This study traces the development of research in marriage counseling to discover whether generalizations concerning development in a scientific field also apply to research in marriage counseling. It is hypothesized that it is possible to identify development in a field along the lines of productivity of research, development of accretive studies, changes in research treatment, and changes in the boundary of the field. Based on these criteria, 161 papers were analyzed. Results indicate that there has been an increase in marriage counseling research which, however, has not been accompanied by increased scientific sophistication in terms of growth by accretion or by greater rigor in research treatment. The author feels these findings might be interpreted as being due to the immaturity of the field or to basic differences between this field and general science. (Author/MPJ)
DEVELOPMENT OF RESEARCH IN MARRIAGE COUNSELING

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During the past three centuries scientific growth has proceeded at a steadily increasing rate. Scientific research and development have produced profound effects in every area of activity. A part of this effect has been the spawning of new fields of endeavor especially created to examine science itself. There are four rather clearly delineated academic fields devoted to this effort: the history of science, the philosophy of science, the psychology of science and the sociology of science. In each of these fields, members of the generic disciplines are attempting to apply the particular expertise of their own discipline to an understanding of the phenomenon of scientific activity. To the extent that such efforts make use of the methods of science, these fields may be considered under the broad title, the science of science.

In investigating a problem in the history of the behavioral sciences, the present study drew from each of these fields in an effort to trace the development of research in an emerging quasi-scientific field, the specialty of marriage counseling. The goal was to determine whether generalizations concerning development which have been empirically derived from study of recognized scientific fields apply also to research in marriage counseling.

Marriage counseling is here defined as professional treatment of problems arising within the husband-wife relationship. The focus is therefore on interpersonal factors rather than intrapsychic phenomena. The effort of the counselor is directed toward three interrelated but separable elements: the husband, the

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wife and the marriage. This definition excluded from this study research dealing with such activities as education for marriage and parenthood, family life guidance programs, advice-giving, sex education and family therapy where the emphasis is on parent-child relationships.

Marriage counseling as a specific professional activity may be said to have begun in the United States in 1929, with the opening of the first marriage consultation center by Drs. Abraham and Hannah Stone in New York City. This was soon followed by the establishment of similar centers aimed at providing information and guidance to those about to be married and to those already married. These included Dr. Paul Popenoe's American Institute of Family Relations, opened in Los Angeles in 1930, and the Philadelphia Marriage Counsel, begun in 1932 under the direction of Mrs. Emily H. Mudd (Stone, 1949).

Then, as now, marriage counselors were a highly interdisciplinary group, including professionals who received their basic training in one or more of the following: medicine, psychiatry, social work, psychology, education, theology, sociology and law.

The general hypothesis of this study was that developmental trends in marriage counseling research are exhibited in the direction of increased research activity and sophistication. These trends might be expected to be similar to those which have been observed and documented in the development of established scientific fields. Therefore, four trends were proposed as subsidiary hypotheses. Specifically, it was hypothesized that it is possible to identify development over time along the following lines: productivity, development of accretive studies, changes in research treatment, and changes in the boundaries of the field.

For the purposes of clarity and brevity in presentation, the rationale, findings and discussion of each hypothesis will be considered as a unit. This will be preceded, however, by an explanation of the method used in selecting the population of papers which represent marriage counseling research.
The data used in examining the hypotheses were based on analysis of all identified papers which met the following criteria:

1. The paper must deal with the marriage counseling process, thereby excluding studies concerned with identifying marital patterns, sources of problems in marriage, factors contributing to disturbance, etc.

2. The paper must report some empirical data (herein broadly defined to cover a range from observation of personal experience to detailed reports of findings), thereby excluding general discussions of a theoretical or rational nature.

3. The paper must have been published as an article in a professional journal, following the usual pattern of dissemination of data used by the sciences.

4. The paper must have been published in English and be based on data gathered in the United States or Canada.

The bibliography of references examined was derived from four sources. The primary source was the International bibliography of research in marriage and the family, 1900-1964 (Aldous & Hill, 1967), plus references listed in an up-to-date supplement provided by the Minnesota research group which produced that volume. A second source of references was the indexing services of the National Library of Medicine. A computer search covering the period 1963-1968 was run by the Medical Literature Analysis and Retrieval System (MEDLARS). This was supplemented by the author's personal search of annual volumes of Index Medicus prior to 1963 and of the Current List of Medical Literature for the years 1945-1959. A third source of references included the bibliographies of major recent books on marriage counseling. In addition, as it became apparent that the major publication outlet for marriage counseling research was a single journal, each issue of the 30-year-old Journal of Marriage and the Family, formerly titled Marriage and Family Living, was systematically searched.

Each paper derived from these sources was checked to determine whether it met the criteria for inclusion in the present study. This process produced a group...
of 161 papers which comprised the population under consideration here. There was, coincidentally, a total of 161 authors, with 124 first authors and 35 of the papers being jointly authored. Sixty-one different journals were represented.

And now for the findings

I. Productivity. It was hypothesized that there has been an increase in activity in the field, measured by the number of published papers over the period, 1920-1968. A frequency distribution depicted the growth curve.

Price (1963) has identified this measure as a basic one for studying the growth of science. He has emphasized two features. First, he has determined an empirical law of growth, using many numerical indicators of which the rate of publication is one, which states that the normal mode of growth is exponential, multiplying by some fixed amount in equal periods of time. He suggests this as the fundamental law of any analysis of science and indicates that it holds true with high accuracy over long periods of time. Second, the growth has been shown to be extremely rapid, however measured. Using publication rates, the doubling times vary from 10 to 20 years, depending on the stringency of the criterion which is applied. Price accepts as a general statement that publications double in each 15-year period, the modern normal rate of growth. He reported that about 30 analyses have been done by other persons, all with similar results and concluded that "it seems beyond reasonable doubt that the literature in any normal, growing field of science increases exponentially, with a doubling in an interval ranging from about ten to about fifteen years" (Price, 1961, p. 102).

Data from the marriage counseling research publications do not reflect this orderly pattern of science over the 40-year period studied. The frequency distributions for the four 10-year periods surveyed are 5, 12, 60 and 84 papers. A 10-year doubling pattern holds for the first 20 years. During the third period there was a sharp increase, so that there were five times as many papers published during 1949-58 as in the preceding period. Then in the fourth period, though
there was an increase in absolute numbers, the rate of growth dropped to 49%, the slowest growth rate for the four time periods.

It may be concluded that research publication trends in marriage counseling to date are not following the usual pattern of scientific fields. The observed instability of growth rates may be due to the immaturity of the field, in which case one would expect to observe in the future movement toward increased regularity and similarity to the productivity pattern of the sciences. On the other hand, the observed differences in publication trends might reflect a basic difference in the nature of the fields being compared.

II. Development of accretive studies. It was hypothesized that there has been an increase in the use of cross-referencing, indicating systematic development by the process of accretion. A salient characteristic of science is that it progresses by building upon previous work, a process in which each new paper adds to the accumulated knowledge of the past and then provides a stronger base for subsequent work. Price points to the citation of references as the most obvious manifestation of this scholarly bricklaying (1963, p. 65).

By means of citation analysis it was possible to obtain a measure of the frequency of cross-referencing, an indication of the amount of accretive growth. Only 49 of the 161 papers were cited by other papers in the population. In other words, 70% of the papers have received no citations within the relevant research literature, having failed to come to the attention of or be considered worthy of citation by authors within the same field.

There were only 96 instances of cross-referencing between population papers and almost a fifth of these were self-citations of earlier works. In order to examine the citation pattern that did exist, a citation matrix was constructed to indicate the network in the population. Despite the low incidence of citation, it was possible to identify what might be called a research front, defined by a higher probability of citation in a strip near the diagonal, extending over the
40 papers immediately preceding each paper in turn.

Comparison was made to the citation patterns of science in general. Based on the world-wide literature, Price (1965) has found that there is an average of 15 references per paper. In the marriage counseling papers, the average number of references was six. The average figure here is deceptive, however, for it was found that 20% of the marriage counseling papers contained no references at all, as compared with about 10% of general scientific papers. Sixty-seven percent of the marriage counseling papers contained 25 or fewer references, compared with 35% of the general scientific papers. In both populations only about 5% of the papers carried more than 25 references.

In summary it might be concluded that documentation by referencing is less frequent in the marriage counseling research papers and cross-referencing within the field is minimal. New papers are not knitted to the existing literature but rather connected in a loose fashion to only a small part of the relevant work. There is failure to use previous studies as a means of advancing knowledge through accretion. It is therefore difficult to discern the characteristics of an active research front for the field as a whole.

III. Research treatment. It was hypothesized that there has been movement from the predominance of papers based on broad, general observations to the use of controlled investigations of specific variables.

Research on marriage counseling to date has been primarily descriptive and unsystematic. For this reason it was decided to investigate changes in research treatment by content analysis of a single dimension: the strength of the empirical basis used by the authors to support their generalizations. This dimension was defined by the type of observation which the authors reported in the population papers.

The category system was designed to place each paper on a scale ranging from naturalistic to controlled observations, from post hoc to purposive selection.
and recording of data, from subjective to objective material. Four categories were used in an effort to cover all possibilities.

Category I included papers reporting observations of a general nature based on personal experience. The empirical data consisted of anecdotal illustrations, casual references to experience in practice and incomplete case descriptions used as examples of a principle. Here the author used his observations to support or illustrate his statements rather than drawing his conclusions directly from the incidents described.

Category II included papers based on case study. The empirical data reported consisted of the full description of a case. Here the conclusions were specifically drawn from a detailed analysis of a case, and the author provided more complete information on which the reader could judge the generalizations which were made.

Category III included papers based on observations of a specified sample or series of cases, chosen especially in order to derive statements of fact. The characteristics of the sample were specified and the cases were considered as a group with deliberate and conscious selection of cases to be considered together.

Category IV included papers in which the observations were based on a controlled study of a sample, chosen in advance. Relevant variables were defined and controlled. The method was either experimental, involving the conscious manipulation of variables, or differential, using comparison of samples.

Each paper was coded for the highest possible category. An entire paper was used as both recording and context unit. The system of enumeration was a frequency measure, the number of papers coded in each category. Sampling is an extremely important technical aspect of most content analysis studies, but it was not a factor in the present investigation because of the effort to make the population inclusive of the universe of papers which meet the criteria given earlier for both "research" and "marriage counseling."

Problems associated with the establishment of validity were minimized in this
study because the effort of the content analysis was purely descriptive, rather than inferential. Coding was based on what is actually reported in the papers under analysis. The concern therefore was with content validity, and the question reverted to the appropriateness of the category system used.

Reliability is a crucial factor for any content analysis study and a variety of methods are available for computing intercoder agreement. In this study three coders were used. One was the investigator herself, and two were experienced marriage counselors trained in the social sciences. Coder A analyzed all the papers; Coder B analyzed 15%; and Coder C analyzed 10%, with a 5% overlap with Coder 2. Thus there were at least two judgments for 20% of the material, with precise percentages of agreement of .85 and .73.

Findings based on the content analysis indicated that there has been little change over time in the direction of increased incidence of papers falling in the higher categories. Over the entire time period of forty years, distribution of papers in the four categories was as follows: Category I contained 56% of the papers; Category II, 13%; Category III, 22%, and Category IV, 4%. To examine changes over time, shifts in category proportions in each of the four ten-year periods were studied. Since the first 20 years included only 10% of the papers, focus is directed toward the third and fourth periods. In the third period (1949-58), there were decreased percentages of papers in Categories I, II, and IV, with 45%, 23%, and 2% respectively. Category III, which had no papers in the previous time period, accounted for 30% of the papers published during 1949-58. In the fourth time period, 1959-68, the proportion of papers in Category I increased to 64% with Categories II, III, and IV showing decreases, with 14%, 16%, and 6%.

From this analysis it was concluded that marriage counseling research has thus far moved very little toward increased sophistication in terms of research treatment. The increase in numbers of published papers is largely accounted for by articles which meet only a very broad, minimal definition of research. The
generalizability of the bulk of these studies is severely limited.

IV. Boundaries of the field. The professional orientation of workers in the field of marriage counseling research may be represented by 1) the author's training discipline and 2) publication outlets used. Information concerning these variables was collected, whenever possible, for each of the papers in the population.

Concerning training disciplines, it was found that during the last two 10-year periods (which account for about 90% of the total number of papers) the highest proportion of authors were trained in medicine (including psychiatry, psychoanalysis, obstetrics and general medicine), followed by social work and psychology. Although there has been some shifting in the proportions of persons trained in the six disciplines, the rank orders have remained stable.

Concerning publication outlets used in the last two 10-year periods, for both periods interdisciplinary journals contain the greatest number of papers (56% and 35% respectively), the bulk of these having been published in Journal of Marriage and the Family (before 1963 titled Marriage and Family Living). Social work journals accounted for 19% of the papers published in the third time period with medical publications in third position with 14%. Medical and social work journals shifted rank positions in the fourth time period, with medical journals publishing 31% of the papers and social work again 19%.

It was therefore concluded that there has been little change in the boundaries of the field. Authors of papers in marriage counseling research have been mainly persons trained in medicine, social work and psychology. They have published primarily in interdisciplinary, social work and medical journals.

These findings suggest that the deviance of certain characteristics of marriage counseling research from those of general science might be due to something other than the immaturity of the field. An alternate explanation would take account of the training and value orientations of those persons practicing and studying
marriage counseling. A good case may be made in terms of there being basic differences in 1) the socialization processes to which practitioners of the helping professions, on the one hand, and scientists, on the other hand, are exposed, 2) the different reward systems under which these people operate, and 3) differences in temperament, attitude and ability of persons who are attracted to and find satisfaction in one or the other role.

Conclusion. In summary it was concluded that though there has been increased activity in the field of marriage counseling research, this has not been accompanied by increased scientific sophistication either in terms of growth by accretion or by greater rigor in research treatment. These findings might be interpreted as due to the immaturity of the field or to basic differences between this field and general science.
REFERENCES


