategories

1. *Perception only* involves apparent perception without manipulation or discussion.
2. *Employment* involves manipulation without discussion.
3. *Distorted information* involves content which is an obvious misinterpretation of socially accepted reality.
4. *Information* involves discussion, such as clarification, repetition, or control.
5. *Suggestion or direction* involves discussion that attempts to direct or control.

Details of Coding Types of Involvement

Distorted information is to be coded when information about persons, objects, self, functions, or other content involves an obvious misinterpretation of socially accepted reality.

Examples of distorted information:

"They come to pick me up every day in a rig."

"My son lives in the chandelier."

Distorted information is also to be coded for *misinformation*.

Example: When a person says, "Today is Wednesday," when actually the day is Tuesday.

When someone gives his age as 74, when actually he is 82.

Suggestions refers to transfers that attempt to indirectly control activities or communication.

Examples of suggestions:

"Why don't you and I go out and play bingo?"

"You could lie down for a while, if you'd like to rest."

"How about going downstairs?"

"Let's go for a walk."

Directions refers to transfers that attempt to directly control activities or communication. Directions are usually in the form of a command with the implied subject, "you."

Examples of directions:

"Come on, come on in."

"Go on in there and wash those things out."

"See if you can get it open."

"Remind me to help you."

"Lean against the bed for a minute."

Whenever the actual purpose of a request is to ask for a function or an object, it will be coded as a *request for employment*. The purpose of the request will be determined by the content.

For example, if a Ptx has an unlighted cigarette he wants to smoke and asks, "Do you have a match?" this is a *request for employment*, since the purpose of this request is for the employment of a match.

If the Nx is going to bring the Ptx a carton of cigarettes and asks him, "Do you have a match?" this is a *request for information about objects*, since the Nx does not want to employ the matches.

Examples of request for employment:

- "Will you soak my feet now?"
- "Would you get my stockings?"
- "Would you put this on my bed?"
- "Got a light?"

When one person offers an object to another person, the object involved is coded as *employment* under *Types of Involvement*, for example, "Would you like a cookie?" The person is offering the cookie (object) to be eaten and therefore manipulated (employed).

When coding communication, *perception only* and *employment* (under *Types of Involvement*) do not apply. Exception: for employment see how to code *offering and requesting an object or function*.

When coding activities, *information, directions, and suggestion* (under *Types of Involvement*) do not apply.

The following distinction will be made between *offering employment, giving a suggestion, and requesting information about*, when all three are stated in a question form:

Offering employment:

- "Would you like your bath now?"
- "Would you like some coffee?"
- "Would you like to have your hair washed?"

Giving a suggestion:

- "Why don't you lie down for a while?"
- "How about washing your face?"
- "How about going outside in the sun?"
- "Why don't you put your feet up?"

Requesting information about:

- "Would you like to wear your red or green dress?"
- "Would you like to go to the bathroom?"
- "Would you like to go into your room?"
- "Would you like to play bingo?"

COLUMNS 31-32

DIMENSION OF OBJECTS: IDENTIFICATION

Description of Subcategories

1. *Human and material waste products* include body excrements and discarded material objects, which in our culture are commonly discarded and/or destroyed: "trash," paper on the floor, urine, feces, vomitus, garbage, "sweepings."
2. *Insects, pests, and rodents* are undesirable small animal life that are commonly exterminated because they impede sanitation, esthetic well-being of the individual: cockroaches, flies, mosquitoes, rats, mice.
3. *Food and drink* are material objects that are intended to be taken into the body to satisfy hunger or thirst: meat, salad, alcoholic beverages, milk, water.
4. *Service items* are movable objects used in the employment of maintenance, care or housekeeping: broom, scissors, nail files, comb, food containers, crutches, canes, walkers, soap, bedding, linen.
5. *Hospital furnishings* refer to items of furniture and/or decor, such as bed, wheel chair, bedside table, bath tub, draperies, windows, fans, mattress, porch rails, bannisters, stretchers, doors. See also *hospital structure and environment* under *Other Content*.
6. *Clothing* refers to wearing apparel.
7. *Personal items* refer to movable objects that have special significance and that are not used or manipulated in the giving of service to others: dentures, eyeglasses, tobacco and related objects, keys, religious objects, plants, flowers, contents of wallet, suitcases, purses, jewelry, stamps.
8. *Money and money equivalents* include any reference to money or other objects that represent money, such as tokens, stocks and bonds, checks, etc.
9. *Gifts* include any reference to a gift received or sent. This category is limited to those instances in which it is definitely implied that the object is a gift. In this case, the gift will have priority over other *Object* categories. For example, "My sister sent me this dress for my birthday last week." The object would be coded as *gift* rather than *clothing*.
10. *Correspondence and cards* refer to written or printed communication received or sent.
11. *Hospital communications* include references to records, identifying information, schedules, etc. that are used to convey information within the hospital situation. Examples: patients' charts, bed tags, medication cards.
12. *Recreational and diversional objects* are those items which

are used in activities of amusement and which are not used in mass communication: jigsaw puzzles, crossword puzzles, bingó equipment, needlework equipment.

13. *Mass communication objects* are those objects utilized to communicate with a large number of persons: radio, television, books, magazines, movies, newspapers, Bibles, prayer-books, cookbooks, catalogues, calendars.
14. *Home furnishings and structure* are equivalent to hospital furnishings and/or structure except that the items refer to those of a house instead of a hospital.
15. *Other naturally occurring phenomena* refer to plants, animals, or other elements of nature not included in other categories: horses, trees, sunsets, hills, etc. See also *places* under *Other Content*.
16. *Other man-made objects* are those manufactured material items that are not elsewhere coded: bridges, automobiles, trains, etc.

Details of Coding Objects: Identification

When objects are implied in the performance of a function, they are coded, for example, "I dried her arm." The object (towel) is implied and is to be coded under the dimension relating to *objects*.

When more than one object is involved in a unit of interaction, the first one mentioned will be coded.

Examples: "Bring me some candy and a newspaper."

Code only *candy*.

"My sister brought me some apples and magazines."

Code only *apples*.

When a function is being talked about, implied objects are not coded.

Examples: Nx asks, "Do you want me to dry your arm?"

The implied object (towel) would not be coded here.

Nx asks, "Do you want to play a game of 'Rummy'?"

The implied object (cards) would not be coded here.

Nx asks, "Do you often get your back rubbed?"

The implied objects (service items) would not be coded.

All other references to objects received or sent will be coded as *gift*, only if it was stated that the object was meant to be a gift, such as birthday presents, Christmas presents, etc.

Whenever the word or words denoting a function also refer to an object, the *object* as well as the *function* will be coded.

Examples: Code both *service item* and *nursing maintenance* in the following:

"I will comb your hair."

"Do you want me to file your nails?"

"Did you brush your teeth this morning?"

Examples: Code both *recreational and diversional object* and *recre-*

ational and diversional function for the following:

“I went to the horse races.”

“Did you ever play baseball?”

“Let’s play cards.”

“We have movies every week.”

Examples: Do not code objects in the following instances:

“I’ll give you a bath next week.”

“I’ll cut your fingernails.”

“When I was young, I enjoyed hunting and fishing.”

“I used to play tennis.”

“I never read much.”

“We had a picnic last week.”

“Do you ever go to dances?”

Code both *object* and *function*.

Examples: I tied her shoe.

I put her water pitcher on the table.

Code *object* only.

Examples: She looked in the mirror.

She picked up the magazine.

Code only the *object* for handing or giving an object.

Examples: She handed me her glasses.

I gave her the newspaper.

I handed her some Kleenex.

I gave him a cigarette.

When the Nx obtains supplies (service items) or makes other items, such as clothing or personal items, available to the Ptx, code these activities as *nursing maintenance* and *employment of objects*.

Examples: I brought the linens and bath water in.

I got her dress.

All employment of objects will be coded for both *object* and *function* being performed unless there is no function to code.

All references to eating, drinking, hunger, and thirst will be coded as *food* under *Objects*.

When the Nx, Ptx, or Pg reads a magazine, newspaper, etc. and comments on objects, persons, etc., such as, “Isn’t this a pretty cake?” the *objects*, *persons*, etc. mentioned will be coded and not *mass communication objects*.

Examples: While reading a magazine or newspaper the following statements were made:

“Isn’t this a pretty cake?” Code *food* under *Objects*.

“These chemise dresses look awful.” Code *clothing* under *Objects*.

I pointed to a picture of a baby. Code *other* under *Persons*.

When no specific object is mentioned, such as, “I pointed to an article in the newspaper,” code *mass communication objects* under *Objects*.

COLUMN 33

DIMENSION OF OBJECTS: LOCATION

Description of Subcategories

1. Inside hospital
2. Outside hospital

Details of Coding Objects: Location

This dimension will be coded for every unit of interaction involving an object.

Examples of objects inside the hospital:

- "Here is your washcloth."
 "You have a pretty uniform."

Examples of objects outside the hospital:

- "I used to buy a new car every year."
 "I had a beautiful home."

COLUMN 34

DIMENSION OF OBJECTS: DISTORTION

Description of Subcategories

1. Nondistorted or functional
2. Distorted or nonfunctional

Details of Coding Objects: Distortion

This dimension will be coded for every unit of interaction involving an object.

Objects are not considered as *distorted* unless they are manipulated in such a manner as to be nonfunctional in terms of the use that might be made of this object under similar circumstances by a personalized person. For example (1) the placement of letters in a cookie box is *nondistorted*, since the cookie box is a container and therefore serves the purpose of holding the letters; (2) the use of facial tissues in place of toilet tissue is *nondistorted*, since in this case the paper is serving a useful function; however, if the patient uses a washcloth to remove feces after defecation, this is *distorted* because it renders the washcloth useless for the purpose for which it was originally intended without first altering its condition.

COLUMNS 35-36

DIMENSION OF PERSONS: IDENTIFICATION

Description of Subcategories

1. Patient (Ptx)
2. Patient (other)
3. Nurse (Nx)
4. Nurse (other Nx)
5. Control observer
6. Personnel (nursing)
7. Personnel (other)
8. Family (Ptx)

9. "They" (inside hospital); refers to indirect references to persons in the hospital setting such as, "They always feed us at 5:00 P.M."
10. "They" (others); refers to indirect references to persons outside the hospital setting such as, "They're going to build a new city hall."
11. Historical, public figures
12. Friends (Ptx)
13. Others; refers to persons who cannot be identified by any of the other code categories.
14. Ptx and Nx
15. Ptx and Pg
16. Ptx and other patient
17. Pg and other patient
18. Ptx and family
19. Ptx and others
20. Nx and Pg
21. Visitors
22. Nurses in general; refers to statements such as, "Nurses are kind."
23. Nx, family, and friends
24. "Everybody"; refers to statements such as, "Everybody likes the head nurse."
25. Nursing personnel and other personnel
26. Other patient and other Nx
27. Nx and other Nx
28. Other patient and control observer
29. Control observer and Pg
30. Other patient and Nx
31. Pg family and friends

Details of Coding Persons: Identification

Persons will not be coded if the person being talked about is identified through the coding of *Self*. For example, *Persons* is not coded in the following instances:

"My leg hurts."

"I feel tired today."

Do not code *Persons* unless reference is made to persons other than those included under *Persons Involved*, except when the subject is compound.

Examples: Ptx, "I like the way you fix my hair." Do not code *Persons*.
 Nx, "Your leg looks much better." Do not code *Persons*.
 "My sister was always very neat." Code *sister*.
 "I like Mrs. Roosevelt." Code *Mrs. Roosevelt*.
 Ptx, "Mrs. Smith (other Pt) and I always get our lunch early." Code both *Ptx* and *other patient*.

When two or more persons are mentioned in the unit, code only

the subject or subjects of the grammatical structure of the unit.

Examples: "Mrs. Witt (Pg) always bathes her." Code only Pg under *Persons*.

"Let's go outside." Code both Nx and Ptx.

When *we* is the subject of the unit, code the dimension of *Persons* for all persons included in *we* unless they can be coded under the dimension of *Self*.

Examples: Nx to Ptx, "We are both Republicans." Code *role* under *Actor* and *Recipient: Self*.

Who will be coded as X (not enough information) under *Persons*, and as *identity* under *Functions: Psychological* for such statements as: "Who cut your hair?" "Who took my water pitcher?" "Who is she?"

When *role differentiation* is coded under *Cultural Functions*, identify whose role is being talked about under *Persons*.

References to "company" will be coded as *visitors* under *Persons*.

Examples: "I had company yesterday."

"Well, I won't have any company today."

Other patients outside the hospital are *Others*.

The dimension of *Persons* does not apply when coding *activities*, except when the activity is that of observation. For these interactions (observation) under *Types of Involvement*, *perception only* is applicable.

COLUMNS 37-38 AND 40-41

DIMENSION OF SELF: IDENTIFICATION

Description of Subcategories

1. *Expectation of death* includes references to the cessation of life.
Examples: "When I die"
"I was afraid I was going to die."
"I want to be buried in the family cemetery lot."
2. *Expectation of life* and *life span* include references to life expectancy.
Examples: "I've lived too long."
"I hope I live until June."
"I've lived longer than any of my brothers and sisters."
3. *Age* includes references to the number of years a person has lived.
Examples: "I'm 73 years old."
"I'm an old lady."
"I'm younger than she is."
4. *Health, disease, disability, and/or physical condition* include references to the degree of soundness in body. If a unit contains elements of both physical appearance and health, it will be coded as *health*.

Examples of health:

"I've never had to worry about my health."

"I can hear as well as most people my age."

5. *Examples of negative health:*

"I've got arthritis in my hand."

"I'm very weak this morning."

"I had the flu last year."

6. *Examples of positive health:*

"I've always enjoyed good health."

"I hear real well."

"My hands are as strong as a young man's."

7. *Lack of knowledge* includes references to lack of acquaintance with or awareness of people, facts, etc.

Examples: "I don't know Wally Moore."

"I didn't know they were going to bring me here."

8. *Knowledge* includes references to acquaintance with or awareness of people, facts, etc.

Examples: "I know Stan Musial."

"I know he could do better if he tried."

"I know that dress belongs to me."

9. *Self-identity* refers to identification of self by a name.

Example: "I'm Virginia Hill."

10. *Self-sufficiency* includes references to the ability to supply one's own needs and also includes other references to self-confidence.

Examples: "I don't need anyone to bathe me."

"I can make my bed."

11. *Lack of self-sufficiency* includes references to the inability to supply one's own needs and also includes other references to lack of self-confidence.

Examples: "I can't do anything for myself."

"I'm not able to walk alone."

12. *Physical appearance* includes references to outward looks or aspects of self.

Examples of physical appearance:

"My hair is getting long."

"My skin is tanned from sitting in the sun."

13. *Examples of negative physical appearance:*

"I look shabby."

"My teeth are crooked."

"I've never had pretty hands."

14. *Examples of positive physical appearance:*

"My skin is soft and smooth as a baby's."

"I had beautiful curly hair when I was young."

"I was the prettiest child in the family."

15. *Feelings and/or personality* includes references to emotional feelings and to distinctive personal characteristics which are not physical.

Examples of feelings and personality:

"I was surprised."

"I was a tomboy."

"I get along with most people."

16. *Examples of negative feelings:*

"I was angry this morning."

17. *Examples of positive feelings:*

"I'm happy today."

"I'm thankful for that."

"I like you."

18. *Nonmembership* includes references to lack of belonging to a group.

Examples: "I never joined a church."

"I've never belonged to any clubs."

19. *Role differentiation* identifies one's role in a group.

Examples of role differentiation:

"I'm a doctor."

"I was a pitcher for our ball team."

"I was a deacon in the church."

20. *Examples of role differentiation with negative evaluation:*

"I was a poor housewife."

"I neglected my children."

"When I taught, I wasn't popular with the students."

21. *Examples of role differentiation with positive evaluation:*

"I had the highest batting average of anyone on our team."

"I was the best president our club ever had."

"I was valedictorian of my high school class."

22. *Other* refers to other references to self that are not included in the preceding categories.

Examples: "I went to City Hospital, then I came here."

"This is my home."

Details of Coding Self: Identification

The subcategories of *Self: Identification* apply to *Self: Actor* and *Self: Recipient*.

This dimension is coded for *verbal interaction* only.

The following examples will be coded as *health, disease, disability, or condition* under *Self (Recipient or Actor)* or *Other Content*.

"He's strong."

"I weigh 70 pounds."

"Does it itch?"

"That doesn't bother me," will be coded under *Self* as *feelings and/or personality*.

Requests for information about likes and dislikes will be coded as follows:

"Do you like baseball games?"

"What kind of dresses do you like?"

"Do you like spinach?"

"Don't you like the way she fixed your hair?"

The above examples will be coded as *requests for information about feelings, personality* under *Self: Recipient*.

The responses to such requests will be coded as *negative* or *positive feelings* or *personality* accordingly.

When a person makes a statement containing the word "you," which actually refers to himself, it will be coded as if he said "I". For example if he says, "You get good food here," code as if he said, "I get good food here."

Role differentiation identifies the role within a group. For example, a man may be a father, a deacon, a committeeman, a doctor, a 32nd degree Mason, etc.

Whenever a patient mentions something about his occupation, job, or income, in general, but does not mention his specific role, such information will be coded under *Self* as *role differentiation*.

Examples: "My job paid \$300 a month."

"I used to keep my tools real clean."

"I get \$50 a month old-age assistance."

Self-sufficiency refers to patient self-maintenance or patient self-care only.

Examples: "I can shave myself."

"I make my own bed every day."

"I put this bandage on without any help."

Knowledge or lack of knowledge will be coded when the statement implies that the individual knows or does not know something, regardless of why he does or does not have certain information.

Examples: "I haven't the slightest idea."

"I can't remember."

"Do you remember?"

"I forgot your name."

"Do you know her?"

"I don't know anything about it."

"I'm not very well informed on the subject."

Requests for information, with positive or negative evaluations, will be coded as such.

Examples: "Do you feel better?" is coded as *request for information about positive health*.

"Do you feel worse?" is coded as *request for information about negative health*.

"Were you the top one in your class?" is coded as *request for information about role differentiation with positive evaluation*.

Statements referring to being tired or looking tired will be coded as *negative health* under the appropriate dimensions (*Self* or *Other Content*).

When the patient talks about a function performed some time ago and says, "It hurts," or "It doesn't hurt," referring to her health and condition at the present time, *health* will be coded.

Examples: The patient talks about hitting her finger yesterday and then says, "It doesn't hurt."

The patient talks about the aide pulling her arm and then says, "It still hurts."

When someone addresses someone else, using identity, and there is no distortion, then *Self identity* under *Recipient Self* is coded.

For example: Ptx to Nx, "You're Miss Jones, aren't you?"

When coding *activities*, the dimension of *Self* does not apply.

COLUMNS 39 AND 42

DIMENSION OF SELF: MEMBERSHIP

Description of Subcategories

1. *Race* refers to nationality and/or ethnic roles.
Example: "I'm a Negro."
2. *Religion* refers to religious roles.
Example: "I'm a Catholic."
3. *Politics* refers to political roles.
Example: "I'm a Democrat."
4. *Economic* refers to economic roles.
Example: "We always had servants."
5. *Family* refers to family roles.
Example: "I come from a large family."
6. *Vocational* refers to vocational roles.
Example: "I belong to the medical profession."
7. *Social and recreational* refer to social and recreational roles.
Example: "I'm a Mason."
8. *Educational* refers to educational roles.
Example: "I went to the University."
9. *Military* refers to military roles.
Example: "I was in the Army."

Details of Coding Self: Membership

This dimension is coded only when a role is being talked about under *Self: Identification*, and the subcategories apply to *Self: Actor* and *Self: Recipient*.

COLUMNS 43-44

DIMENSION OF BIOSOCIAL FUNCTIONS: IDENTIFICATION

Description of Subcategories

1. *Biological functions* refers to those activities of the patient which involve the basic needs of an individual, such as eating, drinking, sleeping, and eliminating.
2. *Patient self-maintenance* refers to those activities of daily living which an individual normally does for himself, such as bathing, feeding, dressing, etc.
3. *Patient self-care* refers to those activities which an individual normally does not do for himself without special training, such as bandaging, massaging, etc.
4. *Nursing maintenance* refers to those activities of daily living, such as bathing, feeding, and dressing, which are done to or for the patient by the nurse.
5. *Nursing care* refers to those activities of the nurse which require special technical training, such as giving medications, treatments, etc.
6. *Housekeeping and maintenance* refers to those activities which involve cleaning, maintaining, repairing, and decorating of the hospital and hospital grounds, such as cleaning the bedside table, sweeping the floor, gardening, yardwork, etc.
7. *Recreation and diversion* refers to activities of amusement, such as playing cards, bingo, etc.
8. *Safety* refers to activities that involve freedom from bodily harm.
9. *Physicians' care* refers to those activities which are performed by the physician, such as surgical procedures.
10. Both 2 and 8
11. Both 4 and 8
12. Both 2 and 4
13. Both 6 and 8
14. *Other* refers to those activities that cannot be identified in any of the above categories.

Details of Coding Biosocial Functions: Identification

When the Nx or Pg position the patient for purposes other than comfort, code *nursing care* under *Biosocial Functions*.

Example: The Nx turns the patient from side to side because of poor skin condition on the patient's back.

When the Nx or Pg examine the patient in order to evaluate or treat some aspect of ill health or condition, code as *nursing care* under *Biosocial Functions*.

Example: The Nx examined a rash on the patient's legs.

All references to television, such as Channel 4, programs, sta-

tions, dial, aerial, etc., will be coded as both *mass communication objects* under *Objects* and *recreational functions* under *Biosocial Functions*.

Examples: "What station is that?"
 "Where is Channel 4?"
 "This dial isn't numbered."
 "I like that program."
 "I'll fix the T.V."
 "Turn the aerial around."
 "Do you watch T.V.?"

When reference is made to a function performed by someone other than the Nx or Pg, code as *nursing maintenance* (or *care*) under *Biosocial Functions*, and code *Persons* to identify the person who performs the function.

Examples: "My niece does my hair on Sundays now."
 "I used to have my hair done at the beauty shop."
 "My sister does my laundry."

The following examples will be coded as *directions for other* under *Biosocial Functions*:

"Shake hands with her."
 "Stop trying to kiss me."
 "Don't pat me on the abdomen."
 "Get out of my pocket."
 "Let me go."

When a patient asks, "Will you help me?" code as a *request for the employment of X* under *Biosocial Functions*.

Turning on a radio or turning it up louder will be coded as *employment of the object* (radio) and as *recreation and diversion* under *Biosocial Functions*.

Hunger and thirst will be coded as *biological functions* under *Biosocial Functions*.

Biosocial functions are not to be coded when role is coded for the Nx or Pg.

Examples: "I was a nurse's aide."
 "I'm studying better ways of caring for patients."

Housekeeping is limited to hospital housekeeping. If the Ptx, Nx, or Pg talk about housekeeping outside of the hospital, this is coded as *role differentiation* or *role evaluation*.

The activities of washing a wheel chair and cleaning out bedside tables will be coded as *housekeeping* under *Biosocial Functions*.

When a unit of interaction is coded as the employment of a function, *objects* are also coded if they are specified in the unit or if they are implied in the performance of that function.

When a communication interaction refers to a function alone, implied objects are not coded.

When there are references to some aspect of patient maintenance

or nursing maintenance, and it is not clear as to which it is, code *nursing maintenance*.

Examples: "You can help put me in bed."

"You can help get me up."

When a communication interaction includes references to a function and an object, both the *function* and the *object* are coded.

Examples: "Would you like to play cards?"

"Did you enjoy reading the magazine?"

"I'll comb your hair."

Indirect references, such as "it" and "that," will be coded for *function* only, when the reference includes both an object and a function.

Example: "If you had something on the back of your chair it'd be better." Code *it* as *nursing maintenance* under *Biosocial Functions*.

Do not code *Biosocial Functions* for such statements as, "Do you wear . . . ?" "I used to wear . . ." "I'm wearing . . ."

When the Nx obtains supplies (service items) or makes other items, such as clothing or personal items, available to Ptx, code these activities as *nursing maintenance* and as *employment of objects*.

Examples: I brought the linens and bath water in.

I got her dress.

All employment of objects will be coded for both *object* and *function* being performed (provided there is a function).

Examples: I tied her shoe.

I put her water pitcher on the table.

"Would you like" or "I'd like," in reference to an object and/or function, will be coded as *information about the object* and/or *function* and not personality and feelings.

Examples: "Would you like your bath now?"

"I'd like a piece of candy."

"I'd like to brush my teeth."

"Would you like to rest a while?"

When coding "It hurts" or "That feels better" or similar statements in which "it" or "that" refers to a function, code information about the *function* not health.

Examples: The nurse is filing the patient's nails, and the patient says, "That hurts."

The nurse gives the patient a back rub, and the patient says, "That feels better."

"When the aide pulled my arm, it hurt."

When the Ptx is watching television (with others) and makes comments that seem directed toward the program, these comments will be coded as though the Ptx were saying them to the others present, and the *content* will be coded to reflect as nearly as possible what the Ptx said.

Examples: Ptx comments, "We know all about washing machines."
Ptx comments, "You're crazy."

If the Ptx is watching television alone and comments, code the same way for content, but code Ptx alone under *Persons Involved*.

When the nurse makes statements such as "would you like" or "do you want," and the function is nursing maintenance or nursing care, which are part of general hospital routine, code *offer of employment*.

Examples: "Would you like a back rub?"
"Do you want your bath?"
"Shall I comb your hair?"
"Would you like for me to soak your feet?"

When the statement concerns a function that is nursing maintenance or nursing care but is not a part of general hospital routine, code *request for information* and *autonomy*.

Examples: "Shall I fix your hair in a pompadour?"
"Would you like some powder on your face?"
"Do you want your pearls?"

When the statement concerns a function that is patient self-maintenance or patient self-care, code *request for information* and *autonomy*.

Examples: "Would you like to walk down the hall?"
"Do you want to rest for a while?"

When a function is being performed, and subsequent units refer to employing objects as a specific step or aspect of the function, code *employment* of both the *object* and the *function*.

For example, during a card game, a unit of interaction might be, "I shuffled the cards." This would be coded as *employment of the object*, cards, and *function of recreation and diversion*.

When the patient turns so that her back can be washed or rubbed, or lifts an arm or leg to be washed, code *patient self-maintenance*.

When the Nx shops for the Ptx, this is *nursing maintenance*.

When the Ptx shops for himself or other patients, this is *patient self-maintenance*.

Examples: Ptx to Nx, "Will you buy me a new washcloth?"
Other patient to Ptx, "Will you get me some coffee and cookies?"

COLUMN 45

DIMENSION OF BIOSOCIAL FUNCTIONS: DISTORTION

Description of Subcategories

1. Nondistorted or functional
2. Distorted or nonfunctional

Details of Coding Biosocial Functions: Distortion

Functional distortion refers to the distortion of the natural, proper,

or characteristic aspects of the function or activity being pursued in the interaction.

Purposeless repetitive activities will be coded as *distortion of patient self-maintenance* under *Biosocial Functions*, the first time it is repeated.

Example: She repeatedly removed her glasses, rubbed her eye, and put her glasses on.

This rule will apply to repeated meaningless manipulation of objects, even though no function is ordinarily coded for the manipulation of objects.

Example: The Ptx kept removing the pieces of paper and putting them back in his pocket.

Communication about slapping, hitting, biting, etc. will be coded as *other: distorted* under *Biosocial Functions*.

Statements such as, "I didn't get much sleep last night," "I didn't sleep a wink," "I can't sleep," will be coded as *distortion of biological functions* under *Biosocial Functions*.

Code "I couldn't get in a comfortable position," as *distortion of patient self-maintenance* under *Biosocial Functions*.

When patient self-maintenance or nursing maintenance are performed in such a manner that they might or did cause injury, they will be coded as *distorted* rather than as *distorted safety*. For example, when the patient says, "I hit my finger on the side of the bed," code *distorted patient self-maintenance*. When the patient says, "The nurse hurt my finger with the bed rail," code *distorted nursing maintenance*.

COLUMN 46

DIMENSION OF PSYCHOLOGICAL FUNCTIONS: IDENTIFICATION

Description of Subcategories

1. *Ptx privacy* refers to verbal interaction concerning the privacy or lack of privacy afforded the patient under study: "There's no privacy here."
2. *Identity* refers to verbal interaction concerning the establishment of an individual's identity and also includes the distortion of identity: "Who is that patient?" "What is your name?" "Hey you." "Blind man."
3. *Ptx autonomy* refers to verbal interaction concerning the patient's power or right to govern or control acts or activities.
4. *Nx support* refers to verbal interactions in which the Nx gives support, encouragement, reassurance, approval, or praise.
5. *Nx friendly negative evaluation* refers to verbal interaction in which the Nx gives constructive criticism of personality, role performance, etc.: "You look tired today." "You haven't been soaking your foot."

Details of Coding Psychological Functions: Identification

This dimension will be coded for *verbal interaction* only.

Autonomy will be coded when the patient gives directions for nursing care or maintenance when these directions alter or oppose what the nurse or Pg is doing.

Examples: The nurse puts a bath blanket on the patient, and the patient says, "Don't put that bath blanket on."

The nurse lifts the patient into the bed, and the patient says, "Don't let me lie on my back."

When the patient makes statements such as "I don't like to," "I don't care to," code *personality and feelings* under *self* rather than *autonomy*.

Do not code *autonomy* when there is a transfer of a suggestion.

Example: "Why don't you go for a walk?"

Do not code *autonomy*.

Both actual and implied *autonomy* are to be coded. When the nurse gives the patient a set of choices, the patient's response is also coded for *autonomy*, even though he says, "I don't care," in response to the offer.

"That teapot is mine," refers to possession or ownership. However, "Do not put the flowers in my teapot," is *autonomy* because how an individual's object is used is the owner's right to designate.

When the nurse asks, "Do you want to wear your green dress or your gray one?" *autonomy* is implied, since it is assumed that the patient has the right to designate what she will wear.

Do not code *autonomy* for offers, because offering implies that a choice is given.

COLUMN 47

DIMENSION OF PSYCHOLOGICAL FUNCTIONS: DISTORTION

Description of Subcategories

1. Nondistorted or functional
2. Distorted or nonfunctional

Details of Coding Psychological Functions: Distortion

Functional distortion refers to the distortion of the natural, proper, or characteristic aspects of the function or activity being pursued in the interaction.

Distorted identity will be coded under *Psychological Functions* as *distorted*.

Examples: Pg to Pg, "Here Miss Slowpoke."

Pg to Ptx, "Hi, dog."

When a patient is addressed as "baby," code as *distorted identity*.

Examples of functional distortion.

Privacy:

"She bathed me in front of everyone."

Identity:

"The aide addressed him as 'blind man'."

COLUMN 48

DIMENSION OF PSYCHOLOGICAL FUNCTIONS: PERFORMANCE

Description of Subcategories

1. Currently not being performed
2. Currently being performed

Details of Coding Psychological Functions: Performance

Examples: "Do you want your bath now or later?" would be a *request for information about nursing maintenance* under *Biosocial Functions*, and *autonomy* under *Psychological Functions*. Autonomy is currently being performed, under *Functions: Performance*.

"Do you ever get to decide when you'll get your bath?" would be a *request for information about nursing maintenance* and *autonomy*. Autonomy is currently not being performed.

"You're walking much better," would be *information about patient self-maintenance* under *Biosocial Functions* and *support* under *Psychological Functions*, currently being performed.

"I had a private duty nurse who gave me lots of reassurance," would be *information about support* under *Psychological Functions*, currently not being performed.

COLUMNS 49-50

DIMENSION OF CULTURAL FUNCTIONS: IDENTIFICATION

Description of Subcategories

1. *Ownership* refers to the establishment of proprietorship of an object: "Is that your car?" "Whose chair is this?"
2. *Lack of ownership* refers to the lack of proprietorship: "I have nothing."
3. *Availability of (human) cultural resources* refers to statements concerning the availability of persons as a cultural resource: "Will you really be here tomorrow?" "Get the doctor for me."
4. *Absence of (human) cultural resources* refers to statements concerning the absence of persons as cultural resources: "My family never comes to see me."
5. *Communication* refers to statements of verbal expressions of thought: "Talk louder." "The doctor never understands me."
6. *Absence of communication* refers to statements in regard to the absence of verbal expressions of thought: "There's nobody for me to talk to."
7. *Nonmembership* refers to lack of belonging to a group: "She doesn't have any family."

8. *Role differentiation* (not self) refers to statements denoting a role: "She's a nurse."
9. *Role differentiation with negative evaluation*: "She's a lousy nurse."
10. *Role differentiation with positive evaluation*: "She's a good nurse."

Details of Coding Cultural Functions: Identification

This dimension will be coded for *verbal interaction* only.

When a request is made to repeat something by saying "What?" "What did you say?" this is coded as a *request for employment of the function of communication*.

The response, "I repeated what I had said," is also coded as *employment of communication*. It is not coded for original content.

Ownership, as a function, involves the establishment of proprietorship of an object.

Examples: "Is that your car?" "Yes, it is." "Whose car is that?" "I don't know."

Ownership is not coded for such things as:

"My clock isn't working."

"I'll wear my green dress."

References to winning or losing will be coded as *role differentiation with positive or negative evaluation*.

Examples: "My friend always wins at playing bingo."

"The Cardinals lost last night."

Information about other people's communication will be coded under *Persons*, for the person who gave the information, and under *Functions: Cultural as communication*. The content of the communication will be coded if possible, after these two areas have been coded.

Example: Ptx to Nx, "The aide told me to stay in bed." Code Pg under *Persons*, code *communication* under *Cultural Functions*, code *patient self-maintenance* under *Biosocial Functions*, and code *bed* under *Objects*.

When reference is made to "news," code under *Objects* as *mass communication objects* and under *Cultural Functions* as *communication*.

Examples: "What's the news this morning?"

"My friend keeps me up-to-date on the news."

"I never hear the news anymore."

When the comment, "We'll see," is made in response to a request, code as *information about communication* under *Cultural Functions*.

Example: "Could I go back to bed now?"

Response: "I'll make your bed first and then we'll see."

Code "I'm ready" as *availability of human resources* under *Cultural Functions*.

All aspects of earning money are *economic role*: "I never made any money at that job." "My last job paid well."

Under *Cultural Functions*, such statements as "I'm leaving now," "I'll be back Monday," and "I'll be right back" are coded as *availability of human resources*.

Do not code *availability of human cultural resources* for such statements as: "I'll go tell them you're ready to get up"; "I'll go out and get some sheets."

COLUMN 51

DIMENSION OF CULTURAL FUNCTIONS: MEMBERSHIP

Description of Subcategories

1. *Race* refers to nationality and/or ethnic roles.
Example: "She's of German descent."
2. *Religion* refers to religious roles.
Example: "She's a Protestant."
3. *Politics* refers to political roles.
Example: "He's a Democrat."
4. *Economic* refers to economic roles.
Example: "They've always had money."
5. *Family* refers to family roles.
Example: "She's a good mother."
6. *Vocational* refers to vocational roles.
Example: "He's a foreman."
7. *Social and recreational* refer to social and recreational roles.
Example: "He is a Mason."
8. *Educational* refers to educational roles.
Example: "She's a student."
9. *Military* refers to military roles.
Example: "My son is a lieutenant."

Details of Coding Cultural Functions: Membership

This dimension is coded only when a role is being talked about under *Cultural Functions: Identification*.

COLUMN 52

DIMENSION OF CULTURAL FUNCTIONS: DISTORTION

Description of Subcategories

1. Nondistorted or functional
2. Distorted or nonfunctional

Details of Coding Cultural Functions: Distortion

Functional distortion refers to the distortion of the natural, proper, or characteristic aspects of the function or activity being pursued in the interaction.

Talking or muttering to self will be coded as *employment of communication* under *Cultural Functions: Distorted*. The content of the

communication will not be coded.

Talking in a foreign language will be coded as *employment of communication distorted*.

Example of functional distortion:

Ownership:

"Someone stole my new dress."

COLUMN 53

DIMENSION OF CULTURAL FUNCTIONS: PERFORMANCE

Description of Subcategories

1. Currently not being performed
2. Currently being performed

Details of Coding Cultural Functions: Performance

"She talks too much," would be *information about communication* under *Cultural Functions*, not currently being performed.

Role differentiation will not be coded for *performance*.

COLUMNS 54-55

DIMENSION OF OTHER CONTENT

Description of Subcategories

1. *Weather* includes any reference to weather, such as wind, temperature, moisture, cloudiness, etc.

Examples:

"It ain't the heat, it's the humidity."

"It's supposed to rain tomorrow."

"That storm was terrible."

2. *Time* includes references to time periods, seasons, and specific communications about time orientation when these topics are a major content of communication. References to time that merely indicate past, present, or future, as shown in the dimension of *Time* will not be included.

Examples:

"What time is it?"

"Spring is my favorite season."

"Are you going to be here the entire day?"

Not included:

"Last winter I fell and broke my leg."

"My son is coming to visit me next month."

"I'm tired today."

3. *Hospital structure and environment* includes references to those parts of the hospital which are relatively stationary and permanent, such as floors, doors, rooms, lounges, O.T. shop, etc., and references to the hospital in general, without specific references to any person or object identified with the hospital.

Examples:

"My room is cold."

"The bathroom is crowded."

"This place is dirty."

"It's noisy here."

4. *Places* includes references to geographic locations, such as cities, countries, rivers, mountains, compass points, organizations, businesses, and similar institutions. If these have no specific proper name and location and can be coded as other man-made or other naturally occurring phenomena under *Objects: Identification*, they should be coded there.
5. *Physical appearance* (not self) includes references to outward looks or aspects of people.

Examples:

"She has dark brown hair."

"She wears pink lipstick."

6. *Negative physical appearance* (not self).

Examples:

"His clothes are dirty."

"He needs a shave."

7. *Positive physical appearance* (not self).

Examples:

"She wears beautiful clothes."

"She's very neat."

8. *Knowledge* includes references to acquaintance with or awareness of people, facts, etc.

Examples:

"She knows him."

"Does she know anything about baseball?"

"Does she know that I walked without help yesterday?"

9. *Lack of knowledge* includes references to lack of acquaintance with or awareness of people, facts, etc.

Examples:

"She doesn't know that I borrowed her chair."

"He doesn't know anything about taking care of animals."

10. *Health, disease, and/or disability and condition* (not self) includes references to the degree of soundness in body.

Example:

"How is her toe this morning?"

11. *Negative health, disease, disability, or condition* (not self).

Examples:

"She's very ill this morning."

"My sister had cancer."

12. *Positive health, disease, disability, or condition* (not self).

Examples:

"She looks much better today."

- "My brother is in good health."
13. *Personality and/or feelings* (not self) includes references to distinctive personal characteristics that are not physical and to emotional feelings.
Examples:
 "She has will power."
 "He's a man of integrity."
 14. *Negative personality and/or feelings.*
Examples:
 "She's hard to get along with."
 "I think she's mad today."
 15. *Positive personality and/or feelings.*
Example:
 "She is a sweet person."
 16. *Death* (not self) includes references to the cessation of life.
Examples:
 "All of my brothers and sisters are dead."
 "She told me Miss B.'s husband was killed."
 "I don't know what friends of mine have died."
 17. *Age* (not self) includes the number of years a person has lived.
Examples:
 "My son is 12 years old."
 "It's terrible to be old."
 "That's the only sign of old age."
 18. *Changes* includes references to progress or deterioration in general.
Examples:
 "We don't like change around here."
 "Things have changed."
 "We used to do things differently in the old days."
 19. *Politics* includes references to relations between governments or states or within the government itself, such as laws, elections, wars, battles, treaties, political or government conferences. If an issue contains both political and social elements it will be coded as *social issues and problems*.
Examples:
 "Miss M. talked about the Civil War."
 "She started to talk about the Yalta Conference."
 "She talked about the Cleveland and Blaine election."
 20. *Other social issues and problems* includes references to relations between groups or individuals in regard to situations that involve life in society, such as delinquency, birth control, segregation, strikes, prejudice, etc. See *Politics*.
Examples:
 "She said she was against teachers or any professional people

striking.”

“She talked about the slave situation in Missouri during the Civil War.”

“The unions have gotten so they no longer allow a man to run his own business.”

“He asked me how the newspaper strike was doing.”

21. *Religion* (not self) includes references to a belief in a superior being.

Examples:

“Do you have church services here on Sunday?”

“The Catholic church has beautiful services.”

“Buddhists don’t believe in killing animals.”

22. *Linguistics* includes general references to languages, dialects, spelling, pronunciation, and grammar.

Examples:

“He told me something about an expression that is used in New England.”

“It seems that someone has finally come up with the idea that any kind of grammar or pronunciation which is unique to a particular area of the country is perfectly correct.”

“That French word means bad clerk.”

“Look how I spelled *composed*.”

“Do I capitalize *battle*?”

23. *Education* (not self) includes references to the science dealing with the principles and practices of teaching and learning.

Examples:

“The Catholic school was better than the public school that was available.”

“A good education is necessary for success.”

“Education is something they can never take away from you.”

24. *Abstractions* includes references to qualities, properties, or attributes not related to concrete phenomena.

Examples:

Honesty, integrity, wisdom, trustworthiness, deference, homage, reverence, veneration, honor, sincerity, dependability.

25. Both 1 and 2

26. Both 2 and 4

27. Both 2 and 3

Details of Coding Other Content

This dimension is coded for *verbal interaction* only.

Places should be coded when they are mentioned in relation to role.

Examples: “I used to work at the plant.”

“I was a nurse’s aide at an old folk’s home.”

"I worked for the University."

When the word "here" refers to the hospital, code this as *hospital structure and environment*.

Examples: "I've been here 5 years."

"We have movies here."

When the word "there" refers to some place other than the hospital, code as *places*.

Examples: "I stayed there 6 weeks."

"They sell imported foods there."

When coding *activities*, the dimension of *Other Content* does not apply.

COLUMN 56

DIMENSION OF AFFECT

Description of Subcategories

1. *Confusion* refers to communication of the Ptx, which has been identified by the nurse recorder as being confused.

Example:

"She (Ptx) said in a very confused manner . . ."

2. *Definite negative affect* refers to negative feeling tones that have been identified by the nurse recorder as such, or to interactions in which there is no question about the negative aspect.

Examples:

"She said very hostilely . . ."

"He said very sarcastically . . ."

"He said brusquely . . ."

"He said scornfully . . ."

"Damn it, get out of here," etc.

3. *Undifferentiated negative affect* refers to negative feeling tones that have not been identified by the nurse recorder as such, but that are negative in content.

Examples:

Ptx, "That's perfectly ridiculous of you."

Ptx, "I don't need you."

Ptx, "Why don't you go talk to someone else?"

4. *Positive affect* refers to all other communication that is not negative, confused, or humorous.

Examples:

I said, "Good morning."

Ptx, "You've been so good to me."

I said, somewhat surprised, "I didn't know she could walk alone."

5. *Humor* refers to communication denoting wit, humor, or jest, but does not include jokes.

Details of Coding Affect

Affect will be coded for all verbal interactions, including those

interactions which are not coded for content, for example, when the Nx or Pg talks to anyone other than the Ptx or to each other, and when anyone other than the Nx, Pg, or Ptx talks. *Affect* will be coded as Y for *activities*. This includes staring or watching and silence or pause.

All *humor* will be coded as *other nonstereotypic* under *Degrees of Stereotypy*, and as *humor* under *Affect*.

Examples of humor:

“Tell your husband I’m not trying to make an Irishman out of you.”

“You’re all fenced in.”

Affect will not be coded when a response failure is given.

COLUMNS 57-58

DIMENSION OF BEHAVIORAL MANIFESTATIONS

Description of Subcategories

1. Laughter
2. Crying or tearful
3. Smiling
4. Frowning
5. Whispering or “under the breath”
6. Withdrawal—movement away from or turning away
7. Kissing, hugging, and patting
8. Shaking hands
9. Waving
10. Sighing
11. Singing and humming
12. Moaning, groaning, and yelling
13. Swearing and vulgarisms
14. Hitting and biting, etc.

Details of Coding Behavioral Manifestations

When swearing occurs within the content of a unit of communication, the content will be coded in all appropriate dimensions and as *other nonstereotypic* and as *swearing* under *Behavioral Manifestations*.

When swearing constitutes the totality of a unit of communication, it will be coded as a *stereotypic transfer* and identified as *swearing* under *Behavioral Manifestations*.

The *affect* accompanying swearing will be identified according to content.

Vulgarity will be coded as *other nonstereotypic* and as *swearing and vulgarisms* under *Behavioral Manifestations*.

Examples: She said, “I’ll knock you on your ass.”

He said, “I shit on the floor.”

The acts of hitting, slapping, biting will be coded as *biting, etc.* under *Behavioral Manifestations*.

JAMES M. A. WEISS, editor and coauthor of *Nurses, Patients, and Social Systems*, is Professor and Chairman of the Department of Psychiatry in the University of Missouri School of Medicine at Columbia. He holds degrees in psychology and medicine from the University of Minnesota, and in public health psychiatry from Yale University. He has also served on the faculty at Washington University, and has been appointed Visiting Professor at Cambridge University, England, for the academic year 1968-1969.

MARTHA M. BROWN, Dean of the Washington University School of Nursing at St. Louis, was principal investigator and project director for this study. Dean Brown has received degrees from The University of Michigan, Wayne University, and Western Reserve University, and is now a candidate for the doctoral degree at Saint Louis University.

PATRICIA R. BROWN is Associate Professor of General Nursing Science and Associate Dean of the Washington University School of Nursing, where she received the B.S.N. and M.S.N. degrees. She holds the Ph.D. degree from Saint Louis University, having received it in 1965. She was a research assistant and served as one of the skilled nurses in the research study upon which this book is based.

JOHN C. GLIDEWELL received his doctoral degree at The University of Chicago, where he is now Professor of Educational Psychology. Professor Glidewell served as Director of Research and Development for the St. Louis County Health Department and as a member of the faculty at Washington University from 1953 to 1963.

RAYMOND G. HUNT, Professor of Psychology at the State University of New York at Buffalo, was educated at the University of Buffalo. He was a corecipient of the Helen L. DeRoy Award for Research and Writing, of the Society for the Study of Social Problems, in 1960.

DUE	RETURNED
JAN 15 1971	JAN 15 1971
MAY 28 1974	FEB 7 1974
JUL 18 1975	APR 5 1975
JUL 27 1979	APR 23 1979
MAY 1 1981	APR 27 1981
MAR 26 '82 MU	APR 6 '82 MU
NOV 30 '84 MU	NOV 15 '84 MU
MAY 03 2006	MAY 10 2006 MU

UNIVERSITY OF MISSOURI - COLUMBIA
ELL E99696
As36 .M82 46



010-014598394

AS
36
.M82
46
E99696

