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## Ralph W. Tyler's Principles of Curriculum, Instruction and Evaluation: Past Influences and Present Effects

Marie Kirchner Stone  
*Loyola University Chicago*

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RALPH W. TYLER'S PRINCIPLES OF CURRICULUM, INSTRUCTION  
AND EVALUATION: PAST INFLUENCES  
AND PRESENT EFFECTS

by

Marie Kirchner Stone

A Dissertation Submitted to the Faculty of the Graduate School  
of Loyola University of Chicago in Partial Fulfillment  
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Doctor of Philosophy

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## VITA

Marie Kirchner Stone received her undergraduate degree in sociology and her master's degree in education. Minor areas of educational focus include: philosophy, English, and American Studies.

Her professional career includes teaching and administration. She has been an educator at the secondary and the university levels with a concentration on teaching both American Literature and writing courses in urban independent schools. Her administration experience includes: Chairman of the Department of English, college counselor, Dean of Students, and Academic Dean. Since 1974, she has been Academic Dean, with a major responsibility for curriculum coordination, at the Francis W. Parker School, an independent day school in Chicago.

The majority of her work is directed to curricular development. She has participated in and developed numerous curriculum projects in diverse areas such as: writing, reading, interdisciplinary studies, and health education. She also works as a Curriculum Consultant and has helped to organize school conferences on the local, regional, and national levels during the 1970s, when she was one of a twelve member Academic Committee of the National Association of Independent Schools.

Marie Kirchner Stone is the author of American Literature in An American Studies Approach and a Syllabus for Grade 10 English. She is also the editor of a school history, published in 1976, entitled

Between Home and Community. About a dozen articles covering diverse curriculum topics from education of the gifted and talented to President Reagan's influence on education have been published.

Since 1982, she has been a member of Phi Delta Kappa, the Association for Supervision and Curriculum Development, and the National Council of Teachers of English. In 1983, she was the recipient of the National Jesuit Society Honor Award for scholarship, service, and achievement, and in 1984, she was selected and received a grant as a Schmitt Dissertation Fellow.

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## CHAPTER I

### THE NEED FOR THE STUDY

#### The Need For Curriculum History

Curriculum has long been a major interest of those concerned with education, but curriculum as a specialized field has become a conscious and deliberate professional field of study only within the twentieth century. "As such curriculum is a late arrival in the long drama of education history."<sup>1</sup> As a late arrival the historical inquiry into the specialty is sometimes incomplete or absent. This ahistorical posture of the curriculum field has been proclaimed as detrimental to both academic scholars and to educators. The problem of this study derives from the need for and the lack of intellectual curriculum history about significant curricularists, who have made major contributions that have created the field.

Several critics have commented on the absence of historical analyses in the curriculum field. In an article entitled, "The Curriculum: Field Without a Past?", Gerald Ponder applies the term "ahistorical" to characterize the state of the field.<sup>2</sup> This descriptor is

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<sup>1</sup>Edward A. Krug, Curriculum Planning (New York: Harper & Row, 1950), p. 310.

<sup>2</sup>Gerald A. Ponder, "The Curriculum: Field Without a Past?" Educational Leadership 31 (February 1974): 461-64.

not without precedent; curriculum scholars of other decades also lament the ahistoricism of the field. "In the curriculum field," states Herbert Kliebard, "issues seem to arise ex nihilo; each generation is left to discover anew the persistent and perplexing problems that characterize the field."<sup>1</sup>

Reiterating a similar concern, John Goodlad explains the prevalence of the problem of ahistoricism. "A substantial number of new crop reformers have approached the persistent recurring problems of curriculum construction in the naive belief that no one had looked at them before."<sup>2</sup> Arno Bellack also links the ahistorical stance with the general failing in the curriculum by pointing out, "This ahistorical stance seems to be characteristic not only of the current crop of curriculum reformers, most of whom are university professors of academic disciplines, but also of educationists who claim curriculum building is their field of professional specialization."<sup>3</sup> This ahistorical perspective of the curriculum scholar and specialist results from a lack of curriculum history.

The importance of an historical examination into the curriculum field is supported by both historians and educationists. History,

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<sup>1</sup>Herbert Kliebard, "The Curriculum Field in Retrospect," in Technology and the Curriculum, ed. P. W. I. Witt (New York: Teachers College Press, Columbia University, 1968), p. 69.

<sup>2</sup>John L. Goodlad, The Changing School Curriculum (New York: Fund for the Advancement of Education, 1966), p. 91.

<sup>3</sup>Arno Bellack, "History of Curriculum Thought and Practice," Review of Educational Research 39 (June 1969): 291.

according to famed Cambridge historian, Edward Carr, has general value because it "is a continuous process of interaction between the historian and his facts, an unending dialogue between the present and the past."<sup>1</sup> But history also makes a specific contribution to curriculum as is emphasized by Kenneth Charlton, who examines what history cannot and can do in dealing with curriculum problems. History cannot provide answers, but it can make educators, "aware of the possibility of change, of the complexity of change, and of the carry-over of the past into our present situation and future aspirations."<sup>2</sup>

Arthur King and John Brownell also see the value of an historical approach to curriculum study but somewhat differently. Their premise is that the assumptions, the theoretical conceptions, and the empirical and descriptive data of any intellectual community are built upon the discourse of its forebears.<sup>3</sup> William Schubert joins in underscoring the need for historical inquiry in a somewhat more demanding admonishment. "Curriculum scholars, administrators, and teachers need to see themselves as part of an evolving historical context . . . to know about the insights, foibles, and achievements of those who faced similar problems in other times and circumstances."<sup>4</sup>

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<sup>1</sup>Edward H. Carr, What is History? (New York: Random House, 1961), p. 35.

<sup>2</sup>Kenneth Charlton, "The Contributions of History to the Study of Curriculum," in Changing the Curriculum, ed. J. F. Kerr (London: University of London Press, 1968), p. 71.

<sup>3</sup>Arthur R. King and John A. Brownell, The Curriculum and the Discipline of Knowledge: A Theory of Curriculum Practice (New York: John Wiley & Sons, 1966), p. 75.

<sup>4</sup>William H. Schubert, Curriculum Books: The First Eighty Years (Lanham, Md.: University Press of America, 1980), p. xi.

### Intellectual History in the Curriculum Field

To ameliorate the absence of history, several different kinds of activities have been undertaken in the field during the past two decades. Studies of individual educators have been written since the mid-1960s; some are about curriculum specialists.<sup>1</sup> In 1977, Daniel and Laurel Tanner and other curricularists established The Society of Curriculum History.<sup>2</sup> In 1980, William Schubert prepared an important chronological index of 1,138 major curriculum books published since 1900, which constitutes an overview of curriculum literature from the beginning of the field to the present.<sup>3</sup> In the text, Schubert states that the purpose of "this book is . . . to further historical consciousness for curriculum inquiry, . . . to whet curricular appetites and inspire further study, . . . [and] to augment curriculum as a scholarly enterprise grounded solidly in its history."<sup>4</sup>

If curriculum is to prosper as a field of study, then analysis of inherited ways of thinking about curriculum by those who created the field appears to be vital to its growth. To this end, curriculum historians have constructed several different kinds of intellectual histories. Mary Seguel traces the important voices in the Formative Years of the curriculum field from 1895-1937. About her historical analysis of leading curricularists of this period she states, "It seems important to understand the development of . . . thinking, especially if the

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<sup>1</sup>Lawrence Cremin, The Wonderful World of Ellwood Patterson Cubberly (New York: Teachers College Press, Columbia University, 1965), p. 79.

<sup>2</sup>Schubert, Curriculum Books: The First Eighty Years, p. 7.

<sup>3</sup>Ibid., p. 11.

<sup>4</sup>Ibid., p. 38.



sources and the reasons for the development can be discovered in the tracing of it."<sup>1</sup> In the text, Seguel hypothesizes, "An attempt to re-create the past in order to discover who engineered this development, what its course was, and what influenced it, should help today's curriculum makers."<sup>2</sup>

Arno Bellack, who influenced Seguel's text, expands the perspective by tracing curriculum ancestry from its Formative Years to the present. Bellack examines thirty-three pieces of literature directly related to the history of curriculum thought and practice and divides the chronology of curriculum into four historical periods: the Formative Years (1890-1930), the decades of Curricular Theorists (1930-1960), the era of National Curriculum Committees (1960-1970), and the period of Curriculum Problems and Issues (1970-1980).<sup>3</sup>

Daniel and Laurel Tanner also support the need for intellectual history in each preface to the two editions of their text, Curriculum Development: Theory into Practice. In the preface of the first edition, the Tanners encourage a microcurricular approach to curricular problems by stating, "In the absence of a holistic conception of curriculum, the focus is on the piecemeal and mechanical functions."<sup>4</sup>

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<sup>1</sup>Mary L. Seguel, The Curriculum Field: Its Formative Years (New York: Teachers College Press, Columbia University, 1966), p. 2.

<sup>2</sup>Ibid.

<sup>3</sup>Bellack, "History of Curriculum Thought and Practice," p. 283.

<sup>4</sup>Daniel Tanner and Laurel N. Tanner, Curriculum Development: Theory into Practice (New York: Macmillan Co., 1980), p. xv.

The Tanners do not mean, "contemporary problems can be solved by turning to the past but rather . . . we have to treat contemporary curriculum development and problems from the perspective of historical experience."<sup>1</sup>

In the second edition history receives an even greater emphasis. "It is shown how, throughout the Formative Years of the curriculum field, successive movements and reforms have emerged as reactions to the excesses of preceding movements and reforms."<sup>2</sup> In an attempt to alleviate these excesses and provide a holistic view of curriculum, the revised edition includes two new chapters on curriculum history entitled "Early Perspectives of the Curriculum" and the "Curriculum Legacy." The Tanners define the curriculum legacy as "the heritage of struggle for a sense of community for the curriculum field."<sup>3</sup> The additions to the second edition clearly demonstrate the continuing necessity and the value of intellectual history.

Writing in the Seventieth Yearbook of the National Society for the Study of Education entitled The Curriculum: Retrospect and Prospect, several authors demonstrate different approaches in tracing the intellectual curriculum legacy. Some authors interpret curriculum history through analyzing specific development during selected decades. Historical interpretations of this bent are presented by Ralph Tyler in a chapter entitled "Curriculum Development of the Twenties and Thirties" and by Robert McClure in his analysis of "The Reform of the Fifties and Sixties."

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<sup>1</sup> Ibid.

<sup>2</sup> Ibid., p. xi.

<sup>3</sup> Ibid., p. xii.

Tyler labels the era between the World Wars as a period of "scientific curriculum building," which he credits to Harold Rugg and other committee members, who created the Twenty-Sixth Yearbook.<sup>1</sup> In Tyler's analysis, the Yearbook identifies the curriculum problems we still recognize, "as critical in the development of the curriculum and instruction program."<sup>2</sup> Intellectual history, in Tyler's approach, provides understanding through identifying theoretical contributions and recurrent problems in the curriculum field.

Robert McClure's "historical look at the near past" cites not only the influences of forces but also "the influencers [leaders] of the curriculum reforms" in the Fifties and Sixties.<sup>3</sup> His analysis assigns equal weight to the intellectual and the social forces of change. Among the intellectual forces influential in changing curriculum he identifies two: the influence of one theorist upon other pioneers of the field and the influence of "collaboration [among curricularists] as forces of change" in curriculum.<sup>4</sup> In quoting Harold Rugg from the Twenty-Sixth Yearbook, "What then has a century of curriculum making produced?", McClure implies yet another value of

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<sup>1</sup>Ralph W. Tyler, "Curriculum Development in the Twenties and Thirties," The Curriculum: Retrospect and Prospect, in Seventieth Yearbook of the National Society for the Study of Education, pt. 1 (Chicago: University of Chicago Press, 1971), p. 26.

<sup>2</sup>Ibid., p. 30.

<sup>3</sup>Robert McClure, "The Reforms of the Fifties and Sixties: A Historical Look at the Near Past," The Curriculum: Retrospect and Prospect, in Seventieth Yearbook of the National Society for the Study of Education, pt. 1 (Chicago: University of Chicago Press, 1971), pp. 45-46.

<sup>4</sup>Ibid., p. 50.

knowing curriculum history, the value of knowing the collected wisdom of the specialty.<sup>1</sup>

James Macdonald, like McClure, also concentrates upon intellectual forces causing curriculum change. Macdonald names three intellectual sources of change, which differ from those McClure cites, and one source, which is similar to McClure's analysis of causes of curriculum change. Macdonald identifies intellectual forces for curricular change as: cultural reactions to technology, foundations of education, the substantive disciplines, and professional educators. McClure and Macdonald agree that "the experts in curriculum development . . . have also provided . . . notable contributions."<sup>2</sup> Among the professional influencers, Macdonald states that perhaps the most notable example of professional influence has been: "the Tyler rationale, the [Bloom] taxonomy of educational objectives, and the behavioral objective."<sup>3</sup> "The challenge ahead," Macdonald says, "becomes one of taking curriculum development out of the accidental category and introducing some form of general rational input in the planning."<sup>4</sup>

The intellectual forces influencing curriculum change that emanate from the educational and professional experience of curriculumists are beginning to gain new prominence in the literature. As William Schubert states, "Surely, origins of ideas in curriculum or any

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<sup>1</sup>Ibid., p. 45.

<sup>2</sup>James B. Macdonald, "Curriculum Development in Relation to Social and Intellectual Systems," The Curriculum: Retrospect and Prospect, in Seventieth Yearbook of the National Society for the Study of Education, pt. 1 (Chicago: University of Chicago Press, 1971), p. 106.

<sup>3</sup>Ibid., pp. 106-7.

<sup>4</sup>Ibid., pp. 111-12.

other scholarly area derive from . . . influences on scholars . . . [such as] their mentors, experiences outside of academia, teaching experience, reading exposure, and association with colleagues."<sup>1</sup> Schubert strongly encourages analyzing ways of thinking about curriculum by those who created the field, and, to this end, he constructs four genealogies of curriculum scholars based upon a mentor-student relationship as "a prerequisite to the more illuminating task of analyzing, interpreting, criticizing, and evaluating the data."<sup>2</sup> His purpose in constructing a curriculum genealogy is "to arrive at a better position for inquiry about lines of curriculum thought relative to origins."<sup>3</sup> He indicates that the examination of all or any branch of this curriculum genealogy has the potential of creating a valuable genre of intellectual history.

At the center of the most elaborate branch of mentor-student relationships is Ralph Tyler, a person who has been a central figure in the field since the 1930s. Tyler's pre-eminence in the curriculum field is long established, and he is judged by many as "the dean of curriculum theorists."<sup>4</sup> An investigation of his intellectual curriculum genealogy is well worth studying both for relevance to current problems and for historical illumination.

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<sup>1</sup>William H. Schubert, "Origins of the Curriculum Field Based on a Study of Mentor-Student Relationships," Journal of Curriculum Theorizing 2 (Summer 1980): 37.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

<sup>4</sup>McClure, "The Reforms of the Fifties and Sixties: A Historical Look at the Near Past," p. 50.

## CHAPTER II

### THE PROBLEMS AND THEIR SOLUTIONS

#### The Problem

The purpose of this study is to trace the legacy of the Tyler Rationale from its origins in the Formative Years of Curriculum (1890-1930) to its influence upon the curriculum theorists of the present day. To achieve this purpose of tracing the intellectual history of Tyler's curriculum contribution to the field, the investigation follows several steps: (1) an intellectual concentration upon the Tyler Rationale is identified through a review of the Tyler literature, (2) an historical focus is established through the identification of the ancestors and the descendants of the Tyler Rationale, (3) the investigation problem is formulated into three questions and their resolutions, (4) the terminology is clarified, and (5) the methodology and the limitations of the study are delineated.

#### Intellectual Focus

The intellectual history examines Tyler's major contribution, which is a curriculum model that formulates the four major divisions of curriculum into four fundamental questions: "(1) What educational purposes should the schools seek to attain? (2) What educational experiences can be provided that are likely to attain these purposes? (3) How can these educational experiences be effectively organized? and

(4) How can we determine whether these purposes are being attained?"<sup>1</sup>

These four fundamental questions, which are stated in Basic Principles of Curriculum and Instruction, create the Tyler Rationale. The rationale is described and traced from its origins in Tyler's own research projects before the publication in 1950 through its modifications and transformation from 1950 until 1984. The publication of the second edition of the rationale is forthcoming in 1985. The rationale is also traced from its origins in and its influence upon curriculum theorizing in the field.

#### Historical Focus

The central chapters of the investigation are each presented in an historical perspective to demonstrate how the early foundations provide the bases for the present rationale. Chapter I, "The Need for the Study," describes the general need for intellectual history in the new field of curriculum and the specific value of tracing Ralph Tyler's intellectual curriculum genealogy. From 1930-1980, no single curriculum construct in the field has been as dominant, few have been as controversial, and none has been continually shaped by the criticism and events of the eras. The rationale has been measured by the last quarter of a century of experience.

Chapter II, "The Problems and Their Solutions," explains the historical and intellectual significance and limitations of the problems

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<sup>1</sup>Ralph W. Tyler, Basic Principles of Curriculum and Instruction (Chicago: University of Chicago Press, 1950), p. 1.

of the investigation and defines the Tyler terminology. Tyler's changing jargon is important to analyze because it illustrates transitions in the new field and alterations in Tyler's concepts as they expand with new meaning. It is valuable to view the changes in Tyler's language in an historical perspective.

Chapter III, "The Related Literature," is a literature review of Tyler's major works in chronological order. To examine Tyler's writings historically presents a view of their interrelationships so essential to his scientific approach. Each of Tyler's writings about the rationale is part of a whole fabric; isolated reading distorts because Tyler works methodically in an organized whole. The absence of an historical perspective also neglects Tyler's progressive origins. Tyler's progressivism is sustained for fifty years. The literature is also related in subsequent chapters of this investigation to each of Tyler's major research projects and to most career changes in his life. What Tyler writes reflects not only his experience and thinking and the nature of the curriculum problems of the different eras, but it also records how the social sciences can contribute research of value to the field of curriculum. In a certain way, Tyler's writings reveal him as his own chronicler as well as an important historian interpreting both the changes in society that are reflected in schools and the changes in curriculum development from 1930-1984. Most changes he has personally experienced as a student of many eminent early curricularists or as an actual participant.



Chapter IV, "Tyler's Career and Contributions to Curriculum," and Chapter V, "Major Contribution: the Tyler Rationale," interrelate Tyler's career and his curricular contributions in an attempt to demonstrate how the foundations of his undergraduate and graduate education affect his perception of curriculum. In the fourth chapter, Tyler's changes in his career and his research projects are presented in historical perspective in order to provide the context for Tyler's major contribution. In the fifth chapter, the rationale is traced from its origins to the most recent transformations. The research projects that lead to the evolution of the Tyler Rationale are presented in greater depth to show how they relate to previous and succeeding developments of the rationale. This dual approach shows the general horizontal integration among several factors in Tyler's career and the detailed vertical focus of the Tyler Rationale over the fifty year period. The research in the social sciences and Tyler's role as a consultant affect the rationale.

Chapters VI and VII present an intellectual history of the curriculum field by tracing the curriculum legacy of the Tyler Rationale from its ancestors in the 1900s to its descendants in the present. The Tyler Rationale is traced from the early intellectual influences of curricularists upon Tyler's formulation of the rationale to the effects of Tyler's principles of curriculum and instruction upon present day curriculum theorists. The intellectual origins and influences of Tyler's Rationale are traced through four different categories of

intellectual relationships: (1) the general intellectual influence upon Tyler by the early curriculum experts; (2) the specific influence upon Tyler by his mentors at Ohio State University and the University of Chicago; (3) Tyler's influence upon his students, colleagues, and collaborators on major projects at Ohio State University; and (4) Tyler's influence upon student, colleagues, and collaborators on major projects at the University of Chicago.

### The Resolution

To trace the origins of the Tyler Rationale from its roots to its revision both within Tyler's own projects and within the field creates three problems to be resolved. The three problems concern the origins and evolution of the Tyler Rationale from 1930-1984, the identification of the intellectual curriculum ancestors, and the identification of the intellectual descendants. The three problems include:

#### Problem One: Description of Tyler's Contribution

1. What is Tyler's definition of the principles of curriculum, instruction, and evaluation?
2. What are the origins of the Tyler Rationale in Tyler's own research projects from 1930-1950?
3. How did Tyler modify or transform the rationale from 1950-1984?

#### Resolving Problem One

1. Describe Tyler's principles of curriculum, instruction, and evaluation.
2. Identify and trace the origins of the Tyler Rationale in Tyler's major research projects from 1930-1950.

3. Analyze the modifications and transformations in the Tyler Rationale from 1950-1984.

Problem Two: Intellectual Influence from the Past on Tyler

1. What educational thinkers from 1890 to 1930 influenced Tyler?
2. What curriculum specialists influenced Tyler?
3. What was the influence of prominent mentors at the University of Chicago and Ohio State University upon Tyler?

Resolving Problem Two

1. Analyze the intellectual origins from 1890 to 1930 of the Tyler Rationale.
2. Analyze the influence of curriculum specialists from 1890 to 1930 upon the Tyler Rationale.
3. Analyze the influence of Tyler's mentors from the University of Chicago and Ohio State University upon his curriculum model.

Problem Three: Tyler's Influence on the Present Curriculum Field

1. What is Tyler's influence upon his students, colleagues, and collaborators on major projects at Ohio State University, who are known curricularists?
2. What is Tyler's influence upon his students, colleagues, and collaborators on major projects at the University of Chicago, who are known curricularists?

Resolving Problem Three

1. Analyze the intellectual influence of Tyler upon prominent curricularists, who were his students and colleagues at Ohio State University

2. Analyze the intellectual influence of the Tyler Rationale upon prominent curricularists, who were his students and colleagues at the University of Chicago.

#### Definition of Terms

In defining broad terms of curriculum, the investigation relies on selected statements by authorities in the field. Tyler's terminology is used in those cases where he defines the term. Sources of difficulty occur both within the field and within the major texts describing the Tyler Rationale.

One major source of difficulty in terminology lies in the distinction between the word theory and rationale. Tyler does not consider his rationale a theory. In 1971, at an International Seminar on Curriculum in Sweden, Tyler rejects the use of the word theory for curriculum. "Theory in a scientific sense is not appropriate for curriculum theory where one has the practical question of will it work?"<sup>1</sup> Tyler indicates that his rationale is not a theory; "it is a set of categories to guide people from very different backgrounds."<sup>2</sup>

Several other important sources of difficulty in using Tyler terminology also exist. Tyler "put evaluation on a scientific footing" and yet when the word becomes popularized in nationally prominent evaluation projects, he substitutes other words like appraisal in the Eight

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<sup>1</sup>George A. Antonelli, "Ralph W. Tyler and the Curriculum Arena: A Historical Interpretation" (Ph.D. dissertation, Southern Illinois University, 1971), p. 191.

<sup>2</sup>Ibid.

Year Study and assessment in the National Assessment of Educational Progress to indicate broader and newer concepts. The use of synonyms for the word evaluation creates problems especially when the terms are used not only by scholars and experts in the field but also by practitioners and the public. Tyler first introduces the concept of evaluation in a book comprised of several articles entitled Constructing Achievement Tests. The language is confusing because Tyler begins the series of articles talking about the new kinds of testing and concludes the book with his new theory of evaluation. The concept of evaluation evolves between 1931-1934 and is introduced by Tyler in 1935. The confusion in terminology between testing and evaluation is exacerbated because the word evaluation is also frequently used synonymously with the word research. To help clarify this latter ambiguity, Blaine Worthen and James Sanders in Educational Evaluation: Theory and Practice, a text in the field of evaluation, devote an entire chapter to differentiate evaluation from the broader concept of research.<sup>1</sup>

The lack of clarity in the original statement of the rationale, which is introduced in Basic Principles of Curriculum and Instruction in 1950, creates other problems in terminology. Tyler does not define what he means by the three key concepts: principles, curriculum, and instruction, that create the title of the text. The word principles is

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<sup>1</sup> Blaine R. Worthen and James R. Sanders, Educational Evaluation: Theory and Practice (Belmont, Calif.: Charles A. Jones Publications, Wadsworth Publishing Co., 1973), p. 10.

not defined by Tyler until 1970, twenty years after the text is published.<sup>1</sup>

Instruction tended to be subsumed under the curriculum, although the phrase curriculum and instruction was commonly employed to include both curriculum designs and instructional strategies. . . . While the phrase curriculum and instruction was commonly used, . . . instructional or method courses tended to remain apart from curriculum courses. Similarly, most authors have separated the study of curriculum and instruction as two discrete but related fields of inquiry.<sup>2</sup>

Other curricularists continue to interrelate the concepts calling the curriculum, "the planned experiences provided through instruction."<sup>3</sup>

A third major source of language difficulty emanates from repeated clarification of Basic Principles of Curriculum and Instruction. From 1949, when the text is first published until the present, clarifying statements of the text, which arouse new interpretations by others in the field, have been written. When a concept changes, Tyler changes the word. Without familiarity with the entire Tyler literature on the rationale, these changes are necessarily confusing.

A fourth serious misunderstanding occurs because of the unclear meaning of the phrase behavioral objective. For Tyler, the word educational objective is used synonymously with the phrase, behavioral

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<sup>1</sup>Richard D. Levy, "A Study of Ralph W. Tyler's Statement, Development and Later Modifications of His Rationale As Set Forth in Basic Principles of Curriculum and Instruction" (Ph.D. dissertation, Temple University, 1972), p. 4.

<sup>2</sup>J. Galen Saylor, William M. Alexander, and Arthur I. Lewis, Curriculum Planning for Better Teaching and Learning, 4th ed. (New York: Holt, Rinehart, & Winston, 1981), p. 7.

<sup>3</sup>Allan C. Ornstein and Daniel U. Levine, An Introduction to the Foundations of Education, 2d ed. (Boston: Houghton Mifflin Co., 1981), p. 352.

objective. "The kinds of changes in behavior that an educational institution seeks to bring about in its students," can be called behavioral or educational objectives according to Tyler.<sup>1</sup> Many other curricularists and psychologists, however, are more precise in their definition of behavioral objectives. Tyler himself further confuses the problem in terminology by his use of the words: aim, goal or purpose, and objective, which he interchanges. Most curricularists distinguish among these concepts, which differ in scope and in their targets of concern. Prominent curricularists of today, George Beauchamp, John Goodlad, Allan Ornstein, and J. Galen Saylor, differentiate among the aim of education, the goal or purpose of a school stemming from its philosophy, and the objectives of curriculum. The phrase behavioral objectives is made more complicated by the changing clarifications of the form in which an objective should be stated. The confusion persists because of the increased specificity in the statement form of the objective required by such new behaviorists as Robert Mager and W. James Popham contrasted with the increased generality required by Tyler. Tyler does not want specificity confused with clarity of the statement of objectives.

In general, it must be understood that Tyler is a scientist who uses language as precisely as possible to create a terminology that illustrates newer meanings in a discipline that is not science. To read the corpus of the work is to respect Tyler's effective attempt at precision in word choice and change.

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 6.

### Tyler's Terminology

1. Curriculum--This term is not defined by Tyler in his curriculum text. In 1930, Tyler defines curriculum "as comprising the things-to-be-learned-by-the-pupils or subject matter."<sup>1</sup> He differentiates between Curriculum Service Studies, which focus upon "choosing objectives," and Methods Service Studies, which focus upon selecting learning experiences." In 1958, he alters the language somewhat but sustains the distinction between "new criteria" for curriculum content and for curriculum methods. But in 1956, Tyler defines curriculum as "All of the learning of the students which is planned by and directed by the school to attain educational goals."<sup>2</sup> After 1966, Tyler uses the word curriculum development instead of the phrase principles of curriculum and instruction, which reveals a new interpretation of the concept. Tyler contributes a model that systematizes an approach to curriculum in terms of formulating and stating objectives, selecting and organizing learning experiences, and evaluating behavioral objectives.

2. Instruction--This term is not defined by Tyler in his text. Tyler uses the terms "revising, building, rebuilding, modifying, and

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<sup>1</sup>Douglas Waples and Ralph W. Tyler, Research Methods and Teachers' Problems: A Manual for the Systematic Study of Classroom Procedure (New York: Macmillan Co., 1930), p. 221.

<sup>2</sup>Ralph W. Tyler, "Curriculum: Then and Now," in Proceedings of the 1956 Invitational Conference on Testing Problems (Princeton, N.J.: Educational Testing Service, 1957), p. 79.



constructing when discussing, planning, or developing a program of curriculum and instruction."<sup>1</sup>

3. Education--Tyler defines "education as a process which seeks to change the behavior pattern of human beings. . . ." <sup>2</sup> Tyler possesses a sophisticated understanding of the word, which later, in 1976, he interchanges with the concept of learning.

4. Evaluation--This term is used similarly by Tyler with appraisal and assessment. Evaluation is "a process for determining if learning experiences . . . are actually producing the desired results." Evaluation also involves the identification of "the strengths and weaknesses of the curriculum plans."<sup>3</sup> Evaluation has expanding "new roles and new means."

5. Basic Principles--This phrase, when underlined, refers to an abbreviated title of the text published in 1950. Tyler does not define what he means by basic principles in this text. Tyler, in 1970, defines basic principles as "guiding ideas that would enable different groups to work out a curriculum for their own particular programs."<sup>4</sup>

6. Rationale--The word refers to the Tyler Rationale, which is comprised of the four fundamental questions and recommended procedures "for viewing, analyzing, and interpreting the curriculum and instructional program of an educational institution."<sup>5</sup>

<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, pp. 126-28.

<sup>2</sup>Ibid., p. 5.

<sup>3</sup>Ibid., p. 105.

<sup>4</sup>Levy, "A Study of Ralph W. Tyler's Statement, Development, and Later Modifications of His Rationale As Set Forth in Basic Principles of Curriculum and Instruction," p. 4.

<sup>5</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 1.

7. Behavioral Objective--A term describing generalized behavior and used synonymously with educational objective, which Tyler defines as, "consciously willed goals . . . that are desired by the school staff . . . the kinds of changes in behavior that an educational institution seeks to bring about in its students. . . ." <sup>1</sup> This study uses the word objectives in the Tyler sense but differentiates the objectives of curriculum from the aim of education and the goals or purposes of a school. <sup>2</sup>

8. Learning Experiences--A term used originally and interchangeably with educational experiences referring to "the interaction between the learner and the external conditions in the environment to which he can react." <sup>3</sup> John Dewey's concept of learning is sustained from 1930-1980. Edward Thorndike's theory of transfer of training is also sustained from 1930-1980.

9. Theory--A theory is a general statement about relationships among facts. The facts that are a part of a theoretical statement are not isolated facts, but idealized facts; they have been organized into concepts. A theory is a structure of concepts; it states relationship, often a casual relationship among concepts. Hence, a theory is something more than a structure; it is an explanation of how a structure works. <sup>4</sup>

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<sup>1</sup> Ibid., p. 6.

<sup>2</sup> Saylor, Alexander, and Lewis, Curriculum Planning for Better Teaching and Learning, p. 7.

<sup>3</sup> Tyler, Basic Principles of Curriculum and Instruction, p. 41.

<sup>4</sup> Irving Morrissett, ed., "The New Social Science Curricula," Concepts and Structure in the New Social Science Curriculum (New York: Holt, Rinehart, & Winston, 1967), p. 5.

10. Curriculum Development--A term introduced by Tyler into his own writing in 1966 and defined by him in 1974. "Curriculum development . . . is not a science . . . we can think of engineering . . . but not very precise engineering. What goes on . . . is planning, execution, evaluation, replanning, repeating the cycle."<sup>1</sup>

#### Methodology

The methodology of the study is documentary research conducted through several different approaches: (1) a review of the literature written by and about Ralph Tyler and other prominent theorists, (2) interviews and correspondence with Ralph Tyler, (3) a questionnaire and correspondence with prominent curriculum theorists associated with Tyler, and (4) the development of a Tyler genealogy based upon several relationships of influence.

To define the nature of Tyler's contribution to curriculum and to ascertain the amount and type of influence in the curriculum field upon and by Tyler, a review of the literature is undertaken. Primary and secondary sources about Tyler are preponderant in the review and are presented in Chapter III in order to place the investigation in historical perspective. Because Tyler proceeds methodically with alterations in the rationale, the changes can be and usually are initiated and reflected in his writings. To understand the manner

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<sup>1</sup>Ralph W. Tyler, "Utilizing Research in Curriculum Development," Theory Into Practice 13 (February 1974): 8.

in which the rationale emerges and transforms is accomplished through reading Tyler's companion literature in an historic perspective. Additional readings concentrate upon curriculum history with a special emphasis upon the major primary works of curricularists, who intellectually influence Tyler or are influenced by Tyler's principles of curriculum and instruction and his theory of evaluation. William Schubert's Wilhelm-Wundt-Judd-Tyler tree of curriculum genealogy provides the initial basis for the selection of Tyler's mentors and students.<sup>1</sup>

An investigation of primary materials, other than materials published in book or periodical form, has also been undertaken. The Tyler Papers at the Regenstein Library of the University of Chicago, which include: correspondence, calendars, working papers, records, notes, and other professional memorabilia, have been examined to help identify intellectual relationships of influence. A correspondence was engaged with the Director of the Ralph W. Tyler Project, which is located in Washington, D.C., to ensure as comprehensive coverage of Tyler's papers and publications as possible. The goals of the literature review are reinforced through interviews.

A series of extended interviews with Ralph Tyler have been conducted intermittently over a period of two years. Some key interview areas include: his career development, his contributions to curriculum, the Tyler Rationale, the influential ideas and the important curricularists in his career, the Tyler influence upon the field, and

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<sup>1</sup>Schubert, "Origins of the Curriculum Field Based on a Study of Mentor-Student Relationships," p. 37.

other german topics of concern to the investigation. Interviews were preceded with prepared questions and followed with a written exchange with Tyler to document and further elaborate the information.

A questionnaire has been developed and sent to prominent curricularists, who are associated with Tyler in at least one of the following relationships: mentor, student, professor appointed by Tyler, or a colleague who assisted in Tyler's major projects or who sustained a lengthy collegial relationship. The questionnaire helped to increase or eliminate and to validate the names of curricularists for the Tyler curriculum genealogy. Communication with several curricularists from among this group was arranged.

A Tyler curriculum genealogy was designed based upon different areas of influence: (1) general intellectual influence upon Tyler; (2) mentor and colleague influence upon Tyler; and (3) Tyler's intellectual influence upon students, professors he appointed, and colleagues on major projects. The review of the literature, the Schubert genealogy, the extensive Tyler interviews and correspondence, and the curricularists' correspondence provide the bases for the selection of these classifications of influence and for further refining factors in the selection process.

Several factors helped to refine the selection process for the genealogy. The Tyler intellectual ancestors are identified by name or concept in Tyler's writings and verified in interviews with Tyler. The intellectual relatives or descendants of the Tyler influence are chosen using four guidelines: (1) the duration of the curricularist relationship with Tyler within the university, (2) the amount of pro-

fessional influence, (3) the prominence of the curricularist who is influenced, and (4) the number of relationships between one specific curricularist and Tyler.

Factor One, short or long term associations, is utilized in the selection process to be able to eliminate the numerous short term working relationships between curricularists and Tyler. Only curricularists associated with Tyler for extended periods of time and/or in more than one major project are included in the Tyler genealogy. This factor of the duration of relationship automatically included only those associations with Tyler that occurred at his two major university affiliations, but it excluded the numerous active working associations of curricularists with Tyler of shorter duration.

Factor Two, the identification of the amount of influence, is determined by the following criteria: (1) Tyler's estimate of influence, (2) the curricularists' own estimate of Tyler's influence, (3) other curricularists' estimate of Tyler's influence, and (4) the researcher's estimate of influence based upon reading and interviews.

Factor Three, the measure of prominence, is determined by several criteria: (1) the listing of the curricularist's name in William Schubert's index of 1,138 curriculum texts from 1900-1980;<sup>1</sup> (2) the listing of the curricularist's name in Who's Who in American Education, Leaders in Education, or the Biographical Dictionary of American Educators, and in the Education Index; (3) the listing of the curricular-

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<sup>1</sup>Schubert, Curriculum Books: The First Eighty Years, p. 11.

ist's name in a bibliography of current curriculum books;<sup>1</sup> and (4) Tyler's estimate of the curricularist's prominence in the field.

Factor Four, the number of relationships between one curricularist and Tyler, is important in delineating the Tyler genealogy. The largest number of major relationships between Tyler and a curricularist are five: a Tyler student, a professor appointed by Tyler, a collaborator in two of Tyler's major evaluation projects, and an Examiner. The majority of influential relationships is characterized by more than one association of a curricularist with Tyler.

#### Limitations

The limitations of the study are classified into several different groups involving: (1) technique, (2) materials, (3) the historical process, and (4) the intellectual process. The limitations in technique are twofold: those limitations inherent in the interview process and those difficulties inherent in gathering data through correspondence.

At least four limitations are evident in the materials: the scarcity of historical materials about curricularists during the first fifty years of the twentieth century, the lack of references in Tyler's own writings in the form of both footnotes and bibliographies, and the unavailability of those materials published by Tyler in a variety of different forms such as conference proceedings, reports, evaluations, radio scripts, and correspondence. An additional problem with

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<sup>1</sup>The bibliography of general curriculum texts for doctoral students arranged by the professors of the Department of Curriculum and Instruction at Loyola University of Chicago, Illinois was used.

materials has occurred because no complete bibliography of Tyler's prolific writings is available. The most recent, authorized comprehensive bibliography from 1929-1974, Perspectives on American Education, is incomplete and is in the process of revision.

Another limitation that exists is inherent in the historical process itself. The problem is related to the selection of those who influenced and were influenced by Tyler. The difficulty in demonstrating a clear cause and effect relationship between Tyler and his intellectual ancestors and between Tyler and those whose ideas he influenced is a problem that is complex to resolve with objectivity and full confidence. The relationships among scholars are often more correctly viewed as an exchange rather than as one scholar influencing another. Tyler himself sees intellectual relationships in this manner. Also, a fuller and in-depth reading of each of these curricularists would be beneficial in providing a more complete and a more accurate accounting.

Other limitations apparent in the intellectual process are important to note. Tyler is biased against intellectual history favoring the interpretation of social forces as historical causes. Therefore, Tyler is sometimes argumentative in an interview when he is questioned about the early intellectual influence upon his rationale. Another intellectual problem occurs with the usage of words that identify the key concepts in the investigation. As discussed in the section on terminology, no complete agreement among the scholars in the field exists about some key terms essential to the investigation.



Arbitrary decisions had to be made to call curriculum and instruction simply curriculum and to identify evaluation separately to reflect Tyler's work and the separateness of the field. Because the Tyler Rationale includes all three concepts and evolved from an evaluation to a curriculum construct, the language becomes more difficult. Not only does the evolution of the rationale have to be considered, but also the continual changes, modifications, and revisions. The changing use of terminology in Tyler's publications on the rationale compared with language usage in the field at the time and current usage becomes a very significant problem to manage in this investigation.

#### Significance of the Study

An historical approach to curriculum study is insisted upon by many curricularists because "curriculum scholars, administrators, and teachers need to see themselves as part of an evolving historical context."<sup>1</sup> The present investigation can augment curriculum study as a scholarly enterprise grounded in history since "much of importance can be gleaned from thought patterns and techniques . . . expressed in works by those who forged the origins."<sup>2</sup> An analysis of inherited ways of thinking about curriculum by a person who helped to create much of the current theory and practice should be beneficial to people interested in the field. The present study can contribute to both the scholar and the practitioner of curriculum by tracing the history of thought of a leading curriculum theorist.

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<sup>1</sup>Schubert, Curriculum Books: The First Eighty Years, p. xi.

<sup>2</sup>Ibid.

For the scholar, it is hoped that this study can advance theory building by showing how one model originated and was transformed. Because curriculum is a young field, it is feasible to develop intellectual histories tracing most of the various branches of curriculum thought and examining how they interrelate. The ideas of each major theorist, such as Tyler, can be analyzed to show the evolution of thought from past to present and the relationship of one theory to another. Such an historical frame of reference can provide a basis for theory analysis more akin to theory building in the sciences.

For the practitioner, this study identifies the development of some ideas that shaped the history of curriculum and the practice of curriculum development. The attempt is "to re-create the past in order to discover who initiated ideas, what course the ideas took, and what influenced the course of ideas."<sup>1</sup> When curriculum developers become more conscious of the sources of their assumptions and the processes by which they reach them, the field will mature as a result of this historical method. This study also attempts to enable practitioners to work in an historical context by facilitating their understanding of the evolution of theories and the interrelationships among theorists.

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<sup>1</sup>Seguel, The Curriculum Field: Its Formative Years, p. 2.

## CHAPTER III

### RELATED LITERATURE

#### Method of Review

The literature created by Ralph Tyler for the curriculum field is extensive and, when completely compiled, it is estimated by one authority to include approximately 120 books, over 700 articles, and extensive other materials.<sup>1</sup> Tyler is a prolific author of books, chapters, articles, lectures, pamphlets, and other genre in the specialty. Although Tyler writes about other areas, he writes within the field predominantly as a theorist and a researcher; occasionally, he also writes as a curriculum historian. Perhaps the only genre omitted from his expansive repertoire is a curriculum textbook; otherwise, Tyler has shared his curriculum ideas and experiences in numerous forums and through a variety of media. Not only does Tyler write extensively himself, but he also encourages others to write, and as a consequence, he is a co-author or a contributing author to a long list of books and articles. At other times, as with his major research projects before 1950, the collaborating professors and curricularists wrote several volumes, and Tyler wrote minimally.

Published early in his career, as a young man of twenty-eight

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<sup>1</sup>See Director Helen Kolodziey, Ralph W. Tyler Project, the National Foundation for the Improvement of Education, 1201 Sixteenth Street Northwest, Washington, D.C.

years, Tyler continues to write and to be published both nationally and internationally today, fifty-five years later. A complete bibliography has not yet been created; however, a partial bibliography was published in 1976 and is in the process of revision at present. Similarly, partial vignettes of Tyler's life and contribution have been published, but no definitive biography has yet been written.

This review of literature is presented in an historical framework and is divided into three categories: books and chapters written by Tyler; articles by Tyler; and articles, interviews, and dissertations written about Tyler's life, his career, or his contribution. In the first category, the review is arranged to differentiate between the books he wrote alone, which are most frequently theoretical, and those he co-authors with one or several authors. An attempt is made to contrast theoretical from non-theoretical books and to place the books in chronological and topical order, when sensible to do so. The review is organized to display the evolution of Tyler's ideas by tracing how his early works influenced theoretical formulations and generalizations later in his career. When appropriate, the importance of the particular book in Tyler's development and the significance of the book to the curriculum field in general are commented upon. In the review there is an attempt to relate books with the specific professional phase in Tyler's career.

In contrast to the review of books, a less comprehensive review of the articles has been undertaken. According to an authority on Tyler's publications, approximately one-third of the articles he has

written are listed on the official and most recent bibliography.<sup>1</sup> This general review of articles provides further insight into the scope and magnitude of the literature generated by Tyler. A review of articles written about Tyler, however, reveals a paucity of materials.

#### Books and Chapters by Tyler

From 1930 until 1984, Tyler is the single author of five texts, the co-author of eleven texts, and the editor of and/or a contributing author to over 100 books in the curriculum field. Written about fifteen years apart, Tyler's two most important theoretical texts combine to state his theories of evaluation and curriculum. In his 1934 publication, Constructing Achievement Tests, written as a series of articles while Head of the Division of Achievement Testing at Ohio State University, Tyler expands the prevalent view of testing at the time and introduces a new theory of evaluation. In his 1950 publication, Basic Principles of Curriculum and Instruction, he expands this theory of evaluation as part of a rationale for curriculum. Basic Principles, the most important of Tyler's books and the capstone of his career, "was written," as Tyler reveals, "in two weekends in 1947."<sup>2</sup> Actually, it is demonstrated in Chapter V regarding the sources of the rationale, that the book was in the making early in Tyler's career. Basic Principles was published originally, in 1949, as a Syllabus for Education 360 by the University of Chicago, and, in 1950, Basic Principles was published as a book, which is now translated from English

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<sup>1</sup>Kolodziej, Ralph W. Tyler Project.

<sup>2</sup>Interview with Ralph W. Tyler, Chicago, Ill., April 1984.

into five other languages: Dutch, German, Norwegian, Portuguese, and Spanish.<sup>1</sup> The book has been reprinted twenty-eight times and is presently in the process of revision.

Two other books, for which Tyler is the single author, are non-theoretical texts written in the latter part of his career. One book, The Challenge of National Assessment, explains the National Assessment of Educational Progress, a national evaluation designed by Tyler. This slim volume initiates a new concentration in Tyler's writing from school based evaluation to national evaluation and international concerns. The second book, about Some Reflections on Soviet Education, identifies the first in several writings about international curriculum issues. Later, in 1979, Tyler contributes to a book on the theme of international education, China's Schools in Flux. In 1984, two articles by Tyler will be published in the International Encyclopedia of Education on "Curriculum Resources" and "The National Assessment of Educational Progress."<sup>2</sup> This focus on national and international issues in his writing parallels the end of his tenure at the Center for Advanced Study in the Behavioral Sciences and the beginning of his career as a Senior Curriculum Consultant.

The fifth single authored text Perspectives on an American Education is written in 1976 while a consultant at the Science Research Associates in Chicago. The book is the revised and edited Patten Lec-

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<sup>1</sup>Ralph W. Tyler, Perspectives on American Education: Reflections on the Past . . . Challenges For the Future, ed. Dorothy Neubauer, with an Introduction by John Goodlad (Chicago: Science Research Associates, 1976), p. 165.

<sup>2</sup>Interview with Ralph W. Tyler, Chicago, Ill., April 1984.

tures delivered at the University of Indiana about "reflections on the past and challenges for the future of education."<sup>1</sup> In these lectures, Tyler discusses educational benchmarks, reforms, and research. This book also includes the authorized and the most comprehensive bibliography to date of Tyler's publications. Among these single authored texts, the two earliest are influential texts in shaping the curriculum field and to date the most important in Tyler's career.

In the early 1930s, with Douglas Waples, Tyler co-authors two books, which are influential in the shaping of Basic Principles. The earlier and the more important study, Research Methods and Teachers' Problems: A Manual for Systematic Studies of Classroom Procedure, ". . . is a pioneer effort . . . intended to facilitate systematic studies of teachers' classroom problems . . . which are conducted by supervisors or teachers in service to solve urgent problems of the particular school or class."<sup>2</sup> This book is important because a number of Tyler's intellectual roots to his curriculum ancestors, especially W. W. Charters and the Commonwealth Teacher Training Study, can be traced to it and because origins of the Tyler Rationale can be identified in it. The measuring devices introduced in this manual are utilized by Tyler and built upon in his own work with professors at Ohio State University. A spin off of this approach to "teachers' problems" appears to be the roots for Tyler's introduction of the teacher work-

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<sup>1</sup> Tyler, Perspectives on American Education, p. vi.

<sup>2</sup> Waples and Tyler, Research Methods and Teachers' Problems: A Manual for Systematic Studies of Classroom Procedure, pp. vii-viii.

shop in the Eight Year Study in 1934 and at the University of Chicago in 1939.

Douglas Waples, the co-author of the text, and Tyler collaborated on several projects. Waples assisted Charters at the University of Chicago during the Commonwealth Teacher Training Study, where he met Tyler, who was a research assistant. The two co-authored the book, What People Want to Read About, which is insignificant in the curriculum field. Nonetheless, this study of adult reading habits introduces a prevailing concern in Tyler's work. Tyler is not only interested in reading habits, but he also explores, in later articles, ways in which people are educated outside of academic institutions. Throughout his career, he expresses his views on what can and cannot be taught in schools and what the influence is of reading or such media as television. Ultimately, it is this theme of non-school learning that places new emphases upon the Tyler Rationale in 1976.

During Tyler's third year at Ohio State University, he reports on the Service Studies in Higher Education with a group of professors, who collaborates in the project and the publication. The book on Service Studies in Higher Education reports the application of the hypotheses presented in "the manual for systematic study of teacher's problems," as described in Research Methods and Teachers' Problems. Describing the Service Study Tyler states, "A service study lies between the offhand attempt to solve a problem and the research study of it."<sup>1</sup> The purpose of the service study is ". . . a method of obtaining

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<sup>1</sup>Ralph W. Tyler et al., Service Studies in Higher Education (Columbus: Ohio State University, 1932), p. vi.



preliminary evidence on problems in higher education as a means of adapting fundamental generalizations to a particular classroom situation. . . ."<sup>1</sup> The successful application of the ideas described in Research Methods and Teachers' Problems to the Service Studies is also reported in concurrent articles written by Tyler about testing between 1930-1934. These articles are eventually compiled in Constructing Achievement Tests, the complete presentation of Tyler's view on testing and evaluation. These books which describe the Service Studies, show the application, and reveal how new theory evolves, illustrate Tyler's work and writing pattern. The trilogy demonstrates the importance of historical sequence in reading Tyler's publications.

Research Methods and Teachers' Problems, Service Studies in Higher Education, and Constructing Achievement Tests, written in the first five years of his career answer the question, "How do teachers solve classroom problems?" from a theoretical point of view. A fourth, small little-known volume answers the question from a practical vantage point. Entitled Summer Work-Shops in Secondary Education: An Experiment in the In-Service Training of Teachers and Other Educational Workers, this small book introduces the workshop in which teachers and supervisors or other needed experts learn through the collaboration of practitioners and theoreticians. This book also introduces a theme common in Tyler's writing regarding the active role of the teacher in curriculum practices.

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<sup>1</sup>Ibid., p. vii.

This set of books presents different ways in which Tyler scientifically approaches questions and answers them in his writings. One kind of answer is found in a theoretical statement written and authored by Tyler alone. Another kind of answer is found in a research project usually undertaken with a group of curricularists and reported in a co-authored text. A third approach to the question is found in practice and reported insignificantly in a small book, a pamphlet, or an article. Most of the writings by Tyler directly related to curriculum can be divided into these three classifications.

The middle phase of Tyler's work answers the challenge of developing a curriculum for progressive education, which he introduces in a final article in the book, Constructing Achievement Tests. This article, "Evaluation: A Challenge to Progressive Education," introduces the Eight Year Study of Thirty Schools, which is reported in a five volume series in which Tyler wrote sparingly. The book, Appraising and Recording Student Progress, is Volume III of the series on the Eight Year Study co-authored with Eugene Smith and the Evaluation Staff. "This volume reports in detail the steps that were taken to help the schools discover, record, and report the progress of students toward the whole range of desired goals."<sup>1</sup> The other four volumes about the Eight Year Study, in which Tyler is not an author, but which are significant to his work, are listed in numerical order of the

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<sup>1</sup>Eugene R. Smith, Ralph W. Tyler, and the Evaluation Staff, Adventure in American Education, vol. 3: Appraising and Recording Student Progress (New York: Harper & Brothers, 1942), p. xviii.

volumes: The Story of the Eight Year Study by Wilford M. Aikin; Exploring the Curriculum by H. H. Giles, A. P. McCutchen, and A. N. Zechiel; Did They Succeed in College? by Dean Chamberlin, et al.; and Thirty Schools Tell Their Story as told by each school. During the Eight Year Study, Tyler introduces the Tyler Rationale and during his next research project, the Cooperative Study in General Education, Tyler modifies the rationale.

The Cooperative Study in General Education is written by members of the Executive Committee of the Study with a foreword by Tyler, the Director of the Study. This book is the first of several volumes to report the work of twenty-two colleges in a six year evaluation. Three other volumes: General Education in the Humanities, General Education in the Social Sciences, and Student Personnel Services in General Education, were also published, but Tyler is not an author of them. A fifth volume of the final report on "science was interrupted by the War."<sup>1</sup> Following these two major research projects, Tyler writes Basic Principles of Curriculum and Instruction, in which he introduces the rationale. The rationale of 1950 incorporates the original concept of evaluation of 1931 and hints at Tyler's new concept of evaluation explained in his next important book, The Challenge of National Assessment. The rationale is discussed in depth in Chapter V of this investigation.

Taken as a whole, this body of material about three major

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<sup>1</sup>Ralph W. Tyler, "Foreword," The Cooperative Study in General Education: A Final Report of the Executive Committee of the Cooperative Study in General Education (Washington, D.C.: American Council on Education, 1947), p. x.

projects from 1930-1950 is substantial. Each of these research projects is reported in great detail ranging from a minimum of 240 pages for one project to a maximum of 640 pages for another and from one volume to five volumes for a single project. Only The Challenge of National Assessment, which was at first an invitational lecture and later published in book form, is brief. The research projects themselves are discussed in greater depth in Chapter IV of this investigation because each of them leads to the Tyler Rationale.

Other books of importance are written with renowned curricularists. With Charles Judd as major author, Tyler contributed to a text, Education as Cultivation of the Higher Mental Processes. The book is important to identify the mentor-student relationship between these two professors. The book, Toward Improved Curriculum Theory was compiled and edited with Virgil Herrick, a colleague of Tyler's after they jointly arranged the important Curriculum Theory Conference at Chicago in 1947. Several years later, Perspectives of Curriculum Evaluation was written with Robert Gagné and Michael Scriven, two curricularists who are influenced by Tyler's work.

Tyler was strongly influenced in his early years by the yearbooks of the National Society for the Study of Education, especially the Twenty-Sixth Yearbook. Tyler is a major contributor to the publications having served four terms: 1937-1943, 1947-1953, 1959-1964, and 1967-1984, as an officer of the Society. Tyler is also the editor of the NSSE Sixty-Eighth Yearbook, Educational Evaluation: New Roles, New Means and an author in thirteen yearbooks. To each of four

yearbooks, he contributed more than one chapter. He will again be a contributor to the 1985 Yearbook.

Tyler has been the editor, co-editor, and/or contributor to at least five books of the National Society for the Study of Education Series, the Society's series on contemporary educational issues. The titles, published between 1971-1978, for which Tyler is the editor are: Accountability in Education, Crucial Issues in Testing, and Prospects for Research and Development in Education. He is also a contributor in two other National Society for the Study of Education publications, Educational Policy and International Assessment and From Youth to Constructive Adult Life: The Role of the Public School.

In the past decade, since the completion of the official Tyler bibliography, he has been a contributing author to about forty texts. Many of the chapters in these books focus on the topics that sustain Tyler's concentration; such as, tests and measurement, curriculum and evaluation, theory and research, and educational issues, which vary among the five decades of his publishing career. Other topics of these chapters indicate Tyler's career shifts and new interests. For example, since 1953, when Tyler left the University of Chicago to direct the Center for Advanced Study in the Behavioral Sciences, his writings show a new concentration upon the behavioral sciences. Since 1967, when he became a Senior Curriculum Consultant, more writings reflect his interest in curriculum for professional schools. His growing international prominence is reflected in the writings of the 1970s.

### Articles by Tyler

The topics of Tyler's articles in many cases parallel the topics of his books but are much more expansive in scope. The topics cluster around several areas. One area of concentration is directed specifically to the clarification and modification of the rationale beginning in 1951 and sustaining throughout his career. A second focus is related to curriculum issues in general and includes discussions of such topics as instruction, the theory and practice of evaluation, curriculum theorizing, and explanations of testing and measurement. A third area is curriculum history and curriculum research. Another group of articles addresses different levels of education from elementary to higher education and from professional to lay adult education. Military education is a special concentration of Tyler's work during World War II and engineering education is written about during several different periods. Articles also reflect career shifts in Tyler's life; but throughout his career, Tyler remains involved in science education and writes recurrently about the discipline. Beginning in the 1950s, Tyler writes about the contribution of social sciences to the field of curriculum usually showing the changes in theory or the contribution the various disciplines can make to education. But Tyler is a practical man too and another significant portion of articles addresses issues of the day.

A chronological listing of more than 250 articles, written by Tyler from 1929 until 1974, "identifies many of the basic concerns of

educators and of society in general at different times."<sup>1</sup> As John Goodlad states, "Ralph Tyler reminds us that most of our educational problems have been with us for some time. . . . He gives us new insights into persistent issues in education and schooling."<sup>2</sup> Not only the number but the expanse of topics of the articles each year remain considerable. Tyler is noted for his long and distinguished career, and the three main reasons Tyler writes: "to help in my teaching which is my major mission, to comment upon the changing educational scene, and upon request of my colleagues," suggest why he is so prolific.<sup>3</sup> The secondary sources about Tyler, however, are disproportionately small in relationship to the number of publications, the significance of his contribution, and the array of subjects about which he writes.

#### Writings About Tyler

While Tyler writes prolifically and is referenced in the curriculum literature frequently, there is little written about him or his career. Tyler is not "in any standard biographical reference . . . not in Who's Who, Who's Who in Education, or Men of Science."<sup>4</sup> At present, only several short biographical sketches exist; these talk about him in another vein. As the titles: "Education's Mr. Fix-It," "Educa-

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<sup>1</sup> Tyler, Perspectives on American Education: Reflections on the Past . . . Challenges For the Future, p. 137.

<sup>2</sup> John Goodlad, Introduction to Perspectives on American Education: Reflections on the Past . . . Challenges For the Future, by Ralph W. Tyler, p. 3.

<sup>3</sup> Interview with Ralph W. Tyler, Chicago, Ill., July 1982.

<sup>4</sup> Edwin Kiester, Jr., "Ralph Tyler: The Educator's Educator," Change 10 (February 1978): 29.

tion's Family Doctor," "The Educator's Educator," and "Ralph Tyler: American Educator," indicate, the articles are human interest vignettes. Less than a half dozen interviews and two doctoral dissertations with a biographical dimension have been written.

In contrast, the secondary sources of literature regarding Tyler's contributions to the field are plentiful and frequently critical. Several of Tyler's research projects are nationally prominent and evoke a controversial response. The Eight Year Study and the National Assessment of Educational Progress both fit into this category. Each of these projects has a considerable literature of challenge to which Tyler himself continues to react and explain. The literature responding to the National Assessment, about which Tyler wrote approximately eighteen articles, includes about 900 different topical areas and about 300 different authors. Articles about the Eight Year Study are fewer in number but continue to be written; the most recent article was published in the 1970s. Another sizeable source of literature dwells on the Tyler Rationale. Six to eight curricularists write critically, and some frequently, about the rationale. Another group of curricularists write supportively about the rationale. Critics, supporters, curriculum historians, and theorists have reason to use the rationale as a centerpiece for discussion of theory and practice in the field. Not only is there prodigious literature about Tyler's research and rationale, but he is referenced in a majority of the important books on theory or history in the field.



Papers by Tyler

At present, some of the Tyler Papers are stored at the Regenstein Library of the University of Chicago. Other of the Tyler Papers are being assembled in Washington, D.C.<sup>1</sup> Director of the Ralph W. Tyler Project, Helen Kolodziej, expects complete transfer of the collection in 1985 to the University of Chicago, where it will be permanently stored in the Regenstein Library.<sup>2</sup> Many boxes of Tyler's papers remain in the sub-basement of Judd Hall at the University of Chicago from which transfer to the Regenstein Library has been requested.<sup>3</sup> Some important papers, such as the research documents from the Eight Year Study, appear to be missing.

Tyler shares his ideas on curriculum not only through numerous publications but also through other media including: tapes, scripts, and notes, which are difficult to obtain if available. Tyler used the radio in the 1940s and 1950s and was recorded on tapes for release in the 1970s. Another source of unavailable information is the test instruments designed since 1930, especially those instruments designed for the Service Studies and the Eight Year Study. Since the late 1930s, Tyler has also been very active in arranging and contributing to curriculum workshops, seminars, and conferences. Most of this material has not been recorded. From 1930-1984, Tyler has shared his ideas

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<sup>1</sup>Kolodziej, Ralph W. Tyler Project.

<sup>2</sup>The present Tyler Collection of papers at the Regenstein Library numbers twenty-nine boxes.

<sup>3</sup>In the spring of 1982, several boxes of Tyler's papers were personally discovered in the sub-basement of Judd Hall at the University of Chicago.

professionally in dialogues, lectures, and professional meetings both nationally and internationally. Tyler has been an official or unofficial consultant for most of his career . Scant record is available from many of these important proceedings.

## CHAPTER IV

### TYLER'S CAREER AND CONTRIBUTIONS TO CURRICULUM

#### Nature of Tyler's Contribution

For the past sixty years, Tyler has been involved with almost "every facet of education from curriculum design to advanced research to educational policy."<sup>1</sup> Among his major achievements, Tyler "has written the leading textbook in curriculum design; fathered the concept of behavioral objectives; put educational evaluation on a scientific footing; founded the prototype social sciences think tank; and assisted Robert Hutchins in restructuring the University of Chicago."<sup>2</sup>

The landmarks in Tyler's productive and multifaceted career are numerous, but two are often identified as most significant. "In the 1930s, he helped move the schools from Darwinian thinking to the concept of educating each child according to ability; [and] in the 1960s he was a major architect of the Johnson administration's 1965 education bills."<sup>3</sup> In Tyler's personal view, however, he judges two other landmarks as his significant contributions. One contribution was his role during the Depression Years in the Eight Year Study, the first nationwide showcase for modern methods of evaluation. The second occurred in the 1950s, when he founded and for thirteen years directed the Center

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<sup>1</sup>Kiester, "Ralph Tyler: The Educator's Educator," p. 29.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid., pp. 29-30.

for Advanced Study in the Behavioral Sciences, a think tank in Palo Alto, California, which provided a model for academically oriented research institutions around the world.<sup>1</sup>

Tyler's achievements are noteworthy as contributions to the curriculum field and to educational policy. It is the number and kind of achievements in the curriculum field, the dominant focus of his career, that make him a prominent figure. Tyler's career spans from 1929 through the 1980s and throughout these five decades he has made several significant contributions both to curriculum practice and theory, but none as important as the Tyler Rationale.

Tyler's main contribution to the curriculum specialty includes several large research projects, which build to two theories that have sustaining value. Among a number of other research projects, five appear to be most well known and valuable in the field: two kinds of approaches to Service Studies of teachers' problems from 1929-1938, the Eight Year Study of progressive schools from 1934-1942, the Cooperative Study of General Education in colleges from 1939-1945, and the National Assessment of Educational Progress of sectors of the American population conceived in 1963 and implemented in 1969. Two theories rank among the most influential theories in the curriculum field: the early evaluation theory published in Constructing Achievement Tests and the curriculum rationale explained in Tyler's Basic Principles of Curriculum and Instruction. Each study is incremental in the evolution of

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<sup>1</sup>Ibid., p. 29.

the Tyler Rationale, and each sustains value to the field today in varying degrees of importance.

Chicago, Illinois is the center of most of Ralph Tyler's professional life. Born in Chicago in 1902, Tyler returns to attend the University of Chicago at age twenty-four to earn a doctoral degree between 1926-1927 and again at age twenty-eight as a summer Associate Professor to teach at the University. At age thirty-five, Tyler is invited to return as Chairman of the Department of Education and the University Examiner. In 1948, he is appointed Dean of the Division of Social Sciences.<sup>1</sup> After fifteen years in California, Tyler returns for a fourth time to Chicago to be a Senior Consultant at Science Research Associates. Nebraska, South Dakota, North Carolina, Ohio, and California are other Tyler residences in the United States. Russia, China, Ireland, Israel, Sweden, Ghana, Indonesia, and several other countries have also been working residences but for periods of short duration.

The examination of Tyler's career and the exploration of his contribution to the curriculum field reveal several themes of importance in understanding the man and the nature of his accomplishments. Tyler is a broadly educated scholar whose approach to the curriculum field is as a scientist. Tyler's work is methodical, and he incrementally generated an answer to the perplexing curriculum question of the era. But more than a scientist and a scholar, Tyler is also a practical man of action motivated as a doer toward practical solutions.

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<sup>1</sup>Interview with Ralph W. Tyler, Chicago, Ill., August 1982.

Throughout the several decades of his career, Tyler has researched one major question, what is the purpose of schools, from a variety of different perspectives. In Tyler's view, this was the important question to be answered beginning in the 1930s.

Several major themes or motifs, relating to both the content and to Tyler's approach or method, characterize his contribution to the curriculum field. Tyler's curriculum approach can be described as the scientific approach, which means that through the practice of curriculum development, curriculum theory is created. In other words, practice precedes theory. Two other themes characterize his perception of curriculum development. He emphasizes the interactive roles of the practitioner and the specialist in curriculum development, and he incorporates the educative function of both schools and other educative agencies. A third set of themes describing his contribution combines a unique interrelationship between his scholarship in the social sciences and his practice as a consultant. Tyler utilizes the new research from the social sciences to alter his perspective of curriculum, and he utilizes the observations he makes as a consultant as an integral part of his curriculum views.

The influences of Tyler's extensive work with engineering education early in his career and with military education during World War II are also in evidence in his thinking about curriculum. These two important experiences interweave academic learning with field experience and create for Tyler an important commentary on Thorndike's theory of transfer of training. Tyler cites the transfer theory in his original statement of 1950 and with increasing frequency between

1950-1976, the earliest and most recent statements directly related to the rationale.

To understand the contribution of Ralph Tyler, the curriculum-ist, it is important to know that he is a problem solver and a social realist whose predominant career path focuses first upon instruction, second upon evaluation, and third upon curriculum, which he defines as encompassing both. To trace the evolution of Tyler's career is an orderly and logical journey beginning in 1917.

#### Undergraduate and Graduate Education (1917-1927)

From 1904 until 1921, Nebraska is the site of Ralph Tyler's education. The son of a physician, who later became a congregation-  
alist minister, Tyler attended Doane College, a congregationalist in-  
stitution in Crete, Nebraska from 1917-1921. The primary goal of Doane  
College is the education of ministers and the inculcation of Christian  
doctrine and principles. The program of studies at Doane College  
during this post World War I period, however, also included science and  
courses in the classics. Tyler receives his Bachelor of Arts degree  
Magna Cum Laude with three major areas of concentration: physics,  
mathematics, and philosophy.<sup>1</sup> Each discipline, in varying degrees, is  
influential in his approach to curriculum.

Before attaining his Master of Arts degree in 1923 from the  
Teachers College of the University of Nebraska at Lincoln, Tyler  
secures a position as a secondary school teacher of science in Pierre,  
South Dakota for the academic year 1921-1922. The next year, he fur-

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<sup>1</sup> Ibid.

thers his education in science, attains a master's degree in educational psychology, and teaches part time as an instructor at the Teachers College in Lincoln. His unpublished master's thesis entitled "A Test for High School Sciences" relates both to his instructorship in education and his assistant supervisory position in the sciences.<sup>1</sup>

While at Teachers College, Tyler teaches physics courses to freshmen students in the College of Engineering. Engineering becomes a sustaining interest in Tyler's career. In 1929, engineering education relates to Tyler's work with W. W. Charters at the Rochester Athenaeum and Mechanics Institute, now the Institute of Technology at Rochester.<sup>2</sup>

Until 1926, Tyler supervises teachers interning in science education; this interest in science teaching is a topic about which he writes frequently throughout his career. As is apparent in these early associations with engineering and science, Tyler sustains an active role with each new area that is introduced along his career path.

The Fall of 1926 is a significant turning point in Tyler's career. Encouraged by his mentor, Professor Herbert Brownell, Chairman of the Secondary Education Department at the Teachers College of Nebraska, Tyler is well advised to become a doctoral student at the University of Chicago. Brownell, a professor of education and the author of several books, two about science teaching, The Teaching of Science and the Science Teacher and Physical Science: An In-

<sup>1</sup>Jacques Cattell and E. E. Ross, eds., Leaders in Education--A Biographical Directory, 3rd ed. (Lancaster, Pa.: Science Press, 1948), p. 1087.

<sup>2</sup>Ibid.



roduction to Specialized Courses in College Science, recommends the University of Chicago because of the direction toward the measurement field in its Department of Education.

Under the chairmanship of Charles Judd, the approach to curriculum at the University of Chicago is highly compatible with the young Tyler's interests in science, mathematics, educational psychology, but not philosophy. Courses in the field of his master's training are taught by Charles Judd, whose area is educational psychology. Tyler's undergraduate training is also in philosophy, although he holds no official degree, but educational philosophy courses are excluded from the Department of Education at the University of Chicago under Judd.

The emphasis in the department is upon the scientific approach to curriculum construction including the quantitative study of education, which is reflected in Tyler's dissertation entitled "Statistical Methods for Utilizing Personal Judgment to Evaluate Activities for Teacher Training Curricula." The names of Tyler's mentors, the graduate faculty of the College of Education, read like Who's Who among the curricularists and statisticians of that decade. The luminaries on the faculty include: Franklin Bobbitt, W. W. Charters, George Counts in curriculum and Frank Freeman, Karl Holzinger, and William Gray in statistical measurement.<sup>1</sup> Between 1926-1928, Tyler makes his first acquaintance with W. W. Charters, who employs him as a statistical consultant in his Commonwealth Teacher Training Study.<sup>2</sup> This appointment

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<sup>1</sup>Interview with Ralph W. Tyler, Chicago, Ill., April 1982.

<sup>2</sup>Cattell and Ross, eds., Leaders in Education--A Biographical Directory, p. 1087.

is the first of an extended and important working relationship between mentor and student and later colleague.

Foundations: Science, Mathematics,  
Psychology, and Philosophy

Tyler's background in four different disciplines creates an important factor that determines the manner in which he pursues the early challenges of the new curriculum field. In tracing Tyler's career, it is interesting to note that the chronological age of Tyler and the age of the curriculum field parallel. When Franklin Bobbitt officially introduces the field with his book, Curriculum, in 1918, Tyler is sixteen years old. Tyler makes his entrance to the specialty in 1926, when it is riddled with problems of a new field, problems of both definition and methodology. Tyler's foundations in several disciplines help him to address both. (See Figure 1.)

Foundation in Science

Tyler's foundations in the natural sciences provide an intellectual framework for problem solving in this new specialty. An advantage of a foundation in science is the ease with which Tyler translates the scientific into a social scientific methodology, a curriculum fashion of the 1930s. Tyler's propensity for this scientific approach is revealed early in his career as can be seen in the practice and the evolving theory from the Service Studies of 1930. His scientific approach in these Service Studies is characterized by the recognition of the problem, the definition and investigation of the problem, the col-

Tyler's Foundations in Theory and Practice

1967-1984	Scientific Approach	National Assessment of Educational Progress	School Philosophy	Active Learning Transfer of Training	Social Sciences	Question 2 Selection of Learning 1976 Statement	Consultant Practices
1952-1967	↑	National Assessment of Educational Progress	↑	↑		1966 Statement 1958 Statement	Center for Behavioral Sciences
1948-1953 University of Chicago	↑	↑	↑	↑	Theories of Social Sciences Influence Curriculum	<u>Basic Principles of Curriculum and Instruction</u>	Division of Social Sciences
1939-1948 University of Chicago	↑	Appraisal of General Education	↑	Military Education	Curriculum Evaluation Instruction	Question 3 Organization of Learning	Cooperative Study
1934-1942 Ohio State University University of Chicago	↑	Appraisal of Secondary Students	School Philosophy	John Dewey Learning Theory	Curriculum	Question 1 Objectives	Eight Year Study
1928-1934 Ohio State University	↑	Evaluation Theory	↑	Engineering Project	Evaluation	Question 4 Evaluation	Service Studies
1926-1927 Doctorate	Scientific Approach	Statistical Measurement	↑	Charles Judd Edward Thorndike			Doctoral Dissertation
1921-1925 Master's Degree	↑	↑	↑	Educational Psychology	Instruction		Master's Thesis
1917-1921 Undergraduate	Physics	Mathematics	Philosophy		Instruction		
Career	Science Foundation	Mathematics Foundation	Philosophy Foundation	Psychology Foundation	Focus	Rationale	Activity

Fig. 1. Tyler's foundations in undergraduate and graduate education influence the rationale as the vertical columns indicate. Some disciplines are more influential than others. The horizontal bands indicate the focus of the time period and also show influence of events on the Tyler Rationale.

lection and interpretation of the data, and the generalization.<sup>1</sup> This investigation method is repeated in a continuous cycle to encompass broader and broader concepts and more and more disciplines. The scientific thought process is apparent in Tyler's research projects throughout his career. This approach is also defined for those working in curriculum development in the final chapter of Basic Principles of Curriculum and Instruction, which explains the utilization of the Tyler Rationale for others. This four part process explained in the Service Studies and revealed in his research can be termed curriculum development as inquiry. To understand Tyler's clearly articulated and almost self-conscious approach to curriculum development as inquiry is to comprehend the first two of several themes, that are identified earlier in this chapter, which characterize Tyler's work. Curriculum development as inquiry is the hallmark of Tyler's curriculum contribution and at its base is the scientific method.

Based upon his scientific approach, Tyler makes at least four different kinds of contributions to the curriculum field: (1) he identifies the four fundamental questions for curriculum development and inquiry, (2) he recommends suggested procedures to answer the questions, (3) he illustrates and advances a methodology for curriculum, and (4) he develops a body of evidence to answer the questions posed by the curriculum field in the 1930s. Whether the answers that are found are correct or incorrect, the scientific approach makes it possible for other curricularists to interpret the value of the question, the pro-

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<sup>1</sup>Tyler et al., Service Studies in Higher Education, p. 24.

cedures used, and the answers obtained. Tyler's intellectual process can be traced from the pursuit of the sciences in his early career to the social sciences at the peak of his career and the behavioral sciences in the third career phase.

#### Foundation in Mathematics

Tyler's early training in mathematics provides a second intellectual foundation for his approach to curriculum problem solving. His talent, training, and interest in mathematics motivate his selection of a doctoral degree in statistical measurement.<sup>1</sup> The quantitative approach to curriculum is another fashion introduced in the mid 1920s, when Tyler enters the new field. Tyler's mathematical penchant directs him to testing, measurement, and eventually evaluation, areas associated with this talent. His expertise as a statistician results in an invitation to be a research assistant on W. W. Charters' task analysis approach to curriculum in the Commonwealth Teacher Training Study, which in turn is influential in Tyler's approach to curriculum and in his career path.<sup>2</sup> It is Charters who invites Tyler to the Bureau of Educational Research at Ohio State University in 1929, and it is because of evaluation that Tyler is invited to direct three nationally prominent research projects. Many judge evaluation his greatest contribution to the field, which recognizes him as "the dean," a title he deserves because he conceives the theory and the term. Best described in his words, Tyler states, "Because the term 'test' usually was inter-

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<sup>1</sup> Interview with Ralph W. Tyler, Chicago, Ill., April 1982.

<sup>2</sup> Ibid.

preted as a collection of memory items, I suggested the use of the term 'evaluation' to refer to investigating what students were really learning."<sup>1</sup> Tyler not only invents the term evaluation and creates a ten step plan of evaluation, but he also helps to extend and enlarge upon the concept by using new words, "appraisal and assessment," to show the expanding dimensions of evaluation.

Tyler's theory of evaluation is at the center of his work in curriculum and at the foundation of the specialty of evaluation, which is now more than fifty years old. Tyler remains active in the evaluation field, and, as editor of the Sixty-Eighth Yearbook of the National Society for the Study of Education, he compiles a collection of articles to illustrate the advancement in the field through "new roles and new means" for educational evaluation.<sup>2</sup> At present, Tyler's evaluation model is effectively amassing data for the National Assessment of Educational Progress about education in America from over twenty million twenty-one to twenty-five year old adults.<sup>3</sup> The evaluation legacy has distinguished Tyler's career in America and abroad.

#### Foundation in Educational Psychology

A foundation in educational psychology also plays a significant

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<sup>1</sup>Jeri Ridings Nowakowski, An Interview with Ralph Tyler, Evaluation Center Report Series, no. 13 (Kalamazoo, Mich.: Western Reserve University, 1981), p. 8.

<sup>2</sup>Ralph W. Tyler, "Outlook for the Future," Educational Evaluation: New Roles, New Means, in Sixty-Eighth Yearbook of the National Society for the Study of Education, pt. 2 (Chicago: University of Chicago Press, 1969), pp. 391-400.

<sup>3</sup>Archie E. Lapointe, "National Assessment of Educational Progress," NAEP Newsletter, no. 17 (Spring 1984), p. 4.

role in the formulation of the Tyler Rationale. Judd's influence upon Tyler's definition of the behavioral objective, Thorndike's influence upon Tyler's integration of the transfer of training theory, and Dewey's effect on Tyler's view of learning relate to educational psychology.<sup>1</sup>

Tyler's training in educational psychology assists in his pursuit to answer the question about learning, which has entailed the longest search and caused the greatest change in the original rationale from 1950 to 1976. Tyler first answers Question Four of the rationale about evaluation in 1931, perhaps because of his entrance to the curriculum field through the evaluation field. He secondly answers Question One regarding choosing and formulating objectives in 1936 during the Eight Year Study. Question Three, regarding organizing the learning experiences, is answered during the Cooperative Study of General Education and at the Curriculum Theory Conference of 1947. The second question about selecting learning experiences, however, is the last to be resolved until the "New Emphases Speech" of 1976. Following his original inclination of 1950, Tyler again selects Dewey's and Thorndike's learning theories as well as evidence from what is learned about learning in institutions other than schools.<sup>2</sup> Tyler's training in educational psychology helps him to arrive at his answer about learning. In 1976, he states, "The failure of students to transfer what is

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<sup>1</sup>Ralph W. Tyler, "Trends in Teaching--How Research is Affecting Our Understanding of the Learning Process," School Review 59 (May 1951): 263.

<sup>2</sup>Ralph W. Tyler, "Two New Emphases in Curriculum Development," Educational Leadership 34 (October 1976): 61.

learned . . . has long been central to educational psychology."<sup>1</sup>

### Foundation in Philosophy

Philosophy is less prominent in Tyler's approach to curriculum theorizing. It should be recalled that Tyler has the equivalent of a major in philosophy from his undergraduate studies; however, philosophy courses are not offered in the Department of Education at the University of Chicago when Judd is chairman. The minimal influence of philosophy suggests that Tyler prefers knowledge as created through science rather than through philosophy. This absence of philosophy might be explained in the words of a Henry Luce Professor on the Committee of Social Thought at the University of Chicago, "Science . . . is explicitly anti-philosophic . . . neutral to the large human and metaphysical questions."<sup>2</sup> Whatever the explanation, philosophy as a discipline exerts the least dominant influence in Tyler's curriculum approach.

Philosophy, in the original statement of the rationale, is used as a "screen" to "filter" objectives in the same manner as psychology. But unlike the transformations created in the rationale because of learning theory, philosophy remains constant. Tyler states, "In essence the statement of philosophy attempts to define the nature of the good life and a good society. The educational and social philosophy to which the school is committed can serve as the first screen."<sup>3</sup> In 1976, Tyler

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<sup>1</sup> Ibid., p. 62.

<sup>2</sup> Leon Kass, "Modern Science and Ethics: Time for a Re-examination?" University of Chicago Magazine 76 (Summer 1984): 30.

<sup>3</sup> Tyler, Basic Principles of Curriculum and Instruction, pp. 33-34.



reiterates, "The book, [Basic Principles] does not present a philosophy or curriculum; each institution must develop and clarify its own objectives."<sup>1</sup> Philosophy is a subject about which Tyler neither writes nor elaborates upon in connection with the rationale or in isolated articles.

In tracing Tyler's intellectual foundations in science, mathematics, educational psychology, and philosophy from their roots to their results in his curriculum theorizing, it is valuable to see how different bodies of knowledge influence his thinking. Tyler's intellectual foundations provide a broad path to answer: (1) the methodological questions of the curriculum field at that time, (2) the questions concerning the theory of learning throughout this era, and (3) the purpose of school question of the 1930s.

#### The University of North Carolina (1927-1929)

Tyler's first appointment to a college faculty is as an Associate Professor of Education at the University of North Carolina at Chapel Hill.<sup>1</sup> Tyler occupies this position from 1927-1929 in a growing Department of Education in which the faculty tripled from five to seventeen faculty members, and the courses offered in the Department of Education doubled in less than a decade from 1920-1929.<sup>2</sup> A grant from the General Education Board to support a program of practice teaching between the University of North Carolina and the Chapel Hill High School

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<sup>1</sup>Cattell and Ross, eds., Leaders in Education--A Biographical Directory, p. 1087.

<sup>2</sup>Louis R. Wilson, The University of North Carolina, 1900-1930 (Chapel Hill: University of North Carolina Press, 1957), p. 541.

is the basis for the appointment of Dr. Tyler. Tyler's position involves teaching methods courses to future science and mathematics teachers, an appointment very similar to the University of Nebraska position except for an additional responsibility, which is to assist the secondary teachers from the schools in the impoverished mountain communities adjacent to the Chapel Hill area.<sup>1</sup> The concentration in this phase of Tyler's career is upon instruction; namely, teaching teachers.

Publications by Tyler are not available for these dates during his employment at the University of North Carolina. Tyler, however, reinforces his experiences in teaching methods courses in science, adds teaching mathematics, and introduces an important aspect of his career, the consultant role. Tyler consults with secondary school teachers in Chapel Hill and, throughout his career, he either unofficially, from 1929 until World War II, or officially, from 1945-1984, serves in a consulting capacity. This capacity allows practical experiences as well as intellectual foundations to influence his thinking. After two years at the University of North Carolina, Tyler vacates the position to work with W. W. Charters for a second time, but Tyler returns to Chapel Hill to teach summer sessions. In 1934, Tyler is a summer professor at North Carolina when invited to interview for Director of the Evaluation Staff of the Eight Year Study.

The Bureau of Educational Research at Ohio State  
University (1929-1938)

Ohio State University in Columbus, Ohio is Tyler's second

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<sup>1</sup>Interview with Ralph W. Tyler, Chicago, Ill., July 1982.

university appointment. Tyler is on the faculty at Ohio State University for nine years. From 1929-1931, Tyler is an Associate Professor of Education; in 1931-32, he is made a Professor of Education; and for the entire time, he is a Research Assistant in the Bureau of Educational Research. Similar to the University of North Carolina, Ohio State University is also experiencing a growth phase with an expanding student body.<sup>1</sup> To accommodate the expansion and improvement of the University, George Arps, the newly appointed Dean of the Department of Education, recruits Professor Boyd Bode, a man of acknowledged scholarship, from the University of Illinois to accept a position in the Department of Education. Professor Bode becomes an important colleague of young Dr. Tyler and is influential in his career. A colleague of Bode's from the University of Illinois is appointed to organize and direct the new Bureau of Educational Research, a bureau for evaluation legislated by the state. W. W. Charters, who held the parallel position at the University of Illinois is later invited, in 1928, to be the second Director of the Ohio Bureau. It is Charters who invites his three former students: Ralph Tyler, Edgar Dale, and W. H. Cowley, from the University of Chicago and the University of Illinois to join the staff of the Bureau of Educational Research.

In the Bureau, W. W. Charters creates three divisions: evaluation, personnel, and curriculum, and Tyler is appointed for evaluation as the Head of the Division of Accomplishment Testing. Although Tyler prefers the Division of Curriculum he accepts the assignment to arrange

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<sup>1</sup>Ralph W. Tyler, "Leader of Major Educational Projects," Educational Research Bulletin 32 (February 1953): 45.

testing and to provide leadership in evaluation by working with several junior deans from the five major colleges: agriculture, arts and sciences, commerce, education, and engineering.<sup>1</sup> To accomplish this task, Tyler applies the Service Studies, which he and Douglas Waples describe in their text published in 1930. In his new position at Ohio State University, Tyler continues to focus upon instruction, but the clientele differs and instead of secondary teachers, as in Nebraska and North Carolina, he now assists college instructors and professors. Similarly, he is again in an unofficial consulting role. Different, however, is his responsibility for testing and not for instruction.

The concept of Service Studies is introduced by Douglas Waples, a professor at the University of Chicago, and Ralph Tyler in a book entitled Research Methods and Teachers' Problems: A Manual for Systematic Studies of Classroom Procedure. This 1930s manual is developed for teachers to provide "effective methods of investigation" of classroom problems.<sup>2</sup> In the preface to the manual, Tyler and Waples state six purposes of Service Studies: (1) to encourage specialists in research to a more fruitful science of education, (2) to help graduate students to see the need for investigation of classroom situations before the content of professional literature can be helpfully applied to them, (3) to help teachers see the service study methods applicable to any branch of a subject matter, (4) to use as a basis for courses in methods of educational research, (5) to help in the collection of data

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<sup>1</sup> Interview with Ralph W. Tyler, Chicago, Ill., July 1982.

<sup>2</sup> Tyler and Waples, Research Methods and Teachers' Problems: A Manual for Systematic Studies of Classroom Procedure, p. vii.

by classroom teachers, and (6) to apply as a means of investigating typical problems by teacher groups.<sup>1</sup> This concept and definition of teachers' problems and their possible solution is applied in the field.

Tyler conducts these Service Studies with college professors and their five deans or supervisors to solve immediate teaching concerns in college freshmen classes due to the increased enrollments at Ohio State University. The Service Studies have four main characteristics: (1) recognizing a problem, (2) defining the program in specific terms, (3) planning and carrying out the investigation, and (4) interpreting the findings.<sup>2</sup> In general, the Service Studies were a method to improve instruction through testing applied in the Zoology and Botany Departments at Ohio State University.<sup>3</sup> Course revision was also undertaken, however, and reported by professors of history, English, psychology, and other disciplines in a book entitled Service Studies in Higher Education. The record and success of the application of the Service Studies is also described in a series of articles written by Tyler and compiled in Constructing Achievement Tests. This second volume reports the evaluation aspect of the Service Studies during the years between 1930-1934.<sup>4</sup> It is from this application of the concept of Service Studies that the ten step process of evaluation derives.

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<sup>1</sup> Ibid., pp. ix-xi.

<sup>2</sup> Tyler et al., Service Studies in Higher Education, p. 24.

<sup>3</sup> Ibid., p. 43.

<sup>4</sup> Ralph W. Tyler, Constructing Achievement Tests (Columbus: Ohio State University, 1934), pp. v-vi.

While at Ohio State, Tyler also assists W. W. Charters in a research program to train engineers. At Rochester Athenaeum and Mechanics Institute, Charters developed ". . . a new program . . . for engineering students . . . reluctant to tackle the usual abstractions in that [engineering] curriculum . . . [through] . . . a work-study program that brought the abstractions closer to practical application."<sup>1</sup> This work-study innovation, introduced by Charters, becomes an important concept in the Tyler Rationale.

During his tenure at Ohio State, Tyler's publishing career catapults. The four texts published between 1930 and 1934 report his contributions concerning "systematic procedures for solving teachers' problems," the examination of "adult reading habits," the Service Studies, and the original evaluation theory. Tyler writes approximately sixty articles published in the Ohio State University publications: Educational Research Bulletin and the Journal of Higher Education, a new publication introduced by W. W. Charters at Ohio.

Tyler's early success at Ohio State University leads to several successive significant appointments. Earlier, in the Winter of 1932, Tyler is invited to assist in the establishment of examining procedures for the new comprehensive exams at the University of Chicago. Later, in 1938, "Tyler is invited by Robert Hutchins to become the University Examiner at the University of Chicago."<sup>2</sup> But in the interim period, Tyler receives another invitation. While teaching a summer session at

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<sup>1</sup>Tyler, "Leader of Major Educational Projects," p. 46.

<sup>2</sup>Interview with Ralph W. Tyler, Chicago, Ill., July 1982.

the University of North Carolina, Tyler is invited to Princeton, New Jersey to interview for the position of Research Director of the Evaluation Staff of the Eight Year Study. Both W. W. Charters and Boyd Bode are instrumental in helping Tyler obtain the position that wins him national acclaim.<sup>1</sup> "Professor Boyd Bode from Ohio State University, a friend and critic, whose office was across from mine, recommended me for the appointment," states Tyler.<sup>2</sup>

Tyler accepts the position as Director in 1934 on a half time basis to enable him to complete his work at Ohio State University. He describes his views, about the challenge of evaluating thirty progressive schools, in the final article published in Constructing Achievement Tests entitled "Evaluation: A Challenge to Progressive Education." Because Tyler's views as a progressive educator are often forgotten and misunderstood by critics, this article is significant in placing Tyler in perspective as he begins the Eight Year Study.

At the age of thirty-two, Tyler has acquired considerable experience in teaching at Pierre, South Dakota; in Lincoln, Nebraska; and at Chapel Hill, North Carolina. He has also been in an unofficial consulting role with teachers for six years. His accumulated experiences in curriculum research through the Commonwealth Study, the Service Study, and the constructing of achievement tests at the Ohio Bureau are also noteworthy. Both the practical and theoretical experiences are strong qualifications to recommend him for assisting thirty schools to evaluate the experiment in progressive education.

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<sup>1</sup> Ibid.

<sup>2</sup> Ibid.

The Eight Year Study (1934-1942)

The Eight Year Study is a pivotal point in Tyler's career and a significant contribution in answering the challenge of progressive education. The Study of Thirty Progressive Schools, as it is sometimes called, places Ralph Tyler in a position of national prominence, provides an arena in which to test his newly formulated evaluation theory of 1931, and, most importantly, gives national exposure to the concept of evaluation. About this study, two famed curriculum historians report that it is "perhaps the largest-scale longitudinal study ever undertaken in education."<sup>1</sup> The study "grew out of the need to free the secondary school curriculum from college-preparatory dominance so that an experimental basis for curriculum development could be established."<sup>2</sup> The study is launched in 1930 by the Progressive Education Association, which had previously "stimulated great change in elementary schools."<sup>3</sup> The association establishes a Commission on the Relations of Schools and Colleges to explore possibilities of better coordination.<sup>4</sup>

The Commission for the study has two major purposes: "(1) to establish a relationship between the school and college that would permit and encourage reconstruction in the secondary school and (2) to find, through exploration and experimentation, how the high school in

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<sup>1</sup>Tanner and Tanner, Curriculum Development: Theory Into Practice, p. 81.

<sup>2</sup>Ibid.

<sup>3</sup>Wilford M. Aikin, Adventure in American Education, vol. 1: The Story of the Eight Year Study (New York: Harper & Brothers, 1942), p. 1.

<sup>4</sup>Ibid., p. 2.



the United States can serve youth more effectively."<sup>1</sup> Thirty schools were chosen to represent different sizes, areas of the country, and both the public and private sectors of education. According to the study, the common problems of American youth became the heart of the curriculum in this experiment,<sup>2</sup> and "thirty schools took the position that evaluation is important only in relation to purpose."<sup>3</sup>

To accomplish the task, the director and the members of the evaluation staff analyzed the purposes schools listed and "identified ten major types of objectives, which they measured through a variety of procedures. . . ."<sup>4</sup> The results of the study show how 1,475 matched pairs of students from thirty progressive schools compare with their counterparts in non-experimental schools. The evaluation team found that the graduates of progressive schools excelled according to most cognitive and social measures.

The Eight Year Study gained national recognition because of the focus upon the controversy between progressive and traditional educators and because of the issue it addressed concerning the relationship between the colleges and secondary schools. The study also gains recognition in the curriculum field because of the application of the theory of evaluation and the contribution to the theory of curriculum. Additionally, the Eight Year Study benefitted the practitioner because from it originated the workshop, a new model for teacher, administrator, and curriculum specialist collaboration in the development of cur-

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<sup>1</sup>Ibid., p. 116.

<sup>2</sup>Ibid., p. 57.

<sup>3</sup>Ibid., p. 88.

<sup>4</sup>Ibid., p. 110.

riculum. Five volumes report this research project and these eight years of evaluation and curriculum development.

The contribution of the Eight Year Study continues to be assessed. In the early 1950s, Frederick Redefers undertook a follow up study of the participating schools and reports, "There has been little if any marked progress in participating schools since the end of the Eight Year Study."<sup>1</sup> Redefers' conclusion is overturned in the early 1970s, however, when an analysis of research studies in education significantly influential on public schools, reports to the contrary. The 1970 research states, "This Eight Year Study was sponsored by a group of educators, each of whom has earned lasting recognition in his own field of education . . .; the study distinguished the Thirties as a pioneering period in American education."<sup>2</sup> Of sustaining value to curriculum is the change in the focus of educators from testing to evaluation as a result of Tyler's theory, which forced a much wider view of educational programs and placed educational evaluation on a scientific footing. Authorities in the field state, "If for no other reason than establishing a scientific method for evaluation, Tyler's contribution to American education and to the field of curriculum must be considered as significant and of lasting importance."<sup>3</sup>

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<sup>1</sup>Frederick Redefers, "The Eight Year Study--Eight Years Later" (Ph.D. dissertation, Columbia University, 1951), p. 61.

<sup>2</sup>Charles C. Ritchie, "The Eight Year Study: Can We Afford to Ignore It?" Educational Leadership 28 (February 1971): 484.

<sup>3</sup>Tyrrell, "Ralph W. Tyler's Influence on the Field of Curriculum," p. 90.

Three Joint Positions at the University  
of Chicago (1938-1953)

At the onset of his career at the University of Nebraska and at the University of North Carolina, instruction, as a professor of methods courses for teachers, is Tyler's career focus. At Ohio State University, instruction, this time as a researcher of "teachers' problems," is the emphasis. Evaluation, by chance of Charters' decision to assign Tyler to the testing rather than the curriculum position in the Bureau of Educational Research, is his other emphasis. Charters' decision was fortuitous because it begins a long and distinguished career for Tyler as a major contributor to this new field. Tyler is invited for research projects more frequently because of evaluation than because of curriculum. Now, in the third phase of his career, Tyler's position at the University of Chicago incorporates instruction, as a professor of the famous Education 360 Course, evaluation through the appointment to the Examiner's Office and the six year effort of the Cooperative Study of General Education, and curriculum, his first preference.<sup>1</sup>

From 1938 until 1953, the remainder of Tyler's university career, Tyler holds three important joint positions at the University of Chicago. In 1938, when Robert Hutchins, the President of the University, invites Tyler to consult with him about the replacement for the retiring Charles Judd, Tyler is considered among the foremost evaluators in the country. Both Charles Judd and Leon Thurston, the first University Examiner, were vacating their positions. Tyler felt qualified to accept Thurston's position and flattered to become the

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<sup>1</sup>Interview with Ralph W. Tyler, Chicago, Ill., August 1982.

fourth Chairman of the Department of Education following the distinguished Francis Parker, John Dewey, and Tyler's own mentor, Charles Judd. Later, Tyler is appointed Dean of the Division of Social Sciences.

Several aspects of Tyler's appointment to this chairmanship at the University of Chicago "created a sensation in the academic world."<sup>1</sup> Tyler is invited to occupy the chair vacated by Charles Judd, his mentor. About this event, the popular press states, "To fill Charles Judd's shoes poses a pretty problem for the University of Chicago's unorthodox young president, Robert Maynard Hutchins, who has been busy the past year attacking progressive education."<sup>2</sup> The person Hutchins appoints "to fill Judd's shoes" is known as "the fair haired boy of progressive education. . . ."<sup>3</sup> Concerning this appointment, Hutchins is labeled incorrigibly unorthodox. "What Robert Hutchins had to take to get Ralph Tyler was to take the entire Progressive Education Association evaluation staff," the article continues, "which moves its headquarters to the University of Chicago with him."<sup>4</sup> "The joint appointment also raises arched eyebrows in academic circles."<sup>5</sup>

As Chairman of the Department of Education, Tyler rejuvenates the Department with new personnel, major research projects, and a

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<sup>1</sup>"School of Education of the University of Chicago," School and Society 47 (February 1938): 240.

<sup>2</sup>"Tyler for Judd," Time, February 28, 1938, p. 44.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

<sup>5</sup>Interview with Ralph W. Tyler, Chicago, Ill., August 1982.

teacher workshop. Tyler recruits a distinguished graduate faculty, as preeminent as the faculty of Judd's tenure. At least a dozen professors, who later become luminaries in the curriculum field, such as Virgil Herrick, Herbert Thelen, Hilda Taba, Lee Cronbach, John Goodlad, and other highly reputed curricularists are recruited. Tyler establishes a collegial tone in the department through his administrative style, which he fashions in the mode of W. W. Charters.<sup>1</sup> The style is characterized by the encouragement of the faculty, financial and intellectual support for research, a democratic manner, and an open-door policy. "This protective and encouraging attitude toward his staff was also shown to his students."<sup>2</sup>

The intellectual tone of the department is also invigorated by Tyler's research involving University of Chicago professors. Three years remain to complete the Eight Year Study and the overlapping Co-operative Study begins. Benjamin Bloom and Louis Heil are on the staff of both projects, and five other professors: Lee Cronbach, Herbert Thelen, Christine McGuire, Hilda Taba, and Paul Diederich, collaborate in the Eight Year Study.<sup>3</sup> Professors Harold Dunkel and Joseph Schwab as well as moderately prominent curricularists, Earl Johnson and George Barton, also engage in Tyler's research.<sup>4</sup> In 1939, Tyler is Director of the Evaluation Staff of the Eight Year Study, Director of the Co-

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<sup>1</sup>Ibid.

<sup>2</sup>Tyrrell, "Ralph W. Tyler's Influence on the Field of Curriculum," p. 84.

<sup>3</sup>Interview Questionnaire Two: Professors at the University of Chicago, Tyler to Stone, December 1983.

<sup>4</sup>Ibid.

operative Study of General Education, Chairman of the Department of Education and University Examiner of the University of Chicago, and the initiator of the teachers' workshop.

The Cooperative Study in General  
Education (1939-1945)

The Cooperative Study in General Education is introduced at the University of Chicago in 1939 and is one of the major research projects at the University in the Department of Education. The origins of the Cooperative Study can be traced to the Eight Year Study, when, in 1936, Tyler is invited to the University of Chicago "to describe the Thirty-School Study of the Progressive Education Association."<sup>1</sup> Assured that a similar plan is feasible for colleges, "representatives from several institutions in the Middle West sought the assistance of the president of the American Council on Education in the development of the project."<sup>2</sup> The Cooperative Study examines common concerns of twenty-two colleges over a period of six years with the aim "to improve practice in general education."<sup>3</sup> The college representatives and a committee of the American Council on Education selected the twenty-two participating ". . . institutions which could show evidence of educational vitality."<sup>4</sup>

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<sup>1</sup>Earl J. McGrath, "The Cooperative Study in General Education," The Junior College Journal 9 (May 1939): 500.

<sup>2</sup>Ibid.

<sup>3</sup>Cooperation in General Education, The Cooperative Study in General Education: A Final Report of the Executive Committee of the Cooperative Study in General Education (Washington, D.C.: American Council on Education, 1947), p. 24.

<sup>4</sup>McGrath, "The Cooperative Study in General Education," p. 503.

The purposes of the Cooperative Study are fourfold:

(1) to assist faculties in redefining the aims of the program of general education, (2) to provide a staff of technical experts competent to assist faculties in evaluating their program, (3) to develop persons within the cooperating institutions capable of stimulating and conducting internal programs, and (4) to demonstrate the value of cooperative effort among educational institutions. . . .<sup>1</sup>

The Cooperative Study does not set out to raise issues, but it addresses several factors of the era that influenced college education: "population changes," "employment conditions," "enrollments," "the doctrine of formal disciplines," "new psychological theories," and "specialized versus general college requirements."<sup>2</sup> Some colleges focus on individual projects, but major projects are also undertaken jointly in the humanities, the social sciences, the sciences, and student personnel. The major projects in the humanities focus on general life goals, the reading of fiction, and student thinking in the arts. The two social science goals are both inventories about social understanding and beliefs about the postwar period. The science project concentrates solely upon health inventories, and student personnel goals are directed to self inventories and counseling relationship inventories.

Some of the major conclusions of the study cluster around answers to seven basic questions concerning: (1) Who should receive a general education? (2) What should be the ends of a general education? (3) How should the definite objectives be selected? (4) What kinds of courses should be offered? (5) What content should be in-

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<sup>1</sup>Ibid., pp. 500-2.

<sup>2</sup>Cooperation in General Education, pp. 3-20.

cluded? (6) What teaching material and methods should be used? and (7) How should achievement be appraised and recorded?<sup>1</sup> The study also reports on the individual college projects. The Cooperative Study in General Education gains less prominence in the literature than the Eight Year Study for several reasons, but significant among them is America's involvement in World War II at that time. Tyler's concurrent efforts in this period are directed to military training and to education of returning veterans.

Important contributions for both the curriculum practitioner and the theoretician emerge from the Cooperative Study. "The concepts of the workshop and in-service training developed in the Eight Year Study were utilized in the Cooperative Study."<sup>2</sup> As Tyler states: "In carrying on the work, the Cooperative Study functioned in a number of ways; probably the most important of these was the workshop."<sup>3</sup> Modification of the Tyler Rationale is also undertaken, especially the answer to the third question regarding the organizing of learning experiences. It is only two years after the Cooperative Study that Tyler writes his opus, Basic Principles of Curriculum and Instruction, as a course syllabus. Four volumes, other than Basic Principles, report this research project. Few articles are published on the Cooperative Study, which does not gain prominence in the literature like the Eight Year Study.

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<sup>1</sup> Ibid., pp. 201-3.

<sup>2</sup> Antonnelli, "Ralph W. Tyler and the Curriculum Arena: A Historical Interpretation," p. 171.

<sup>3</sup> Ralph W. Tyler, "The Cooperative Study in General Education," Higher Education 4 (January 1948): 97.



The Workshop at the University of Chicago  
(1939-1944)

Another infusion of intellectual stimulation into the Department of Education at the University, the workshop, is introduced by Tyler in the Summer of 1939 and sustained for five years. The workshop, since its earlier inception by Tyler, is utilized in a variety of ways but always focused upon combining experts to assist teachers. At the University of Chicago, during the Cooperative Study, the prime objective was ". . . to provide an opportunity for faculty members to live together for five or six weeks and to work cooperatively on problems. . . ." <sup>1</sup> Under Tyler's direction, "a staff of technical experts competent to assist faculties in evaluating was maintained." <sup>2</sup> The central research staff becomes members of the workshop to which each college in the Cooperative Study sent several staff members. The workshop accrues many advantages for the University of Chicago, both intellectual benefits and national prominence are derived.

Initially, the workshop was a vehicle designed to aid in the joint development of curriculum by teachers and theoreticians as early as 1930. The idea is introduced in a recommendation described in Waples' and Tyler's text, Research Methods and Teachers' Problems. It is utilized by the evaluation staff and teachers in the Eight Year Study to select learning experience and to implement course objectives, and it is replicated in 1939 at the University of Chicago for the Cooperative Study to develop an evaluation staff for colleges. The work-

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<sup>1</sup> McGrath, "The Cooperative Study in General Education," p. 502.

<sup>2</sup> Ibid.

shop concept is introduced again by Tyler for the Research and Development Centers that are a result of the Elementary and Secondary Education Act of 1965. The workshop is described in a pamphlet with Tyler as co-author and in several articles. The concept of cooperation between practitioners and scholars is also described in Basic Principles.

The Examiner's Office at the University  
of Chicago (1938-1953)

Similar to the Department of Education, Tyler also transforms the Examiner's Office at the University of Chicago with the same democratic administrative style described earlier. During Charles Judd's tenure, the University of Chicago becomes a major center for quantitative measurement. During Tyler's tenure the concept of measurement is expanded from the traditional uses of appraising the achievement of individual students for sorting purposes to assessing learning according to instructional objectives and evaluation. In the apparent fashion of W. W. Charters' prototype for Ohio State University's Bureau of Educational Research, Tyler re-locates the Examiner's Office for greater accessibility by colleagues. Similar also to Charters' appointment of five deans at Ohio State University, Tyler appoints several subject matter specialists to the Examiner's Office: Joseph Schwab in biological sciences, Leo Nedeisky in physical sciences, Harold Dunkel in languages and English, and Joseph Axelrod in the humanities. Benjamin Bloom is invited to become Tyler's assistant as Tyler had been Charters' assistant in the Ohio Bureau.<sup>1</sup>

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<sup>1</sup>Tyrrell, "Ralph W. Tyler's Influence on the Field of Curriculum," p. 86.

In this position, Benjamin Bloom, with a Committee of College and University Examiners, conceives the famous two volume work on cognitive and affective objectives, the Taxonomy of Educational Objectives, which he dedicates to "Ralph W. Tyler, whose ideas on evaluation have been a constant source of stimulation to his colleagues. . . ." <sup>1</sup> Members of the Committee of College and University Examiners, who contribute to the development of taxonomy from 1949 to 1953, include many of Tyler's former students and/or contemporaries: Lee Cronbach from the University of Illinois, Lily Detchen from Pennsylvania College for Women, Chester Harris from University of Wisconsin, Louis Heil from Brooklyn College, David Krathwohl and Louis Mayhew from Michigan State University, and Christine McGuire, who remained at the University of Chicago, "where most had been affiliated with Tyler prior." <sup>2</sup> The eighteenth printing of this text and the existence of a sequel handbook to the taxonomy of educational objectives, again created with six of the original contributors, is but one tangible result of the successful functioning of the Examiner's Office and the influence of Ralph Tyler at the helm.

Basic Principles of Curriculum and Instruction  
(1947-1950)

During his tenure at the University of Chicago, Tyler writes Basic Principles of Curriculum and Instruction, which is considered his

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<sup>1</sup> Benjamin S. Bloom, ed., et al., Taxonomy of Educational Objectives: The Classification of Educational Goals Handbook I: Cognitive Domain (New York: David McKay Co., 1956), p. 1.

<sup>2</sup> Ibid.

major contribution to the curriculum field. The book defines the behavioral objective, describes the Tyler Rationale, and has become one of the leading texts in the field. The recognition of Basic Principles as one of the leading texts in curriculum is determined by its prominence in both the national and international arenas and by its use for both theoreticians and practitioners. The content of Basic Principles identifies the "four fundamental questions, [of the rationale] which must be answered in developing any curriculum and plan of instruction."<sup>1</sup>

Some scholars attribute the foundation of the rationale to early curriculum specialists: Frederick Taylor, Franklin Bobbitt, and W. W. Charters.<sup>2</sup> Still others popularly believe that, "Almost as an afterthought, Tyler, dashed off Basic Principles of Curriculum and Instruction as a course syllabus, and it rapidly became the bible of the field."<sup>3</sup> Earliest readers of the text recall their initial encounter with it as, "The first time anything made sense . . . in the messiest of all fields."<sup>4</sup> From the perspective of both practice and theory, the popularity of the book can be derived, at least in part, from its purpose, which is explained by Tyler in his introduction. "This small book attempts to explain a rationale for viewing, analyzing, and interpreting the curriculum and instructional program of an educational in-

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 1.

<sup>2</sup>See Antonelli, "Ralph W. Tyler and the Curriculum Arena: A Historical Interpretation," p. 8; Tyrrell, "Ralph W. Tyler's Influence on the Field of Curriculum," p. 91.

<sup>3</sup>Kiester, "Ralph Tyler: The Educator's Educator," p. 32.

<sup>4</sup>Ibid.

stitution . . . it outlines one way of viewing an instructional program as a functioning instrument of education."<sup>1</sup> The rationale can be used for curriculum development in institutions ranging from elementary to professional schools and from business to the military.

From the perspective of curriculum theory, the rationale is one of the central theories of curriculum presented over the past fifty years. Whenever curriculum theory is classified into a conceptual scheme, the Tyler Rationale is central to one of the classifications. For example, in one organizational scheme, curriculum theory is divided among "the traditionalists, the conceptual-empiricists, and the reconceptualists."<sup>2</sup> In this scheme, the Tyler Rationale is at the center of the traditional theorists. It is not, however, the classification that is relevant, but the fact that Tyler is a central theorist in the field.

Basic Principles is an unfinished statement that was originally intended as a course syllabus. Many of the weaknesses of the rationale are as much a fault of the statement as of the rationale itself. Whether Tyler considered the weakness to be in the statement, in the actual rationale, or in both is unclear, but upon the publication of the text, Tyler begins clarifying, modifying, and transforming the rationale. Since 1951, each question has been examined by Tyler as a discrete unit and in relationship to the other questions of the rationale. Each question is analyzed through new data from Tyler's own

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 1.

<sup>2</sup>Henry A. Giroux, Anthony N. Penna, and William F. Pinar, Curriculum and Instruction (Berkeley, Calif.: McCutchan Publishing Corp., 1981), p. ix.

research projects and from the theoretical perspective of new research in the social sciences. Tyler's experiences and findings from practice with institutions, other than schools, such as the military or engineering, provide another framework for his analysis of the rationale.

The articles about the clarifications, modifications, and revisions of Basic Principles create a body of literature that far exceeds the original 128 page text when the writings by Tyler about the Eight Year Study, the Cooperative Study, evaluation in general, and the National Assessment of Educational Progress are incorporated. The original statement describing the rationale has been modified three times: in 1957, in 1966, and in 1976, and a new revision of the text is planned for 1985. About the revision, Tyler states that he is "improving illustrations in the text by adding examples of curriculum from a variety of fields."<sup>1</sup> It can be anticipated from his 1976 statement that changes will be greater than Tyler understates.

Social Sciences: Dean of the Division of Social  
Sciences at the University of Chicago  
(1948-1953)

At the University of Chicago, the Department of Education is one of nine departments that creates the Division of the Social Sciences, and Tyler is the ideal candidate to be appointed and to accept the position of the Dean of the Division in 1948. To his broad education in several disciplines, Tyler, over the past twenty years, accrues significant and far reaching professional experiences working with all levels of education from elementary through graduate and

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<sup>1</sup>Interview with Ralph W. Tyler, Chicago, Ill., July 1982.

professional schools as well as the military. Throughout the country as well as at the University of Chicago, during the period following World War II, graduate departments and schools of education were in conflict. Confusion regarding their purpose was caused by their rapid growth.

Among Tyler's major contributions to the Division of Social Sciences is his identification of the bases and criteria for graduate programs in education to help determine their functions. Tyler designs four goals for the division which include: a research function, an education function, a service function, and a total function.<sup>1</sup> Tyler applies the criteria to facilitate interdepartmental cooperation in the study of educational programs and graduate education. Tyler desires the cooperation of all nine departments of the social sciences because of the existing fragmentary and piecemeal approach to problems due to growth. Tyler recommends a solution for the problems of graduate schools of education to transpire in two ways: (1) by focusing the graduate department of education on the problems and (2) by obtaining the help of other scholars who have relevant knowledge and methods. "The greatest help universities can give to education is a more basic and comprehensive understanding," states Tyler.<sup>2</sup>

To facilitate that understanding, Tyler clarifies the role of the university in 1951. He states:

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<sup>1</sup>Ralph W. Tyler, "The Functions of Graduate Departments and Schools of Education," Graduate Study in Education in Fiftieth Yearbook of the National Society for the Study of Education, pt. 1 (Chicago: University of Chicago Press, 1951), p. 11.

<sup>2</sup>Ibid., p. 21.

The university shares in common with other institutions responsibility for the improvement of man; however, its major role . . . is to focus trained intelligence upon the problems of understanding man, his environment, and his works and, through understanding, to provide an important basis for his transformation.<sup>1</sup>

From this premise, Tyler extrapolates what he calls the essence of the graduate department of education, which he describes. "The essence . . . is a staff who provides trained intelligence, freedom to pursue significant intellectual problems in whatever direction understanding may lie, students to learn and to participate in these studies . . . all dedicated to the improvement of man."<sup>2</sup> Based upon this definition, Tyler within the Division of Social Sciences differentiates between research appropriate for graduate schools and research appropriate for graduate departments of education. He also defines the research function of education. Tyler states:

Education, unlike most of the sciences, is a purposeful human enterprise with ends that are consciously willed. One cannot observe how education takes place as though it were a natural process that operated without regard to the purposes and procedures employed by those engaged in that process.<sup>3</sup>

Tyler also describes, "The task of the scholar in education is to understand . . . the ends and means of education . . . [and that] . . . basic educational questions . . . require knowledge and the method of inquiry from many fields."<sup>4</sup> Tyler's view of education is influenced by John Dewey's view of the science of education.

Tyler identifies some of the contributions various disciplines can bring to the study of education: (1) sociology can provide under-

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<sup>1</sup>Ibid., p. 14.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid., p. 15.

<sup>4</sup>Ibid.



standing of the role of education in social mobility and in understanding difficulties of individuals who change status different from their parents or social groups; (2) psychology can provide knowledge of learning, studies of anxieties created by social mobility, and studies of personality types who learn new behavior most rapidly; and (3) philosophy can provide a consistent understanding of the nature of man and of a good society.<sup>1</sup> Tyler also indicates that other disciplines in the university: anthropology, political science, and biology, have a significant contribution to make in terms of knowledge and methods of inquiry for education. The contribution of the social sciences to education Tyler has understood for three decades since his undergraduate student days. Tyler attempts, from this loftier position, to share his renaissance background in training and experiences with the Department of Education, the Division of Social Sciences, and the University of Chicago.

During his tenure at the University of Chicago, Tyler's career in the academic world peaks. He has created a prestigious Department of Education and Division of the Social Sciences and developed networks of productive relationships among university professors and between elementary and secondary teachers and university professors. Successfully concluded and newly launched research projects stimulate the curriculum field and the professors in the Department of Education and the Division of Social Sciences. Many graduate students of curriculum, who have been mentored by Tyler, are now prominent. Tyler's famous ratio-

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<sup>1</sup>Ibid., pp. 15-16.

nale and approximately ninety articles have been published during this fifteen year period at the University of Chicago. Tyler's prestige advances and articles are re-published. Other forms of communication: consulting, lectures, radio, committee appointments, conferences, seminars, increase Tyler's exposure. Tyler is ready for a new challenge in 1952, when he is invited to become chairman of a planning committee funded by the Ford Foundation to advance the behavioral sciences. In the next year, Tyler is offered and accepts the position as Director of the Center for Advanced Study in the Behavioral Sciences. Given Tyler's educational and professional background, it is not a far step from the social to the behavioral sciences or from the academic world to the foundation world.

Tyler's contribution to the curriculum field during this quarter of a century from his first professorship at the University of North Carolina to his deanship at the University of Chicago are significant. Most important, he has contributed to theory in the field, both an evaluation theory and a curriculum rationale. Second, Tyler has contributed to research through the Service Studies, the Eight Year Study, and the Cooperative Study in General Education. Third, he has contributed to practice in the field through the workshop and his definition of the joint collaboration between practitioner and theoretician. Fourth, his accomplishments are also administrative such as rejuvenating the Department of Education and the Division of Social Sciences. Fifth, his achievement can also be described in terms of the number of people he has mentored from elementary teachers to graduate students. Sixth, Tyler has contributed to scholarship through evalua-

tion instruments and publications. Now, in 1953, Tyler has advanced from teaching science in a small classroom in Pierre, South Dakota to defining the role of the Department of Education in the Social Sciences at a university. Tyler has travelled most steps of academia and is still a young man approximately fifty years of age.

Behavioral Sciences: The Director of the Center  
for Advanced Study in the Behavioral  
Sciences (1953-1967)

In 1953, Tyler develops and helps to establish a prototype think tank. For thirteen years, until 1967, Tyler also directs the Center for Advanced Study in the Behavioral Sciences. In 1951, a Ford Foundation Study reports that "the problems of contemporary society make clear the need for knowledge of principles which govern human behavior."<sup>1</sup> When Tyler is consulted for a solution to such problems he recommends, "The establishment of a superuniversity where faculty might spend a year pursuing advanced study for which they otherwise had not time."<sup>2</sup> Tyler believes, "One of the banes of the social sciences is the number of people in their thirties who have great promise and by their forties get into a rut and don't produce much that's new or original."<sup>3</sup>

In 1952, Tyler becomes the chairman of a planning committee "that sought to establish a unique research center whose purpose was to

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<sup>1</sup>Kiester, "Ralph Tyler: The Educator's Educator," p. 30.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

secure better teaching for the behavioral sciences."<sup>1</sup> Tyler works out the details of a forty member think tank of scholars of equal rank but of different ages with one-fourth of the fellows from abroad. Since the Center opened in 1954, more than 1,000 scholars have participated and the format has been replicated by other centers.<sup>2</sup> The format of the Center is to provide a year of self-directed study for scholars to work in an atmosphere with others of congenial intellectual interests.

Tyler states:

The center attempts to provide scholars with the ideal environment for study and reflections to make it easy for them to accomplish what would be difficult or impossible in the home setting. Here they have extended opportunity to work alone and uninterruptedly or to converse with top scholars in their own fields.<sup>3</sup>

The prime purpose of the Center is to provide continued growth of scholars based upon the process of reflection.

While Director of the Center, Tyler's name looms even larger in the curriculum field. Just as he gains national prominence in curriculum during the Eight Year Study, he gains international prominence in curriculum and the behavioral sciences while at the Center. The Center is one of the two accomplishments that Tyler himself judges as "a landmark in his career."<sup>4</sup> The literature in the Tyler bibliography of this era reflects his concentration on the behavioral sciences, his reflec-

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<sup>1</sup>Antonelli, "Ralph W. Tyler and the Curriculum Arena: A Historical Interpretation," p. 296.

<sup>2</sup>Interview with Ralph W. Tyler, Chicago, Ill., July 1982.

<sup>3</sup>Donald W. Robinson, "A Talk with Ralph Tyler," Phi Delta Kappan 49 (October 1967): 75.

<sup>4</sup>Kiester, "Ralph Tyler: The Educator's Educator," p. 29.

tion upon the rationale, and an emerging interest in international education. It is also during the end of his tenure as Director of the Center that he introduces the National Assessment of Educational Progress.

Senior Consultant: Science Research Associates  
and System Development Foundation  
(1967-Present)

For a variety of reasons and to serve a number of purposes, Tyler has been in a consultant role throughout his career. Tyler's appointments as an evaluator condition him to respond as a consultant whether he is assisting teachers to improve education in the impoverished communities surrounding Chapel Hill, North Carolina, using Service Studies at Ohio State University with the five deans and instructors, or assisting Charters at the Rochester Institute of Technology in a program for engineers. As Director of the Evaluation Staff of the Eight Year Study, Tyler traveled throughout the country consulting with teachers from the thirty experimental schools in defining objectives and selecting learning experiences that he could measure. Tyler's career as an unofficial consultant is lengthy.

Several reasons explain Tyler's effectiveness as a consultant. Tyler holds a belief in the importance of the classroom teacher. As a consultant in schools, he functions as the investigator asking questions and involving teachers in answers. Second, Tyler is basically a problem solver who ". . . builds structures to fulfill functions. When a problem is given to him his task is to find a solution.

. . ."<sup>1</sup> Third, Tyler is an administrator who enjoys those functions of planning, organizing, and operating, which are essential to effective consulting. Fourth, Tyler possesses a broad foundation in a variety of disciplines, diverse professional experiences, an exposure to a number of different kinds and levels of educational institutions, and a wish to create new solutions and new knowledge. Tyler also possesses personal attributes ascribed to effective consultants and described by those with whom he consults. Tyler is a modest and gentle person who enjoys listening and who perceives no hierarchy in the consultant relationship.<sup>2</sup> Perhaps the most realistic explanation of his success is that he has been a consultant throughout his career because the role is intrinsic to an evaluator.

Another significant factor for frequent invitations requesting Tyler's assistance as a consultant relates to the Tyler Rationale itself. The rationale is a multi-purpose eclectic model to be used at any stage of curriculum development. The rationale is an effective instrument for a variety of educational institutions from elementary to medical schools. It should also be remembered that the Tyler Rationale is introduced in a text that explains "How a School or Staff May Work on Curriculum Building."<sup>3</sup>

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<sup>1</sup>Edgar Dale, "The Historical Setting of Programmed Instruction," Programmed Instruction, in Sixty-Sixth Yearbook of the National Society for the Study of Education, pt. 2 (Chicago: University of Chicago Press, 1967), p. 44.

<sup>2</sup>The author participated in three different situations in which Ralph Tyler was a consultant.

<sup>3</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 126.

Tyler functions as a curriculum consultant throughout his career, but since 1967, when he retires from the Center, he has been actively involved as a consultant on national and international educational matters through the Science Research Associates of Chicago and the System Development Foundation in Palo Alto, California. Tyler consults in many capacities both within academia and with other social and governmental agencies to effect educational change. This panoptic exposure to the world of practice stimulates his scholarship

As a research consultant, Tyler was the Chairman of the Board of Trustees of many groups and institutions including: the American College Testing Program, the National Commission for Cooperative Education, the National Commission on Resources for Youth, and the National Advisory Group of the National Technical Institute for the Deaf. Tyler was also Chairman of the Board of Visitors of the Learning Research and Development Center of the University of Pittsburgh, and the Faculty of Educational Studies of State University of New York at Buffalo.<sup>1</sup> Tyler was also an active member of many advisory committees including: the John F. Kennedy Center for Research on Education and Human Development, the Visiting Committee for the Center for Behavioral Sciences at Harvard University, and the Visiting Committee for the School of Education at Stanford University.<sup>2</sup> Tyler was a member of boards of foundations of several independent schools. Tyler also contributed in other capacities as a consultant and/or evaluator at medical schools, nursing

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<sup>1</sup>Interview with Ralph W. Tyler, Chicago, Ill., August 1982.

<sup>2</sup>Ibid.

schools, businesses, and graduate departments of education at such institutions as Case Western Reserve Medical School in Cleveland, Ohio or more recently at the Graduate School of Education at Loyola University in Chicago, Illinois.

In another pattern of consulting, Tyler creates a reciprocal exchange between his work and the consulting project. For example, from 1943-1953, Tyler is the Director of the Examination Staff for the United States Armed Forces Institute. While he is assisting in evaluation for the military, he writes two articles in 1943 and 1944 appraising educational achievement in the military. Then, in 1945, writing in the introduction to the Forty-Fourth Yearbook of the National Society for the Study of Education entitled American Education in the Postwar Period: Curriculum Reconstruction, Tyler explains how "War training experiences themselves have contributed data of value in planning the postwar curriculum."<sup>1</sup> This he generalizes into "What the Schools Can Learn From the Training Programs of the Armed Forces." The articles identify what is transferable to civilian education, such as: "The ineffectiveness of drill and the need for providing many and varied oral opportunities for practicing what is learned" or "the primacy of genuine motivation."<sup>2</sup> Thirty years later, these conditions for learning appear as alterations in the Tyler Rationale. It is possible to

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<sup>1</sup>Ralph W. Tyler, "Introduction," American Education in the Postwar Period in Forty-Fourth Yearbook of the National Society for the Study of Education, pt. 1 (Chicago: University of Chicago Press, 1945), p. 1.

<sup>2</sup>Ralph W. Tyler, "What the Schools Can Learn From the Training Programs of the Armed Forces," Elementary School Journal 45 (May 1945): 502.



trace many of these reciprocal patterns, which show the influence of the practice of the consulting experience upon Tyler's theoretical formulations.

This pattern of reciprocal exchange is most pronounced in Tyler's international consulting. Tyler has been an international consultant since the 1960s. In the past twenty years, he has consulted in many countries about many kinds of problems. In the early 1960s, Tyler visits schools in Russia with a delegation and writes Some Reflections on Soviet Education. Later, as a consultant for the University of Dublin, he assists educational reform in Ireland. In 1967, he serves as an American representative to an International Conference on Curriculum at Oxford. In 1975, Tyler is in Ghana as one of the staff of the African Regional Seminar on curriculum development. In 1979, he visits China and is a contributing author to a book, China's Schools in Flux. A consultant to the Hebrew University of Jerusalem, Tyler assists curriculum revision in Israel. It is upon the Russian and Israeli experience that he draws and applies the generalization that alters the rationale.

In 1974 and 1976, Tyler writes companion articles that illustrate his application of consulting experience. He combines the practical experience with theoretical advances in the social sciences; both affect his theorizing. The 1974 article highlights the theoretical and discusses changes in research in the social sciences that influence his thinking about the rationale. The 1976 article explains the practical, the actual changes themselves that he observes as an international consultant. Both articles provide specific examples of the

influence of international consulting and illustrate how the data are applied.

In "Utilizing Research in Curriculum Development," Tyler states, "I have been working with the Ministry of Education in Israel . . . [which has] . . . been considering introducing new math and new science programs."<sup>1</sup> Tyler wonders, "Is there a way of implementing a program without a complete overthrow of the old?"<sup>2</sup> This reflection about the Israeli question causes Tyler to re-direct his thinking about the rationale from an "objectives-based rationale" to an "implementation-based rationale" or from an emphasis on the first question of the model to an emphasis on the second question regarding "selecting learning experiences." The Israeli question regarding implementation evokes one new emphasis in the rationale explained in "Two New Emphases in Curriculum Development." An observation about the Soviet Union catalyzes another. In the 1976 article, Tyler explains the Soviet Union's "support of . . . supplementary educational institutions."<sup>3</sup> This illustration introduces a second new emphasis in the rationale relating to "school and non-school areas of learning," a consideration in reconstructing the total educational environment.<sup>4</sup> Many more consulting positions in and out of the country reveal this reciprocal pattern.

It is certainly simple to recognize Tyler's expertise as an

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<sup>1</sup>Tyler, "Utilizing Research in Curriculum Development," p. 9.

<sup>2</sup>Ibid.

<sup>3</sup>Tyler, "Two New Emphases in Curriculum Development," p. 69.

<sup>4</sup>Ibid.

effective consultant. It is also easy to decipher the effectiveness of the rationale as a utilitarian model for curriculum development whether in Sweden or Indonesia, where Tyler also accepted invitations to consult. But it is most impressive to see the influence of the practical experience of consulting upon Tyler's theory building and to observe the reciprocal intellectual exchange between his consulting experience and their resulting ramifications upon the rationale. Tyler not only incorporates these ideas into his current curriculum theorizing in America, but he is also now published internationally. Basic Principles is published in several languages, as it may be recalled, and more recently, in 1984, additional articles will be published in the International Encyclopedia of Education.

Another focus during this period as a Senior Consultant is the National Assessment of Educational Progress, one of Tyler's major contributions to the field, and the first major undertaking produced after the Tyler Rationale. The purpose of the National Assessment is to provide the intelligent lay public with, "census-like data on the educational levels of important sectors of our population in order to furnish a dependable background of information about our educational attainments, the progress we are making, and the problems that we still face in achieving our educational aspirations."<sup>1</sup> Although the National Assessment has many opponents and proponents, Tyler believes:

Assessing the progress of American education provides a means of helping the public understand the instructional purposes, achievements, and progress of our schools and furnishes the professional

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<sup>1</sup>Ralph W. Tyler, The Challenge of National Assessment (Columbus, Ohio: Charles E. Merrill Publishing Co., 1968), p. 2.

staff with means for evaluating . . . the effectiveness of educational programs designed to serve particular purposes.<sup>1</sup>

Tyler adds, "The information generated by the National Assessment can make a constructive contribution to education."<sup>2</sup>

The National Assessment is conceived when the United States Commissioner of Education saw the need for a nationwide survey of educational achievement and joined forces with Ralph Tyler ". . . to determine the feasibility of the plan."<sup>3</sup> In the summer of 1963, several educational leaders asked Tyler "to prepare a memorandum on the possibility of assessing progress of education."<sup>4</sup> Actually, Tyler, since 1950, had the germ of this idea relating to such an assessment when in Basic Principles he states, "In fact, so far as frequency of evaluation is concerned, much can be said for at least an annual appraisal carried on year after year . . . so that a continuing record of progress can be obtained. . . ."<sup>5</sup>

As a consultant to this project, Tyler, in 1964, at a conference of national education leaders "reviewed the memorandum and discussed the educational pros and cons of developing an assessment procedure."<sup>6</sup> Beginning in 1969, the National Assessment surveyed educa-

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<sup>1</sup> Ibid., p. 17.

<sup>2</sup> Ibid., p. 18.

<sup>3</sup> Theodore B. Pratt, ed., National Association of Educational Progress 1969-1983: A Bibliography of Documents in the ERIC Database (Denver, Colo.: National Association of Educational Progress, 1983), p. vi.

<sup>4</sup> Ralph W. Tyler, "Assessing the Progress of Education," Phi Delta Kappan 47 (September 1965): 15.

<sup>5</sup> Tyler, Basic Principles of Curriculum and Instruction, p. 127.

<sup>6</sup> Tyler, "Assessing the Progress of Education," p. 15.

tional achievement across the country and reported its findings to the nation. The Assessment has tracked attainment levels of 9-, 13-, 17-year olds, and adults in various learning areas: art, citizenship/social studies, career and occupational development, mathematics, music, reading/literature, science and writing.<sup>1</sup>

During this period from 1964-1975, Tyler writes eighteen articles on the National Assessment. Not only does he write articles of explanation and defense, but he also expands the horizon of evaluation to the international scene, a topic Tyler introduces in 1950 in an article, "U.S. vs. The World: A Comparison of Educational Performance." In 1984, another article on the Assessment will be published for international consumption. The concept for evaluation used in the National Assessment expands upon Tyler's original theory of 1931. Now, the data from the National Assessment, provided over the past seven years, are influencing the transformation of the rationale in 1976. Again, practice and theory interrelate.

During these five decades as a consultant, Tyler also served as an educational policy advisor on schooling and curriculum to many presidents of the United States. Under President Franklin D. Roosevelt, a Joint Army and Navy Committee on Welfare and Recreation was appointed and Tyler served on its subcommittee, the Advisory Committee on Education in the Armed Forces. This advisory Committee provided guidance on educational programs for the military. Under President Truman, Tyler's advice was again sought for developing socially re-

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<sup>1</sup>Pratt, ed., National Association of Educational Progress 1969-1983: A Bibliography of Documents in the ERIC Database, p. v.

sponsive curriculum for the military. Tyler's first plan was rejected because it was too long range for Truman's tenure, but later Tyler was invited to develop a curriculum for continuing education of officers. During the Kennedy Administration, Tyler was vice-chairman of the National Science Foundation. Under the Johnson Administration, he was part of the task force that formulated many education bills, including the famous Elementary and Secondary Education Act of 1965.<sup>1</sup>

Each of Tyler's major contributions: the Service Study, the concept and theory of evaluation, the Eight Year Study of Thirty High Schools, the six year study of Cooperation in General Education of twenty-two colleges, the Tyler Rationale, the National Assessment of Educational Progress of millions of students and young adults in the nation, is significant as a single entity. But the group of projects and the two theories should be perceived and measured as a totality or a collective body of evidence to answer the crucial questions from the 1930s: What are the purposes, goals, objectives of the American schools? How can we achieve these objectives? Have we achieved the objectives to which they are proposed answers?<sup>2</sup> Whatever the reason for the question, Tyler's body of work traces one answer created of a corpus of material, which is scientifically derived.

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<sup>1</sup>Interview with Ralph W. Tyler, Chicago, Ill., July 1982.

<sup>2</sup>Tyler, "Utilizing Research in Curriculum Development," p. 9.

## CHAPTER V

### MAJOR CONTRIBUTION: THE TYLER RATIONALE

#### The Emergence and Evolution of the Tyler Rationale (1930-1976)

The Tyler Rationale is a curriculum model presented in the text, Basic Principles of Curriculum and Instruction, with origins in Tyler's earliest work and modifications in Tyler's recent writings. The origins of the rationale can be traced from Tyler's early research projects undertaken between 1930 and 1947. Modifications of the rationale can be traced from the year following the publication of the rationale until 1976, when Tyler wrote his most recent statement, a little more than a decade before the forthcoming revision promised for 1985. The origins and the influence of the curriculum model can be traced to sources outside of Tyler's work, but those origins and the effect of the rationale will be investigated in another chapter. This chapter traces the history of the rationale within the context of Tyler's own publications from 1930-1976.

The major literature constituting the origins of the rationale is comprised of nine volumes describing different kinds of research projects and a series of articles describing Tyler's evaluation theory. The earliest origins of the rationale can be traced to the Service Studies, which are described in Research Methods and Teachers' Problems: A Manual for Systematic Studies of Classroom Procedure

and Service Studies in Higher Education. The first book reviews the literature of that period regarding the topic of solving classroom problems. From the literature, the authors suggest systematic rather than arbitrary ways for teachers to solve classroom problems, which eventually become recommended procedures in the rationale. The latter of the two works describes the manner in which these systematic procedures are applied at Ohio State University in what is referred to as the Service Study. In this investigation, this description of a systematic approach to classroom problems and its application will be called the Service Study rather than by both names.

A second origin to which the rationale can be traced is found in Tyler's early work in evaluation. While applying the concept of the Service Study at Ohio State University, Tyler evolves an approach to evaluation, which he describes in a series of articles dating from 1930-1935. This series of articles is compiled in a text entitled Constructing Achievement Tests. Tyler applies this evaluation theory in the Eight Year Study, his next major research project.

A third origin to which the rationale can be traced is the Eight Year Study (1934-1942) of thirty progressive schools. It is during this Eight Year Study, which is written about in five volumes, that Tyler begins to devise the questions that create the rationale. Rather than analyze the sources of the rationale by using the different names of the five volumes of the study, the source will be simply called the Eight Year Study.

The final origins to which the rationale can be traced are the Cooperative Study in General Education (1939-1945) of twenty-two col-



leges and the Curriculum Theory Conference of 1947. The Cooperative Study resembles the Eight Year Study and is described in four volumes, all of which will be called the Cooperative Study. Two years after the completion of the Cooperative Study, Tyler presents a paper at the 1947 Curriculum Theory Conference entitled "The Organization of Learning Experiences," which is derived from the Cooperative Study and which later becomes a chapter in Basic Principles of Curriculum and Instruction.<sup>1</sup>

The major literature constituting the modifications of the rationale after its publication is comprised of more than twenty articles or chapters in books, which begin in 1951. Some of the publications indirectly relate to the rationale, but twelve directly clarify, modify, or transform the rationale. From among these twelve writings, three that modify the rationale are the most significant statements of the grouping. During each decade from 1950 until 1970, Tyler writes one of these statements and includes the word new in the title to signify its importance.<sup>2</sup> In 1958, Tyler adds "New Criteria for Curriculum Content and Method"; in 1966, he adds "New Dimensions in Curriculum Development"; and in 1976, Tyler entitles the modifications "Two New Emphases in Curriculum Development."<sup>3</sup>

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<sup>1</sup>Ralph W. Tyler, "The Organization of Learning Experiences," in Toward Improved Curriculum Theory, comp. and ed. Virgil Herrick and Ralph W. Tyler (Chicago: University of Chicago Press, 1950).

<sup>2</sup>Interview with Ralph W. Tyler, Chicago, Ill., August 1982.

<sup>3</sup>See Ralph W. Tyler, "New Criteria for Curriculum Content and Method," in The High School in a New Era, ed. Francis S. Chase and Harold A. Anderson (Chicago: University of Chicago Press, 1958); Ralph W. Tyler, "New Dimensions in Curriculum Development," *Phi Delta Kappan*, vol. 48 (September 1966); and Tyler, "Two New Emphases in Curriculum Development."

Each decade from 1930-1980, Tyler makes a contribution to the rationale. The origins of the rationale will be traced from the Service Studies and evaluation theory at Ohio State University during the early 1930s and from the Eight Year Study and the Cooperative Study during the late 1930s and early 1940s. The modifications of the rationale will be traced to the major changes in each decade since its publication: the 1950s, the 1960s, and the 1970s. During the 1980s, Tyler has been revising the original publication.

#### The Importance of the Tyler Model in the Curriculum Field

It is important to understand the origins, the content, and the modifications of the Tyler Rationale because it is one of the major models in the curriculum field. The rationale has occupied a focal position in the curriculum field from the time of its introduction as a suggestion on a blackboard during the Eight Year Study in 1936 to its use as a course syllabus for Education 360 at the University of Chicago in 1947 and later as a text in the field in 1949. The origins of the rationale can be traced even earlier than 1936, not only in Tyler's own work but also in the writings of prominent curricularists of the Formative Years of the specialty. About its birth in the field, two curriculum historians, Daniel and Laurel Tanner state, "Its conceptual origins span the entire first half of the twentieth century."<sup>1</sup> About its importance to the field today the same historians believe, "Alternative proposals have been made, but such proposals appear to be derived

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<sup>1</sup>Tanner and Tanner, Curriculum Development: Theory into Practice, p. 96.

from factors that are accounted for in this extant model."<sup>1</sup> In John Goodlad's review of "the state of the field" from 1950-1970, he states, ". . . as far as the major questions to be answered in developing a curriculum are concerned, most of the authors . . . assume those set forth in 1950 by Ralph Tyler. No other scheme has served in a similar way."<sup>2</sup>

The amount of criticism in the literature, both positive and negative, also indicates the importance of the rationale in the field. During the 1950s, the work of Benjamin Bloom and David Krathwohl extend the rationale.<sup>3</sup> The approach of the behaviorists of the 1960s: Robert Gagné, Robert Mager, Raymond Smith, W. James Popham, and others also incorporates the rationale. Concerning this application, it should be noted, however, that Tyler in two interviews in 1973 disclaims this definition of objectives.<sup>4</sup> Again in the 1970s, several articles in support of the rationale are published. In 1971, Richard Hersh and Stuart Cohen write an article, "A Case Against a Case Against Behavioral Objectives," listing six points supporting the use of objectives."<sup>5</sup>

<sup>1</sup> Ibid., p. 97.

<sup>2</sup> John I Goodlad, "Curriculum: The State of the Field," Review of Educational Research 30 (June 1969): 374.

<sup>3</sup> The Benjamin Bloom and David Krathwohl taxonomies of cognitive and affective objectives are discussed in Chapter VII.

<sup>4</sup> See Justin Fishbein, "The Father of Behavioral Objectives Criticizes Them: An Interview with Ralph W. Tyler," Phi Delta Kappan 55 (September 1973): 55-57; June G. Shane and Harold G. Shane, "Ralph Tyler Discusses Behavioral Objectives," Today's Education 62 (September-October 1973): 41-46.

<sup>5</sup> Richard H. Hersh and Stuart J. Cohen, "A Case Against a Case Against Behavioral Objectives," Elementary School Journal 71 (May 1971): 435-37.

The following year Robert Wise presents both a pro and con position in "The Uses of Objectives in Curriculum Planning," which examines the claim for planning by objectives. Wise explains:

It has not been my intent to argue that objectives are irrelevant. . . . On the contrary, goals and objectives have an important function . . . to communicate the desired consequences of instruction. We must make every effort to articulate those desired consequences as clearly as we can. Yet we must be aware that statements of desired consequences cannot be sources for deducing means nor criteria for selecting the best means. Planning by objectives is one way, but it is not the only way.<sup>1</sup>

The literature of criticism also finds fault with the Tyler Rationale in predominantly two areas: objectives and the underlying assumptions and logic of the rationale. During the 1960s, Elliot Eisner is one of the main critics of the rationale. In an article entitled "Educational Objectives: Help or Hindrance?" Eisner examines three limitations of objectives: (1) the assumption that it is possible to predict what the outcomes of instruction will be, (2) the failure to recognize the constraints various subject matter places upon objectives, and (3) the belief that objectives stated in behavioral and content terms can be used as criteria by which to evaluate.<sup>2</sup>

The criticism of the rationale increases in the 1970s. James Macdonald and Bernice Wolfson make "A Case Against Behavioral Objectives" in which they posit that the use of behavioral objectives is contradictory to the nature of knowledge. The authors call knowledge

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<sup>1</sup>Robert I. Wise, "The Use of Objectives in Curriculum Planning: A Critique of Planning by Objectives," Curriculum Theory Network 5 (1975): 288.

<sup>2</sup>Elliot W. Eisner, "Educational Objectives: Help or Hindrance?" School Review 75 (Autumn 1967): 253-55.

uncertain, personal, and functional, and they call the effects of what behavioral objectives are communicating in that regard detrimental.<sup>1</sup>

Kliebard also questions several assumptions underlying the rationale. Kliebard agrees with Macdonald and Wolfson and questions the overall assumption that educational objectives can be drawn from subject matter. In his 1975 appraisal of the rationale, he questions the school philosophy as a screen for objectives. He believes a philosophy makes objectives products of a value structure.<sup>2</sup> Later, Kliebard criticizes the rationale but for different reasons. Kliebard states:

Tyler's claims for his rationale are modest, but, over time, his proposal for rationally developing a curriculum has been raised almost to the status of revealed doctrine . . . the Tyler Rationale is imperishable . . . it will always stand as the model of curriculum development for those who conceive of the curriculum as a complex machinery. . . .<sup>3</sup>

In challenging the assumptions upon which Tyler bases the rationale, Kliebard also adds, "But the field of curriculum . . . must recognize the Tyler Rationale . . . [as one] version of how a curriculum should be developed--not the universal model of curriculum development."<sup>4</sup>

In the view of many reconceptualist critics: Dwayne Huebner, Elliot Eisner, and James Macdonald, the rationale unfortunately is imperishable. "In some form [the rationale] will always stand as a model of curriculum development for those who conceive of

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<sup>1</sup>James B. Macdonald and Bernice J. Wolfson, "A Case Against Behavioral Objectives," Elementary School Journal 71 (December 1970): 126.

<sup>2</sup>Herbert M. Kliebard, "The Tyler Rationale," in Curriculum and Evaluation, ed. Arno A. Bellack and Herbert M. Kliebard (Berkeley, Calif.: McCutchen Publishing Corp., 1977), p. 56.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid., p. 65.

the curriculum as a complex machinery for transforming the crude raw material that children bring with them to school into a finished and useful product."<sup>1</sup>

### The Nature of the Tyler Rationale

The rationale is comprised of four fundamental questions that should be answered "to develop a plan of curriculum and instruction."<sup>2</sup> Tyler calls the model a rationale because it is an applied process intermediary between a manual and theory. Tyler, in the 1950 introduction to Basic Principles, makes the disclaimer that the rationale is not a manual. "It [Basic Principles] is not a manual . . . [it] outlines one way of viewing an instructional program as a functioning instrument of education."<sup>3</sup> In an earlier work, Research Methods and Teachers' Problems, which is subtitled A Manual for Systematic Studies of Classroom Procedure, the authors state, a manual is "intended to facilitate systematic studies of teachers' classroom problems--studies . . . which are conducted by supervisors or teachers in service to solve urgent problems of the particular school or class."<sup>4</sup> Basic Principles is more than a manual, it is, ". . . a rationale for viewing, analyzing, and interpreting the curriculum and instructional program

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<sup>1</sup>Ibid.

<sup>2</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 1.

<sup>3</sup>Ibid.

<sup>4</sup>Tyler and Waples, Research Methods and Teachers' Problems: A Manual for Systematic Studies of Classroom Procedure, p. vii.

of an educational institution."<sup>1</sup> To Tyler himself, "it was intended to be a guide for the thinking and planning of students, most of whom were mature professionals working in problems of curriculum and instruction in their own institutions and organizations."<sup>2</sup> Fifteen years after the publication of the rationale, Tyler reflects upon its origins. "The stimulus for me to construct a comprehensive outline of the questions to be answered and the steps to be taken in developing a curriculum, including the program of instruction, arose from my work with the staff of the Eight Year Study."<sup>3</sup> Tyler states that he was invited to devise a rationale to guide the efforts of the schools in their development of new curricula. "The rationale developed in 1936, was employed in the Cooperative Study in General Education, . . . [and] the modifications . . . resulted from its use. . . ."<sup>4</sup>

#### Organization and Content of Basic Principles of Curriculum and Instruction

The content of Basic Principles of Curriculum and Instruction is comprised of an introduction, stating the purpose and limitations of the rationale; a final chapter, explaining the use of the rationale by a staff of teachers and other experts, and four central chapters, which identify and recommend procedures for the fundamental questions that create the rationale. The four fundamental questions include:

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 1.

<sup>2</sup>Tyler, "Two New Emphases in Curriculum Development," p. 61.

<sup>3</sup>Tyler, "New Dimensions in Curriculum Development," p. 25.

<sup>4</sup>Ibid.

1. What educational purposes should the school seek to attain?
2. What educational experiences can be provided that are likely to attain these purposes?
3. How can these educational experiences be effectively organized?
4. How can we determine whether these purposes are being attained?<sup>1</sup>

These four questions create a process involving: stating the objectives, selecting and organizing learning experiences, and evaluating objectives. The linear model comprises the principles by which the program of curriculum and instruction are investigated. The sequence of questions to be answered can begin with any one of the four questions, however, the first question is the important question. As Tyler states, "If we are to study an educational program systematically and intelligently we must first be sure as to the educational objectives aimed at."<sup>2</sup> Tyler does not answer these questions because, ". . . the answers will vary to some extent from one school to another."<sup>3</sup> Rather he explains recommended procedures that "constitute a rationale by which to examine problems of curriculum and instruction."<sup>4</sup>

Each of the four central chapters describes the recommended procedures for answering one of the questions. Chapter I answers "What Educational Purposes Should the School Seek to Attain?" The recommended procedures are divided into six subtopics: 1-3--examine the three primary sources of objectives including studies of learners, studies of contemporary life, and suggestions from subject specialists; 4-5--explain the use of philosophy and the psychology of learning as screens;

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 1.

<sup>2</sup>Ibid., p. 3.

<sup>3</sup>Ibid., pp. 1-2.

<sup>4</sup>Ibid., p. 2.



and 6--describes the statement form in which an objective is to be written. This is the longest chapter of the text comprised of about forty pages, indicating the most complete answers.

Chapter II about selecting learning experiences is the shortest chapter of the text comprised of only about five pages, indicating the fewest procedures. Tyler defines learning experiences and recommends five principles in selecting them. The chapter also provides illustrations of characteristic learning experiences useful for attaining objectives.

Chapter III regarding organizing learning experiences defines the concept of organization and provides criteria, elements, structures, and principles for organizing. Comprised of fewer than twenty pages, the chapter repeats the article presented at the 1947 Curriculum Theory Conference.

In Chapter IV, Tyler describes how to evaluate the effectiveness of learning. Tyler discusses the need, notions, procedures, and uses of evaluation. The contents of these twenty pages are similar to the evaluation theory presented by Tyler in Constructing Achievement Tests.

Chapter V explains the use of the rationale by teachers and other experts.

Question 1: What Educational Purposes Should  
the School Seek to Attain?

Tyler formulates his first question regarding objectives from his definition of education as "a process of changing the behavior

patterns of people."<sup>1</sup> Behavior is used in the broad sense to include "thinking and feeling as well as overt action."<sup>2</sup> Behavioral or educational objectives, the phrases are used synonymously, are ". . . consciously willed goals . . . ends that are desired by the school staff . . . not simply matters of personal preference of individuals and groups."<sup>3</sup> "In the first analysis," Tyler says that objectives are, ". . . value judgments of those responsible for the school."<sup>4</sup> Objectives are also ". . . the criteria by which materials are selected, content is outlined, instructional procedures are developed, and tests and examinations are prepared."<sup>5</sup> Objectives are culled from three traditional primary sources in the Tyler Rationale. Since, in Tyler's view, "no single source for objectives is adequate" and all three sources have value, each "must be given consideration in the planning."<sup>6</sup> The three sources of objectives from which data are derived include: "studies of learners," "studies of contemporary life," and "suggestions from subject matter specialists."<sup>7</sup>

From the first source of objectives, "the studies of learners themselves," one of the recommended procedures is "to identify needed changes in behavior patterns of the students which the educational institutions should seek to produce."<sup>8</sup> The learners themselves provide two areas for study, needs and interests, that help to determine objectives. The needs' studies appear to take precedence over the interest

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<sup>1</sup> Ibid., pp. 5-6.

<sup>2</sup> Ibid., p. 6.

<sup>3</sup> Ibid., p. 3.

<sup>4</sup> Ibid., p. 4.

<sup>5</sup> Ibid., p. 3.

<sup>6</sup> Ibid., p. 5.

<sup>7</sup> Ibid., p. 25.

<sup>8</sup> Ibid., p. 6.

studies in determining objectives. The concept of need is defined by Tyler in relation to norms. Tyler states, "needs represent a gap between some conception of a desirable norm, that is, some standard of philosophic value and the actual status."<sup>1</sup> In a less extended discussion, Tyler also recommends the investigation of student interest as another source for objectives derived from the learners themselves. Tyler reasons that since education is an active process, the learner learns what he does; he does what interests him, therefore educational objectives should be based upon interest. For both investigations of needs and interests, Tyler recommends a variety of procedures. In the period between 1950-1976, one of the important modifications in the rationale emanates from interests of learners.

A second source of objectives, "studies of contemporary life outside of school," follows the logic of obtaining objectives through the technique of activity analysis, a technique made famous by Tyler's mentors, Franklin Bobbitt and W. W. Charters. Tyler posits two arguments favoring studies of contemporary life as sources of objectives. He reasons that since life is complex and changing, schools must focus on the critical aspects of it and not waste student time. His second argument is based upon data from Edward Thorndike's studies of transfer of training, which demonstrate improved learning when certain conditions of similarity are found by the pupil between outside and inside school activities. Society as a source of objectives is of lesser importance in the modification of the original statement. Nonetheless,

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<sup>1</sup>Ibid., pp. 7-8.

Tyler reports modifications in 1958, when he clarifies school appropriate tasks and again in 1976, when society as a source of objectives becomes transformed into school and non-school areas of learning.

"Suggestions from subject specialists" provide the third source for educational objectives. Knowledge is judged the most common source of objectives by Tyler, who in the original text, criticizes the Committee of Ten for asking the wrong question. Instead of asking, "What should be the elementary instruction for students who are later to carry on much more advanced work in the field?" he suggests that the Committee asks the question, "What can your subject contribute to the education of young people who are not going to be specialists in your field?"<sup>1</sup> Tyler believes in two functions of knowledge: "the broad functions a particular subject can serve" and "the particular contributions the subject can make to other large functions which are not primarily the functions of the subject concerned."<sup>2</sup> The second most important modification in the original rationale emanates from knowledge as a source from which to cull objectives. Tyler does not address this topic until the mid 1960s, at which time he introduces new guidelines about the interrelationship of knowledge.

Two screens to filter the objectives: philosophy and psychology, are utilized in the model. From among the many objectives provided by the three sources, "a smaller number of consistent highly important objectives need to be selected," Tyler explains.<sup>3</sup> "To select a group of a few highly important consistent objectives it is necessary

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<sup>1</sup>Ibid., p. 26.

<sup>2</sup>Ibid., pp. 27-28.

<sup>3</sup>Ibid., p. 33.

to screen the heterogeneous collection of objectives. . . ."<sup>1</sup> For this purpose, Tyler recommends "the educational and social philosophy to which the school is committed" as the first screen.<sup>2</sup> The process is to cull those objectives "that stand high in terms of values stated or implied in the school's philosophy."<sup>3</sup> "Those in harmony with the philosophy will be identified as important objectives."<sup>4</sup> Tyler makes no future changes in philosophy as a screen, except to affirm its importance in 1966.

The second screen for culling objectives is the use of the psychology of learning. Tyler reasons, "Educational objectives are educational ends, they are results to be achieved from learning. Unless these ends are in conformity with conditions intrinsic in learning they are worthless."<sup>5</sup> Using psychology as a screen, an objective is rejected from a psychological viewpoint, "because it is probably unattainable, inappropriate to the age level, too general or too specific, or otherwise in conflict with the psychology of learning."<sup>6</sup> Tyler restates his identical position on psychology as a screen in 1966. After a review of the research on learning in the mid 1970s, however, Tyler modifies his position.

Tyler describes the form in which objectives are to be stated in order to be helpful in selecting learning experiences and in guiding teaching. Tyler challenges the forms in which objectives are usually written and criticizes objectives when "stated as things which the in-

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid., pp. 33-34.

<sup>3</sup>Ibid., p. 34.

<sup>4</sup>Ibid., p. 37.

<sup>5</sup>Ibid.

<sup>6</sup>Ibid., p. 43.

structor is to do."<sup>1</sup> Tyler argues, ". . . although objectives are often stated in terms of activities to be carried on by the instructor, this formal statement operates as a kind of circular reasoning which does not provide a satisfactory guide to the further steps of selecting materials and devising teaching procedures for the curriculum."<sup>2</sup> Tyler also criticizes a second form in which objectives are stated by "listing topics, concepts, generalizations, or other elements of content . . . dealt with in the course. . . ."<sup>3</sup> "This form is unsatisfactory because it does not . . . specify what the students are expected to do with these elements."<sup>4</sup> A third form, "generalized patterns of behavior,"<sup>5</sup> is dismissed as less than fruitful. Tyler argues, ". . . from what we know about transfer of training it is very unlikely that efforts to aim at objectives so highly generalized as this will be fruitful. It is necessary to specify more definitely the content to which this behavior applies. . . ."<sup>6</sup>

Tyler then defines the way in which objectives need to be stated. "The most useful form for stating objectives is to express them in terms which identify both the kind of behavior to be developed in the student and the content or area of life in which this behavior is to operate."<sup>7</sup> Tyler defines this two dimensional objective to include "the behavioral aspect and the content aspect," and presents a diagram to illustrate how this form of objective can be best stated.<sup>8</sup>

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<sup>1</sup>Ibid., p. 44.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid., pp. 44-45.

<sup>4</sup>Ibid., p. 45.

<sup>5</sup>Ibid., p. 46.

<sup>6</sup>Ibid.

<sup>7</sup>Ibid., pp. 46-47.

<sup>8</sup>Ibid., p. 47.

The form in which an objective is stated has been a source of confusion, controversy, and criticism since the 1950 statement. Tyler returns to the statement form of objectives in "New Criteria for Curriculum Content and Method" in 1958. By 1976, each procedure of Question One has been examined and modified or changed.

Question 2: How Can Learning Experiences Be Selected?

The second fundamental question, "How Can Learning Experiences Be Selected Which Are Likely to Be Useful in Attaining These Objectives?" is explained more briefly than procedures for the first question. The explanation includes a definition of learning, the citation of five learning principles helpful in selecting learning experiences, and an illustration of characteristic learning experiences useful in attaining various types of objectives. Tyler defines learning experiences in a Deweyan definition. "The term . . . refers to the interaction between the learner and the external conditions in the environment to which he can react."<sup>1</sup> He describes how learning "takes place through the active behavior of the student; it is what he does that he learns. . . ."<sup>2</sup>

Tyler explains that learning is not the content with which the course deals nor the activities performed by the teacher. Tyler states, "The problem of selecting learning experiences is the problem of determining the kinds of experience likely to produce given educational objectives and also the problem of how to set up situations which will evoke or provide within students the kind of learning experiences

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<sup>1</sup>Ibid., p. 63.

<sup>2</sup>Ibid.

desired."<sup>1</sup> Five general principles are identified for selecting learning experiences:

1. A student must have an opportunity to practice the behavior implied by the objective.
2. The learning experience must be such that the student obtains satisfaction from the behavior.
3. The reactions desired are in the range of possibilities for the students.
4. Many particular experiences can be used to attain the same educational objectives.
5. The same learning experience will usually bring about several outcomes.<sup>2</sup>

Several illustrations of the characteristics of learning experiences useful in attaining various types of objectives are enumerated and described, such as: learning experiences to develop skill in thinking, in acquiring information, and in developing social attitudes and interests.<sup>3</sup> A thorough examination of recommended procedures to answer this question does not occur until after the publication of the rationale. Tyler, before and after 1950, writes about this question constantly. The articles on learning span from 1931 regarding the "Nature of Learning Activities" until 1974 concerning "Where Learning Happens." From 1966-1976, the learning or the implementation question becomes the foremost question in the examination of the rationale.

### Question 3: How Can Learning Experiences Be Organized?

The third fundamental question to answer is, "How can learning experiences be organized for effective instruction?" After learning

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<sup>1</sup>Ibid., p. 65.

<sup>2</sup>Ibid., pp. 65-67.

<sup>3</sup>Ibid., pp. 68-79.



experiences have been selected, the third step is to organize them into some coherent pattern to produce a cumulative effect. "Organization," Tyler sees, "as an important problem in curriculum development because it greatly influences the efficiency of instruction and the degree to which major educational changes are brought about in the learners."<sup>1</sup>

Two broad patterns of organization are the vertical relations of learning experiences over a period of time and the horizontal relations of learning experiences from one area to another. Within these broader schemes, Tyler recommends three criteria for effective organization: continuity, sequence, and integration. "Continuity refers to vertical reiteration of major curriculum elements."<sup>2</sup> "Sequence . . . emphasizes the importance of having each successive experience build upon the preceding one but to go more broadly and deeply into the matters involved."<sup>3</sup> "Integration refers to the horizontal relationship of curriculum experiences . . . which help the student increasingly to get a unified view and to unify his behavior in relation to the elements dealt with."<sup>4</sup>

Tyler recommends elements to achieve continuity, sequence, and integration including: (1) organizing threads such as a concept, a skill, or a value which appear throughout the length and breadth of the instructional program; (2) organizing principles, which tie organizing threads together; and (3) organizing structures such as lessons, topics, units, core curricula, or undifferentiated structures. Tyler concludes with recommended procedures for planning a unit.

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<sup>1</sup>Ibid., p. 83.

<sup>2</sup>Ibid., p. 84.

<sup>3</sup>Ibid., p. 85

<sup>4</sup>Ibid.

Theory for organization of learning experiences is clarified during the Cooperative Study of General Education and at the 1947 Curriculum Theory Conference. The proceedings from the Conference include an article, "The Organization of Learning Experiences." In 1966, a promise of attention to Question Three is made by Tyler who states, "Recently, I have been giving considerable attention to the problem of organization and to the elaboration of a more helpful rationale for this area."<sup>1</sup> Although promised, no article has been written until 1976. The first change in organizing learning experiences is made in 1976.

#### Question 4: How Can Learning Experiences Be Evaluated?

The fourth question asks how can the effectiveness of the learning experiences be evaluated? The recommended procedures for evaluation were delineated in 1931, twenty years before the publication of the rationale. Tyler considers "evaluation an important operation in curriculum development."<sup>2</sup> Evaluation is a process "for finding out how far learning experiences as developed and organized are actually producing the desired results."<sup>3</sup> The process involves "identifying the strengths and weaknesses of the plan."<sup>4</sup> The process also helps to check the validity of the hypothesis, the effectiveness of the teachers, and other conditions and instruments being used in the instructional program. Basic notions regarding evaluation are identified. "The process of evaluation is essentially the process of determining to what extent the

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<sup>1</sup>Tyler, "New Dimensions in Curriculum Development," p. 28.

<sup>2</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 104.

<sup>3</sup>Ibid., p. 105.

<sup>4</sup>Ibid.

educational objectives are actually being realized. . . ."1 This definition implies two aspects of evaluation: (1) evaluation must appraise student behavior and (2) evaluation involves at least two appraisals. The first aspect of the evaluation process is inherent in Tyler's definition of education. Since change in behavior is what education seeks; it is also what it measures. The second need for evaluation is determined by the need for pre and post testing to enable measurement of progress. In total it appears that at least three evaluations are essential according to Tyler. The first evaluation, a preliminary or intermediate evaluation, occurs in the screening of objectives and in checking "the learning experiences . . . to see that they are related to the objectives. . . ."2 Two other appraisals, "one taking place in the early part of the educational program and the other at some later point . . . after the instruction has been completed," are needed.3 Another appraisal, a follow up study, to obtain evidence about the permanence or impermanence of learning is also important. The values of the evaluation process include: a "powerful device for clarifying objectives," "an influence upon learning," and "important in the individual guidance of pupils."4

The evaluation question has not been altered but expanded over the past fifty years. Tyler promises change in 1966 when he states that the National Assessment of Educational Progress, ". . . is furnishing grist for a rather thorough re-examination of the process of evalua-

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<sup>1</sup>Ibid., pp. 105-6.

<sup>2</sup>Ibid., p. 104.

<sup>3</sup>Ibid., pp. 106-7.

<sup>4</sup>Ibid., p. 124.

tion."<sup>1</sup> The promise is delivered in 1969, when a new use of evaluation is created to assess populations in order to provide data for the public and in 1976, when the census-like data modify the rationale.

### Use of the Rationale

In an additional chapter to the text, Basic Principles, "How a School or College Staff May Work on Curriculum Building," Tyler describes the practical and theoretical use of the rationale. Tyler explains the integral role of the teacher. "If a school-wide program of curriculum reconstruction is undertaken, it is necessary that there be widespread faculty participation."<sup>2</sup> He also indicates:

Unless the objectives are clearly understood by each teacher, unless he is familiar with the kinds of learning experiences that can be used to attain these objectives, and unless he is able to guide the activities of students so that they will get these experiences, the educational program will not be an effective instrument for promoting the aims of the school.<sup>3</sup>

Tyler therefore concludes, "Hence, every teacher needs to participate in curriculum planning at least to the extent of gaining an adequate understanding of these ends and means."<sup>4</sup> The rationale has practical implications in curriculum development for the role of the administrators, who take responsibility for the philosophy of their schools. The rationale is also "a theoretical construct to relate different curriculum efforts, conflicts, and questions of investigations" for such theoreticians as the learning psychologists, the social scientists, the subject

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<sup>1</sup>Tyler, "New Dimensions in Curriculum Development," p. 28.

<sup>2</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 126.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

matter specialists, and the curricularists. Tyler differentiates between tasks appropriate for the staff and tasks for "special reviewing committees . . . to review and coordinate the detailed instruction plan."<sup>1</sup>

Immediately following the publication of the four question rationale, Tyler begins revising the model. The origins of the rationale can be traced to twenty years prior to its publication and the modifications and changes to twenty-six years after the publication. The rationale was conceived a half a century ago and tested over the past quarter of a century.

An Overview of the Origins of the Rationale Within  
Tyler's Research Projects (1930-1945)

To trace the emergence of the rationale from within Tyler's work is to observe a phenomenon in which origins of the rationale in both instruction, from the Service Study of 1930, and evaluation, from the theory of 1931, converge during the Eight Year Study. The convergence of these two theoretical constructs was reinforced by more than 500 practitioners from thirty pre-selected experimental schools engaged in an eight year experience to demonstrate that their students in progressive schools could achieve in college. Tyler, in fact, states that the construct ". . . arose from my work with the staff of the Eight Year Study."<sup>2</sup>

In all of the major research projects: the Service Studies, the

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<sup>1</sup>Ibid., p. 127.

<sup>2</sup>Tyler, "New Dimensions in Curriculum Development," p. 25.

Eight Year Study, and the Cooperative Study, it is important to recognize that actual curriculum was developed. The curriculum development incorporated tangible questions that are answered in each project. The three questions include: (1) For what clientele is the curriculum developed? (2) For what institution is the curriculum developed? and (3) Who should develop the curriculum? Actual syllabi are products of these studies for which each of the three clientele is different.

The Service Studies were for college freshmen in five different divisions at Ohio State University. The Eight Year Study was for secondary students of thirty progressive high schools. The Cooperative Study was for general education of college undergraduates in twenty-two liberal arts colleges. The personnel always involved a combination of teaching professionals and other experts. In each case, the purpose of these projects was specified by a source other than Tyler and was a request to answer some immediate problems that the institutions wished resolved through curriculum development and evaluation. The actual development of curriculum was significant in solving a practical as well as a theoretical problem. The research projects, introduced with a theory of evaluation and concluded with the rationale, show how theory helps create practice and practice helps create theory.

Origins of the Rationale Within Instruction: The  
Service Studies (1930-1938)

The origins of the rationale have their heritage in the instructional strategies of the early Service Studies described by Douglas Waples and Ralph Tyler in Research Methods and Teachers' Problems: A Manual for Systematic Studies of Classroom Procedure. The actual Service

Studies are described in a text, Service Studies in Higher Education. The purpose for Research Methods and Teachers' Problems is to help teachers to bridge the gulf between the selection of teaching procedures based upon arbitrary or systematic measures. As they define, "The investigation of teaching problems occupies a position halfway between the teacher's off-hand solution of difficulties and the more intricate methods of research."<sup>1</sup> The authors further elaborate their explanation. "The Service Study represents a method of investigation that is more systematic than ordinary thinking but far less systematic and carefully controlled than the research study."<sup>2</sup> The manual explains the Service Studies, which help teachers with six functions: to recognize and define a problem, to plan and carry out the investigation, and to interpret the findings.<sup>3</sup> Three areas of Service Studies: Curriculum, Method, and Management are classified into ten sub-categories. A description of each kind of Service Study explains the concepts as they were applied in the field at Ohio State University.

The Curriculum Service Study suggests systematic activities to decide "what is taught."<sup>4</sup> In 1930, Tyler defines curriculum, as comprising the things-to-be-learned-by-the-pupils or subject matter."<sup>5</sup> The four kinds of Curriculum Service Studies, are defined by their functions: (1) defining objectives, (2) constructing or reorganizing courses, (3) selecting text materials, and (4) adopting prescribed

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<sup>1</sup>Waples and Tyler, Research Methods and Teachers' Problems: A Manual for Systematic Studies of Classroom Procedure, p. viii.

<sup>2</sup>Ibid., p. 12.

<sup>3</sup>Ibid., p. 24.

<sup>4</sup>Ibid., p. 75.

<sup>5</sup>Ibid., p. 221.

materials to a given course.<sup>1</sup> In the first kind of Curriculum Service Study, the three sources of objectives: (1) the objective proposed by authorities in their writings; (2) the subject matter and learning exercises of the course; and (3) the social, vocational, and personal needs of a typical class, are sources comparable to the three identified in the rationale.<sup>2</sup> The Curriculum Service Studies relate what curriculum is and what the teacher does in relation to objectives and to content. The emphasis upon objectives relates to Question One of the rationale.

The Method Service Studies are related to instruction. "If the curriculum is the total range of experience through which the pupil passes in the process of formal education," then, "methods of teaching are whatever the teacher himself does to provide the experience."<sup>3</sup> The four kinds of Method Service Studies include: (1) selecting learning procedures, (2) constructing exercises and guide sheets, (3) motivating, and (4) testing.<sup>4</sup> The Methods Service Study relates to Question Two of the rationale.

The Management Study is concerned with the problems teachers experience in organizing the classroom instruction. The two kinds of Management Service Studies, "grading and sectioning pupils" and "managing a class," do not relate to the rationale.<sup>5</sup>

When some of the eight kinds of Curriculum and Methods Service

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<sup>1</sup>Ibid., pp. xvi-xviii.

<sup>2</sup>Ibid., p. 90.

<sup>3</sup>Ibid., p. 221.

<sup>4</sup>Ibid., pp. xvii-xviii.

<sup>5</sup>Ibid., p. xix.



Studies are viewed in the aggregate: (1) defining objectives, (2) constructing or reorganizing courses, (3) selecting learning experiences, and (4) testing, a resemblance to the four fundamental questions of the rationale emerges.<sup>1</sup> When the systematic procedures suggested for teachers to achieve the goals of the ten different kinds of Service Studies are identified, they display a similarity with techniques described for use in the procedures recommended in Basic Principles. (See Figure 2.)

The application of the strategies from the Service Studies is the concentration of Tyler's efforts at Ohio State University, where for nine years he assists five deans in improving instruction for college freshmen. During this period, Tyler is Head of the Division of Accomplishment Testing and Edgar Dale holds the appointment in curriculum. Consequently, Tyler directs the Curriculum and Method Service Studies from the viewpoint of creating tests that would be helpful for the instructors in their teaching. In this process, Tyler and the instructors collaborate in the first task of defining objectives. While the professors work at: (1) constructing or reorganizing courses, (2) selecting and adopting materials, (3) selecting learning procedures, (4) constructing exercises, and (5) motivating, Tyler designs the testing exercises and the eventual theory. The application of the Service Studies in the field permitted Tyler to relate evaluation to objectives through instruction, It should be recognized that the first origin of the rationale is in instruction and the major source is in evaluation.

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<sup>1</sup>Ibid., pp. xvi-xviii.

Origins in Curriculum, Methods, and Management Service Studies (1930)

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- A. Curriculum Service Studies
  - \*1. Defining Objective
  - \*2. Constructing or Reorganizing the Course
  - 3. Selecting Text Materials
  - 4. Adopting Prescribed Materials
  
- B. Methods Service Studies
  - \*1. Selecting Learning Experiences
  - 2. Constructing Exercise and Direction Sheets
  - 3. Motivating
  - \*4. Testing and Diagnosis
  
- C. Management Service Studies
  - 1. Classifying and Sectioning Pupils
  - 2. Managing a Class
  
- D. General Techniques
  - 1. Analysis
  - 2. Reading and recording
  - 3. Observation
  - 4. Personnel Interview and Group Conference
  - 5. Obtaining Written Statements by Question Boards
  - 6. Check List
  - 7. Sampling
  - 8. Classification
  - 9. Summarizing
  - 10. Evaluation
  - 11. Individual Judgment
  - 12. Group Rating
  - 13. Comparison
  - 14. Space and Frequency Counts
  - 15. Testing
  - 16. Experiment

\*Comparable to the four fundamental questions of the rationale

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Fig. 2. Three categories of Service Studies, with a total of the ten different types, when seen in the aggregate bear a resemblance to the four questions of the Tyler Rationale. Some of the sixteen general techniques are repeated in the procedures of the rationale.

SOURCE: Douglas Waples and Ralph W. Tyler, Research Methods and Teachers' Problems: A Manual for Systematic Studies of Classroom Procedure (New York: Macmillan Co., 1930), pp. 40-44.

Several important similarities between the Service Studies and the rationale, which illuminate some of the unanswered questions or the ambiguities in the rationale, are apparent. Tyler himself relates Research Methods and Teachers' Problems: A Manual for Systematic Studies of Classroom Procedure to Basic Principles of Curriculum and Instruction through definition. The Tyler Rationale is based upon the manual but is broader in scope. The manual is directed to teachers for "teachers' problems" in the "classroom"; whereas, the rationale is directed to the teachers' and the theoreticians' "plan" for the "instructional program" in an "institution." The former relates to procedures of teachers and the latter to principles of instruction and curriculum. Just as the purpose of the manual is to advance the arbitrary procedures of teachers in the classroom to a systematic approach to classroom problems, so too the purpose of the rationale is to advance the "systematic procedures" of teachers to "recommended procedures" to answer four fundamental questions. The audience for the manual is limited to teachers, but the audience for the rationale is directed to teachers and to curriculum specialists. The rationale expands each dimension of the manual. (See Figure 3.)

It can be seen that on a continuum of thought from the manual to the rationale, the next anticipated evolution is from curriculum principles to curriculum inquiry. The systematic study of teachers' problems occupies a midway position between "arbitrary solutions" and "intricate methods of research." The rationale too occupies a midway position to curriculum inquiry. Perhaps a problem of the rationale is

## A Curriculum Continuum from Practice to Theory

Practice	→	→	→	→	→	→	→	→	→	→	Theory
	1900-1930	1930-1940	1940-1950	1950-1970	1980						
Publication		<u>Research Methods and Teachers' Problems</u>	<u>Basic Principles of Curriculum and Instruction</u>	New State-ments of 1958 1966 1976	Anticipated Revision						
Practice	Arbitrary Proce-dures	System-atic Pro-cedures	Recom-mended Procedures		Research Procedures						
Location Specified for Curriculum	Classroom	Classroom	Institu-tion	School and other Educativ Agencies	Total Educational Environment						
Personnel Responsible	Teachers	Teachers Experts	Experts Teachers	Experts Teachers	Experts Teachers Students Intelligent lay public						
Organization Scheme	Lesson Plans	Units	Instruc-tional Program	Five School Goals	School Area Non-School Areas						
Curricular Concept	Teaching	Instruc-tion Methods	Principles of Instruc-tion and Curriculum	Curricu-lum Develop-ment	Curriculum Inquiry						
Research Project		Service Studies	Eight Year Study  Coopera-tive Study	National Assess-ment of Educa-tional Progress	National Assessment of Educa-tional Progress						

Fig. 3. An historical perspective of Tyler's research projects on a continuum from practice to theory shows Tyler's contribution to curriculum theory as it evolved from instruction in the 1930s and from evaluation between 1940-1980.

that more of a gap between classroom practice and curriculum theory exists than Tyler anticipated.

The concept of curriculum in both Tyler texts relates to a location. In the former it is the classroom and in the latter the institution. This fact is important because it demonstrates the reason for Tyler's insistence about teacher involvement and his advocacy for the philosophy of an institution being used as a screen to cull objectives. Since curriculum must be developed by teachers for a specific institution, philosophy is defined in relationship to the institution and not in more global terms. "The educational and social philosophy to which the school is committed can serve as the first screen," Tyler states in the rationale.<sup>1</sup>

The similarities between the Service Studies and the Tyler Rationale are pronounced: (1) the topics in two kinds of Service Studies bear resemblance to the four questions of the rationale, (2) the sources of objectives in the first Curriculum Service Study and the rationale have great similarity, and (3) the concept of testing through the practice and application of the Service Studies becomes evaluation. The weakness or lack of clarity regarding learning is sustained from one text to the next. The rationale appears to be a conceptual extension of the manual. The difference, however, between the manual and the rationale is also pronounced. The former identifies four major curriculum divisions but does not develop the question. It is not the curriculum divisions that are important, it is the formulation of the divisions

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, pp. 33-34.

into interrelated questions that is vital. Nevertheless, instruction and evaluation as defined and applied in the Service Studies are at the origins of the rationale of 1950. Both instruction and evaluation provided a separate initiative that coalesced during the Eight Year Study.

Origins of the Rationale Within Evaluation: Evaluation  
Theory (1931-1934)

The Service Studies are the major source of Tyler's ten step evaluation theory, which is at the basis of the Eight Year Study and ultimately the rationale. Concurrent with conducting the Service Studies, Tyler begins reporting on testing from 1930-1934, in a series of articles published in Constructing Achievement Tests. The series reveals the transformation of the concept of testing, explained in "A Generalized Technique for Constructing Achievement Tests," written in 1931, to the concept of evaluation, introduced in "Evaluation: A Challenge for Progressive Education," written in 1935. In a 1931 article, Tyler introduces the ten step evaluation theory:

1. Formulation of course objectives
2. Definition of each objective in terms of student behavior
3. Collection of situations in which students will reveal presence or absence of each objective
4. Presentation of situations to students
5. Evaluation of student reactions in light of each objective
6. Determination of objectivity of evaluation
7. Improvement of objectivity, when necessary
8. Determination of reliability
9. Improvement of reliability, when necessary

10. Development of more practicable methods of measurement, when necessary.<sup>1</sup>

In describing each step, Tyler, using a similar procedure in the rationale, identifies both the task to be accomplished and the person responsible for the curriculum development. Achievement test construction is a cooperative effort involving the test technician and the subject matter specialists with the primary responsibility for the first, second, third, and fifth steps on the latter personnel. The ". . . first two steps of the theory are largely curricular problems and . . . the function of the department."<sup>2</sup> For the second and third steps, ". . . the ingenuity of the test maker and of instructors in the department . . . is required."<sup>3</sup> The fourth step ". . . is primarily the function of the test constructor."<sup>4</sup> The fifth step belongs to "The instructors in the department . . . [who] formulate the standards to be used in evaluating reactions and . . . [in] evaluations which are not wholly objective in character."<sup>5</sup>

In an intervening companion article, "Formulating Objectives for Tests," written two years later, Tyler defines behavior as "any sort of appropriate reactions of students, mental, physical, emotional. . . ."<sup>6</sup> To formulate objectives Tyler recommends two procedures: (1) to begin with the general function of purpose of the subject and to analyze

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<sup>1</sup>Ralph W. Tyler, "A Generalized Technique for Constructing Achievement Tests, " in Constructing Achievement Tests, pp. 5-6.

<sup>2</sup>Ibid., p. 8.

<sup>3</sup>Ibid., p. 9.

<sup>4</sup>Ibid.

<sup>5</sup>Ibid., p. 10.

<sup>6</sup>Ralph W. Tyler, "Formulating Objectives for Tests, "in Constructing Achievement Tests, p. 19.

this into its several aspects or subfunctions and (2) to begin with the content of the course and ask the questions: What is the purpose of this topic? What do I expect students to get from this topic?<sup>1</sup> The parallels between the theory of evaluation and the recommended procedures for the fourth question of the rationale are identifiable. The process inherent in the evaluation theory bears some resemblance to the overall process of the rationale: Steps One and Two relate to Question One about objectives, Steps Three and Four relate to Question Two regarding learning experiences, and Steps Five through Ten relate to Question Four concerning evaluation.

Origins of the Rationale Within Curriculum: The  
Eight Year Study (1934-1942)

Tyler's research on instruction and its application in Service Studies merge with his newly derived theory of accomplishment testing during the Eight Year Study. The merger occurs through Tyler's assistance of teachers in the development of course syllabi for their thirty respective schools. The smaller scale curriculum development carried out in the Service Studies at Ohio State University is replicated on a larger scale during the Eight Year Study where instruction interacts with evaluation. The evaluation activities of the Service Studies become the concentration of Tyler's school visitations and the summer workshops at Ohio State University during the Eight Year Study. The original testing theory evolves from several new assumptions, which place evaluation in 1934 upon a scientific footing.

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<sup>1</sup>Ibid., p. 17.



The Eight Year Study provides Tyler and a large staff of evaluators and teachers the opportunity to refine the systematic study of teacher's problems and to apply the theory of evaluation. The instruction process and the evaluation process are the two foundations in Tyler's research projects that interact during the Eight Year Study to help create the rationale of 1950.

The actual written record of the early rationale is not reported in the literature but is explained by Tyler in an interview and later affirmed by him in an article written in 1966. Tyler's leadership and success in the application of the evaluation theory, however, is acknowledged in the literature. One critic states:

The significance of Tyler's appointment was that he . . . brought together the problem of curriculum, control, testing, and evaluation. . . . He introduced the element of scientific methodology . . . [and] . . . approached the evaluation from the point of view of its interactions with the curriculum: evaluation was not, . . . the finite activity of designing and administering . . . end examinations, it was an ongoing process.<sup>1</sup>

In the Eight Year Study, Tyler broadens the original purposes for evaluation. Tyler states, "At least two common elements . . . are present in all [progressive] schools . . .; the belief that education needs to be and can be improved and the willingness to develop and apply a working hypothesis as to the way in which this improvement may be brought about."<sup>2</sup> It is Tyler's intention to develop this hypothesis believing that evaluation should be able to "present evidence, reasonably

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<sup>1</sup>Carol Marie Thigpen, "The Development and Evolution of the Eight Year Study" (Ph.D. dissertation, University of North Carolina, 1978), pp. 95-96.

<sup>2</sup>Ralph W. Tyler, "Evaluation: A Challenge to Progressive Education," in Constructing Achievement Tests, p. 102.

objective and accurate, which throws additional light upon the value of these experimental programs."<sup>1</sup> Tyler adds, "If we accept the importance of these various purposes or objectives of progressive schools, we must enlarge our concept of evaluation."<sup>2</sup> Tyler explains:

Evaluation proceeds on the assumption that education is a means of bringing about changes in young people and that these purposes or objectives represent a statement of the kinds of changes in its pupils which the school hopes it may help to bring about. These objectives will indicate the variety of aspects of pupil development which need to be considered in a satisfactory program of evaluation.<sup>3</sup>

Objectives will indicate in what direction students should develop, and evaluation will measure that growth as well as ". . . help both teachers and pupils to clarify their goals. . . ." <sup>4</sup>

The original evaluation plan is also extended during the Eight Year Study through the context of five major purposes of evaluation. The new major purposes are: (1) to provide a periodic check on the effectiveness of the educational institution; (2) to validate the hypothesis upon which the educational institution operates; (3) to provide information basic to effective guidance of individual students; (4) to provide a certain psychological security to the school staff, to the students, and to the parents; and (5) to provide a sound basis for public relations.<sup>5</sup> Thirty years later, when discussing the uses of evaluation for the National Assessment of Educational Progress, Tyler

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid., p. 103.

<sup>3</sup>Ibid., pp. 106-7.

<sup>4</sup>Smith, Tyler, and the Evaluation Staff, Appraising and Recording Student Progress, p. 60.

<sup>5</sup>Ibid., pp. 7-10.

reiterates these identical five uses but calls the fifth use new because it has not yet been applied.

Another way Tyler expands upon his plan of evaluation is through practice. In the application of his theory during the first year of the Eight Year Study, academic year 1934-35, Tyler outlines a strategy in which evaluation and curriculum automatically interact. The Evaluation Staff visits the thirty schools "to formulate in a clear and understandable fashion the purposes or objectives and indicate after each objective any methods . . . practicable for obtaining evidence of the degree to which this objective is being realized."<sup>1</sup> The schools' lists of objectives are submitted to Tyler's committee for classification into general categories of five areas of behavior, which are further clarified and returned to the faculty of the thirty schools. In the next year, a summer conference is arranged by Tyler who invites the "teachers . . . ready to develop and refine tests . . . to Columbus [Ohio] to work with the technical assistants on the Evaluation."<sup>2</sup> The Evaluation Staff for the Ohio State University Summer Conference includes, among others, Tyler's colleagues: Douglas Waples, Louis Raths, Maurice Hartung, and Paul Diederich. Some other of Tyler's colleagues on the Evaluation Staff include: Louis Heil, George Sheviakov, Hilda Taba, Benjamin Bloom, Lee Cronbach, and Herbert Thelen.

The important impact Tyler creates by these two strategies of

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<sup>1</sup>Tyler, "Evaluation: A Challenge to Progressive Education," p. 139.

<sup>2</sup>Thigpen, "The Development and Evolution of the Eight Year Study," pp. 97-98.

visitation and summer conferences upon attitudes toward curriculum and evaluation is acknowledged by the Director of the Study, Wilford Aikin, when he states, "The first work of the Evaluation Staff was concerned with changing the attitudes toward evaluation in the schools. . . . The teachers [now] think of the [evaluation] program as an important aspect of teaching rather than a special adjunct irrelevant to their main purpose."<sup>1</sup> To help the teachers in this interaction between evaluation and curriculum, the summer conferences are extended into a more intensive plan of in-service study. The summer workshop had two innovative features: (1) the teachers came with projects upon which they wished to work and (2) the staff assisted teachers in their projects.<sup>2</sup> The effectiveness is acclaimed by a series of subsequent workshops. The result of the workshop is the development of curriculum by the teachers, who are assisted by evaluation and curriculum experts.

During the Eight Year Study, Tyler not only extends the concept of evaluation to the broader and more encompassing concept of appraisal, but he also reduces the ten step process of evaluation to a seven step process, which he sustains in the rationale. The original two steps regarding the formulation of objectives are increased to three steps. The original third and fourth steps are reduced to Step Four, which is to identify situations in which students can display defined behavior. The original Steps Five-Ten are generalized into three steps: selection of

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<sup>1</sup>Progressive Education Association, Progressive Education Advances (New York: D. Appleton-Century Co., 1938), p. 22.

<sup>2</sup>Wilford M. Aikin, "Commission on the Relationship of School and College," Educational Research Bulletin 17 (November 1938): 215.

various methods to obtain evidence, selection of tests, and interpretation of results.<sup>1</sup> The changes in the evaluation procedures are more procedural than substantive, but the distribution of the emphasis among the steps is important to recognize in understanding that the concentration is upon objectives and evaluation, each comprised of three steps, and not upon selecting learning experiences, which is comprised of only one step. The interaction between evaluation and selecting learning experiences occurs through formulating objectives.

Evaluation, the 1934 term, accrues the distinguishing traits of the appraisal, the 1942-1963 term, through the recognition and addition of eight assumptions: (1) education is a process which seeks to change the behavior patterns of human beings, (2) behavior patterns the school wants to bring about in students are the educational objectives, (3) appraisal of an educational program requires the collection of evidence as to the degree the objectives are being realized, (4) human behavior is so complex that it cannot be measured by a single dimension, (5) an appraisal requires consideration of the way students organize their behavior patterns, (6) methods of evaluation are not limited to paper and pencil tests, (7) appraisal influences teaching and learning, and (8) the evaluation responsibility belongs to the school staff and clientele.<sup>2</sup> The first and second assumptions are restatements of the original plan; assumptions four, five, and seven are new; and assumptions six and eight are also repeated from the original evaluation plan. This

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<sup>1</sup>Smith, Tyler, and the Evaluation Staff, Appraising and Recording Student Progress, pp. 11-14.

<sup>2</sup>Ibid., pp. 15-28.

illustration of how testing becomes the concept of evaluation based upon new assumptions demonstrates the manner in which Tyler changes his language when he broadens a concept.

The new purposes, procedures, and assumptions that guide the Eight Year Study explain the evolution of the concept of evaluation. Tyler states, "The term evaluation was used to describe the staff and the project rather than the term measurement, test, or examination because the term evaluation implies a process by which the values of an enterprise are ascertained."<sup>1</sup> From the examination of the new assumptions, the word appraisal appears to relate to the program and to teaching and learning. Just as the plan of evaluation grows from the Service Studies, it is the interaction between the practices of teachers and the evaluation by experts that creates the curriculum rationale during the Eight Year Study. While the Study applied the steps of evaluation it introduced the curriculum rationale.

The evaluation plan is much more clearly enunciated than the curriculum rationale during the Eight Year Study. When or how the working model for curriculum is introduced in the Eight Year Study remains unclear. In the 1942 report, the Curriculum Associates of the Study: H. H. Giles, S. P. McCutchen, and A. N. Zechiel, present a curriculum model in which the four curriculum problems include: "objectives, subject matter, methods and organization, and evaluation."<sup>2</sup> The four fun-

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<sup>1</sup> Ibid., p. 5.

<sup>2</sup> H. H. Giles, S. P. McCutchen, and A. N. Zechiel, Adventure in American Education, vol. 2: Exploring the Curriculum (New York: Harper & Brothers, 1942), p. 2.

damental questions, portrayed as interdependent determinants include:

(1) "What is to be done? (2) What subject matter is to be used? (3) What classroom procedures and school organization are to be followed? and (4) How are the results of the program to be appraised?"<sup>1</sup> The Curriculum Associates explain these four questions by stating or implying certain interrelationships. The Curriculum Associates describe:

. . . objectives serve as criteria for the selection of subject matter and teaching methods. . . . To solve problems dealing with choices of subject matter or method, new insights are gained as to purposes to be served. Subject matter may be selected . . . to meet certain objectives but, in order to do so effectively, must be dealt with by methods pointed toward the same objectives. Questions of evaluation are closely related to all other problems. . . .<sup>2</sup>

This reciprocal process of objectives determining subject matter and method, and subject matter and method determining objectives becomes the key to curriculum development by the teachers as reported in the volume on Exploring the Curriculum.

The exploration of curriculum shows that "practice determined purpose and purpose determined practice."<sup>3</sup> The staff explores aspects of curriculum: (1) the sources and statement of objectives; (2) the organization of curriculum by broad fields, adult and adolescent needs, and subjects; (3) the scope and sequence of instruction and classroom practice; and (4) several other practical teacher and administrative topics. The overlap between the Service Studies and the curriculum development of the Eight Year Study is apparent. From the Service Studies evolves the theory of evaluation and from curriculum practices of the Eight Year Study evolves the rationale. At the close of the Eight Year

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<sup>1</sup>Ibid., p. 1.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid., p. xiii.

Study, "The curriculum is . . . seen as the total experience with which the school deals in educating young people."<sup>1</sup>

The similarities between the Eight Year Study and the Tyler Rationale concerning sources of objectives are apparent. The Eight Year Study identifies: (1) the adolescent needs approach, (2) the social demands or need for the preservation and extension of democracy approach, and (3) the subjects as sources.<sup>2</sup> The explanation of "the analysis of objectives"<sup>3</sup> and the recommendations to state objectives explicitly and through "illustrating typical behavior patterns"<sup>4</sup> are also similar. The same four curriculum divisions are used in the model of the Curriculum Associates as by Tyler. Tyler, as Director of the Evaluation Staff, worked closely with the Curriculum Staff and the teachers, and it was Tyler who informally, in 1936, presents a curriculum model created in the form of four boxes.

According to an interview with Tyler, his rationale has its sources in those boxes sketched on the blackboard. As Tyler explains, he drew four boxes on the blackboard at a meeting one afternoon with the evaluation and curriculum staffs and labeled each box with a curriculum problem. To the first box on formulating objectives, he added three sources of objectives and two screens to filter objectives. In the second and third boxes, Tyler states that the objectives determined the learning experiences and that some organizational arrangement is necessary. The fourth box he simply labels evaluation because the procedures

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<sup>1</sup>Giles, McCutchen, and Zechiel, Exploring the Curriculum, p. 293.

<sup>2</sup>Ibid., pp. 7-12.

<sup>3</sup>Ibid., p. 14.

<sup>4</sup>Ibid., p. 15.



were already worked out.<sup>1</sup> These same curriculum problems are presented in the rationale as four sequential questions in a linear model with recommended procedures for answering each question.

Although the contrast between the two diagrams presented in the Eight Year Study is not the focus of this investigation, it is important to note that the differences between the Curriculum Associates' model and the Tyler model of 1950 are significant. The former model states no bases upon which decisions regarding function can be made. Tyler's 1950 model functionalizes Question One regarding objectives through his experience during this eight year period. Later Tyler recommends procedures for operationalizing the other two questions. The former model makes the four determinants interdependent, but the Tyler boxes did not indicate any order for use. Later, in 1950, the Tyler Rationale places these four curricular problems into a sequential model, which can be introduced at any of the four steps.<sup>2</sup> The distinction between the two models concerning the interdependent or sequential steps is an important curriculum question. As two curriculum historians state:

Although the various elements of the curriculum paradigm . . . were discussed . . . in Exploring the Curriculum (1942), it was not sufficiently well developed to be considered as a paradigm for the curricular field. The full orchestration of such a paradigm was to be made by Ralph Tyler in 1949.<sup>3</sup>

The Tyler Rationale is created during the Eight Year Study. The early theory of evaluation of 1931 is extended by new purposes, proce-

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<sup>1</sup>Interview with Ralph W. Tyler, Chicago, Ill., August 1982.

<sup>2</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 128.

<sup>3</sup>Tanner and Tanner, Curriculum Development: Theory into Practice, p. 83.

dures, and assumption of evaluation that guide the Eight Year Study and become the fourth chapter regarding evaluation in Basic Principles. Tyler's 1936 outline of his rationale and the four curriculum divisions of the Eight Year Study Curriculum Model become the fundamental questions of the rationale. The procedures to operationalize Question One of the rationale are conceived during the study. When examined through Tyler's own research projects, it is apparent that the key elements of the rationale originate in the research methods of teachers' problems, the Service Studies at Ohio State University, and the theory of evaluation. The rationale is, however, the direct descendant of the Eight Year Study although ". . . many contemporary curriculum scholars fail to recognize that the key elements embodied in the Tyler Rationale were derived from progressive educational thought. . . ." <sup>1</sup>

Origins of the Rationale Within Curriculum: The  
Cooperative Study in General Education  
(1939-1945)

In Tyler's words, the Cooperative Study is the immediate source of the rationale. In 1966, he remarks, "The rationale developed in 1936 was also employed in the Cooperative Study in General Education. . . . The modifications which resulted from its use at the college level were incorporated in 1950 in the syllabus written for a course. . . ." <sup>2</sup> By 1936, Tyler has formulated the initial version of his curriculum paradigm; he has identified the four fundamental curricular divisions and stated that educational objectives serve as the criteria for selecting

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<sup>1</sup> Ibid., p. 84.

<sup>2</sup> Tyler, "New Dimensions in Curriculum Development," p. 25.

and organizing learning experiences. By 1939, at the onset of the Cooperative Study and while still completing the Eight Year Study, he has also identified all procedures to operationalize Question One and Four but only some procedures to operationalize the second and third questions. It is the third question that he answers in the Cooperative Study and in a statement at the 1947 Curriculum Theory Conference, just two years after the completion of the Cooperative Study. The Cooperative Study in General Education distinguishes itself as being the first and only large scale study in Tyler's repertoire that is initiated with both the evaluation and the curriculum questions already framed. In a manner of speaking, the Cooperative Study is the pilot test of the rationale.

Underwritten by the American Council on Education, the Cooperative Study in General Education of twenty-two colleges for six years from 1939-1945 had four purposes: (1) to assist the faculties in re-defining the aims of a program in general education, (2) to provide a staff of technical experts competent to assist faculties in evaluating programs, (3) to develop persons in cooperating institutions to conduct and develop internal programs of evaluation, and (4) to demonstrate the value of cooperative effort among educational institutions.<sup>1</sup>

Following the pattern of the Eight Year Study, to solve these problems, Tyler reinstates the workshop concept and replicates the visitation to the thirty schools by implementing regional conferences held on some of the campuses of the twenty-two colleges and attended by

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<sup>1</sup>McGrath, "The Cooperative Study in General Education," pp. 500-2.

faculty members from neighboring institutions.<sup>1</sup> Also similar to the Eight Year Study, the invitation to undertake the project is initiated upon a request for evaluation. Tyler explains, "There was widespread need expressed for an evaluation of general or survey courses . . . [and] . . . the intangible outcomes of learning."<sup>2</sup>

Before the beginning of the Cooperative Study, Tyler presents a more precise delineation about the recommended procedures for dealing with the four major curriculum problems than he presented for the Eight Year Study. To the Institute for Administration Offices of Higher Education, Tyler explains the curriculum rationale naming the four questions, the three primary sources of objectives, the two screens for filtering objectives, and the recommended procedures for answering the four fundamental questions. Again, as in the Eight Year Study, the Cooperative Study concentrates upon the task of actually developing a program including: (1) formulation of objectives, (2) schemes of organization of learning, (3) preparation of syllabi, and (4) evaluation.

To solve the first problem, "formulating objectives," Tyler identifies five elements to consider: ". . . the demands of modern society, the needs of young people who constitute the student body of the college, the potential contributions which each field of knowledge makes to the student, the social and educational philosophy of the in-

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<sup>1</sup>Tyler, "The Cooperative Study in General Education," p. 98.

<sup>2</sup>McGrath, "The Cooperative Study in General Education," pp. 504-5.

stitution, and the implication of the learning."<sup>1</sup> A sixth element, "to look at objectives accepted as worthwhile in the past," is added.<sup>2</sup>

Using these six elements, Tyler introduces his scheme for the two dimensional objective.

To solve the second curriculum problem, "schemes of organization of learning," Tyler also recommends other elements for the colleges to consider in their planning, which include: (1) sequence defined as the length of time for the student to develop the objective; (2) integration defined as the manner in which several subject fields can reinforce one another in order to broaden, deepen, and unify the major outcome; (3) courses building upon previous courses, and (4) the psychological stages of development of the students.<sup>3</sup> The third curriculum problem, "preparation of syllabi," is approached through workshop procedures and the suggestions explained in Exploring the Curriculum about the Eight Year Study. For the fourth question on evaluation, Tyler applies the same assumptions as he was using in the concurrent Eight Year Study.

In the Cooperative Study, the rationale is worked out before it is written out two years later; the practice precedes the theory. The Cooperative Study is significant to the rationale in a number of ways: (1) it replicates the Eight Year Study, but it begins with the

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<sup>1</sup>Ralph W. Tyler, "Cooperation in the Study of Institutional Problems," in The Outlook for Higher Education, ed. John D. Russell (Chicago: University of Chicago Press, 1939), p. 231.

<sup>2</sup>Cooperation in General Education the Cooperative Study in General Education: A Final Report of the Executive Committee of the Cooperative Study in General Education, p. 60.

<sup>3</sup>Tyler, "Cooperation in the Study of Institutional Problems," pp. 234-35.

four questions and many of the procedures, (2) it provides a vehicle for developing more procedures to functionalize some of the four questions, and (3) it demonstrates the versatility and adaptability of the rationale for college as well as secondary levels.

#### Summary Regarding Origins

The history of Tyler's own work reveals that the origins of the Tyler Rationale are deeply rooted in the earliest of Tyler's research projects in instruction. Tracing the origins with instruction as the foundation reveals a legacy of practice. The practice component of the rationale is a Service Study in which the major actor is the teacher and the major tasks are to formulate objectives and to select and organize learning experience. These tasks are accomplished with the assistance of experts on site, in workshops, at summer conferences, or at regional conferences. The curriculum developed in this mode is written in course syllabi. The approach to curriculum development is described within the period from 1930-1950 in Research Methods and Teachers' Problems, Service Studies in Higher Education, Summer Workshop in Education, Exploring the Curriculum and four companion volumes of the Eight Year Study, four volumes of the Cooperative Study, about twelve articles by Tyler, course syllabi, and the fifth chapter of Basic Principles, which describes how to use the rationale.

The origins of the rationale are as deeply rooted in evaluation as instruction. Tracing the origins with testing-measurement-evaluation as the foundation reveals a legacy that combines theory-practice-theory. The theoretical component of the rationale has its origins in

the ten step theory for constructing an achievement test in which the major actor is the evaluation expert and the major tasks are: (1) to help in formulating objectives, (2) to assist in selecting learning experiences that can be measured, and (3) to measure them. The tasks are accomplished by evaluation experts whose purpose it is to create a hypothesis, gather the data, and generalize. This curriculum inquiry is described in a theoretical formulation in "A Generalized Technique for Constructing An Achievement Test," "Formulating Objectives," Appraising and Recording Student Progress, numerous articles on evaluation, and Basic Principles. Basic Principles presents a rationale created from theory and practice as a model for institutions to use in planning a program of curriculum, instruction, and evaluation.

Several other points can be garnered from this historical analysis. In Tyler's paradigm of curriculum development as inquiry are theoretical as well as practical factors. That is, instead of answering the question of the 1930s: What is the purpose of education? Tyler answers the question: What is the purpose of an educational institution? Curriculum was, therefore, developed for a particular school dictated by that school's philosophy. Tyler possesses a sophisticated understanding of education as making a difference; the difference is a change in behavior. Tyler also possesses a sophisticated understanding of the American schools, which must be different from each other in order to serve the diverse purposes of a heterogeneous population for a democratic society. Tyler's approach is not generic; Tyler's approach to curriculum is to solve a particular problem, for a particular clientele, of a particular institution.

This historical perspective also reveals the progression of thought from one research project to the next in a scientific approach beginning with the concrete in an attempt to find the abstract. The analysis also shows that Tyler, like John Dewey, believes, "Theory is in the end the most practical of all things . . . ; theory that is treated as an end in itself is not really theory since it cannot be tested in the world of experience."<sup>1</sup> The "research problems" lay the foundation for the Service Study; the Service Studies create evaluation theory. Both instruction and evaluation are experimented upon during the Eight Year Study, the basis for the Cooperative Study. The Eight Year Study and the Cooperative Study lead to the rationale, which is published in Basic Principles following the Cooperative Study.

#### An Overview of the Modifications of the Rationale (1951-1976)

Immediately after the publication of Basic Principles, Tyler begins writing directly or indirectly about it for the purpose of clarifying, modifying, or changing the rationale. His first article of direct clarification, "Translating Youth Needs into Teacher Goals," is published in 1953, and his most recent article, "Goals and Objectives," is published in 1983.<sup>2</sup>

From among his written discourse about the rationale, during

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<sup>1</sup>John Dewey, The Sources of a Science of Education (New York: Horace Liveright, 1929), p. 17.

<sup>2</sup>Ralph W. Tyler and Ronald S. Brandt, "Goals and Objectives," Fundamental Decisions, in Association for Supervision and Curriculum Development Yearbook (Alexandria, Va.: Association for Supervision and Curriculum Development, 1983).



this period from 1950-1984, two topics dominate. The earliest and largest number of articles concentrates upon the learner as a source of objectives and upon learning, and a second but not as prevalent focus of his writing is about objectives derived from subject matter or about knowledge. Both of these topics are pursued as curriculum content and curriculum methods; and are therefore, related to the first question about objectives and the second question about learning experiences in the rationale. Tyler also writes about evaluation frequently but not in relationship to the rationale per se. Tyler does not write about the topic of organizing learning experiences except in a brief reference in 1976.

From among this body of literature, three articles, the "New Criteria Statement" of 1958, the "New Dimensions Statement" of 1966, and the "New Emphases Statement" of 1976, are significant in modifying the recommended procedures of the rationale. The 1958 Statement is important because it concludes Tyler's clarification and modification of Question One of the rationale about objectives. From 1951-1958, Tyler's major focus in clarifying the rationale is upon the first question. In 1958, Tyler cites six new criteria for curriculum content, a phrase he uses synonymously with objectives. This 1958 Statement also introduces the first modifications of the second question of the rationale, which concentrates upon selecting learning experiences. The changes Tyler adds to Question Two are called new criteria for curriculum methods, a phrase used synonymously with selecting learning experiences in the second question. In 1958, Tyler adds nine new learning conditions to Question Two. (See Figure 4.)

Modifications in the Original Basic Principles of Curriculum and Instruction

1956  
"Clarifying the Role of Elementary Schools"

New Guidelines for Question One

- . Opportunities to learn complex or difficult things which require organization and distribution of practice over considerable periods of time
- . Opportunities for learning where essential factors are not obvious to one observing the phenomenon and where basic principles, concepts and meanings must be brought specially to the attention of the learner
- . Learning experiences which are "purified" [art, music, literature] to set high standards
- . Experience that cannot be provided directly in ordinary activities of daily life
- . Experiences in which reexamination and interpretation are essential
- . Concentration of school on tasks which it does best (See 1958)

1958  
"New Criteria for Curriculum Content and Methods"

New Content for Question One

1. Emphasize task appropriate to school  
(See 1956, no. 6)

(Five kinds of learning)

- . Opportunities to learn complex or difficult things which require organization and distribution of practice over considerable periods of time
- . Opportunities for learning where essential factors are not obvious to one observing the phenomenon and where basic principles, concepts and meanings must be brought specially to the attention of the learner
- . Learning experiences which are "purified" [art, music, literature] to set high standards
- . Experience that cannot be provided directly in ordinary activities of daily life
- . Experiences in which reexamination and interpretation are essential
- . Concentration of school on tasks which it does best (See 1958)

2. Apply our knowledge of learning  
(See 1964)

3. Utilize scholarly contributions as a vital means of learning  
(See 1964)

1976  
"Two New Emphases of Curriculum Development"

1. Differentiate School and Non-School Areas of Learning

- . Stress things important to participate constructively in society (See 1956, 1958)
- . Be sound in terms of subject matter (See 1964)
- . Be in accord with educational philosophy of the institution (No change since 1950)

Modifications in the Original Basic Principles of Curriculum and Instruction

1956  
"Clarifying the Role of Elementary  
Schools"

New Guidelines for Question One

- . Opportunities to learn complex or difficult things which require organization and distribution of practice over considerable periods of time
- . Opportunities for learning where essential factors are not obvious to one observing the phenomenon and where basic principles, concepts and meanings must be brought specially to the attention of the learner
- . Learning experiences which are "purified" [art, music, literature] to set high standards
- . Experience that cannot be provided directly in ordinary activities of daily life
- . Experiences in which reexamination and interpretation are essential
- . Concentration of school on tasks which it does best (See 1958)

1958  
"New Criteria for Curriculum Content,  
and Methods"

New Content for Question One

1. Emphasize task appropriate to school  
(See 1956, no. 6)

(Five kinds of learning)

- . Opportunities to learn complex or difficult things which require organization and distribution of practice over considerable periods of time
  - . Opportunities for learning where essential factors are not obvious to one observing the phenomenon and where basic principles, concepts and meanings must be brought specially to the attention of the learner
  - . Learning experiences which are "purified" [art, music, literature] to set high standards
  - . Experience that cannot be provided directly in ordinary activities of daily life
  - . Experiences in which reexamination and interpretation are essential
  - . Concentration of school on tasks which it does best (See 1958)
2. Apply our knowledge of learning (See 1964)
  3. Utilize scholarly contributions as a vital means of learning (See 1964)

1976  
"Two New Emphases of Curriculum  
Development"

1. Differentiate School  
and Non-School Areas of Learning

- . Stress things important to participate constructively in society (See 1956, 1958)
- . Be sound in terms of subject matter (See 1964)
- . Be in accord with educational philosophy of the institution (No change since 1950)

1958  
"New Criteria for Curriculum Content  
and Methods"

(Nine conditions essential for  
selecting learning experiences)

- Motivation
- Stimulation to try new ways
- Some guidance in new behavior
- Appropriate materials to work on
- Time to keep practicing
- Obtain satisfaction from the de-  
sired behavior
- Opportunity for sequential practice  
of desired behavior
- Set high standards of performance
- Continue learning when a teacher  
is no longer around

1964  
"The Knowledge Explosion: Implica-  
tions for Secondary Education"

(Curriculum Methods)

- Knowledge which is introduced  
should be related to the child's  
own curiosity and problems of  
knowing
- The discovery procedure in acquir-  
ing knowledge should be used
- Subjects ought to deal with real  
problems, questions, or experiences  
of youngsters
- Knowledge acquired at school should  
be extended to situations outside  
of school  
(See 1958, no. 3)

1966  
"New Dimensions of Curriculum  
Development"

(New Guiding Principles)

- Opportunity to practice behavior  
implied by the objective
- Student should obtain satisfaction  
from carrying on behavior implied  
in objective
- Motivation is important condition
- Learner finds previous ways of  
reacting unsatisfactory so stimu-  
lated to try new ways
- Some guidance in carrying on new  
behavior
- Ample and appropriate materials  
on which to work
- Time to carry on the behavior  
until part of his repertoire
- Sequential practice essential
- Learner to set standards requiring  
him to go beyond performance
- Means of judging his performance

1976  
"Two New Emphases of Curriculum  
Development"

2. Emphasize the active role of  
the learner

- See the way in which what  
is learned can be used  
(See 1958, 1966, with re-  
newed emphasis upon transfer  
of training from 1950)
- Use the learned behavior  
in various situations  
(See 1958, 1966, with re-  
newed emphasis upon transfer  
of training from 1950)

Fig. 4. The major changes in the Tyler Rationale from the original document in 1950 to the most recent significant statement in 1976 are presented. The changes focus upon Questions One and Two. Excluded from the diagram are changes in the use of psychology as a screen and the statement form of objectives.

Between the "New Criteria Statement of 1958" and the "New Dimensions Statement of 1966," Tyler's focus is upon the second question of selecting learning experiences. In this period, Tyler is also interested in the interrelationship of knowledge combined with one of his primary sources of objectives, "suggestions about objectives from subject matter specialists." The 1966 Statement concludes with the changes Tyler has made from 1951-1966 on the learning question.

The "Two New Emphases Statement of 1976" combines Tyler's re-interpretation of the objectives question and the second question concerning selecting learning experiences. One of the "new emphases" is upon the objectives, which he now divides between those goals appropriate for school learning and those appropriate for non-school areas of learning. Tyler has been focusing on goals of schools in several articles beginning in 1953, then 1956, with a culminating statement made in 1958. The other of the two new emphases is upon the second question regarding learning. Tyler now calls for an active and involved learner who will transfer training from school and non-school areas of learning. This 1976 Statement incorporates his recommended procedures for Question One and Question Two from 1951-1976.

It should be recalled that the Tyler Rationale is based upon practice or a paradigm of curriculum inquiry through curriculum development. As such a product of the interrelatedness of theory and practice, the rationale has evolved through practice, and the procedures to answer the four questions have evolved over a period of fifty years. Recommended procedures for the fourth question regarding evaluation are delineated during the experience of the Service Studies at Ohio State

between 1930-1938. Recommended procedures for the first question about objectives are designed during the Eight Year Study between 1934-1942. The third question about organizing learning experiences is created through the experience of the Cooperative Study from 1939-1945.

No new research projects until the National Assessment of Educational Progress permitted Tyler to scientifically define procedures for answering the second question. Remember that the recommended procedures to answer Question Two about the selection of learning experiences is explained in merely five pages in the original text. Tyler's focus in the period following the publication is first on the controversial question about objectives, but his focus since 1958 is upon the instruction question.

Modifications in the Rationale in the 1950s: "New  
Criteria for Curriculum Content and  
Method" (1958)

The focus of Tyler's analysis of the rationale in the 1950s is upon Question One about objectives. In the original full statement of the rationale, Basic Principles, Tyler divides the first question, "What educational purpose should schools seek to attain?" into six recommended procedures: the three primary sources of objectives, the two screens of philosophy and psychology, and the statement about the form of objectives. Between 1953-1976, Tyler returns to analyze each of these six procedures at least once and some of them repeatedly. The key result of these major statements appears to be the change in focus of the rationale from a planning to an implementation model. The six recommended procedures regarding formulating objectives are reflected upon during

these twenty-five years mainly in order to design procedures for the second question on selecting learning experiences.

Between 1953-1958, the thrust of Tyler's examination of the rationale centers upon the two sources of objectives: society and the learner with the latter a more preponderant concern. In the original text, Tyler includes both needs and interests studies as sources of objectives. The topic of interests studies is not revisited until 1976, but, in 1953, in a chapter of a text, "Translating Youth Needs into Teaching Goals," three new guidelines for using needs as a source of objectives are added. The new guidelines include:

1. Youth needs imply goals when youth is unable to meet them without developing new patterns of behavior.
2. Teaching goals can be derived by identifying patterns of behavior which will help meet needs.
3. Teaching goals are appropriate if philosophically consistent with the school and with learning theory.<sup>1</sup>

Three articles written between 1956-1958 further explicate the society and the learner as primary sources of objectives. In one article, Tyler "clarifies the role of the elementary school" by identifying three appropriate school related tasks:

1. Opportunities to learn complex and difficult things which require organization and distribution of practice over considerable periods of time
2. Opportunities for learning where essential factors are not obvious to one observing the phenomenon and where basic principles, concepts, and meanings must be brought specially to the attention of the learner

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<sup>1</sup>Ralph W. Tyler, "Translating Youth Needs into Teaching Goals," Adapting the Secondary School Program to the Needs of Youth, in Fifty-Second Yearbook of the National Society for the Study of Education, pt. 1 (Chicago: University of Chicago Press, 1953), pp. 220-21.

3. Learning experiences which are purified . . . [art, music and literature] to set high standards.<sup>1</sup>

The three appropriate tasks for the elementary school are extended to five or six tasks appropriate for high school, depending upon which of the three articles on the topic is utilized as the source of information. The "six kinds of tasks for high school" include the three former elementary school tasks plus these two high school tasks:

4. Experience [geography, history] that cannot be provided directly in ordinary activities of daily life
5. Experiences in which re-examination and interpretation are essential.<sup>2</sup>

The sixth task is to "concentrate the major effort of the high school on important tasks which it can do best."<sup>3</sup> This sixth task is enumerated as a task in the title of an article on the subject, but it is not included or identified until 1965 in another article on "the interrelationship of knowledge," and it is dropped again in a subsequent article because it becomes the new criterion for curriculum content and not for methods. In a third article, "Emphasize Tasks Appropriate to Schools," Tyler makes an important differentiation between "the selection of the major educational tasks . . . appropriate for school in contrast to those . . . best carried on by education agencies."<sup>4</sup> The discussion of

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<sup>1</sup>Ralph W. Tyler, "Clarifying the Role of the Elementary School," Elementary School Journal 57 (November 1956): 78.

<sup>2</sup>Ralph W. Tyler, "Six Kinds of Tasks For High Schools," School Review 66 (Spring 1958): 45.

<sup>3</sup>Ralph W. Tyler, "The Knowledge Explosion: Implications for Secondary Education," Educational Forum 29 (January 1965): 146.

<sup>4</sup>Tyler, "Six Kinds of Tasks For High Schools," p. 43.



school and non-school related tasks introduced in 1956, receives growing attention by Tyler and becomes one of the two dominant "new emphases."

"New Criteria for Curriculum Content and Method" is the first major statement about the rationale since its publication seven years prior. Originally presented as a speech in 1957, at a Conference on the American High School held at the University of Chicago in the aftermath of Sputnik, the speech clarifies and modifies Questions One and Two of the rationale, but it does not transform the rationale. In the "new criteria" article an important distinction is again repeated from the 1930s text, Research Methods and Teachers' Problems, differentiating between "curriculum content" as choosing objectives or Question One and "curriculum method" as selecting learning experiences or Question Two. Tyler has changed the phrase principles of curriculum and instruction to a new phrase, content and method, and, in 1966, will change the language again. Tyler identifies five new curriculum content criteria:

1. Emphasize tasks appropriate for school
2. Utilize scholarly contributions as vital means of learning
3. Seek equal educational opportunity for all
4. Apply our knowledge of laws of learning
5. Provide administrative leadership.<sup>1</sup>

The first curriculum criterion is expressed in terms of objectives and clarified with five tasks or "new methods" appropriate for schools. The fourth new criterion is functionalized through nine conditions for effective learning. Curriculum criterion three is explained

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<sup>1</sup>Tyler, "New Criteria for Curriculum Content and Method," pp. 173-80.

as "methods," but as yet no new guidelines are identified. Tyler repeats the five tasks most appropriate for school learning from a 1956 article and labels these tasks "five kinds of learning" thereby relating the criterion not only to "curriculum objectives" but also to "curriculum methods." He states, "The five kinds of learning which are peculiarly appropriate to the school ought to be strongly emphasized in the school program; in contrast other learnings which can be provided as well or better should be provided by other agencies."<sup>1</sup> By 1958, contemporary life as one source of objectives, cited in 1950, appears to be delimited by these five tasks for schools, and the remainder of the objectives from this source are to be accomplished through educative agencies other than schools.

Nine new conditions essential for effective learning are added as recommended procedures for selecting learning experiences. These nine essential conditions suggest recommended procedures as "curriculum methods" for the second "new curriculum content" criterion:

1. Motivation
2. Stimulation to try new ways of reacting
3. Guidance of the new behavior
4. Materials appropriate to work on
5. Time to practice
6. Satisfaction from the desired behavior
7. Opportunity for sequential practice of desired behavior
8. High standards of performance are set

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<sup>1</sup>Ibid., p. 175.

9. Continuance of learning when teacher is no longer around.<sup>1</sup>

From the original rationale, Tyler has taken the procedures for answering the question regarding curriculum objectives and operationalized them for answering the second question regarding learning. Two of the five new curriculum content criteria, emphasizing school appropriate tasks and applying laws of learning, have mobilized the sources of objectives to curriculum methods for learning. Tyler now examines subject matter as a source of curriculum objectives or curriculum content for methods of selecting learning experiences.

From the 1958 list of five new content criteria, Tyler focuses upon the second criterion, utilizing scholarly contributions as a vital means of learning. Tyler states, "We should see that the contributions of science, scholarship, and the arts are utilized as vital means of learning, not as dead items of recall."<sup>2</sup> He reiterates from Basic Principles the dual function of knowledge and supports the general over the particular function as a source of objectives for schools. "Properly understood, the subject matter of these fields . . . provides a variety of understandings, values, abilities, . . . which can aid the student in living more effectively."<sup>3</sup> The new criterion is to vitalize the general function of knowledge from art, science, history, and other subject fields as a means of learning. In Tyler's view, knowledge as a source of objectives can become a vital means of learning. No procedures or curriculum methods are identified yet, but the phrase, "vital means of

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<sup>1</sup>Ibid., pp. 178-80.

<sup>2</sup>Ibid., p. 176.

<sup>3</sup>Ibid.

learning," gains in importance and becomes more prominent in each revision.

Modifications in the Rationale in the 1960s: "New  
Dimensions in Curriculum Development" (1966)

Several articles in the mid-1960s reflect again upon how knowledge as a source of objectives can become "a vital means of learning." The circumstances of the two articles, "The Interrelationship of Knowledge" and "Knowledge Explosion," are responses to the new direction taken in curriculum development following the National Defense Act of 1958, which provided support for the education of the ablest in science, mathematics, and foreign languages, thereby seemingly encouraging subject matter centered curriculum development. The articles are also evoked by the Woods Hole Conference of 1959 and the rise of the National Curriculum Committees that were dominated by the subject matter specialists. The National Curriculum Committees' response during that decade of the Sixties was focused on the question the Committee of Ten asked: "What should be the elementary instruction for students who are later to carry on much more advanced work in the field?" which Tyler considers the wrong question in 1950 and does so again in 1964.<sup>1</sup>

Essentially the 1964 article confirms Tyler's original view of the use of knowledge but places greater emphasis on translating knowledge from curriculum "content" to "method." "All knowledge," he states, "is really human knowledge . . . [which] arises from the play of man's

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 26.

mind on his experience."<sup>1</sup> "It is important for the learner to see knowledge as something that he can use in his own actions, his own efforts to understand, his own efforts to enjoy and control his feeling."<sup>2</sup> This understanding of these three identified uses of knowledge helps the learners "to see the differences, the similarities, and the interrelationships among various areas of knowledge."<sup>3</sup> Tyler believes that basically each area of subject matter, "deals with somewhat different kinds of experiences and serves different kinds of purposes, [and] if the child understands [these three areas of knowledge] then we can say he understands the interrelationship of knowledge."<sup>4</sup> The article not only discusses the interrelationship of various areas of knowledge but also introduces four new guidelines or new curriculum methods for "utilizing scholarly contributions as vital means of learning," which include:

1. Knowledge which is introduced should be related to the child's own curiosity and problems of knowing.
2. Discovery procedures in acquiring knowledge should be used often.
3. Subjects ought to deal with real problems, questions or experiences of the youngster.
4. Knowledge acquired at school should be extended to situations outside of school.<sup>5</sup>

In the same year, Tyler relates knowledge as a source of objectives to the knowledge explosion and makes several statements about the

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<sup>1</sup>Ralph W. Tyler, "The Interrelationship of Knowledge," National Elementary Principal 43 (February 1964): 12.

<sup>2</sup>Ibid., p. 21.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid., p. 14.

<sup>5</sup>Ibid., pp. 17-18.

structure of knowledge that Jerome Bruner will make two years later. Tyler believes, "Content can be organized for teaching and learning so as to aid the student in understanding structure."<sup>1</sup> About knowledge, Tyler also states, "Implicit in the structure of every subject are the kinds of questions it seeks to answer and the kinds of methods it uses in carrying out its inquiry."<sup>2</sup> Tyler identifies several questions that need to be answered about disciplines that have inferences for objectives based on knowledge. These questions lead to the 1976 statement about knowledge as a source of objectives. In 1976, Tyler states that he explores the nature of knowledge and the structure of an area before deriving and formulating objectives. At this point in 1964, Question One of the rationale has been revised with five new criteria for curriculum content, and Question Two has been operationalized with eighteen new curriculum methods.

In the mid 1960s, Tyler concludes his analysis of the sources of objectives having placed more emphasis upon the learner and knowledge than upon society as a source. He also opens the discussion on the final recommended procedure for the first question regarding the form in which objectives are stated. In 1964, he writes a chapter in a book, Defining Educational Objectives, which is entitled "Some Persistent Questions on the Defining of Objectives." In the chapter, Tyler identifies that the four questions often raised in a discussion about the subject of educational objectives are: (1) the importance of a clear definition of

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<sup>1</sup>Tyler, "The Knowledge Explosion: Implications for Secondary Education," p. 150.

<sup>2</sup>Ibid.

objectives, (2) two aspects of a clear definition, (3) the level of specificity of the definition, and (4) considerations involved in selecting objectives.<sup>1</sup> When addressing the most persistent question regarding the level of specificity or generality attending the form in which objectives are stated, Tyler insists that clarity need not be confused with specificity. The earlier focus in 1950 on specificity is re-directed toward improved clarity and more generality. Tyler describes the new focus:

The objectives should be stated at the level of generality of behavior that you are seeking to help the student acquire . . . [which is] determined by two factors . . . the level required for effective use in life . . . [and] the probable effectiveness in teaching the students involved to generalize to the learning level desired.<sup>2</sup>

Objectives are best stated to the level of generality to be achieved combined with specific examples. This technique is one used for collecting data in the National Assessment of Educational Progress. Between 1958-1966, the changes in the rationale are clarifications and modifications, but beginning in 1966 the changes are transformations.

In the 1966 "New Dimensions in Curriculum Development" statement, which is the second major return to the original rationale, Tyler affirms the basic construct and summarizes the changes since 1958, his "new criteria" statement. Tyler affirms:

I still find adequate and highly useful the original statement of the four divisions of curriculum inquiry . . . into four questions. I also find useful the three recommended sources for getting information helpful in deciding on objectives . . . with the employment

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<sup>1</sup>Ralph W. Tyler, "Some Persistent Questions on the Defining of Objectives," in Defining Educational Objectives, ed. C. M. Lindvall (Pittsburgh: University of Pittsburgh Press, 1964), pp. 77-79.

<sup>2</sup>Ibid., p. 79.

of a philosophy of education and a theory of learning . . . as screens for selection and elimination among possible objectives.

. . .<sup>1</sup>

Tyler later announces, ". . . the greatest changes in my thinking relate to the conception of the learner and of knowledge and to the problem of the level of generality appropriate for an objective."<sup>2</sup> These are three changes which have already been traced from 1958 to the present.

The first new dimension added by Tyler in 1966 is "to examine the concept of the learner as an active, purposeful human being, [which is] an important psycho-philosophic factor to consider at an early stage in work on objectives."<sup>3</sup> Here Tyler's focus is upon the operationalizing of the second question, but in so doing, the procedures for the first question are changing dimensionally. That is, as his theory of learning is becoming more pronounced, his view of procedures for Question One is modified.

Tyler frames the argument for his focus by contrasting the theorists, who perceive the learner as conditioned and those, like him, who perceive the learner as an active agent exploring learning situations. Based upon new and broader concepts of learning explored from 1930 until 1966, Tyler alters the original, five guiding principles presented in the rationale as recommended procedures for the second question. The ten new guiding principles of learning now include:

1. The student must have experiences that give him an opportunity to practice the kind of behavior implied by the objective.

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<sup>1</sup>Tyler, "New Dimensions in Curriculum Development," p. 25.

<sup>2</sup>Ibid., p. 26.

<sup>3</sup>Ibid.



2. The learning experiences must be such that the student obtains satisfaction from carrying on the kind of behavior implied by the objective.
3. The motivation of the learner, that is, the impelling force for his own active involvement, is an important condition.
4. The learner finds his previous ways of reacting unsatisfactory, so that he is stimulated to try new ways.
5. The learner should have some guidance in trying to carry on the new behavior he is to learn.
6. The learner should have ample and appropriate materials on which to work.
7. The learner should have time to carry on the behavior, to practice it until it has become part of his repertoire.
8. The learner should have opportunity for a good deal of sequential practice. Mere repetition is inadequate and quickly becomes ineffective.
9. Each learner is to set standards for himself that require him to go beyond his performance, but standards that are attainable.
10. The learner must have means of judging his performance to be able to tell how well he is doing. Without these means, his standards are of no utility.<sup>1</sup>

From the original five guiding principles, the first and second are identical. The original Numbers Three, Four, and Five regarding the range of possible student reactions and the principles of the same experience attaining several objectives and outcomes, are replaced.

Numbers Six-Ten are also new principles. Tyler suggests, "In actual use, each of these ten conditions . . . serves to focus attention on some of the places where learning experiences are likely to be inadequate."<sup>2</sup> Tyler concludes this discussion of changes in learning principles with an important factor introduced in 1958 about where learning

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<sup>1</sup>Ibid., p. 27.

<sup>2</sup>Ibid.

occurs in the educational environment. In this current analysis, he gives special recognition to the "press" of the environment. This is the third time Tyler refers to where learning occurs; twice earlier he discusses tasks appropriate for schools and for other educative agencies. Later, in 1974, he will write an entire article dedicated to "Where Learning Happens."<sup>1</sup> This dimension sustains its importance for two decades and creates a change in the rationale.

Another dimension related to the examination of the "learners as an active, purposeful human being," an important psycho-philosophic factor to consider in studies of objectives, is "the question of the structure of a discipline." Because Tyler perceives knowledge as a growing product of man's effort to understand, he now "explores the nature of knowledge and structure of an area before deriving and formulating objectives. . . ." <sup>2</sup> This point is made for the second time. About knowledge, Tyler asks, "Is knowledge something outside of man that he has discovered and can now make available to learners, or is knowledge man's effort to explain phenomena with which he comes in contact, so that the learner can produce knowledge?" <sup>3</sup> These two perceptions about the learner and knowledge appear to be altering the use of psychology as a filter and indicating knowledge as a filter to derive objectives. It is true that Tyler confirms the original use of the psychology and philosophy to filter objectives, but it is unclear how they

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<sup>1</sup>Ralph W. Tyler, "Where Learning Happens," National Elementary Principal, vol. 54 (January-February 1975).

<sup>2</sup>Tyler, "New Dimensions in Curriculum Development," p. 26.

<sup>3</sup>Ibid.

are to be used. Tyler states, "Philosophy and psychology formulations may . . . be used to indicate areas for inclusion and exclusion prior to systematic studies of these sources of objectives."<sup>1</sup> He has changed the position of the two screens and now explores the nature of knowledge and structure . . . before deriving and formulating objectives. . . ."<sup>2</sup> The order in which the source of objectives: the learners, society, and knowledge can be used is also changed and use can be in any order.

Another new dimension concentrates upon the form in which an objective is stated. In the 1958 Statement, Tyler introduces the need for a more generalized statement of objectives, which he repeats in 1964, when answering "persistent questions on the defining of objectives." In 1966, he makes the change in form an official new dimension. "The level of generality of an objective should . . . be stated . . . with specifics used as illustrations, rather than treating the specifics as ends in themselves."<sup>3</sup> The more generalized statement of objectives with specific illustrations is recommended because children should be able to move easily from the general to the specific and from the specific to the general in the learning situation.

Tyler does not return to the use of psychology of learning or philosophy for selecting objectives or to the statement of the form for objectives. Tyler's focus has been on selecting objectives and learning experiences and not upon organizing learning experiences or evaluating. At the conclusion of this article he indicates, "Nothing has been said . . . about changes regarding the organization of learning experiences

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<sup>1</sup> Ibid.

<sup>2</sup> Ibid.

<sup>3</sup> Ibid.

and evaluation."<sup>1</sup> He also states, as was cited previously, the National Assessment of Educational Progress, ". . . is furnishing grist for a . . . re-examination of the process of evaluation."<sup>2</sup> Tyler, however, continues to pursue Question Two about learning in his next major statement and not the third and fourth question on organizing and evaluating learning experiences as he promises. Little has been said directly about either question throughout.

Modifications in the Rationale in the 1970s: "Two  
New Emphases in Curriculum  
Development" (1976)

Tyler returns in 1976 to view the rationale in its entirety re-assuring the curriculum community of the value of its purpose, the construct, the recommended procedures, and the use. The original purpose of the rationale is expanded, in 1976, in three ways. First, the description of the original rationale is changed from a "guide for thinking and planning of [graduate students] . . . working on problems of curriculum and instruction. . . ."<sup>3</sup> The new purpose of the rationale in 1976 is a "guide" which expands from "thinking and planning" to "developing a curriculum."<sup>4</sup> Tyler now uses curriculum development rather than principles of curriculum and instruction. Using the phrase since 1966, he defines it as, "Curriculum development . . . is not a science. Its purpose is not to obtain new knowledge; it is a practical enterprise. It is designing educational programs that will bring about

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<sup>1</sup>Ibid., p. 28.

<sup>2</sup>Ibid.

<sup>3</sup>Tyler, "Two New Emphases in Curriculum Development," p. 62.

<sup>4</sup>Ibid., p. 61.

certain desired results that will help children learn things that will be of significance to them and to society."<sup>1</sup> Curriculum development, Tyler considers, "a practical enterprise," "like engineering," rather than like science. "The human variables themselves are more difficult to control and . . . in a school . . . there is such a combination of variables we can't expect to have precise engineering. . . ."<sup>2</sup>

Second, the original intent of the rationale is changed. The original intent is described, "This syllabus has dealt with the problems of planning a program of instruction from the point of view of students examining its purposes, functions, and structures in order to get a rational picture of their interrelationships."<sup>3</sup> The new intent in 1976 extends beyond the planning stage. Tyler explains, "What goes on in curriculum development is planning, execution, evaluation, replanning, repeating the cycle."<sup>4</sup>

Third, the 1950 function of the rationale changes. The original function is defined, "A rationale [is] for viewing, analyzing, and interpreting the curriculum and instruction program of an educational institution."<sup>5</sup> The new function of the 1976 rationale again incorporates viewing, analyzing, interpreting, and extends to include "developing." The changes in definition and function connote a change in the rationale

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<sup>1</sup>Tyler, "Utilizing Research in Curriculum Development," p. 9.

<sup>2</sup>Ibid.

<sup>3</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 126.

<sup>4</sup>Tyler, "Utilizing Research in Curriculum Development," p. 9.

<sup>5</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 1.

from a planning to an implementing model, a phrase which Tyler introduces and defines in 1974. In reflecting upon the construct of the rationale, Tyler finds "no reason to change the fundamental questions it raises."<sup>1</sup> At this point, unlike in previous articles, he does not affirm the philosophic-psychological screens; he does, however, identify three new implications for the active role of the learner.

The two emphases of curriculum development are: (1) a much greater attention to the active role of the student in the learning process and to the implications student involvement has for curriculum development and (2) a comprehensive examination of the non-school areas of student learning as they relate to curriculum development.<sup>2</sup> In his analysis of the first new emphasis upon the "active role of the learner," Tyler changes a key word from the original rationale and re-focuses the emphasis from education to learning. The original rationale begins, "Education is a process of changing behavior patterns of people"; the 1976 Statement begins, ". . . learning is a process in which the learner plays an active role--not a passive one. . . . The only behavior that is truly learned is the behavior the learner carries on with consistency so that it becomes part of his or her repertoire of behavior."<sup>3</sup> The original rationale states, "educational objectives, then, represent the kinds of changes in behavior that an educational institution seeks to bring about in its students."<sup>4</sup> In contrast, "New Emphases" states, ". . . any

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<sup>1</sup>Tyler, "Two New Emphases in Curriculum Development," p. 63.

<sup>2</sup>Ibid., p. 62.

<sup>3</sup>Ibid., p. 63.

<sup>4</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 6.

behavior becomes a permanent part of a person's repertoire only if he or she continues to carry it on."<sup>1</sup> This new emphasis on the active role of the learner begins in 1951 and is introduced officially as a new dimension in 1966. The implications of this change for Question Two now are:

1. See the way in which what is learned can be used
2. Have the opportunity to continue employing the learned behavior in the various situations he or she encounters.<sup>2</sup>

These two new emphases have "vitally important . . . implications for selecting curriculum objectives, designing learning experiences, and achieving transfer of training."<sup>3</sup>

New implications for Question One, selecting curriculum objectives, are threefold:

1. Stress those things that are important for students to learn in order to participate constructively in contemporary society
2. Be sound in terms of subject matter involved
3. Be in accord with the educational philosophy of the institution.<sup>4</sup>

The first implication interrelates the original primary source of objectives, the learner and contemporary society, through the transfer of training. The second implication addresses the original third source of objectives, subject matter. Now the implication is to explore "the nature of knowledge and structure before deriving and formulating objectives." Another implication seems to confirm the use of philosophy to select objectives. No specific mention is made of the use of the psychology of learning to select objectives. Therefore, unlike the origi-

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<sup>1</sup>Tyler, "Two New Emphases in Curriculum Development," p. 63.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid., p. 62.

nal, a single learning theory is selected.

A final implication for objectives relates to student interests. In the original text, studies of student needs and interests are recommended procedures. Since 1953, Tyler analyzes student needs, which become five "youth needs translated into teaching goals," the first new curriculum content criterion in 1958. Now, for the first time, Tyler introduces student interests stating that the new criterion of interest and its perceived meaningfulness described in the original text remain important. The student needs become transformed into goals for the school, and goals for school are differentiated from goals for non-school areas of learning. Student interests now become related to the active role of the learner, the second new emphases of 1976.

Emphasizing the active role of the learners also has important implications for the third question of the rationale. Tyler states:

[Students] should perceive what the behavior is that they are expected to learn and should feel confident that they can carry on the learning task . . . successfully. Sequential organization should be developed in terms of the progress the learners can make in undertaking successively more varied and difficult learning tasks.<sup>1</sup>

Sequence in the 1950 text, differs in its emphasis. Sequence means "having successive experience build upon the preceding one but go more broadly and deeply into the matter involved."<sup>2</sup> In Basic Principles, the word sequence, however, refers more to the subject matter; whereas, the revised 1976 version states, "Sequences that are designed solely in terms of the logic of the discipline are not likely to be effective in

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<sup>1</sup>Ibid., p. 63.

<sup>2</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 85.



meeting essential conditions to learning."<sup>1</sup> Sequence now incorporates explicitly the qualitative differences of the learner's cognitive operations. Tyler comments, "Well designed learning experiences are described as those showing the learners clearly what they are expected to learn and . . . are within their present abilities to carry through."<sup>2</sup> It should be noted that this is the only comment about Question Three regarding organizing learning experiences throughout the quarter of a century. Tyler changes the original word from "organizing," used in Basic Principles, to "designing" learning experience, used for the first time in 1976. The changed word implies a changed concept to Tyler.

A further implication of "the active role of the learner" focuses upon achieving transfer of training. In the original text, Tyler identifies Thorndike's theory of transfer, upon which he now places greater emphasis. Tyler now states, "The failure of students to transfer what is learned in school to situations outside the school is a problem related to the active role of the learner and one that has long been central to educational psychology."<sup>3</sup> Tyler's premise, "If something that is learned in school is not utilized in relevant situations outside the school, most of the value of the learning is lost," is supported by data from the 1972-1973 National Assessment of Educational Progress.<sup>4</sup> Tyler states, "The results reported by the National Assessment . . . are not the only indication that the objectives and learning experiences of some educational programs fail to interest and

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<sup>1</sup>Tyler, "Two New Emphases in Curriculum Development," p, 63.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid., p. 64.

<sup>4</sup>Ibid.

actively engage many students in learning and do not carry over to areas beyond the school environment."<sup>1</sup> Tyler concludes that "the curriculum rationale should strongly emphasize . . . interests, activities, problems, and concerns of the students" and involve them in the planning.<sup>2</sup> This "new emphasis" upon the active role of the learner not only re-introduces Thorndike's theory of transfer of training but also increases the numbers of participants involved in the planning of curriculum to include, as before, teachers and experts, and now to add the students and the "intelligent lay public" since census-like data are now available from the National Assessment.

The second of the two new emphases in this final revision of the rationale involves school and non-school areas of learning. This new emphasis in curriculum development can be traced: (1) to the concept of contemporary life as a source of objectives in the original rationale, (2) to Tyler's focus in the 1950s upon translating youth needs to teaching goals, and (3) to reconstructing the educational environment. The third concept is introduced during the 1970s. The school time has remained constant, Tyler reasons, but erosion has taken place in the total educational system--the home, community agencies, and the working setting. Because the non-school areas are furnishing fewer opportunities for constructive learning experiences for young people today than in the past, Tyler believes schools have new challenges. The schools must perform those tasks appropriate to it and must energetically help to reconstruct the total educational environment. The implications for curricu-

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid., p. 65.

lum development include: "maximizing the school's resources," "strengthening the out-of-school curriculum," and "dealing with the out-of-school environment to establish a more constructive total educational system."<sup>1</sup>

The "new emphasis" on the non-school environment is a problem of curriculum content because as the range of objectives increases, discrimination in the selection of objectives becomes more difficult. As Tyler, in 1975 states:

Since a high level of learning is required of people today, a major problem in education is to select wisely from all the possible goals, the important tasks which the school can do well and to concentrate its energies effectively. Since the total educational job is very great, the home, the church, the employer, and the other potential educative agencies of the community need to be encouraged and strengthened to do their share while the school concentrates on the things it can do best and on those things that only the school can do.<sup>2</sup>

To respond to this content problem of a more discriminating selection of objectives, Tyler, in 1958, divides school tasks from other educative agency appropriate tasks. He sustains this stance until 1974, when he resolves the problem through a division of school and non-school areas of learning described in "Reconstructing the Total Educational Environment." The changing conditions necessitate the school's constructive participation in the restructuring of the total educational environment to meet those needs. The major change is needed to provide education for all children including minorities, disadvantaged, and those from impoverished homes. Tyler concludes, "The new roles for the school will not be easy to work out, but schools' past success in

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<sup>1</sup>Ibid., pp. 67-71.

<sup>2</sup>Ralph W. Tyler, "Reconstructing the Total Educational Environment," Phi Delta Kappan 57 (September 1975): 12.

meeting new and difficult problems encourages one to believe . . . this one can also be solved."<sup>1</sup> Based upon this reasoning, Tyler asserts, in 1976, that a "greater emphasis will be placed on the need to recognize that the school curriculum guides only a portion of the student's total learning process."<sup>2</sup>

#### Summary of the Modifications of the Rationale (1951-1976)

The changes in the rationale are numerous; however, the four questions remain. Major changes modify the procedures to answer the first question. The order of the sources of objectives can proceed differently from the original order. The learner and knowledge gain in importance now that the third source of objectives has been further clarified. Knowledge should be seen in its interrelationship and scholarship should be utilized. Contemporary life as a source of objectives is more clearly delineated and delimited regarding school and non-school areas of learning. The needs of students are clearly translated to teaching goals and the interests of students are understood as essential. Five new curriculum content criteria regarding these goals are identified. The form in which the objectives should be stated is in clear general terms that describe the behavior to be learned with concrete examples. The use of a psychology of learning and philosophy have shifted in several ways but their new function remains somewhat unclear. Philosophy of the institution appears to remain to help determine objectives. Now,

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<sup>1</sup>Ibid., p. 13.

<sup>2</sup>Tyler, "Two New Emphases in Curriculum Development," p. 65.

the nature and structure of knowledge should be explored before deriving and formulating objectives. Psychology of learning is no longer identified as a screen but is replaced with a learning theory.

Important additions have modified procedures to answer Question Two about selecting learning experiences. In applying the new knowledge of laws of learning, the five original guiding principles are transformed to eight new principles and two remain constant. Nine new curriculum methods are introduced as conditions for learning and four new curriculum methods are identified to utilize scholarship. In 1930, no single learning theory is accepted. The theories of John Dewey emphasizing "the active role of the learner" and Edward Thorndike, concerning "the transfer of training," which are suggested in the 1950 text, are now incorporated as part of the rationale.

Changes in Chapters III-V of Basic Principles are less significant. The procedures for the third question have been redirected from organizing learning experiences to designing learning experiences. Changes in the procedures for the fourth question, promised in 1966, have been forthcoming as a result of the National Assessment. The new concept of active role of the learner has its corollary in the changing role of the teacher, where responsibility shifts to tasks appropriate for schools and toward helping to create a total learning environment. The third partner in curriculum development is now the student. The "new emphasis" upon "the active role of the learner in the learning process," is designed to help the learner to transfer training from the school to non-school areas in the reconstructed educational environment.

The rationale of 1950 has been clarified and modified in yet

other ways over the past quarter of a century since its publication. One of the main reasons for the changes is related to the purpose of the rationale. Originally the rationale was a "planning" rationale focused upon the first question regarding objectives. In the 1976 statement the rationale is also a "developing" or an "implementation" rationale. The transfer of emphasis is from objectives to learning or from curriculum to instruction. As Tyler states, "But some problems are not with objectives, but with implementation. . . ." <sup>1</sup> Reflecting about the Eight Year Study Tyler asks, "Were there problems in objectives?" Today he answers, "Yes, in many cases, we needed to identify learning goals that would have real meaning to those students, or objectives on which improvement in learning could really be expected." <sup>2</sup> The new question now is, ". . . where do the inadequacies lie in the total system?" The new answer lies in "the identification of children's personal needs." Tyler queries, "Is there a way of implementing a program without a complete overthrow of the old?" <sup>3</sup> The answer is apparently affirmative.

The rationale has stood the test of its application in different places; it is applicable for many institutions, levels of education, and now for the reconstruction of the educational environment. The Tyler Rationale also stands the test of time. Over the past quarter of a century, the Tyler Rationale demonstrates that it could meet the curriculum realities from 1930-1985 with certain adaptations.

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<sup>1</sup>Tyler, "Utilizing Research in Curriculum Development," p. 9.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

The Tyler Rationale and the National Assessment  
of Educational Progress (1963-1984)

The National Assessment of Educational Progress is conceived in 1963, thirteen years after the publication of the rationale. In a similar way that the Eight Year Study provides the opportunity for Tyler to apply the theory of evaluation, the National Assessment of Educational Progress presents the opportunity for Tyler to challenge the rationale. In fact, in 1966, prior to the data collection, Tyler anticipates that "the grist" from the Assessment will provide for changing procedures in answering the fourth question. The Assessment supplies data for answering the second question of the rationale as well. In 1976, Tyler actually cites data from the National Assessment as evidence suggestive of reasons to transform the rationale with "two new major emphases" on the active role of the learner and the reconstruction of the education environment between school and non-school areas of learning.

From its inception in 1963, the National Assessment has been "one of the most sophisticated and comprehensive educational measurement programs in the world."<sup>1</sup> The need for the Assessment is conceived by Francis Keppel, the United States Commissioner on Education, the financing is initiated by John Gardner, President of the Carnegie Foundation, and the intellectual leadership is provided by Ralph Tyler, the Director of the Center for Advanced Study in the Behavioral Sciences at that time. "Since 1969, the National Assessment of Educational Progress has surveyed educational achievement across the country

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<sup>1</sup>Pratt, ed., National Assessment of Educational Progress 1969-1983: A Bibliography of Documents in the ERIC Database, p. v.

and reported its findings to the nation."<sup>1</sup> The census-like data gathered through the National Assessment provide information for the intelligent lay public, educators, school boards, legislators, and community leaders. The data indicate the levels of achievement and the changes in achievement in different learning areas over the years.

Between 1964-1965, seven conferences are held with teachers, curriculum specialists, administrators, and school board members "to discuss the auspices and guidelines of the assessment."<sup>2</sup> In 1965, a seminar involving major test construction agencies and survey research centers is held to develop plans for assessment instruments to meet the guidelines established in the seminars. The initial assessment planning and development activities are supported by the Carnegie Foundation and the Ford Foundation. Since 1971, the assessment has been federally funded, but, in 1974, the assessment experienced funding cuts which caused a reduction from assessing one learning area each year to assessing one learning area every other year beginning in 1980. It is in 1974 that Tyler begins incorporating thoughts from the assessment in his analyses of the rationale.

The National Assessment between 1964-1969, develops objectives and items for ten learning areas and, by 1983, expands to fifteen subject matter related learning areas. Tyler describes:

In each of these fields, scholars, teachers, and curriculum specialists formulated statements of objectives which they believe faithfully reflect the contribution of the field and which the schools are seriously seeking to attain. For each major objective,

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<sup>1</sup>Ibid.

<sup>2</sup>Tyler, "Assessing the Progress of Education," p. 15.



prototype exercises were then constructed . . . to determine the behavior implied by the objective.<sup>1</sup>

These objectives are reviewed by lay panels. The procedures are designed to insure that the objectives being assessed are considered important to scholars, acceptable educational tasks for the school, and desirable to lay citizens.<sup>2</sup>

During this period, fears and opposition by professionals and lay people mount. Tyler addresses these fears in several different ways. His first argument differentiates other evaluations from an assessment by identifying the three common uses of evaluation in order to illustrate how they are markedly different from a fourth use of evaluation. The three common uses are: (1) to appraise achievement of individual students, (2) to diagnose learning difficulties, and (3) to appraise educational effectiveness.<sup>3</sup> The fourth new use of evaluation is to assess the educational progress of larger populations in order to provide the public with dependable information to help in understanding of educational problems and needs and to guide in efforts to develop sound public policy regarding education. Tyler's second argument for this kind of assessment extends from the similar need for data in education as in the others spheres, such as the morbidity and mortality rates in public health or the Gross National Product and the Consumer Price Index in economic development.

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<sup>1</sup>Tyler, The Challenge of National Assessment, p. 4.

<sup>2</sup>Ibid., p. 9.

<sup>3</sup>Ralph W. Tyler, "A Program of National Assessment," Educational Forum 30 (May 1966): 392.

A third argument made by Tyler is the citation of some valuable by-products of the National Assessment which include: (1) the clarification of the difference between sorting for testing and for guidance and assessing, (2) the demonstration that educational objectives of a school can be formulated and agreed upon, (3) the demonstration that appraisal exercises can provide information for the progress of the entire range of children, (4) the demonstration of the feasibility of using a variety of appraisal techniques rather than being limited to the use of paper-and-pencil tests, and (5) the indication that appraisal exercises can be constructed to aid teachers in their daily work.<sup>1</sup> Tyler confirms, "This contribution to the development of more adequate evaluation within our own schools may be the most important contribution of the current assessment project."<sup>2</sup>

A significant contribution of the National Assessment is as a pioneering effort in measurement techniques and in the kind of data collected. The assessment has pioneered "large scale assessment technology," "led the way in measuring complex skills," "contributed unique information about critical social issues such as the performance of the disadvantaged," and "clarified educational trends by differentiating patterns of change in lower-order skills and higher-order abilities."<sup>3</sup> Data are available for the first time on all spectrums of the learning

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<sup>1</sup>Ralph W. Tyler, "National Assessment--Some Valuable By-Products for Schools," National Elementary Principal 48 (May 1969): 43-46.

<sup>2</sup>Ibid., p. 46.

<sup>3</sup>Pratt, ed., National Assessment of Educational Progress 1969-1983: A Bibliography of Documents in the ERIC Database, p. v.

group in contrast to the data usually collected regarding the average group. Data are also available over three points in time in many subject areas so that achievement trends can be plotted. A third kind of data is by demographics: sex, geographic regions, age groups (nine, thirteen, seventeen, and adult), metropolitan divisions (large city, small city, suburban, and rural classifications), and two socioeconomic classes.

The values of the National Assessment for the nation are four-fold: (1) the development of statements of educational objectives which are clearly defined by sample assessment exercises, (2) the development of assessment exercises appropriate for children in each age group who are among the lowest third in achievement, (3) the development of a wide range of useful evaluation procedures, and (4) background data to give a perspective for understanding local school reports.<sup>1</sup> An important fifth value significant to the curriculum field is the manner in which the data can reflect upon curriculum theorizing. Prior to 1969, data on learning were unavailable for the "group who are among the lowest third in achievement," which Tyler identifies here as an important additional value. The data on this segment of learners provide new insights for Tyler about learning.

Between 1963-1969, the operational plan, the implementation, and the funding are developed. As Chairman of the Exploratory Committee on Assessing the Progress of Education, Tyler is invited to

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<sup>1</sup>Tyler, The Challenge of National Assessment, pp. 9-15.

"discuss the means of ascertaining the educational level attained through American public education."<sup>1</sup> Tyler's earliest proposal at that time described six points: (1) the assessment would test general levels of knowledge, what people have learned, not necessarily all within the school system; (2) the tests would not be aimed at discriminating among individuals, unlike most educational tests; (3) there would be an attempt to assess more accurately the levels of learning of the least educated, average, and most educated groups in the society; (4) some sort of matrix sampling system would test individuals only on a small number of questions but results would be aggregated to reflect the knowledge of particular subgroups in the population; (5) adults might be included in the sample; and (6) stages, such as the end of elementary school, the end of intermediate school, and the end of high school should be used in connection with specific testing ages rather than at specific grade levels.<sup>2</sup> A seventh point concerning the effects of the tests themselves was stated as a cautionary remark so that results do not become standards for curricula. "Tyler's first six proposals made during the first meeting have guided and dominated the assessment from that time until the present."<sup>3</sup> The first and third goals become the most prominent in Tyler's own future work with the rationale.

The National Assessment causes at least one modification in the rationale. From the assessed data Tyler concludes, "A lack of relevant

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<sup>1</sup>William Greenbaum, "NAEP's Objectives and Organizational Development," in Measuring Educational Progress (St. Louis: McGraw-Hill Book Co., 1977), p. 8.

<sup>2</sup>Ibid., p. 10.

<sup>3</sup>Ibid.

application appears to be common to some current educational programs."<sup>1</sup> The results of the 1972-1973 National Assessment showed that over ninety percent of the students could compute correctly, but percentages were much lower in the use of mathematics in solving practical problems. The empirical data and interviews of many students indicate to Tyler that the objectives and learning experiences of some educational programs fail to engage actively many students in learning and do not carry over to areas beyond the school environment. This new evidence causes Tyler to place a second new emphasis in the rationale upon a renewed and greater interest in the active role of the student in the learning process and upon transfer of training. Both of these theories from Dewey and Thorndike are defined in the original rationale but now assume a greater significance.

The National Assessment of Educational Progress not only provides reasons for changes in the rationale but also illustrates the way Tyler has advanced evaluation from 1934 until 1984. Fifty years ago, Tyler included secondary and later college students. Now Tyler's population includes the nation. Tyler's first major evaluation included about 1,400 students; now, the population is in excess of twenty million. Then, Tyler's first evaluation terminated after eight years; now, after fifteen years, data continue to be collected. Then, feedback was limited to academicians; now, the National Assessment of Educational Progress makes information available on assessment procedures and materials to state and local school districts and to educators and the lay

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<sup>1</sup>Ibid.

public. Tyler's early evaluation theories continue to be applied today and continue to expand from student testing, to program evaluation, to school appraisal, and now to national assessment.

## CHAPTER VI

### INTELLECTUAL GENEALOGY OF RALPH TYLER: THE PAST (1900-1930)

#### Theorist and Mentor Ancestry

Tyler's intellectual affiliation with the formative years of the curriculum field between 1890-1930 and the curriculum decades from 1950-1980 reveals him as a major voice in the curriculum field. When the curriculum field is surveyed, it can be seen that Tyler's intellectual forebears are important spokesmen of the past and his descendants prominent curricularists of today.

The examination of Tyler's research projects shows how the Tyler Rationale evolved through his own work, but an investigation of Tyler's intellectual forebears demonstrates how the Tyler Rationale has also been formulated from an intellectual source outside of his own research. Tyler identifies ideas of John Dewey, Edward Thorndike, and Charles Judd as theoretical influences upon him, stating that he was especially in harmony with John Dewey. Tyler states, "In a Philosophy of Education Course at the University of Nebraska all we really did was to read and recite and discuss Dewey's Democracy in Education."<sup>1</sup> Dewey strongly influences his view of learning, according to Tyler, who comments, "No one thought more clearly on the question of learning ex-

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<sup>1</sup>Interview with Ralph W. Tyler, Chicago Ill., July 1982.

periences than Dewey."<sup>1</sup> Tyler also explains his intellectual association with Edward Thorndike and Charles Judd. "The notion of education as a science has two sources: one was the German source, basically social psychology and the understanding of social institutions, which was Charles Judd's emphasis at the University of Chicago; the other source, which Thorndike represented, was largely statistical experimentation, the emphasis at Teacher's College. I was interested in both."<sup>2</sup> Tyler's perspective on curriculum construction was in his words also shaped by the first part of the Twenty-Sixth Yearbook of the National Society for the Study of Education, entitled The Foundations and Techniques of Curriculum-Construction.<sup>3</sup> Most of Tyler's influencers and mentors are contributors to the yearbook, a major source from which influences upon Tyler's Rationale can be traced.

An exploration of Tyler's mentors by William Schubert indicates a lineage of the Tyler Rationale extending from Charles Judd. According to William Schubert's mentor-student genealogy, Tyler stems from the Herman von Helmholtz (1821-1894), Wilhelm Wundt (1832-1920), and Charles Judd (1873-1946) tree.<sup>4</sup> Herman von Helmholtz was a prominent German physiologist, physicist, and physician. Wilhelm Wundt was also a German physiologist, a philosopher, and the founder of the world's first

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<sup>1</sup>Tyrrell, "Ralph W. Tyler's Influence on the Field of Curriculum," p. 114.

<sup>2</sup>Interview with Ralph W. Tyler, Chicago, Ill., July 1982.

<sup>3</sup>Ibid.

<sup>4</sup>Schubert, "Origins of the Curriculum Field Based on a Study of Mentor-Student Relationships," p. 42.



physiological laboratory at Leipzig in 1897, where many famous American scholars were eager to study. Among the students of Wundt was Charles Judd, who became the Chairman of the Department of Education at the University of Chicago from 1909 to 1938, during which time Tyler was a graduate student. These three generations of Tyler's mentors are "solidly rooted in experimental psychology . . ." with a propensity "to seek generalizations."<sup>1</sup> This propensity influences Tyler.

Applying this line of reasoning, a second mentor-student tree can be traced from John Dewey, the mentor of W. W. Charters, who also taught Ralph Tyler. For twenty-three years of his career, Tyler was associated with W. W. Charters as his student in curriculum, a research assistant in the Commonwealth Teacher Training Study, a colleague at the Bureau of Educational Research at Ohio State University, and a collaborator on a project concerned with teaching engineers at the Rochester Institute of Technology.<sup>2</sup>

Other lines of ancestry can be traced from Tyler to mentors at the University of Chicago who include: Franklin Bobbitt and George Counts. Many claim that Franklin Bobbitt is most intellectually influential on the Tyler Rationale, but Tyler himself claims only a mild connection.<sup>3</sup> When Bobbitt was a professor of education from 1909 until 1939, Tyler was, for a period, a student at the University of Chicago, and Bobbitt was his professor for three courses. It is also true that

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<sup>1</sup>Ibid.

<sup>2</sup>Ralph W. Tyler, "The Leader of Major Educational Projects," p. 49.

<sup>3</sup>Interview with Ralph W. Tyler, Chicago, Ill., August 1982.

upon Bobbitt's retirement from the University of Chicago, Tyler, then the Chairman of the Department of Education, was provided, "the opportunity to teach the basic course in curriculum, Education 360, which Bobbitt had been teaching."<sup>1</sup> The influence of Bobbitt on the Tyler Rationale, however, continues to be deliberated and debated. Some curriculum historians, identifying a similarity between Bobbitt and Charters, consider them both the most influential on the Tyler Rationale with earlier roots in Frederick Taylor's work.<sup>2</sup> George Counts' influence is also identified but not traced in the literature.

Tracing the origins of the rationale in the field from 1900-1930 reveals that Tyler's rationale indeed possesses important early conceptual roots in the field. These roots can be traced vertically in history and horizontally through interrelationships among mentors to some of the early seminal ideas of curriculum. Following the Tyler intellectual ancestry reveals that Tyler has developed a curriculum paradigm that is rooted in the most significant ideas of educational philosophy and educational psychology of the early era of curriculum.

#### A Curriculum Paradigm with Roots in the Past

The Tyler Rationale can be viewed as an effort to develop a paradigm for the curriculum field. "Consensus in a field is exemplified by a paradigm or set of paradigms representing the entire constellation of modes of thought and methodology utilized by a community

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<sup>1</sup>Ronald W. Tyrrell, "An Appraisal of the Tyler Rationale," School Review 83 (November 1974): 151.

<sup>2</sup>Tyrrell, "Ralph W. Tyler's Influence on the Field of Curriculum," p. 94.

of scholars as models or examples. These paradigms, models, or exemplars denote concrete problem solutions that are the basis for the solution to yet other problems."<sup>1</sup> A paradigm, in principle, connotes "the entire constellation of beliefs, values, and techniques shared by the members of the community of practitioners. . . ." <sup>2</sup> The tap root of the rationale is in the practice and theory of John Dewey with lesser roots stemming from several other curricularists. Tyler extends and creates upon these early foundations with new inventions from his own practice. The Eight Year Study is the trunk of Tyler's work, and experimentation is the manner in which Tyler creates basic principles of curriculum, instruction, and evaluation.

Some might disagree and argue that the rationale does not qualify as such a paradigm because the rationale does not have consensus in the field but rather continues to be a source of debate among curricularists. However, for some important theorists and for many practitioners in the field, the paradigm provides a system of thought for curriculum development. Those who disagree have to realize that "alternative proposals [which] have been made . . . [are] derived from factors that are accounted for in the extant model."<sup>3</sup> Those who disagree might also recognize that "no model or paradigm rightly serves to eliminate debate or differences. Progress depends upon such differences provided that they are tested reflectively in the field of practice."<sup>4</sup> Finally, those who disagree must recognize that practice is

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<sup>1</sup>Tanner and Tanner, Curriculum Development: Theory into Practice, p. 41.

<sup>2</sup>Ibid., p. 97.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

also proof; recent failures in curriculum resulted from not utilizing the Tyler paradigm.

Within the actual statement of the rationale, Tyler identifies its limitations and its prescribed use, which suggests other reasons for consideration of the rationale as a paradigm. In the introduction and conclusion of Basic Principles, Tyler states three conditions for application of the model. First, he comments that "this book outlines one way of viewing an instructional program," inferring that a single source for viewing curriculum might be inadequate.<sup>1</sup> Second, he states, "No attempt is made to answer these questions since answers will vary to some extent from one level of education to another and from one school to another."<sup>2</sup> Third, he describes the manner of use. "If a school-wide program of curriculum reconstruction is undertaken, it is necessary that there be widespread faculty participation."<sup>3</sup> In general, the rationale has succeeded at its stated purpose, "The purpose of the rationale is to give a view of the elements that are involved in a program of instruction and their necessary interrelationships."<sup>4</sup>

The case for the Tyler Rationale as a curriculum paradigm can also be made from the standpoint of history. As theory, the paradigm is a dialogue between the formative (1900-1930) and central years (1930-1960) and between the central and maturing years (1960-1980) of the first eighty years of the curriculum field. In practice, the paradigm withstands the challenge of history. Throughout these several decades,

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 1.

<sup>2</sup>Ibid., p. 2.

<sup>3</sup>Ibid., p. 126.

<sup>4</sup>Ibid., p. 128.

Tyler's own research projects demonstrate the effective utilization of the rationale in its increasingly inclusive application from one classroom to the entire nation. The paradigm, over the past fifty years, from 1930-1980, has also demonstrated its adaptability to a spectrum of levels of education. The rationale has been successfully applied to view instructional programs at many levels of education from primary to secondary schools, from colleges to professional schools, both within schools and other educative agencies, and in America and abroad. The rationale has also been employed effectively for extreme viewpoints of education spanning from the instructional program for the experimental progressive schools of the 1930s to the diametrically antithetical view of learning by the behaviorists of the 1970s. The lack of success, described by John Goodlad in Behind the Classroom Door, in the discipline-centered curriculum projects of the 1960s, which rejected the Tyler Rationale, also supports the value of the rationale as a curriculum paradigm.<sup>1</sup>

The use of the paradigm has been tested by Tyler himself since its introduction almost thirty-five years ago. During this period, Tyler has clarified, modified, and transformed some aspects of the rationale and in so doing illustrated its worth as "the basis for solutions to yet other problems." The Tyler Rationale is a paradigm developed from the foundations of the past which incorporates many of "the beliefs, values, and techniques" of the field. The paradigm is "a distillation of the sources and determinants in curriculum development from

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<sup>1</sup>John I Goodlad, Behind the Classroom Door, (Worthington, Ohio: C. A. Jones Publishing Co., 1970).

theory and practice spanning the first half of this century."<sup>1</sup>

The conceptual origins of the rationale in the first half of the century of the curriculum field stem most immediately from John Dewey's The Sources of a Science of Education.<sup>2</sup> The determinants and sources of the rationale, however, can be traced further back into history by examining the interwoven pattern of relationships among the theorists and the mentors, who are Tyler's intellectual ancestors. This group of intellectual ancestors, whose influence on the rationale is examined, is comprised of two theorists, John Dewey and Edward Thorndike, who are not Tyler mentors, and four theorists, who are Tyler's mentors: Charles Judd, W. W. Charters, Franklin Bobbitt, and George Counts. An important basis from which to trace this influence is the NSSE's Twenty-Sixth Yearbook and selected major writings of these curricularists. Another basis is Tyler's references to these curricularists in Basic Principles and in the major statements he makes about the rationale between 1950-1976.

Many of the influencers are interrelated, but the effect of each theorist or mentor upon the Tyler Rationale is different in substance and nature of influence. Some theorists influence a concept or theory and others influence a technique or an approach. The most influential ideas derive from John Dewey and Edward Thorndike, whose influences have four common factors: (1) both have an intellectual ancestor in William James, (2) both influence learning theory, (3) each influences an approach to experimentation, and (4) both are identified in the early

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<sup>1</sup>Tanner and Tanner, Curriculum Development: Theory into Practice, p. 95.

<sup>2</sup>Dewey, The Sources of a Science of Education, p. 9.

(1950) and the most recent (1976) explanations of the rationale.

Dewey's influence, however, seems to be greater than Thorndike's.

Charles Judd, who is interrelated with Thorndike, is the third greatest influence on the rationale. Thorndike and Judd are both prominent educational psychologists in America who initiated the movement to apply "the quantitative method to provide educational solutions."<sup>1</sup> Thorndike was trained at Harvard under William James. Judd, on the other hand, was trained at the University of Leipzig under Wilhelm Wundt between 1894-1896. Thorndike and Judd both champion research and measurement. Judd fashioned the Psychological Laboratory at Yale, which he directed between 1907-1909, upon the theories of Wundt, whose ideas were just beginning to filter to America, and Thorndike, a professor at Teacher's College, Columbia University since 1904, was the Director of the Institute of Educational Research at Columbia. Thorndike was the initiator of the measurement movement, and Judd made the Department of Education at the University of Chicago, where he was Chairman since 1909, a center for quantitative study of education.

These two leading psychologists, however, also disagreed on several main points of thought. Tyler, a doctoral student, who studied under Judd at the University of Chicago, was influenced in part by Judd's and in part by Thorndike's theories, but in the rationale determinants of both leading theorists are distilled. The influences of

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<sup>1</sup>Harold Rugg, "Curriculum-Making and the Scientific Study of Education Since 1910," The Foundations and Techniques of Curriculum-Construction, in Twenty-Sixth Yearbook of the National Society for the Study of Education, pt. 1 (Bloomington, Ill.: Public School Publishing Co., 1926), p. 67.

each educational psychologist upon Tyler is different, but the main strand of influence stems from William James to John Dewey and Edward Thorndike. Another strand stems from Charles Judd to Tyler.

Other overlapping influences exist within the Tyler intellectual genealogy when the focus is upon another mentor, W. W. Charters. John Dewey not only has an intellectual ancestor in common with Thorndike, but he also mentors W. W. Charters, who ". . . moved on to a Ph.D. in Methods of History Teaching at the University of Chicago, studying under Dewey, whom he acknowledged to have influenced him deeply."<sup>1</sup> Charters, in turn, mentors Tyler, and the two enjoy a long and influential collegial relationship spanning three decades. Thorndike's indirect influence upon Tyler can also be traced through Charters, but Charters, who is prominent in the Tyler genealogy from several directions, is not as great an influence as the theorists identified earlier or as some historians would have us believe.

Charters is not only mentored by Dewey and influenced by Thorndike, but he is also a colleague of Franklin Bobbitt. The measurement movement between 1914-1918, initiated by Thorndike, provided a psychological theory for the concept of efficiency, a concept internalized in education by the mid-Twenties. Both W. W. Charters and Franklin Bobbitt are leaders in this movement, and both are influenced by Thorndike in their respective techniques of activity or job analyses. Both Charters and Bobbitt are also colleagues of Charles Judd in the Department of Education at the University of Chicago. Charters joins

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<sup>1</sup>Seguel, The Curriculum Field: Its Formative Years, p. 90.



the staff of the University of Chicago in 1925, and Bobbitt's "first university post was in Instruction in Educational Administration at the University of Chicago in 1909. This was Judd's first year at the University of Chicago also, and as a colleague Bobbitt was introduced to the ". . . world of educational measurement, which was to influence his thinking. . . ." <sup>1</sup> Another member of the Tyler intellectual genealogy is George Counts, who is also a colleague of Judd, Charters, and Bobbitt at the University of Chicago, where he mentors Tyler.

From among the philosophers: Wilhelm Wundt, William James, and John Dewey; the educational psychologists: Edward Thorndike and Charles Judd; and the curricularists: W. W. Charters, Franklin Bobbitt, and George Counts, each is a source of intellectual influence but of unequal and dissimilar impact. These conceptual origins, however, provide the common lineage from William James to John Dewey, and less importantly but still significantly, to other curricularists through a web of influence. Tyler personally credits the Twenty-Sixth Yearbook of the National Society for the Study of Education, Foundations and Techniques of Curriculum-Construction, as significant to his understanding the field when he was a doctoral student during the year of its publication.

Another important source of influence upon the Tyler Rationale can be traced from references in Basic Principles in which Tyler names the research or theory of the following men: Prescott's needs' study, Craig's interest studies, Herbert Spencer's examination of What Knowl-

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<sup>1</sup>Ibid., p. 78.

edge is of Most Worth, Charters' job analysis technique, Thorndike's theory of transfer, Judd and Freeman's theory of generalization, and Dewey's learning theory.<sup>1</sup>

Each of these references has been examined as a source to help determine the nature of the influence. Neither Prescott nor Craig are significant to the rationale, but needs' and interests' studies are important in the original rationale and in the modifications in 1976. Tyler's answer to Spencer's question places emphasis upon the general rather than the particular function of knowledge. This answer is sustained throughout the explanations of the rationale from 1950-1976. Charter's technique of job analysis is utilized, but it is not of major significance to the rationale. Thorndike's and Dewey's influence is upon Tyler's definition of learning process and theory and upon the scientific approach to curriculum. Thorndike influences measurement-evaluation and Dewey influences Tyler's view of the sources of the science of education. Judd's and Freeman's influence is upon the definition of objectives as general rather than specific. George Counts, whose name is not mentioned in Basic Principles is influential upon the final chapter of the text, which explains the role of different personnel in curriculum development.

Two other curricularists, colleagues of Tyler, Douglas Waples' and Boyd Bode's influence was also examined. Douglas Waples and Tyler worked together on the Commonwealth Teacher Training Project and are co-authors of two books. Boyd Bode's influence upon Charters was

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Construction, pp. 7-63.

recognized by the latter, and Bode was also a colleague of Tyler's and his critic at Ohio State University. The influence of Waples is discussed in the review of literature and in Tyler's own research project. The influence of Boyd Bode is not traceable to the rationale.

Since a paradigm for the field is "the distillation of the courses and determinants in curriculum development, which is a constellation of values and techniques shared by the members of the community," it is more important to trace the similarities between the sources and the paradigm than to trace the differences. Influence, therefore, is defined in terms of similarities rather than differences between an influencer from the formative years (1890-1930) to the influences or its variation in the Tyler Rationale. Influence is also defined as: (1) a source, determinant, variable, or theory; (2) an approach applied in practice; or (3) a specific technique with roots in the past.

Since a paradigm can be created through at least three processes: (1) replication or imitation, (2) a variation upon a past determinant, or (3) a new invention, the influence of the past upon a present paradigm can occur in one of the first two ways. About the third point, which is about originality, it must be remembered that originality is not to be construed as a more important measure of a paradigm than consensus. A scientific paradigm is usually invented systematically and incrementally before a break through occurs. The influence of the past upon the Tyler Rationale is observable as an imitation or a variation upon theories, approaches, sources, and techniques of earlier curriculumists in the field. The rationale, however, is developed not only by selection from and synthesis of ideas from the field, but also from

Tyler's invention of new concepts, from new arrangements and inter-relationships of variables, and from new ways of operationalizing the variables to create a system of thought for the field. The evolution of the paradigm through Tyler's research projects from 1930-1950 and his clarifications, modifications, and changes over the past fifty years from 1930-1980 underscore the importance and the uniqueness of Tyler's contribution in bridging the past and the present. The intellectual influence of the luminaries of the past underscores the consensus derived from the formative years (1890-1930), upon which Tyler builds to create the major paradigm for the field.

### Three Generations of a Scientific Approach to Education

"Since the beginning of the present century there has prevailed a growing conviction that psychological research must lead the way to a scientific education."<sup>1</sup> One momentum for a scientific approach to education derived from: normal schools, research labs, and the public. Before the introduction of psychology as a science to the American universities at the turn of the century, the normal schools of the country had already created an attitude favorable to the acceptance of the scientific approach. Teacher training was identified with the study of Pestalozzian methods of instruction, and the Hebartian Society emphasized the dependence of educational procedures on scientific psychol-

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<sup>1</sup>Walter T. Pax, A Critical Study of Thorndike's Theory and Laws of Learning, ed. Thomas G. Foran, The Catholic University of America, Educational Research Monographs, vol. 11, no. 1 (Washington, D.C.: Catholic Education Press, 1938). p. 13.

ogy.<sup>1</sup> Between 1890 and 1900, twelve psychological research laboratories proliferated to twenty-six. The pragmatic spirit in America also demanded that the new psychology dedicate its efforts to the practical problems of education. Many teachers and psychologists "were of the opinion that if the structural psychology could contribute so little to the solution of educational problems, it was the business of American scholars to construct an experimental psychology that could meet the pragmatic test."<sup>2</sup> "Both at Columbia and at Chicago the union between experimental psychology and the new movements [scientific and pragmatic] in education had already been established; in America they could no longer go sharply separated ways."<sup>3</sup>

Essentially, the foundations for a scientific basis for education had been laid by John Dewey and others at the University of Chicago. Writing in NSSE's Twenty-Sixth Yearbook, Harold Rugg explains the rise of the measurement movement before 1910. By 1909, scientific methods were coming into their own both at Columbia and Chicago. Rugg states, "Under the leadership of Thorndike in New York and Judd in Chicago, the new scientific movement got definitely underway. Under Judd's stimulation a decade and a half of active laboratory analysis of

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<sup>1</sup>Edwin G. Boring, A History of Experimental Psychology (New York: Century Co., 1929), p. 238.

<sup>2</sup>Clarence E. Ragsdale, Modern Psychologies and Education (New York: Macmillan Co., 1932), p. 47.

<sup>3</sup>Pax, A Critical Study of Thorndike's Theory and Laws of Learning, p. 15.

learning in reading, handwriting, and arithmetic were inaugurated."<sup>1</sup> Rugg concludes, "It would not be counted an exaggeration to say that the work of Judd and his associates in those formative years was one of the two or three chief influences which brought about . . . the expediting of the scientific study of the learning process, and the measurement of school practice."<sup>2</sup>

Describing curriculum-making and the scientific study of education since 1910, Harold Rugg observes that with the close of the first decade of the twentieth century a new and vigorous leadership was offered in curriculum-making, with interest transferred from scholarship, mind training, and knowledge for knowledge's sake to more objective procedures in education. Rugg states:

Under the leadership of Thorndike, Judd, Cubberly, Strayer, Terman, Whipple, Freeman, Gray, and others, the quantitative method began to be applied to the solution of educational problems. The fact-finding era was launched; it was the day of the question-blank and the school survey. Learning was being experimentally investigated in the laboratory; tests had entered the classroom. Thorndike had made available the statistical procedure of the British biometricians (1903); standard deviations and coefficients of correlation were in the air.<sup>3</sup>

Rugg identifies a number of school activities, mostly administrative, which were being studied by the new quantitative techniques.

Between 1910-1920, the association between the new measurement movement and the National Education Association's Committee on the Economy of Time provided the impetus necessary to apply methods of re-

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<sup>1</sup>Harold Rugg, "Curriculum-Making in Laboratory Schools," The Foundations and Techniques of Curriculum-Construction, in Twenty-Sixth Yearbook of the National Society for the Study of Education, pt. 1 (Bloomington, Ill.: Public School Publishing Co., 1926), p. 97.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid., p. 67.

search to the study of curriculum. Rugg reports:

The steps by which the new educational measures began to apply methods of research to the study of curriculum were: first, the construction and use of tests in arithmetic, spelling, language, algebra . . .; second, the inventory of the current curriculum by the tabular analysis of "courses" of study and textbooks; third, the determination of socially worthwhile skills and knowledge by the tabulation of actual human activities; fourth, and much later, the careful determination of trends in societal development, the chief institutions and problems of contemporary life, and standards of appreciation. . . .<sup>1</sup>

By 1910, the school survey was growing in popularity as a technique to use for the reconstruction of the school curriculum. By 1920, the scientific movement was influencing school curriculum through the new types of school textbooks in the skill subjects. After 1920, the surveys and studies were characterized by much greater completeness.

It is Ralph Tyler, who enters the field of curriculum at the height of the union between experimental psychology and the measurement movement. Tyler is an educational psychologist and statistician at the University of Chicago, one of the prominent centers of the movement. Tyler assumes the third generation of new leadership for this evolving scientific approach to curriculum, which begins with William James and Wilhelm Wundt, the first generation and Tyler's mentors, the second generation. (See Figure 5.)

#### The John Dewey Heritage

During the first quarter of the twentieth century, John Dewey plays a leading role in education as does Ralph Tyler in the second and third quarters of the century. The nature and kind of Dewey influence

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<sup>1</sup>Ibid., p. 69.

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 Tyler Genealogy: The Influence of Past Curricularists (1890-1930)
 

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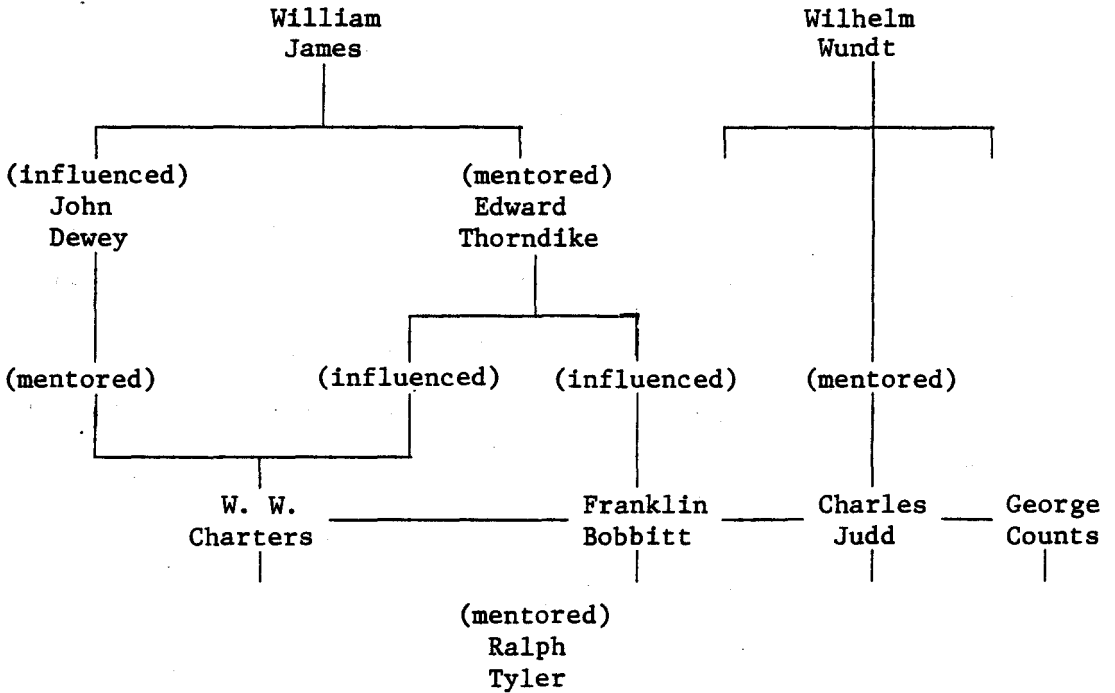


Fig. 5. The intellectual genealogy of Ralph Tyler shows three generations of mentor influence and the interrelationships among these curricularists who applied the scientific approach to curriculum.



upon the Tyler Rationale can be traced through four different associations: (1) Tyler builds upon Dewey's definition of education, (2) Tyler emulates Dewey's example of building theory from practice, (3) Tyler extends Dewey's scientific approach to education, and (4) Tyler utilizes Dewey's learning theory. The Dewey heritage translated into the Tyler Rationale creates a John Dewey-Ralph Tyler curriculum paradigm.

Tyler's definition of education builds upon Dewey's foundation, which in turn builds upon two texts by William James, Psychology and Talks to Teachers on Psychology. The two James' texts develop the thesis that "education is for behavior and habits are the stuff of which behavior consists."<sup>1</sup> Dewey and Tyler both define habit and behavior. Dewey explains, "The basic characteristic of habit is that every experience enacted and undergone modifies the one who acts and undergoes, while this modification affects, whether we like it or not, the quality of subsequent experiences."<sup>2</sup> In the beginning of his career, Tyler adds the definition of behavior in the broad sense "to include thinking and feeling as well as overt action."<sup>3</sup> Fifty years later, Tyler integrates both the concept of habit and behavior when he describes, "The only behavior that is truly learned is the behavior the learner carries on with consistency so that it becomes part of his or her repertoire. . . ."<sup>4</sup> The James-Dewey-Tyler curriculum paradigm has roots in the 1890s and results in the 1980s.

<sup>1</sup> Ibid., p. 92

<sup>2</sup> Dewey, Experience and Education, p. 35.

<sup>3</sup> Tyler, Basic Principles of Curriculum and Instruction, p. 6.

<sup>4</sup> Tyler, "Two New Emphases in Curriculum Development," p. 63.

A second major influence is Tyler's emulation of Dewey's approach to experimentation or practice to derive theory. Dewey operates the Laboratory School at the University of Chicago for the purpose of scientific investigation into problems connected with the psychology and sociology of education. The purpose of the Laboratory School was to apply scientific concepts and methods to the conduct of the school work. Based upon his central doctrine of the need for child activity, Dewey, through experimental practices, transforms elementary schools. Dewey's criterion for excellence of an educational system was: "Does it produce the constant tendency toward growth [and] creative self-expression, rather than the learning of subject matter. . . ." <sup>1</sup> At the University of Chicago, Dewey formulates his theory about the sources of a science of education, a theory derived from practice. Although Dewey's emphasis on "scientific research" pre-dates, by about a dozen years, the work of Edward Thorndike and Charles Judd, it is not until the 1920s that Dewey begins to write about sociology, psychology, and measurement as some of the sources of a science of education.

Similar to Dewey's experimental work at the Laboratory School, Tyler designs an experiment for evaluating secondary schools during the Eight Year Study. From their experimentation Dewey creates a model for progressive education at the elementary school level and Tyler at the secondary level respectively. Through practice, each derives a text on scientific principles of curriculum. John Dewey writes The Sources of a Science of Education, and Ralph Tyler writes Basic Principles of Cur-

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<sup>1</sup>Rugg, "Curriculum-Making in Laboratory Schools," p. 92.

riculum and Instruction. Both Dewey and Tyler write several other descriptions of their work before and after their research is completed, but these two books seem important in understanding the Dewey-Tyler paradigm.

A third major influence upon Tyler is his extension of Dewey's scientific approach to education described in at least three of Dewey's works. The earliest article, "Education as Engineering," is again based upon a Jamesean premise which declares, "Anyone grasps the significance of a generalization only in the degree in which he is familiar with the detail covered by it."<sup>1</sup> Upon this assumption, Dewey argues that to develop a science of education, experience must precede theory just as in any science. Dewey states:

New conceptions in education will not of themselves carry us far in modifying schools, for until the schools are modified the new conceptions will be themselves pale, remote, vague, formal . . . they will offer precise and definite modes of thinking only when new meanings and values have become embodied in concrete life-experience and are thus sustained by them.<sup>2</sup>

Using the metaphor of engineering, which he does in two of the three writings, Dewey explains how a science of education can occur. He states:

There was, I take it, no definite art or science of modern bridge building until after bridges of the new sort had been constructed. The formulae for construction, the rules of specific procedure, the specific classification of types of problems and solutions had to wait upon presentation of appropriate concrete material, that is upon successful experimentation.<sup>3</sup>

In 1922, Dewey explains that there is no art of educational engineering

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<sup>1</sup> John Dewey, "Education as Engineering," The New Republic 32 (September 1922): 89.

<sup>2</sup> Ibid.

<sup>3</sup> Ibid., p. 91.

and that there will not be one until considerable progress has been made in creating new modes of education. Dewey concludes, "I only say that the benefit of such an art cannot be had until a sufficient number of individuals have experimented without its beneficial aid in order to provide its materials."<sup>1</sup> Tyler, drawing upon this basis through twenty years of experimentation including: nine years of Service Studies, eight years of evaluating progressive schools, and six years of developing general education for the college level, attempts to build the "experimental materials" to enable the scientific principles described by Dewey to be drawn.

"Progressive Education and the Science of Education," a second article by Dewey, further clarifies his meaning of the science of education and introduces the early sources of Tyler's approach in the curriculum field. In 1928, Dewey challenges the progressive schools to use the educative process as the source of investigation; in 1934, Tyler uses the educative process of progressive schools as the content for his investigation of thirty schools during the Eight Year Study. Dewey's article is first presented to a Conference of the Progressive Education Association. At the Conference, Dewey tries to elicit at least two contributions, which progressive schools should make to the service of education: "one, is the development of organized subject matter . . . the other is a study of conditions favorable to learning."<sup>2</sup>

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<sup>1</sup> Ibid.

<sup>2</sup> John Dewey, "Progressive Education and the Science of Education," in Dewey on Education, ed. Martin Dworkin (New York: Teachers College Press, Columbia University, 1959), p. 125.

Dewey's questions asked at the Conference further define his meaning of the science of education. Dewey asks:

Does [experimentation] rest upon principles which are adopted at least as a working hypothesis? Are the actual results consistently observed and used to check on underlying hypotheses . . . ? Should we demand that out of the cooperative undertakings of various schools a coherent body of educational principles shall gradually emerge as a distinct contribution to the theory of education.<sup>1</sup>

These are the questions to be answered to create a science of education, and these questions are the undergirdings of Tyler's work with the thirty progressive schools.

In the article, Dewey also insists upon two changes in the traditional approach to education for a science of education: a change in measurement and a change in objectives. Dewey notes, "The place of measurement of achievements as a theory of education is very different in a static educational system from what it is in one which is dynamic, or in which the ongoing process of growing is the important thing."<sup>2</sup> Dewey continues, "The same principle applies to the attempt to determine objectives and select subject matter of studies . . . a different method and content is indicated for the education science."<sup>3</sup> This challenge is the basis for the Tyler Rationale.

Tyler accepts Dewey's challenge and attempts to develop evaluation as a scientific method for education beginning in 1931. It is just three years after Dewey's address, when Tyler initiates a type of measurement different from traditional measurement, so different, in fact, the concept is called evaluation. As a consequence, a source of the science of education evolves, and Tyler becomes recognized for "putting

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<sup>1</sup>Ibid., p. 114.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid., p. 119.

evaluation on a scientific footing." The new measurement, according to Dewey, should be characterized as placing special emphasis upon the "continual growth" of the child and upon the "ongoing process" of learning. Evaluation is "a process" incorporating many more factors to be measured and requiring many new techniques and instruments. "Since evaluation," explains Tyler, "involves getting evidence about behavior changes in the students, any valid evidence about behavior that are desired as educational objectives provides an appropriate method of evaluation."<sup>1</sup> The transition from testing students to evaluation is one of the major contributions Tyler helps to create.

The most important of the three essays regarding Dewey's scientific approach to education, is The Sources of a Science of Education. In the essay, Dewey defines education in "all its branches and phases-- selection of material for the curriculum, methods of instruction and discipline, organization and administration of schools. . . ."<sup>2</sup> The essay also defines education as a science. "Science signifies . . . the existence of systematic methods of inquiry, which, when they are brought to bear on a range of facts, enable us to understand them better and to control them more intelligently. . . ."<sup>3</sup> In the essay Dewey also phrases two central questions: "What are the ways by means of which the function of education in all its branches and phases . . . can be conducted with systematic increase of intelligent control and understand-

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 107.

<sup>2</sup>Dewey, The Sources of a Science of Education, p. 9.

<sup>3</sup>Ibid., pp. 8-9.

ing? [and] What are the materials upon which we may and should draw. . . .?"<sup>1</sup> Dewey concludes his definition with the following thought. "No genuine science is formed by isolated conclusions, no matter how scientifically correct the technique . . . science does not emerge until these various findings are linked up together to form a relatively coherent system."<sup>2</sup>

Tyler applies Dewey's scientific approach to education. Dewey focuses upon all branches of education, but Tyler limits his focus to the selection of material for curriculum and the methods of instruction and excludes the organization and administration of schools. Like Dewey, Tyler applies systematic methods of inquiry, which are explained in the fourth chapter of this investigation. Tyler, again similar to Dewey, also examines the materials or sources of a science of education. Following Dewey's scientific approach, Tyler contributes basic principles of curriculum when sufficient linkage occurs to form a relatively coherent system of thought. Tyler's major research projects provide data in response to Dewey's view. "Each investigation and conclusion is special but the tendency of an increasing number and variety of specialized results is to create new points of view and a wider field of observation."<sup>3</sup>

Dewey's description of the science of education is applied in Tyler's scientific approach to his research. Dewey describes: (1) the meaning, (2) the techniques, (3) the principles, (4) the attitudes, and (5) the sources within and without the science of education. The mean-

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<sup>1</sup>Ibid., pp. 9-10.

<sup>2</sup>Ibid., p. 22.

<sup>3</sup>Ibid., p. 20.

ing of a science of education includes three criteria: no genuine science is formed by isolated conclusions, no matter how scientifically correct the technique or how exact; scientific investigation regarding educational problems must go on for a considerable time in comparative remoteness and detachment from direct application; and measurements and correlations cannot yield a science except in connection with general principles.<sup>1</sup> These criteria guided Tyler's general development of the rationale.

About scientific techniques, Dewey explains, "Educational science cannot be constructed simply by borrowing the technique of science."<sup>2</sup> Dewey believes that a period of groping is inevitable while the field develops techniques. Tyler's first search for technique occurred from 1930-1934, when he experimented with evaluation and then wrote the ten steps for evaluation. His second search for technique occurred between 1934-1945, when he experimented in the two studies preceding the rationale. His third search for technique occurred from 1950-1985, when he modifies the rationale again based upon experimentation.

Dewey's conclusion concerning the principles and attitudes of a science of education is "that laws and facts . . . do not yield rules of practice."<sup>3</sup> The word rule can only be applied if "scientific results furnish a rule for the conduct of observations and inquiries. . . ."<sup>4</sup> Regarding a scientific attitude Dewey believes, "The value of the

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<sup>1</sup>Ibid., pp. 23-25.

<sup>2</sup>Ibid., p. 26.

<sup>3</sup>Ibid., p. 28.

<sup>4</sup>Ibid., p. 30.



science, the history and philosophy of education acquired . . . resides in the enlightenment and guidance it supplies to observation and judgment of actual situations. . . ." <sup>1</sup> Dewey draws the important conclusion, which is stated, "Educational science is not found in books, nor in experimental laboratories, nor in the classrooms where it is taught, but in the minds of those engaged in directing educational activities." <sup>2</sup> Again, this principle and attitude are prevalent in Tyler's cumulative research projects which are built upon each other in which ". . . results are sources to be used . . . to make educational functions more intelligent." <sup>3</sup>

Dewey's final point regarding the sources of a science of education explains that the "science of education is not independent"; <sup>4</sup> therefore, the sources outside of education must be examined. Dewey reasons that the only content of education is educational practices because: (1) educational practices provide the data, the subject-matter, which form the problems of inquiry and because (2) educational practices are the final test of value of the conclusion of all researches. <sup>5</sup> From this premise, Dewey reasons, since concrete educational experience is the primary source of all inquiry and reflection, an active working relationship between the teacher and the research is an important ingredient. It is clear that Tyler's work uses educational practices as the source and measure of his investigations. It is also clear that Tyler's model describes the relationship between the investigator and

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<sup>1</sup>Ibid., p. 31.

<sup>2</sup>Ibid., p. 32.

<sup>3</sup>Ibid., p. 33.

<sup>4</sup>Ibid., p. 35.

<sup>5</sup>Ibid., p. 33.

the teacher. Tyler incorporates Dewey's idea to assure a relationship between the two through the creation of the inservice teacher workshops.

Obvious agreement between Dewey and Tyler seems apparent on the meaning, techniques, principles, and attitudes of a scientific approach to education. Another important parallel, however, is in the final point regarding the sources of the science of education. Dewey reasons that since there is no "intrinsic educational science content," education must select from any pertinent subject whatsoever. Dewey then identifies certain subjects, psychology and sociology, which occupy privileged positions as sources of the science of education. Dewey emphasizes the continuity of the learning process and warns against making a sharp distinction between psychology and sociology or between what is learned, the subject matter of the social sciences, and how it is learned, the subject of psychology. In Dewey's explanation, ". . . psychology lies nearer to the question of means and the social sciences nearer to that of ends. . . ." <sup>1</sup> Dewey also warns against separating the psychological process of skill acquisition from the social conditions through which skill is applied.

In the rationale, Tyler also uses sources outside of education described by Dewey, especially the "privileged source," psychology as a screen to filter objectives. At first, in 1950, Tyler explains that the psychology of learning "is a second screen through which the suggested objectives should be passed." <sup>2</sup> Later, in 1966, the last time he men-

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<sup>1</sup>Ibid., p. 61.

<sup>2</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 37.

tions psychology as a screen, Tyler changes the place and function of psychology of learning. Tyler states, ". . . psychology formulations may also be used to indicate areas for inclusion and exclusion prior to systematic studies of sources of objectives."<sup>1</sup> About Tyler's use of psychology as a source of the screen of education, the Tanners state, "It would appear that Tyler's early identification of the psychology of learning as a screen for educational objectives and his omission of other human sciences was an oversight, otherwise, he would have made a case for the pertinence of psychology over other human sciences."<sup>2</sup> Dewey, however, considered psychology a privileged human science.

Dewey's rationale, The Sources of a Science of Education also explains philosophy as an outside source calling it "the special source." Dewey warns, "It is sometimes said that philosophy is concerned with determining ends of education while the science of education determines the means used."<sup>3</sup> "The philosophy of education," according to Dewey, "neither originates not settles ends. It occupies an intermediate and instrumental or regulative place."<sup>4</sup> "What a philosophy of education can contribute is range, freedom, and constructive or creative invention."<sup>5</sup>

Tyler's response to make philosophy a source of the science of education in the 1950 rationale is to use philosophy, like psychology,

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<sup>1</sup> Tyler, "New Dimensions in Curriculum Development," p. 26.

<sup>2</sup> Tanner and Tanner, Curriculum Development: Theory into Practice, p. 85.

<sup>3</sup> Dewey, The Sources of a Science of Education, p. 55.

<sup>4</sup> Ibid., p. 56.

<sup>5</sup> Ibid., p. 57.

as a screen for objectives. Tyler states, "The educational and social philosophy to which the school is committed can serve as the first screen."<sup>1</sup> Tyler viewed philosophy as a filter or a screen to help determine objectives, but Dewey viewed "philosophy as more of a compass and he viewed all of the human sciences as screens through which knowledge can be drawn to serve educational purposes."<sup>2</sup> In his final statement, in 1966, concerning philosophy as a screen, Tyler states, "The book [Basic Principles] does not present a philosophy of curriculum; each institution must develop and clarify its own philosophy."<sup>3</sup>

Dewey concludes The Sources of a Science of Education, with a brief explanation of "educational values and objectives. Dewey asks, "How are they [objectives] to be determined? From what are they derived?"<sup>4</sup> Dewey's answer is that ". . . the educative process . . . should determine them . . . for education is itself a process of discovering what values are worthwhile and are to be pursued as objectives."<sup>5</sup> Dewey, however, begins answering this question in 1902, some twenty-seven years earlier in The Child and the Curriculum. In The Child and the Curriculum, Dewey names three sources of objectives; two sources include: "The fundamental factors in the educative process are an immature undeveloped being; and certain social aims, meanings, values

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 34.

<sup>2</sup>Tanner and Tanner, Curriculum Development: Theory into Practice, p. 85.

<sup>3</sup>Tyler, "Two New Emphases in Curriculum Development," p. 61.

<sup>4</sup>Dewey, The Sources of a Science of Education, p. 73.

<sup>5</sup>Ibid., p. 74.

incarnate in the natural experience of the adult."<sup>1</sup> The third source of objectives Dewey names is subject matter, which he calls "the specialization and division of curriculum," about which he observes, "[The child] goes to school, and various studies divide and fractionalize the world for him . . . the studies [geography, arithmetic] as classified are the product . . . of the services of the ages, not of the experience of the child."<sup>2</sup> Dewey theorizes ". . . that the child and the curriculum are simply two limits which define a single process."<sup>3</sup>

Already in 1902, Dewey anticipates the problem of the field regarding the three sources of objectives. He states:

It is easier to see the conditions in their separateness, to insist upon one at the expense of the other, to make antagonists of them, than to discover a reality to which each belongs. . . . When this happens a really serious practical problem--that of interaction--is transformed into an unreal, and hence unsoluble theoretical problem. Instead of seeing the educative process steadily and as a whole, we see conflicting terms. We get the case of the child vs. the curriculum; of the individual nature vs. social culture. Below all other divisions in pedagogic opinion lies this opposition.<sup>4</sup>

Dewey attempts to resolve the opposition. Dewey's solution is, "The educative process is the due interaction of these forces. Such a conception of each in relation to the other as facilitates competent and freest interaction is the essence of educational theory."<sup>5</sup>

In Basic Principles, Tyler develops a rationale built upon Dewey's question, "From what are they [objectives] derived?" Regarding Tyler's viewpoint about the sources of objectives, he writes:

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<sup>1</sup>John Dewey, The Child and the Curriculum (Chicago: University of Chicago Press, 1902), p. 8.

<sup>2</sup>Ibid., pp. 10-11.

<sup>3</sup>Ibid., p. 16.

<sup>4</sup>Ibid., p. 8.

<sup>5</sup>Ibid.

The point of view taken in this course [Education 360] is that no single source of information is adequate to provide a basis for wise and comprehensive decisions about the objectives of the school. Each of these sources has certain values to commend it. Each source should be given some consideration in planning any comprehensive curriculum program. Hence, we shall turn to each of the sources in turn to consider briefly what kinds of information can be obtained from the source and how this information may suggest significant educational objectives.<sup>1</sup>

Basic Principles describes the manner in which the three theoretical divisions can be worked out as the experience and the practice of the Eight Year Study warranted. Tyler includes the same three sources of objectives as Dewey but places them in this order: "studies of the learners themselves," "studies of contemporary life outside of school," and "suggestions about objectives from subject specialists."<sup>2</sup>

Dewey and Tyler agree upon the three sources of objectives, which Dewey identifies in 1902, and Tyler popularizes between 1934-1942 during the Eight Year Study. Additionally, Tyler designs and recommends procedures for deriving objectives from these three sources by building on Dewey's explanation of the sources of a science of education.

Although Tyler translates Dewey's concept of the three sources of objectives into practice and later principles of curriculum, Tyler and Dewey treat the sources of objectives somewhat differently. Dewey treats the sources interactively concerned that their separateness might become the basis for opposition among those who emphasize subject matter against curricularists who emphasize child-centered or society-centered curriculum and vice versa. Dewey's interactive treatment describes how subject matter and the learner interrelate as sources of objectives,

<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 5.

<sup>2</sup>Ibid., p. v.

how the learner and society interrelate, and so on.

Tyler's answer to the three sources of objectives is, on the other hand, an eclectic approach in which he cites the learner first, and society second, and the suggestions from subject matter specialists third. According to Tyler, "Each of these sources has certain values to commend it [and] . . . should be given some consideration in planning any comprehensive curriculum program."<sup>1</sup>

Tyler tends to separate the sources in the rationale of 1950 except for "the suggestions from subject-matter specialists." Both Dewey and Tyler agree upon the dual function of knowledge and upon the function they believe the school can serve. Dewey observes:

Every step . . . has two aspects: one for the scientist as scientist; the other for the teacher as teacher. . . . For the scientist, the subject-matter represents simply a given body of truth to be employed in locating new problems, instituting new researches, and carrying them through to verified outcomes.<sup>2</sup>

With this view, Dewey contrasts the teacher's problem. "He [the teacher] is not concerned with subject-matter as such, but with the subject-matter as a related factor in a total growing experience . . . to psychologize it."<sup>3</sup> Tyler presents his explanation of this topic in a separate question for the scientist: What can your subject contribute to the education of young people who are not going to be specialists in your field?"<sup>4</sup> Tyler indicates that if subject specialists can present

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<sup>1</sup>Ibid. p. 5.

<sup>2</sup>Dewey, The Child and the Curriculum. p. 28.

<sup>3</sup>Ibid., p. 30.

<sup>4</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 26.

answers to this question, they can make an important contribution to curriculum.

In these different positions between Dewey's "interactive" and Tyler's "eclectic" approach to the sources of objectives, criticism has been leveled against Tyler's position. While Dewey's explanation is considered more satisfactory by some critics, indications are that the Tyler Rationale is equally satisfactory for several reasons.<sup>1</sup> First, Tyler makes his own adaptations in response to the criticism. In 1966, Tyler states:

In connection with investigation of curriculum objectives, the greatest change in my thinking relates to the conceptions of the learner and of knowledge . . . I now think it is important in curriculum development to examine the concept of the learner as an active, purposeful human being. This appears to be an important psycho-philosophic factor to consider at an early stage of work on objectives. . . . I now seek to explore the nature of the knowledge and structure of an area before deriving and formulating objectives involved in that area.<sup>2</sup>

In the series of three "new statements" about the rationale, Tyler also further clarifies the three sources of objectives.

Second, history has proven that the selection of one source of objectives is detrimental. When a theoretical camp pursued one source of objectives: activity and job analysis from 1910-1920, the child-centered curriculum of the late 1920s, the discipline-centered curriculum of the 1960s, each experiment had limited longevity in contrast to the curriculum that incorporated the three sources of objectives. About the sources of objectives, Dewey, in 1929, states, "Below all other

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<sup>1</sup>Kliebard, "Reappraisal: The Tyler Rationale," p. 7.

<sup>2</sup>Tyler, "New Dimensions in Curriculum Development," p. 26.



divisions in pedagogic opinion lies this opposition." Tyler addresses the three sources of objectives between 1953-1976, and Tyler's colleagues, Hilda Taba and John Goodlad, also consider the problem in their curriculum models.

Built upon Dewey's rationale, Tyler's Basic Principles of Curriculum and Instruction combined with his literature of refinement creates a curriculum paradigm for the field. In 1974, Tyler makes his closing remarks about the state of "the sources of a science of education," which have been presented more than thirty years earlier by Dewey. In 1929, Dewey explains what the sources can do. "Segregation . . . [of education from sources] accounts for the tendency . . . to go at educational affairs without a sufficient grounding in non-educational disciplines that must be drawn upon. . . ." <sup>1</sup> Tyler extends the explanation in an essay, "Utilizing Research in Curriculum Development," in which he describes more explicitly what exactly is available from other disciplines. Tyler in Deweyan terms states, "The main point I have been making here is that in research there is more being utilized than particular findings. There are concepts . . . principles . . . facts . . . and ways of studying questions, together with key attitudes and dispositions toward studies." <sup>2</sup> Tyler uses the actual words of Dewey from The Sources of a Science of Education.

From what Dewey entitles the "privileged subjects" of sociology and psychology, Tyler identifies recent contributions to the science of

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<sup>1</sup>Dewey, The Sources of a Science of Education, p. 50.

<sup>2</sup>Tyler, "Utilizing Research in Curriculum Development," p. 7.

education. From the research of anthropologists comes the concepts of common culture with applicability for planning curriculum for a modern inner city. From social psychology, curriculum can draw concepts about function and roles of the peer group. From personality psychology come concepts of the hierarchy of needs and of the self, helpful in character education. From sociology comes the concepts of social class and social mobility, which can help in curriculum development for careers. "All these studies," Tyler concludes, "illustrate that there is a wealth of materials in research that provides concepts or principles or methods we can use in curriculum development."<sup>1</sup>

Dewey and Tyler, in these point and counterpoint companion texts, address the same question, "Can there be a science of education?" from different vantage points in history. Dewey, as has already been clarified, answers that there is "no intrinsic educational science content," but there are an approach and sources for a science of education. Tyler concurs, "Curriculum development, as we know, is not a science. Its purpose is not to obtain new knowledge. . . ." <sup>2</sup> Both use the development of engineering science as their metaphor. Dewey states:

There is a science of bridge building in the sense that there is a certain body of independent scientific material, say mathematics and mechanics, from which selection may be made . . . and organized to bring about more effective solutions in practice . . . [but] mechanics and mathematics are . . . [the sciences which they are, not sciences of bridge building].<sup>3</sup>

Tyler agrees that curriculum is a practical enterprise and "not really very precise engineering." Dewey then asserts, "We have become only

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<sup>1</sup> Ibid., p. 9.

<sup>2</sup> Ibid.

<sup>3</sup> Dewey, The Sources of a Science of Education, pp. 34-35.

recently alive to the complexity of the educative process and aware of the number and variety of disciplines that must contribute if the process is to go on in an intelligently directed way."<sup>1</sup> Tyler, after fifty years of practice responds, "The human variables themselves are more difficult to control and usually in a school with many humans there is such a combination of variables we can't expect to have precise engineering in designing a curriculum."<sup>2</sup> The paradigm of the two luminaries advances in a scientific process. Tyler explains, "What goes on is planning, execution, evaluation, replanning, and repeating the cycle."<sup>3</sup>

A final major influence of Dewey upon Tyler relates to his use of Dewey's learning theory in the rationale. In the 1926 NSSE Yearbook, Harold Rugg summarizes the perception of Dewey in the curriculum field. "It is probably safe to say that Dewey's The School and Society and . . . The Child and the Curriculum have influenced the thought of teachers in service and teachers in training in educational institutions as profoundly as any other educational writings of the past generation."<sup>4</sup> Other writings of Dewey on learning also are influential in the field. In "Ethical Principles Underlying Education," Dewey develops the basis for the reconstruction of education by setting forth "the psychological foundation of the vital dependence and interrelation-

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<sup>1</sup>Ibid., p. 49.

<sup>2</sup>Tyler, "Utilizing Research in Curriculum Development," p. 9.

<sup>3</sup>Ibid.

<sup>4</sup>Rugg, "Curriculum-Making in Laboratory Schools," p. 94.

ships upon each other of interest and effort and their utilization in the educative activities of the school."<sup>1</sup> Later, Dewey develops his psychological and educational theories in How We Think, Democracy and Education, and Experience and Education. In the latest work, Dewey's "experiential continuum" incorporates two learning principles, "continuity and interaction," which are not separate but intercept and unite. The principle of "continuity" means that every experience takes from the previous and modifies experiences thereafter. "Interaction" assigns equal weights to both objectives and internal conditions. The environment is whatever conditions interact with personal needs, desires, purposes, and capacities to create the experience which is had.<sup>2</sup>

In the 1950 version of Basic Principles, Tyler utilizes the Dewey term learning experience and defines learning as referring to the interaction between the learner and the external conditions in the environment to which he can react. "Learning takes place through the active behavior of the student; it is what he does that he learns, not what the teacher does."<sup>3</sup> Tyler, however, does not state a single learning theory but suggests the psychology of learning as a screen.

However, Tyler, from 1966-1976, relies again on Dewey's theory. In 1966, Tyler writes, "John Dewey commented more than thirty years ago on the truly educative environment as one in which there is a balance between factors under the learner's control and those he could not in-

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<sup>1</sup> Ibid., p. 93.

<sup>2</sup> Dewey, Experience and Education, pp. 33-50.

<sup>3</sup> Tyler, Basic Principles of Curriculum and Instruction, p. 63.

fluence."<sup>1</sup> Tyler concludes that it is important in curriculum development to examine the concept of the learner. In 1974, Tyler calls attention to Dewey's concept of motivation. In 1975, Tyler asks the school to "continue its long-accepted role of providing within its environment a more ideal democratic society . . . and to participate constructively . . . in the reconstruction of the total educational environment."<sup>2</sup> Finally, in 1976, Tyler places great new emphasis on the active role of the learner so that the learner can see the way in which what is learned is used and can "continue" to employ new behavior.

It is John Dewey's learning theory that Ralph Tyler incorporates in his rationale in order to have the active learner transfer training from school to non-school areas. Tyler operationalizes Question Two about the selection of learning experiences last and in so doing selects one learning theory. Dewey's learning theory is first a suggestion and finally the selected theory in the Tyler Rationale.

The Dewey-Tyler paradigm is based upon practice that created principles. Dewey describes the science of education and from that foundation, Tyler begins to use those techniques, principles, attitudes, and sources of the science of education. The scientific approach created by Dewey is extended by Tyler. Many of the determinants introduced by Dewey; namely, the curriculum divisions and curriculum sources are used and altered by Tyler in his rationale. Tyler's creation is the transformation of the divisions into fundamental questions, the intro-

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<sup>1</sup>Tyler "New Dimensions in Curriculum Development," p. 26.

<sup>2</sup>Tyler, "Reconstructing the Total Educational Environment," p. 13.

duction of a fourth new question regarding evaluation, the assigned interrelationships of these four questions, and the operationalizing of each question. These important original contributions distinguish Tyler as the "father of the behavioral objective" and "the dean of the new field of evaluation."

Dewey contributes an explanation of a scientific approach to education and Tyler extends it. Dewey mainly contributes a theory of learning, and Tyler mainly contributes a theory of curriculum. Together they create the important paradigm in the field.

#### The Edward Thorndike Heritage

The history of experimental psychology reveals Edward Thorndike as a major voice in the second generation of leadership for the new scientific approach to education. Thorndike, as it may be recalled, is interrelated with Dewey and Judd in intellectual ancestry and predisposition as well as in university affiliations and educational leadership. Influenced by William James, like Dewey, Thorndike receives one bachelor's degree at Harvard with James as his mentor. But like Judd, Thorndike also completes another undergraduate degree at Wesleyan University. At this time in history, from 1910-1930, three men, Dewey-Thorndike-Judd, occupy the main new leadership position in educational philosophy, psychology, and measurement in this country, as their predecessors, Wundt-James-Dewey did from 1890-1910. Thorndike's leadership in the measurement movement influences Tyler mentors, Franklin Bobbitt and W. W. Charters. Tyler, in turn, is the recipient of this

distinguished legacy traced from Thorndike, to which he contributes significantly.

Whereas Edward Thorndike was not a mentor of Tyler, it is appropriate to trace his intellectual influence upon Tyler for several reasons: (1) Tyler associates himself with the measurement movement through his doctoral degree in statistical measurement, (2) Tyler emerges as a new leader of the scientific approach to education, (3) Tyler identifies Thorndike's stimulus-response theory in Basic Principles, and (4) Tyler relies upon Thorndike's theory of transfer in his model. Tyler personally acknowledges Thorndike's influence upon his thinking, which also validates the importance of tracing the lineage.<sup>1</sup> Additionally, it should be noted that certain confusion between Tyler's behavioral objective and Thorndike's behaviorism principles is clarified later. The most important of these influences upon the Tyler Rationale are the measurement movement, which provides an approach to curriculum through evaluation, and the theory of transfer, which provides a learning process.

"A pioneer in animal psychology, Thorndike also concerned himself with problems of heredity, the learning process, individual differences, mental tests, educational measurement, child study, adult learning, curriculum construction, and educational administration."<sup>2</sup> From among these nine areas of concentration, two areas, educational measurement and the learning process, are of major concern in the Tyler legacy.

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 17.

<sup>2</sup>Merle Curti, The Social Ideas of American Educators (Paterson, N.J.: Pageant Books, 1959), p. 462.

The measurement movement, which begins in 1904 with Thorndike's Mental and Social Measurement, is at its peak between 1915-1925, at about the time Tyler enters the University of Chicago. "Taking over the methods of the physical and natural sciences and using the more quantitative devices of such pioneers as Pearson, Galton, Cottell, Rice, and Boos, Thorndike together with Judd revolutionized American educational technique."<sup>1</sup> From the first, Thorndike insisted that the chief duty of the serious student of education is to form the habit of scientific study and to learn the logic of statistics. Tyler receives his doctoral degree in statistics, which was his passageway to evaluation and curriculum.

Thorndike unites the measurement movement with the generic and comparative approach to the study of the learning process through his stimulus-response theory. Thorndike defines the concept of intelligence as the average of a multitude of highly specialized and largely unrelated functions. What is important to the measurement movement is that these unrelated functions can be measured. Although Tyler rejects Thorndike's theory of the learning process consisting of building up connections between specific stimuli and specific responses, Tyler includes the stimulus-response psychology as an option in Basic Principles. Tyler states, "Learning in these terms is a highly specific matter . . . persons who hold such a theory . . . must view objectives in highly specific terms."<sup>2</sup> Tyler states his preference for Judd's

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<sup>1</sup> Ibid.

<sup>2</sup> Tyler, Basic Principles of Curriculum and Instruction, p. 42.



theory of generalization over Thorndike's theory of specific stimulus and response learning. The original form in which objectives are stated in Basic Principles corresponds to the more general definition of objectives, which is compatible with Judd's rather than with Thorndike's theory of the learning process.

After the publication of the rationale, the problem of the form in which an objective is stated between Thorndike's requirements for "specificity" and Judd's requirements for "generalizability" is one to which Tyler returns for clarification and modification between 1964-1966 in his statements about the rationale. In 1964, Tyler identifies the level of specificity of objectives as "one persistent question in defining objective." In this chapter, he focuses on the confusion of clarity with a high degree of specificity and states, "These efforts sometimes end up with several hundred objectives for one course; this is too specific. . . ." <sup>1</sup> In 1966, Tyler confirms, "In connection with investigations of curriculum objectives, the greatest change in my thinking relates to . . . the level of generality appropriate for an objective." <sup>2</sup> Each time, Tyler discusses specificity versus generality, his direction tends away from Thorndike and toward Judd's notion.

Tyler concludes the analysis of the form in which objectives are stated by relating, "The level of generality of the objective should then be stated in the curriculum plan, with specifics used as illustra-

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<sup>1</sup>Tyler, "Some Persistent Questions on the Defining of Objectives," p. 78.

<sup>2</sup>Tyler, "New Dimensions in Curriculum Development," p. 26.

tions, rather than treating the specifics as ends in themselves."<sup>1</sup> In spite of Tyler's explicit rejection of Thorndike's S-R psychology, he is frequently and incorrectly associated with this school of behaviorism. In two interviews in the 1970s, Tyler reiterates his use of the word behavior, as defined in Basic Principles, in the broad sense to include "thinking, feeling, and overt action" and not in the narrow sense of Thorndike.

Thorndike's theory of transfer of training, however, presents a strong influence on the rationale. Tyler first deals with the concept of transfer in the Eight Year Study and concludes with an increased emphasis on the concept of transfer in the 1976 statement in which transfer becomes an integral part of the rationale. Thorndike's theory describes that whatever transfer of training takes place, it is caused by the operation of identical elements in different learning situations.

Thorndike's theory of transfer, which was first discussed in an article, "The Influences of Improvement in One Mental Function Upon Efficiency of Other Functions," written jointly with Robert Woodsworth in 1901, refutes faculty psychology. The findings in the study reveal that transfer does not occur because of mental discipline but learning transfers if the old and the new activities have common content or method. In 1924, Thorndike reports another major study "concerning the gains in intelligence score during a year made by 8,564 high school pupils . . . who took . . . Latin, geometry, English, and history and gained little more than pupils of equal intelligence who took arith-

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<sup>1</sup>Ibid.

metic or bookkeeping, cooking, or sewing, English and history."<sup>1</sup> What Thorndike concludes is, "The expectation of any large difference in general improvement of the mind from one study rather than another seems doomed to disappointment."<sup>2</sup> In 1927, the findings of "A Second Study of Mental Discipline in High Schools" concurred with Thorndike's earlier research. Tyler credits Thorndike with the theory, but several specific objections to Thorndike's theory identified in the literature and sustained by Tyler include:

1. Transfer through identical elements states a fact or condition but does not explain how the process occurs.
2. An evaluation of the evidence fails to support the theory of identical elements.
3. The theory is based upon psychic atomism which is untrue as it is incapable educationally of sound application.
4. The theory leads us back to the apprenticeship system which is incompatible with the democratic ideal.<sup>3</sup>

Given these objections, Tyler agrees with Charles Judd about the more general nature of transfer and differs with Thorndike. Judd explains:

The literature of education contains more misleading statements with regard to transfer of training than with regard to any other subject. . . . A review of all that has been written about the transfer of training cannot fail to convince one of the futility of attempting to explain human mental life at its upper levels by

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<sup>1</sup>Cecil R. Broyler, Edward L. Thorndike, and Ella Woodyard, "A Second Study of Mental Discipline in High School Studies," Journal of Educational Psychology 18 (September 1927): 382.

<sup>2</sup>Ibid.

<sup>3</sup>Pax, A Critical Study of Thorndike's Theory and Laws of Learning, p. 10.

simple formulas. Transfer is certainly not characteristic of animal life.<sup>1</sup>

Judd criticizes Thorndike for interpreting his research to support his theory of stimulus-response psychology. Unlike Thorndike's doctrine, which describes transfer of specifics and lower mental process, Judd is interested in generalizability and transfer to a wide range of situations. At the higher intellect levels, in Judd's view, transfer is typical, not exceptional. Judd observes:

The psychology of the higher mental processes teaches that the end goal of all education is the development of systems of ideas which can be carried over from the situations in which they were acquired to other situations. Systems of general ideas illuminate and clarify human experiences by raising them to the level of abstract, generalized, conceptual understanding.<sup>2</sup>

It is the later view of transfer to which Tyler subscribes.

Thorndike's theory of transfer has a significant influence upon curriculum in general and upon the Tyler Rationale in particular. At the beginning of the Eight Year Study, ten years after Thorndike's first major attack on mental discipline, Tyler must face the questions the theory of transfer creates. Thorndike's findings in 1924, which indicate that there is no hierarchy of subjects for mental discipline, challenge the very purpose of the school. Tyler states, "When Thorndike reported his experiment, which clearly contradicted the notion that particular subjects disciplined students' faculties--memory, imagination, and reasoning . . . educational leaders began to think of curriculum as

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<sup>1</sup>Charles Hubbard Judd et al., Education as Cultivation of the Higher Mental Processes (New York: Macmillan Co., 1936), p. 198.

<sup>2</sup>Ibid., p. 201.

more than a list of school subjects."<sup>1</sup> Tyler's first fundamental question, "What educational purpose should the school seek to attain?" of the rationale is created by Thorndike's theory.

The Eight Year Study also supports Thorndike's theory of transfer.

. . . probably the most stunning attack, aside from Thorndike's 1924 study on the idea that certain subjects have superior transfer to intelligence was delivered by the Progressive Education Association's Eight Year Study . . . [which] proved that success in college is not dependent on credits earned in high school in prescribed subjects.<sup>2</sup>

Like Thorndike's research, Tyler's findings about 1,475 students from progressive schools, when matched with their counterparts from traditional schools, reveal that transfer of learning does not occur because of the disciplinary value of certain college preparation requirements. The students who enrolled in the progressive rather than the pre-college curriculum performed as well or better by most cognitive and social measures. "Developing social problem-solving skills has a similar transfer objective . . . [and] suitable levels of accomplishment can be specified, as Tyler and his staff did in the Eight Year Study."<sup>3</sup>

In the Eight Year Study of the secondary school and college relationship, Tyler confirms Thorndike's theory of transfer. Therefore, in Basic Principles, which explains recommended procedures based upon the curriculum development of the Eight Year Study, Tyler identifies

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<sup>1</sup>Ralph W. Tyler, Curriculum Development Since 1900," Educational Leadership 38 (May 1981): 599.

<sup>2</sup>Tanner and Tanner, Curriculum Development: Theory into Practice, p. 323.

<sup>3</sup>Ibid., p. 326.

Thorndike's theory of transfer. The identification of the theory is in relationship to "contemporary life" or society as a source of objectives. Tyler states, "A second argument for the study of contemporary life [the second source of objectives] grows out of the findings relating to transfer of training."<sup>1</sup> Tyler paraphrasing Thorndike states:

Studies of transfer . . . indicated that the student was much more likely to apply his learning when he recognized the similarity between the situations encountered in life and the situations in which the learning took place. . . . The student was more likely to perceive the similarity between the life situations and the learning situations when two conditions are met: (1) the life situations and the learning situations were obviously alike in many respects and (2) the student was given practice in seeking illustrations in his life outside of school for application of things learned in school.<sup>2</sup>

Following the publication of Basic Principles, Tyler retains great interest in the concept of transfer of training. In 1964, in an article which explains how to utilize research in curriculum development, Tyler reiterates the importance of Thorndike's theory by stating, "In educational research, people like Edward Thorndike developed the concept of transfer of training [which] was not utilized by those scholars in their curriculum development projects [of the 1960s]."<sup>3</sup> In 1976, Tyler reconsiders learning theory and declares, "The only behavior that is truly learned is the behavior the learner carries on with consistency."<sup>4</sup> The learner must therefore see the way in which learning can be used and keep applying it. These conditions, Tyler says, are

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 17.

<sup>2</sup>Ibid., p. 18.

<sup>3</sup>Tyler, "Utilizing Research in Curriculum Development," p. 6.

<sup>4</sup>Tyler, "Two New Emphases in Curriculum Development," p. 63.

vitally important for "selecting curriculum objectives, designing learning experiences, and achieving transfer-of-training."<sup>1</sup>

The National Assessment of Educational Progress, like the Eight Year Study, deals with transfer of learning. Analyzing the data from the National Assessment Tyler discusses "the implication for achieving transfer-of-training" and states, "The failure of students to transfer what is learned in school to situations outside the school is a problem related to the active role of the learner and one that has long been central to educational psychology."<sup>2</sup> One of the major "new emphases" in the Tyler Rationale concerns transfer of training from school to non-school areas of learning.

Thorndike's initial research from 1901-1924, combined with Judd's focus on higher rather than lower mental processes and upon general rather than specific transfer, and Tyler's second phase of research through the Eight Year Study established a new foundation for schools. Since 1950, contemporary thought on transfer indicates that problem solving skills, content, ways of learning, broad generalizations, and attitudes can be transferred, but transfer is not automatic.<sup>3</sup> Tyler's National Assessment of Educational Progress and the latest version of the Tyler Rationale are, for the second time, built upon a Thorndike foundation regarding the theory of transfer and the process of educational measurement.

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<sup>1</sup> Ibid.

<sup>2</sup> Ibid., p. 64.

<sup>3</sup> Tanner and Tanner, Curriculum Development: Theory into Practice, p. 326.

Mentor Legacy of Charles Judd

Charles Judd, unlike John Dewey and Edward Thorndike, is a mentor of Ralph Tyler and a general intellectual influence upon him. It is true that Dewey was a professor at the University of Chicago, the Head of the Department of Philosophy and Education from 1894-1904, and later the Head of the School of Education from 1902-1904. But Dewey's tenure pre-dates Tyler's graduate studies at the University of Chicago by more than twenty years. Edward Thorndike was never a professor at the University of Chicago nor a mentor of Tyler. When Dewey left the University of Chicago, however, he became a professor of philosophy at Teachers College, Columbia University, the same year Edward Thorndike became a professor of psychology at Teachers College. Thorndike, however, came from Harvard. Whereas Tyler had no collegial relationship with Thorndike, Tyler did carry on conversations with Dewey during the Eight Year Study. Tyler's most extended relationship of these three influencers, however, is with his mentor, Charles Judd, first as his student in curriculum and later as a contributing author in one of Judd's texts.

Within the Tyler genealogy, the general intellectual influence and the mentor influence are defined and traced in a similar way with no explicit assumptions or judgments made about which influence is greater. The prominence of a luminary in the formative years of the curriculum field might counterbalance the extent and the different types of possible collegial influence between mentor and student. Therefore, the division is interesting but not generally significant. As previously, it is more important to trace the nature and kind of influence than to



measure the extent of the influence and to trace the similarities rather than the differences. The objective is to examine what concepts are replicated or varied from the early to the middle years of the field between Charles Judd and Ralph Tyler, his doctoral student, in order to determine the amount of unity in the first eighty years of a new discipline by way of this mentor-student association.

Dewey's influence is major and most obvious in Tyler's scientific approach to curriculum and his choice of learning theory. Thorndike's influence derives from statistical measurement and from the concept of transfer of training. Judd's influence can be observed in both of these categories as well as from certain key concepts relating to curriculum and especially to educational psychology. The points where the influence of Dewey and Thorndike upon Tyler are similar to Judd's influences are not analyzed, but the points where Judd and Thorndike, both educational psychologists, disagree are examined. Significant Juddean concepts influencing the Tyler Rationale, that are identified in Judd's major writing, are the important emphases in this analysis.

Charles Judd is a distinguished educational psychologist of national renown, who is influential upon the Tyler Rationale in general and specific ways. Dewey, Thorndike, and Judd are all prominent in the field in the mid 1920s, when Tyler enters graduate school. Only Judd, however, is an author in the influential NSSE Twenty-Sixth Yearbook on curriculum construction that so powerfully influences young Tyler. Judd completed his undergraduate studies at Wesleyan University in 1894 and was later an instructor of philosophy there. Before his appointment to the University of Chicago, Judd was a professor of psychol-

ogy at several other universities with his longest tenure at Yale University (1902-1909), where he was also Director of the Psychological Laboratory immediately preceding his appointment to the University of Chicago.<sup>1</sup> Judd's major intellectual focuses throughout his career were upon: "university administration, social and educational psychology, nature and development of reading, variation and nature of visual perception, mental development, [and] number ideas and their development."<sup>2</sup>

It is appropriate to trace Judd's influence upon Tyler for at least five reasons: (1) Tyler emerges as one of the new leaders of the scientific approach to education created largely by Dewey-Judd-Thorn-dike, (2) Tyler's relationship with Judd in the Department of Education at the University of Chicago provides the foundation for his approach to curriculum evaluation and the behavioral objective, two of Tyler's major contributions, (3) Tyler identifies Judd's influence upon the behavioral objective in Basic Principles, (4) Tyler personally acknowledges Judd's influence, and (5) Tyler is selected as a worthy successor to chair the Department of Education at the University of Chicago. Judd's mentor influence upon Tyler can be observed in at least four ways: through Tyler's interpretation of Judd's contribution, from Judd's work habit with students, and from the influence of NSSE's Twenty-Sixth Yearbook and other of Judd's writings.

Tyler's personal view of Judd's contribution presents Judd's

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<sup>1</sup>J. McKeen Cattell, Jacques Cattell, and E. E. Ross, eds., Leaders in Education: A Biographical Directory, 2d ed. (New York: Science Press, 1941), p. 543.

<sup>2</sup>Ibid.

general influence upon his student. In Tyler's view, Judd's major contribution consisted of "three principles which he advocated and consistently exemplified [that] illustrate his philosophy."<sup>1</sup> Tyler believes that Judd's first principle, "his belief that a sound foundation for educational policy and practice must be based on facts and tested principles rather than on speculation or collections of 'best practices,'" gives content and significance to work in education.<sup>2</sup>

A second contribution named by Tyler is Judd's conception of a school which includes "a more inclusive basis for the curriculum than does either the traditional school program or the child-centered doctrine."<sup>3</sup> Tyler, paraphrasing from Judd's book, Psychology of Social Institutions, states Judd's view, ". . . if the school was to be effective, its aims and content must be derived from a study of society and from a study of the learner and these aims and content must be translated into concrete curriculum materials. . . ." <sup>4</sup>

The third contribution, identified by Tyler, is not a principle but an intellectual trait. Judd believed in "tough-mindedness" and strict adherence to the canons of inductive and deductive logic. Tyler describes Judd's "willingness to face new facts that upset previous explorations, [and] his unshaken attitude toward scientific method.

. . ."<sup>5</sup> In all these ways, the student emulates the mentor.

Judd's definition of the learning process is influential and

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<sup>1</sup>Ralph W. Tyler, "Charles Hubbard Judd, 1873-1946," Elementary School Journal 46 (September 1946): 2.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

<sup>5</sup>Ibid.

preferred by Tyler over Thorndike's definition. Judd and Thorndike differ on the concept of higher and lower mental processes. Thorndike believes that "the higher thought processes are simply more elaborate hierarchies of connections, but the forces behind the processes are very simple. . . ."<sup>1</sup> About this stance, Judd explains:

There is some tendency in current educational theory and practice to neglect the distinction between lower and higher forms of behavior. In an effort to provide favorable conditions for all kinds of individual development some educators have fallen into the error of regarding human life as a single pattern throughout.<sup>2</sup>

Judd differentiates between lower and higher processes:

The lower forms of behavior are inherited in a state of development which makes them difficult to modify . . . . The types of behavior involved in the cultivation of skills and the use of language are largely dependent on the examples and encouragement supplied by the social environment.<sup>3</sup>

The influence upon Tyler regarding the learning process emanates from Judd's theory rather than from Thorndike's neglect of a distinction.

In 1936, Judd writes, Education as Cultivation of the Higher Mental Processes, which incorporates Tyler's early research at Ohio State University and Judd's research at the University of Chicago. The book is comprised of a statement of the problem, one chapter describing Tyler's research at Ohio State University, and several chapters describing Judd's research with interpretations and applications of the research. One chapter, "Statement of the Problem," is directed to those

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<sup>1</sup>Edward Thorndike, Human Learning (New York: Century Co., 1931), pp. 159-60.

<sup>2</sup>Charles Judd, Educational Psychology (Boston: Houghton Mifflin Co., The Riverside Press, Cambridge, 1939), pp. 60-61.

<sup>3</sup>Ibid., p. 60.

academicians who are concerned that scientific study of higher mental processes will endanger education. Judd notes, "They [educators] think that a scientific explanation, if such can be formulated, of the way in which students make comparisons, reach generalizations, and arrive at valid conclusions will tend to limit the freedom of teachers or the originality of students."<sup>1</sup> Tyler formulates this scientific explanation, which he describes in the first chapter.

In "The Relation Between Recall and Higher Mental Process," Tyler reports on his early work at Ohio State University with testing. Tyler explains, "The development of the Ohio State University of examinations requiring various kinds of intellectual behavior has made it possible during the past few years to compare in a large number of cases. . . ." <sup>2</sup> Tyler interprets his findings on these cases by stating:

It is shown that a large number of students studying a variety of subjects did not develop corresponding degrees of facility in mere recall and facility in the higher mental processes of applying principles and drawing inferences. Memorization of facts frequently fails to result in the development of higher mental processes. If the higher mental processes of application of principles and inferences are really to be cultivated, learning conditions appropriate for their cultivation are necessary.<sup>3</sup>

In the body of the text, Judd defines a higher mental process as "one to which the individual makes a large contribution through his own conscious effort . . . when he compares, infers, and abstracts."<sup>4</sup> Judd also relates his own research projects regarding the number system and symbolic thinking, algebra as a system of abstract processes, and lan-

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<sup>1</sup>Judd et al., Education as Cultivation of the Higher Mental Processes, p. 3.

<sup>2</sup>Ibid., pp. 6-7.

<sup>3</sup>Ibid., p. 17.

<sup>4</sup>Ibid., p. 39.

guage and relational problems to Tyler's research about higher mental processes. Judd explains the main reason for his research when he states, "The factual materials which are presented in the foregoing pages make clear the contrast between those products of learning which result from the mere acquisition and retention of items of experience and those products of learning which result from the higher forms of thinking."<sup>1</sup> Judd believes, "If psychology is to rescue education from the new formalism . . . there will have to be clear recognition of the difference between the lower and higher forms of mental activity."<sup>2</sup> Judd observes that "the higher forms of experience will have to be employed as the true ends to be reached by the process of education."<sup>3</sup>

Connections between Judd's research and Tyler's research as described or inferred in this book are numerous, important, and long lasting. Most significant is that Judd's statement of the problem in this book is at the base of Tyler's early work at Ohio State University from 1929-1934, in developing "a generalized technique for the construction of an achievement test." Also of great significance is that the concepts for the Eight Year Study and its following explanation in Basic Principles are rooted in this joint research. Judd cites, "Throughout the preceding chapter there are suggestions as to ways in which people can be encouraged to cultivate the higher mental processes."<sup>4</sup> Tyler, in Basic Principles, explains "learning experiences" in the context of the cultivation of higher mental processes which include: "to develop

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<sup>1</sup> Ibid., p. 138.

<sup>2</sup> Ibid., p. 165.

<sup>3</sup> Ibid.

<sup>4</sup> Ibid., p. 167.

skills in thinking . . . helpful in acquiring information . . . helpful in developing attitudes, and . . . helpful in developing interests."<sup>1</sup>

Judd's conclusion which is implemented by Tyler, states, "All the discussions in this book aim to illustrate the possibility of achieving the ends thought of as desirable by the 'progressives' without sacrificing the gains which have come to human thinking through systematic orderly organization of ideas."<sup>2</sup>

Judd's influence is most apparent in Tyler's shaping of the behavioral objective. Unlike Dewey and Thorndike, Charles Judd is influenced by Wilhelm Wundt more than by William James. About the influence of these two intellectual precedessors in the field of psychology, Judd states:

No influence has more profoundly affected educational thought and practice during the past half century [1880-1930] than that exerted by the science of psychology. This science can be said to have changed its character and to have become useful as a guide for education with the appearance of the epoch-making writings of Wilhelm Wundt in Germany and William James in this country. . . . Under [their] leadership . . . studies were inaugurated that yielded experimentally established evidence about the ways in which the human minds operate, the whole outlook with respect to learning process and the duty of the school underwent a radical change.<sup>3</sup>

Both Wundt and James point out that the organization of consciousness and the nature of mental processes are conditioned primarily by motor rather than sensory processes. "Wundt calls his system 'voluntaristic psychology' and James developed a theory of emotions and attitudes which

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, pp. 68-82.

<sup>2</sup>Judd et al., Education as Cultivation of the Higher Mental Processes, p. 179.

<sup>3</sup>Judd, Educational Psychology, p. v.

was revolutionary because of its emphasis on behavior."<sup>1</sup> The emphasis on the word behavior, which was previously identified when discussing Dewey's influence upon Tyler, is important in viewing the interrelationship among Wundt, James, Dewey, Thorndike, and ultimately Judd.

In an overly simplistic analysis, the lineage of the behavioral objective is traceable from the emphasis placed on behavior beginning with Wundt and James to Tyler. The new science of psychology places the emphasis on behavior because learning is seen as based upon the motor processes. Wundt and James relate behavior to habit. From this basis Dewey defines the habit of learning in his continuum of experience theory. Thorndike defines his stimulus-response theory of learning also following the lead suggested by James. The stimulus-response theory states, "Exercise and reward desirable connections; prevent and punish undesirable connections."<sup>2</sup> Trained by Wundt, Judd departs from Thorndike's concept of intelligence as the aggregate of an indefinite number of specific abilities. Judd criticizes the doctrine that mental life is comprised of aggregations of simple units or bonds.

In Basic Principles, Tyler describes, "Education is the process of changing behavior patterns of people."<sup>3</sup> Tyler continues in the Juddean view: "This is using behavior in the broad sense to include

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<sup>1</sup>Ibid., p. vi.

<sup>2</sup>Edward L. Thorndike, Educational Psychology, vol. 2: The Psychology of Learning (New York: Teachers College Press, Columbia University, 1931), p. 20.

<sup>3</sup>Tyler, Basic Principles of Curriculum and Instruction, pp. 5-6.



thinking and feeling as well as overt action."<sup>1</sup> Preferring Judd's view, Tyler himself in Basic Principles explains:

More than thirty years ago, Professor Thorndike formulated a theory of learning which involved the idea that learning consisted of building up connections between specific stimuli and specific responses. . . . According to this theory then the kinds of objectives that need to be formulated are specific ones, very numerous and of the nature of specific habits.<sup>2</sup>

Tyler contrasts Judd's position to Thorndike's by explaining:

Judd and Freeman showed that many types of learning could be explained largely in terms of the learner's perceiving general principles that he might use or developing a general attitude towards the situation or method of attack which he could generalize in meeting new situations.<sup>3</sup>

If one holds to Judd's generalized theory of learning, he then views objectives in more general terms. Tyler tends "to view objectives as general modes of reaction to be developed rather than highly specific habits to be acquired."<sup>4</sup>

Again in 1966, Tyler states that one of the greatest changes in his thinking relates to the level of generality appropriate for an objective. Tyler's preference for Judd's view for general objectives is encouraged by Tyler's experience with programmed instruction. Tyler believes that the use of programmed materials "bring into sharp contrast the differing formulations of objectives and theories of learning between those [Thorndike] who perceive the learners as being 'conditioned' by the learning . . . and those [Judd] who perceive the learner as an active agent exploring learning situations. . . ."<sup>5</sup> Tyler reiterates,

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<sup>1</sup>Ibid., p. 6.

<sup>2</sup>Ibid., p. 42.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid., p. 43.

<sup>5</sup>Tyler, "New Dimensions in Curriculum Development," p. 26.

"I now think it is important in curriculum development to examine the concept of the learner as an active purposeful human being . . . a factor to consider at an early stage in work on objectives."<sup>1</sup> Tyler no longer gives the Thorndike and the Judd options about the statement form of objectives. Tyler explains, "The level of generality of the objective should then be stated . . . with specifics used as illustrations."<sup>2</sup>

After the publication of the rationale, Tyler returns to the specificity and generality of the behavioral objectives several times as previously explained in the analysis of the Thorndike heritage. In 1973, Tyler, when asked in two different interviews how he would have defined behavioral objectives originally, answers: "As teachers try to state what they are attempting to do, they should formulate this in terms of what the student is supposed to learn and state this in terms of the kinds of behavior which they hope the student will acquire as a result of instruction."<sup>3</sup> Tyler, reinforcing Judd's research forty years later, describes, "I think we should be less concerned with specific behavior and more concerned with human capabilities."<sup>4</sup>

In a second interview, also in 1973, Tyler reflects on his perception of how he evolved the behavioral objectives from his own research, which relates to Judd. Tyler relates the value of defining objectives in behavioral terms to his early experience in 1931 as Head of the Division of Accomplishment Testing in the Bureau of Educational

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid.

<sup>3</sup>Shane and Shane, "Ralph Tyler Discusses Behavioral Objectives," p. 41.

<sup>4</sup>Ibid., p. 44.

Research at Ohio State University. In Tyler's interpretation, the instructors' experiences in the Service Studies led him "to realize that it was important in constructing an achievement test to identify the one or more kinds of things the students were expected to learn so that test exercises would be designed to furnish an opportunity for students to show the extent to which they had learned these things."<sup>1</sup> It is of some importance to recognize here that the reference to 1931, is to an article incorporated with Judd's research and reported by Judd in the text, Education as Cultivation of the Higher Mental Processes.

In this interview Tyler makes the point: "I was not using the term as it was used by the school of behaviorism, which restricted it only to overtly observable acts and ruled out much of human behavior that is subjectively experienced but is not directly observable by others."<sup>2</sup> Tyler notes that by 1927, the notion of guiding teaching by using specific objectives was no longer widely accepted and infers criticism of the return of the trend in the 1970s. Tyler believes that educators have gone wrong with the behavioral objectives for two reasons, one reason for the problem is a confusion in the statement form between specificity and clarity. "An educational objective does not need to be specific in order to be clear, attainable, and capable of assessment,"<sup>3</sup> A second reason for confusion over objectives relates to learning theory.

The lineage of the Tyler behavioral objective related to

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<sup>1</sup>Fishbein, "The Father of Behavioral Objectives Criticizes Them: An Interview with Ralph Tyler," p. 55.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

learning can be traced from Dewey and Judd. Judd describes, "Psychology has come to recognize that its chief interest is in the active rather than the receptive side of life."<sup>1</sup> In 1950, Tyler makes reference and paraphrases Dewey's learning theory and elaborates Judd's point. "Learning takes place through the active behavior of students."<sup>2</sup> Tyler does not concentrate upon the point until 1966, almost fifteen years later.

In 1973, Tyler diagnoses the problem of objectives related to learning theory in a new statement with a strong Dewey thrust. Tyler encourages teachers to keep in mind "the psychological definition of learning as the acquisition of new patterns of behavior through experiences."<sup>3</sup> Tyler criticizes some educators for having "failed to distinguish between learning of highly specific skills . . . and the more generalized understanding, [or] problem-solving skills. . . ."<sup>4</sup> Actually, since 1950, Tyler becomes more adamant about the active role of the learner and by 1976 states, "I believe . . . that some changes in emphasis [since 1950] are necessary . . . I would now give much greater emphasis to the active role of the student in the learning process."<sup>5</sup>

The curriculum question of the 1930s was: What are the purposes of schools? Tyler's answer is the behavioral objective derived from educational psychology with a clear traceable source to Charles Judd's

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<sup>1</sup>Judd, Educational Psychology, p. 59.

<sup>2</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 63.

<sup>3</sup>Fishbein, "The Father of Behavioral Objectives Criticizes them: An Interview with Ralph Tyler," p. 55.

<sup>4</sup>Ibid., p. 57.

<sup>5</sup>Tyler, "Two New Emphases in Curriculum Development," p. 62.

work in the new science of psychology. The behavioral objective refers more to higher rather than lower mental processes, to educational processes rather than educational products, and to general rather than specific objectives. These Tylerian preferences are the differences between Thorndike and Judd. Dewey's learning theory is also a major traceable source in which the behavioral objective must be understood. Tyler's name for the objective was actually an educational and not a behavioral objective. This distinction should act to clarify the difference between "the acquisition of new patterns of behavior through experience" and the narrow objectives of the behaviorists in the era beginning in the 1960s until the present with the work of William Popham, Robert Magers, and others focused upon instructional systems. The behaviorists follow in the Thorndike-Bobbitt-Charters ancestry and not in the Dewey-Judd-Tyler lineage of objectives.

Tyler's contribution as an educational psychologist is to relate the behavioral objective to curriculum development. Tyler relates the first question regarding objectives to the three other fundamental questions of curriculum. Tyler also identifies the sources from which the objectives derived, the process for culling them, the form for their statement, and the process for evaluating them. The behavioral objective has not been advanced since Tyler but has been frequently misunderstood. In the late 1960s and early 1970s, the specifically stated behavioral objective relating to lower mental process has been applied by behaviorists rather than the educational objective related to higher mental processes and to learning theory as Judd indicated and Tyler described.

Mentor Legacy of George Counts

When Tyler is a graduate student, George Counts is a professor in the School of Education at the University of Chicago. A prolific writer of some thirty books, Counts strongly allies himself with progressive education in his challenging book, Dare the Schools Build a New Social Order? A colleague of Judd, Charters, and Bobbitt, Counts also holds in esteem the contribution of the scientific study of education of which he was a critic identifying both strengths and limitations. In a history of education, Counts writes:

By the opening of the twentieth century objective and quantitative methods were being employed in the study of the learning process by such men as Charles H. Judd and E. L. Thorndike . . . although this interest in the scientific inquiry has fostered a mechanical conception of education, centered attention too exclusively on the school . . . and resulted in the accumulation of vast quantities of sterile facts, the new method has already made important contributions to the theory and practice of education.<sup>1</sup>

Counts is one of two of Tyler's mentors who is an author in the influential first part of the NSSE's Twenty-Sixth Yearbook, but he is not identified by Tyler in Basic Principles. The Count's influence upon Tyler is traced for four reasons: (1) Tyler identifies the Counts' influence in his correspondence, (2) Counts influences important determinants in the original and final statements of the rationale, (3) Counts' influence is not recognized in the literature, and (4) Tyler inaccurately criticizes the Rugg-Counts' curriculum proposal of 1926.

At first glance, Counts' influence on the rationale appears minor in relationship to the major influence of Dewey, Thorndike, and

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<sup>1</sup>Encyclopedia of the Social Sciences, 1931 ed., s.v. "History," by George S. Counts.

Judd or in the context of the perceived important influence of Charters and Bobbitt. But more extensive analysis reveals that Counts influences: the role of teacher involvement in curriculum construction, Tyler's guidelines for curriculum-making in 1930, and one of the "two new emphases" in the rationale of 1976.

In 1971, when Counts retires from Southern Illinois University, Tyler writes Counts a letter explaining Counts' influence upon him as a graduate student. The correspondence expresses these sentiments:

This is an occasion . . . to tell you how greatly I have learned to appreciate your great contribution to my understanding of education. . . . I had the privilege of being a student in your class (Educational Psychology). The new perspective I have gained and the thought you have stimulated have been very helpful to me ever since.<sup>1</sup>

A major influence of Counts' sociological perspective upon Tyler concerned the role and function of a variety of personnel in the curriculum making process. In 1927, the year Tyler is a student of Counts, an article, "Who Shall Make the Curriculum?" is published in which Counts delineates his view on the prevailing conditions of curriculum-making in secondary education. Counts dismisses five groups who should perform the task. Count asks, "If then, the making of the high-school curriculum is not to be entrusted to state legislature, boards of education, powerful minorities in the community, college boards of admission, and persons interested in the defense of particular subjects, who should perform the task?"<sup>2</sup> Counts answers:

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<sup>1</sup>Ralph Tyler letter to George S. Counts, May 7, 1971.

<sup>2</sup>George S. Counts, "Who Shall Make the Curriculum," School Review 35 (May 1927): 337.

. . . it would seem that the co-operative efforts of at least seven types of persons are required . . . the psychologist, the sociologist, the philosopher, the specialist in the selection and organization of the materials of instruction, the classroom teacher, the expert in the appraisal of the curriculum, and the high school administrator.<sup>1</sup>

Counts describes the different functions of each participant and, in describing the classroom teacher's role, he notes, "Until it has become the possession of the teacher, the curriculum is just so much inert material the educational value of which is unknown."<sup>2</sup>

In the NSSE's Twenty-Sixth Yearbook, Counts and Rugg outline an organizational procedure for "current methods of curriculum-making" in which again Counts foreshadows Chapter V of Basic Principles. Counts states, "In an ideal situation . . . the [curriculum] task would be done by a technically trained staff of specialists, clerks, statisticians, educational psychologists, and teachers."<sup>3</sup> The seven step procedure which is outlined includes: (1) the development of a research attitude toward the problem by the superintendent, the supervisory staff, the board of education, and the teachers; (2) the provision of adequate funds for the continuous and comprehensive prosecution of curriculum-construction; (3) the employment of trained and experienced specialists; (4) adequate facilities for development; (5) organization of communities including ideally a technically trained research staff of specialists, clerks, statisticians, education psychologists, and teachers; (6) the

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid., p. 338.

<sup>3</sup>Harold Rugg and George S. Counts, "A Critical Appraisal of Current Methods of Curriculum-Making," The Foundations and Techniques of Curriculum-Construction, in Twenty-Sixth Yearbook of the National Society for the Study of Education (Bloomington, Ill.: Public School Publishing Co., 1926), p. 441.



broadening of characteristic outlines of the entire curriculum and arrangement of activities and topics for which technical advice will be needed; and (7) the maintaining of an overview for seeing the curriculum as a whole.<sup>1</sup>

Building upon the Rugg-Counts' foundation, Tyler replicates or expands several steps of their curriculum proposal in the Eight Year Study. The first and second steps clearly characterize Tyler's approach to the Eight Year Study. The second point regarding continuous prosecution of curriculum-construction is a point Tyler reiterates again in 1974, when he states, "What goes on in curriculum development is planning, execution, evolution, replanning, repeating the cycle."<sup>2</sup> The third point regarding trained specialists coincides with the design of Tyler's 1939 Workshop at the University of Chicago for the Cooperative Study. The fifth point emphasizing the role and function of the teacher is similar to Tyler's reason for the summer workshop for teachers at Ohio State during the Eight Year Study. Development of course syllabi in the Eight Year Study, the Cooperative Study, and the Dalton School Study, referenced in Basic Principles, are exemplars of the sixth point. The holistic view of curriculum is also characteristic of Tyler's approach.

Since Tyler's first publication, in 1930, Research Methods and Teachers' Problems, he reiterates Counts' ideas of 1926-1927 regarding the teacher's role. Tyler also incorporates Counts' principles about

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<sup>1</sup>Ibid., pp. 439-42.

<sup>2</sup>Tyler, "Utilizing Research in Curriculum Development," p. 9.

teacher involvement in the additional fifth chapter in Basic Principles entitled "How a School or College Staff May Work in Curriculum Building." In this chapter Tyler echoes a Counts' principle, ". . . every teacher needs to participate in curriculum planning at least to the extent of gaining an adequate understanding of these ends and means."<sup>1</sup>

Tyler, however, criticizes the seven step Counts-Rugg proposal.

Writing in the NSSE's Seventieth Yearbook Tyler states:

The comprehensive curriculum projects of the thirties revealed three weaknesses in the Rugg-Counts proposal. They failed to take into account the crucial role played by the . . . teacher in interpreting a curriculum plan, putting it into operation, and improving it on the basis of experience.<sup>2</sup>

Tyler credits the Eight Year Study and other projects of the Thirties for learning that lesson and for developing procedures for dealing with the three teacher functions. Tyler's criticism of the deficiency in the Rugg-Counts' proposal does not preclude his being influenced by the proposal. Tyler's criticism of the proposal is, however, unduly harsh and inaccurate. The Eight Year Study was well guided by the proposal. History has demonstrated the necessity of the Tyler teacher workshop to involve teachers in curriculum-making, which is initiated by Counts' principles in 1926-1927 and implemented by Tyler in 1934-1935.

A second influence of Counts' perspective on Tyler concerns the role and function of social institutions, which grows more prominent after the original statement of the rationale. In the NSSE's Twenty-Sixth Yearbook, Counts explains his personal views on curriculum re-

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 126.

<sup>2</sup>Tyler, "Curriculum Development in the Twenties and Thirties," p. 36.

volving around six subjects. First, Counts asserts, "The purpose of education is fundamentally social and the aim is to give the child mastery over his world, and not to prepare him for adult life."<sup>1</sup> Second, Counts describes the function of the school as "but one among many educational agencies and forces in society."<sup>2</sup> Counts explains that the ordinary individual spends only one-fifth of his waking hours in school and other educative agencies perform many educative functions. Counts challenges, "Only as the school recognizes the work of other institutions can it perform its own functions effectively."<sup>3</sup> Counts reasons, "So long as other institutions exist which carry educational burdens, the school should bear a double responsibility. Its function should be residual and normative."<sup>4</sup> By this Counts means that the function of the school in proportion to its strength should supplement the efforts and correct the errors of other institutions.

Counts' definition of the function of the school versus the function of other educative agencies becomes exceedingly relevant to the Tyler Rationale after 1950. The original rationale incorporates the principles of curriculum and instruction for the school alone; the rationale does not explain principles for curriculum for other educative agencies. Tyler is concerned with the influence of education outside of the school, such as adult reading habits, the influence of television,

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<sup>1</sup>George S. Counts, "Some Notes on the Foundations of Curriculum-Making," The Foundations and Techniques of Curriculum-Construction, in Twenty-Sixth Yearbook of the National Society for the Study of Education, pt. 2 (Bloomington, Ill.: Public School Publishing Co., 1926), p. 73.

<sup>2</sup>Ibid., p. 75.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid., p. 76.

work-study programs, and other examples, but not until in 1953 and again in 1956 does Tyler begin to concentrate upon formally clarifying school tasks.

By 1958, Tyler adds five new curriculum content criteria to the rationale of which the first new criterion relates directly to Counts' premise about the residual and normative functions of the school. This content criterion is the emphasis on tasks appropriate for school versus those appropriate for other educative agencies. At that time, Tyler also adds five new curriculum methods to operationalize the criterion in ways that closely parallel Counts. Tyler's major point reiterates Counts. "It [school] should do those things, necessary to the . . . advancement of society, which it will not or can not do."<sup>1</sup> Counts characterizes these school tasks: (1) tasks too difficult for unorganized instruction, (2) tasks too important for untutored learning, (3) tasks that have little immediate or practical appeal, and (4) tasks in danger of being neglected.<sup>2</sup> The tasks identified by Tyler in 1958 are identical to Counts' school tasks. Tyler's school tasks include: (1) too difficult, (2) where essentials are not obvious, (3) learning in art-music-literature, and (4) cannot be provided directly in ordinary life.<sup>3</sup> Except for an additional task, which includes "experiences where re-examination and interpretation are essential," Tyler duplicates Counts' school appropriate tasks.<sup>4</sup> Tyler seems to have concurred with

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid.

<sup>3</sup>Tyler, *New Criteria for Curriculum Content and Methods*, pp. 173-76.

<sup>4</sup>Ibid., p. 176.

Counts' warning, when Counts' observes, ". . . anyone who constructs a program of education on the assumption that the school is the only important educational institution . . . is building on the sands."<sup>1</sup> In 1976, Tyler extends Counts' reasoning further and the school appropriate tasks versus educative agency appropriate tasks becomes a new emphasis in which Tyler explains the transfer of training from school to non-school areas of learning.

Counts' perspective regarding scientific method is not at variance with Tyler's view. Counts states, "We cannot hope that science can give us a complete educational philosophy, but it can at least give us an effective educational technique. After the larger goals are met, there is no educational problems which cannot be obtained by methods of science."<sup>2</sup> Counts also adds, "Whatever measure of stability lies within the bounds of education will be the product of the operation of the scientific method but the definition and formulation of human purposes, upon which education is dependent, will always be somewhat beyond the reach of science."<sup>3</sup> Tyler saw similar limits and values of the scientific approach to education. In 1974, Tyler explains that curriculum building is not a science and is not even precise engineering.<sup>4</sup>

Counts' influence is not very extensive but the three major points of accord with Tyler: (1) the active role of the teacher in curriculum development, (2) the role of other educative agencies, and

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<sup>1</sup>Counts, "Some Notes on the Foundations of Curriculum-Making," p. 75.

<sup>2</sup>Ibid., p. 90.

<sup>3</sup>Ibid.

<sup>4</sup>Tyler, "Utilizing Research in Curriculum Development," p. 9.

(3) the limits of scientific technique, are of significance. Counts' sociology of education made an important difference upon the original statement and the most recent modification of the Tyler Rationale.

#### Mentor Legacy of Franklin Bobbitt

Franklin Bobbitt's first university appointment was as an Instructor in Educational Administration at the University of Chicago in 1909, the same year Judd accepts the position as Chariman of the Department of Education. Bobbitt remains at Chicago until 1940, after which he is appointed emeritus, where his areas of concentration are educational administration and the curriculum. Bobbitt received his doctoral degree at Clark University under the presidency of G. Stanley Hall, during the period when Clark is "a center of study and research on the stages by which each child recapitulates the development of the race."<sup>1</sup> Bobbitt's interest, encouraged by his work at the Phillipine Normal School in Manila and the Los Angeles Junior High School System, focuses upon the interrelationship of the child, the society, and the curriculum. Bobbitt is a professor at the University of Chicago when he writes the famous books, The Curriculum, in 1918, which is considered by many the first work in the new discipline and How to Make a Curriculum, in 1924, which is an early attempt at a science of education. Bobbitt is a mentor of Tyler in the 1926 academic year.

Bobbitt is associated with most curricularists who influence Tyler, including Dewey, Thorndike, Judd, Counts, and Charters. Dewey's influence upon Bobbitt's theory of school management, rooted in the

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<sup>1</sup>Seguel, The Curriculum Field: Its Formative Years, p. 78.

investigation of the Gary Schools and led by a Dewey student, William Wert, is recognized by historian Lawrence Cremin in Transformation of the School.<sup>1</sup> Led by Bobbitt and others, the Efficiency Movement gained momentum through the impetus of the psychological theorizing of Thorndike. A curriculum historian explains:

Edward Thorndike was to combine statistical method and the idea of the controlled experiment with a conception of mind as the total response of the organism, an idea of William James, to forge an original psychological theory which would give the efficiency movement the psychological base it needed.<sup>2</sup>

Thorndike's stimulus-response theory made it possible to conceptualize outcomes as specific acts of a total behavioral response or of learning. The assumption was, since these outcomes could be measured, tabulated, and ordered, they could provide the basis for determining the effectiveness of teaching and learning.

Bobbitt is a colleague of Judd, Counts, and Charters in the Department of Education at the University of Chicago, when it is a center for the measurement movement. Bobbitt is also a member of the society's Committee on Curriculum Making for the Twenty-Sixth Yearbook of the National Society for the Study of Education. Bobbitt is, however, influenced more by Thorndike than Judd, who, it should be remembered, are in disagreement since 1903 on several items: (1) the emphasis on educational products rather than process, (2) the concentration upon lower rather than higher mental processes, and (3) the transfer theory. The

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<sup>1</sup> Lawrence A. Cremin, The Transformation of the School: Progressivism in American Education 1876-1957 (New York: Alfred A. Knopf, 1961), p. 156.

<sup>2</sup> Seguel, The Curriculum Field: Its Formative Years, p. 71.

University of Chicago graduate faculty named above are all engaged in the science of education, but, some, namely, Judd and Counts are guided by the scientific approach to education defined by Dewey. Others, Bobbitt and Charters, however, are guided more by scientific management and the efficiency movement.

In Bobbitt's era of the 1920s, the idea of scientific management, social efficiency, experimentalist theory, and psychological measurement were all a part of the educational context. The organization of scientific inquiry in education had been introduced by John Dewey in several short essays in the early 1900s, but The Sources of a Science of Education is not published until 1929, a decade after Bobbitt's first work. A number of investigations by Thorndike, Judd, and others had been undertaken, but in the early 1920s, these studies were piecemeal. It is Bobbitt, who in 1918, identifies some of the basic principles or general formulations of the methods of curriculum construction for the first time in the field, and it is Bobbitt who attempts to operationalize these principles in How to Make a Curriculum six years later. Bobbitt's work is concurrent with Dewey's early work on scientific approach to education. In one sense, then, the scientific approach to education can be traced from Bobbitt-Dewey-Tyler. But in 1929, Dewey makes a major distinction that differentiates the Dewey-Tyler paradigm from the Bobbitt efficiency management technique.

In the Sources of a Science of Education, Dewey explains that there is no content for education which exists per se, but that the materials drawn from other sciences furnish the content of a science of



education.<sup>1</sup> The scientific approach, of which Tyler is the successor, extends from operationalizing other disciplines for education "as in the cases of Thorndike . . . and Judd in psychology and Counts in sociology, [where] the most effective educational research was done."<sup>2</sup> Judd is particularly interested in the survey technique. "In 1913, the superintendent of schools in Boise, Idaho . . . reported . . . on the results of a one-week survey made of the Boise schools . . . by Edward Elliott, Charles Judd, and George Strayer," which Judd describes in the NSSE's Thirty-Seventh Yearbook.<sup>3</sup> Judd's chapter entitled "Contributions of the School Surveys," states, "There is no body of material dealing with school administration as concrete and illuminating as that which is to be found in school surveys."<sup>4</sup>

George Counts is also involved in scientific techniques, but it is under his influence, combined with the disenchantment of educators with business leadership during the Great Depression, that the emphasis upon business and industrial management techniques for education declines. The difference between the scientific approach to education, in which disciplines, namely psychology, sociology, and philosophy are operationalized to become the content of education, and scientific

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<sup>1</sup>Dewey, The Sources of a Science of Education, p. 15.

<sup>2</sup>Raymond E. Callahan, Education and the Cult of Efficiency (Chicago: University of Chicago Press, 1962), p. 248.

<sup>3</sup>Ibid., p. 113.

<sup>4</sup>Charles H. Judd, "Contributions of the School Surveys," Scientific Movement in Education, in Thirty-Seventh Yearbook of the National Society for the Study of Education, pt. 2 (Chicago: University of Chicago Press, 1938), p. 19.

management, in which it is assumed that education is the content, is essential in understanding the differences between Bobbitt and Tyler.

A scientific approach to education views Bobbitt's activity analysis as one technique for determining objectives and not as the only technique. The sources of objectives extends beyond activities and the way to determine objectives extends beyond analysis of activities for Tyler and most other of his mentors. Finding the sources of the science of education in such disciplines as philosophy, psychology, and sociology differentiates the approach of Dewey, Thorndike, Judd, and Counts from Bobbitt. Bobbitt's activity analysis is central to his curriculum theory, and activity analysis is a peripheral technique for those who utilize the sources of a science of education.

The major purpose for investigating the mentor influence of Bobbitt upon Tyler is an attempt to analyze the position of the Tyler critics, who assert that the Tyler Rationale is a conceptual derivation of Bobbitt's activity analysis technique. Critics, such as Herbart Kliebard, James Macdonald, Bernice Wolfson, Elliot Eisner, Robert Davis, Ronald Tyrrell, and several reconceptual theorists challenge the assumptions and logic of scientific management.<sup>1</sup> These critics fail to differentiate, however, between activity analysis or scientific management of Bobbitt's approach and the scientific approach of Tyler and other of his mentors.

While Bobbitt and Tyler demonstrate some commonality in curriculum models, their views differ significantly, Bobbitt analogizes

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<sup>1</sup>James S. Fogarty, "The Tyler Rationale," Educational Technology 16 (March 1976): 30.

education as industry: "Work up the raw material [the child] into that finished product for which it is best adapted," Bobbitt explains.<sup>1</sup> In the NSSE's Twelfth Yearbook he extends this industrial metaphor:

If the school were a factory, the child the raw material, the ideal adult the finished product, the teacher the operative, the supervisor a foreman, and the superintendent a manager, then the curriculum could be thought of as whatever processing the raw material, the child, needed to change him into the finished product, the desired adult.<sup>2</sup>

Bobbitt expands upon these premises in his first major book, The Curriculum, which defines the interrelationship of the child, society, and curriculum. Bobbitt believes that each child should have the opportunity to develop his potential and that potentialities can be developed if employed in a socially useful way. The school is a social institution supported by the society to replenish and maintain the society. The curriculum, therefore, he concludes, is constituted from the common skills man needs to live a socially useful life.

The curriculum is defined as "the entire range of experiences, both understood and directed, concerned in unfolding the abilities of the individual [and] the series of consciously directed training experiences that the schools use for completing and perfecting the unfoldment."<sup>3</sup> Bobbitt's central theory of curriculum-making is activity analysis, which he defines:

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<sup>1</sup>Franklin Bobbitt, "Elimination of Waste in Education," Elementary School Teacher 12 (February 1912): 269.

<sup>2</sup>Seguel, The Curriculum Field: Its Formative Years, p. 80.

<sup>3</sup>Franklin Bobbitt, The Curriculum (Boston: Houghton Mifflin Co., 1918; reprint ed., American Education: Its Men, Ideas, and Institutions, New York: Arno Press and The New York Times, 1971), p. 43.

The central theory [of curriculum] is simple. Human life, however varied, consists in the performance of specific activities. Education that prepares for life is one that prepares definitely and adequately for these specific activities. However numerous and diverse they may be for any social class they can be discovered. This requires only that one go out into the world of affairs and discover the particulars of which these affairs consist. These will show the abilities, attitudes, habits, appreciations and forms of knowledge that men need. These will be the objectives of the curriculum. They will be numerous, definite and particularized. The curriculum will then be that series of experiences which children and youth must have by way of attaining these objectives.<sup>1</sup>

For Bobbitt, the educational problems can be most efficiently resolved through scientific management. For Bobbitt, "Education is primarily for adult life, not for child life. Its fundamental responsibility is to prepare for the fifty years of adulthood, not for the twenty years of childhood and youth."<sup>2</sup>

In How to Make a Curriculum, Bobbitt operationalizes the principles identified in his first book thereby demonstrating how his principle of curriculum can be used to develop curriculum. The solution for developing curriculum, for Bobbitt, was derived through scientific technique; namely, through activity analysis. Educational objectives and their formulation are the basis for Bobbitt's curriculum development. He divides curriculum development into three steps: (1) divide life into activities, (2) analyze each activity into specific activities, and (3) discover the objective of education. Bobbitt applies these steps by surveying 2,700 well trained and cultivated adults with assistance of 1,500 of his students to arrive at ten major fields of experience:

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<sup>1</sup>Ibid., p. 42.

<sup>2</sup>Franklin Bobbitt, How to Make a Curriculum (Boston: Houghton Mifflin Co., 1924), p. 8.

(1) language activities, (2) health activities, (3) citizenship activities, (4) general activities, (5) space-time activities, (6) keeping oneself mentally fit, (7) religious activities, (8) parental activities, (9) unspecialized or non-vocational activities, and (10) the labor of one's calling.<sup>1</sup>

Bobbitt's curriculum construction resulted in numerous specific objectives written as activities or in behavioral terms. The objectives were, in his view, to be developed for a school system by specialized groups within the community, although the teacher could be involved. "It is clear that Bobbitt was concerned with relating education to life, that he focused upon the social demands of society for the formulation of educational objectives, [and] that he emphasized the active role of the student in learning."<sup>2</sup>

Tyler is influenced by this activity analysis. Tyler studies under Bobbitt and assists Bobbitt's like-minded colleague, W. W. Charters, in the Commonwealth Teacher Training Study, which utilizes activity analysis as a method of curriculum construction. However, in his dissertation in 1927 and in three articles written in the 1930s, Tyler already expresses reservations about the limitations of the activity analysis technique.<sup>3</sup> In 1950, in Basic Principles, Tyler writes:

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<sup>1</sup>Ibid., pp. 8-9.

<sup>2</sup>Elliot W. Eisner, "Franklin Bobbitt and the 'Science' of Curriculum Making," School Review 75 (Spring 1967): 38.

<sup>3</sup>See Ralph W. Tyler, "A Course in History of Education," Educational Research Bulletin 9 (February 1930): 57-65; "Evaluating the Importance of Teachers' Activities," Educational Administration 16 (April 1930): 287-92; and "The Relation Between the Frequency and the Universality of Teaching Activities," Journal of Educational Research 22 (September 1930): 130-31.

The idea of job analysis developed and was widely used to work out training programs in World War I which would speed up the training of people for the skilled trades and various types of technology. In essence, job analysis is simply a method of analyzing the activities carried on by a worker in a particular field in order that a training program can be focused upon those critical activities performed by the worker.<sup>1</sup>

As is clear in this statement, Tyler suggests activity analysis as a technique. Tyler states, "In essence, most studies of contemporary life have a somewhat similar logic [to activity analysis]."<sup>2</sup> But in contrast to Bobbitt, who espouses analysis of activities as the process of curriculum-making and the activities as the curriculum, Tyler recommends activity analysis as only one procedure for attaining objectives.

Their rational approach to curriculum does bind Bobbitt and Tyler by one thread, but Tyler's view of education is not as conservative and simplistic as the view held by Bobbitt. Tyler, in 1950, defines education as "a process of changing the behavior patterns of people." In that definition Tyler essentially agrees with Bobbitt that education is a change in behavior. Unlike Bobbitt, however, the behavior is not prescribed by definite and specific activities discovered by community experts. Tyler clarifies this point more definitively by stating:

The terms "educational delivery system," and "teacher-proof materials" . . . indicate that some leading curriculum builders overlooked the fact that learning is a process in which the learner plays an active role . . . [a point made in 1950] . . . the only behavior . . . learned is the behavior . . . that becomes part of [the] repertoire of behavior.<sup>3</sup>

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<sup>1</sup> Tyler, Basic Principles of Curriculum and Instruction, p. 17.

<sup>2</sup> Ibid.

<sup>3</sup> Tyler, "Two New Emphases in Curriculum Development," p. 63.

In 1950, Tyler interchanges educational experiences with the phrase learning experiences and again in his "new emphases statement" of 1976, he exchanges the word education with the word learning. Tyler's definition more integrally involves the learner in curriculum; unlike Bobbitt, whose process for curriculum is analyzing the activities of adults and whose product of curriculum is these adult activities.

Bobbitt and Tyler disagree on the role of society in the curriculum. Bobbitt's curriculum is constituted of experiences which children have that prepares them for the social class in which they will live. The 1942 report on the Eight Year Study defines curriculum as "the total experience with which the school deals in educating young people."<sup>1</sup> In 1956, Tyler refines his definition--"all of the learning of students which is planned by and directed by the school to attain its educational goals."<sup>2</sup> This definition encompasses educational objectives, all planned learning experiences, and the appraisal of student learning in school. Between 1956-1958, Tyler clarifies his definition of planned learning experiences by identifying the five tasks appropriate for schools as versus tasks for other educative agencies. In 1976, Tyler adds another emphasis in which he calls upon the schools to help define the goals for the non-school areas of learning. By 1976, Tyler's definition of curriculum calls for a continuity between school studies and life but differentiates between school functions and educative functions of other institutions. Bobbitt's school reflects the society;

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<sup>1</sup>Giles, McCutchen, Zechiel, Exploring the Curriculum, p. 293.

<sup>2</sup>Tyler, "Curriculum--Then and Now," p. 79.

Tyler's school is different from society with specified functions.

Tyler and Bobbitt both insist that curriculum development is cooperative, but Bobbitt's community expert, who provides lists of activities, differs essentially from Tyler's specialists, who provide a system of checks and balances through the philosophy of the school, the psychology of learning, and evaluation. Both curricularists involve the teacher, but Tyler's utilization of personnel emulates Counts' definition in preference to Bobbitt's view. Bobbitt's definition of the role of the teacher excludes teachers' collection of objectives while Tyler's includes the teacher in each of his four processes from determining objectives to evaluating.

A significant difference exists not only between their views of personnel but also between the manner in which the rationale is applied. Unlike Bobbitt, Tyler explains that the rationale "is not a manual for curriculum construction . . . it outlines one way of viewing an instructional program . . . [with] no attempt to answer these questions [but to provide] an explanation . . . of procedures by which these questions can be answered."<sup>1</sup> Bobbitt gives only one view of the instructional program, one procedure for curriculum-making, one group of community experts for the discovery of objectives, and no explanation for ways in which his rationale should be used.

Not only is Tyler's definition of curriculum-making and the curriculum maker unlike Bobbitt's theory, but the definition, statement and sources of objectives also differ. For Bobbitt, influenced by

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 2.



Thorndike, objectives are "numerous, definite, and particularized," In contrast, for Tyler, influenced by Judd, objectives are generalized "to include thinking and feeling as well as overt action."<sup>1</sup> Tyler affirms, "By 1927, the notion of guiding teaching by using specific objectives was no longer widely accepted."<sup>2</sup> Bobbitt, like the present day behaviorists, would have educators stockpile repositories of thousands of objectives. Tyler, on the other hand, in a recent interview states, "I think we should be less concerned with specific behavior and more concerned with human capabilities."<sup>3</sup> Tyler believes that depositories of objectives can be useful as a guide but if taken mechanically can be as bad "as becoming a convert to a religion without knowing what the religion stands for."<sup>4</sup> Tyler's statement form for objectives reveals a level of generality, unlike the Thorndike-Bobbitt specificity.

Bobbitt and Tyler differ on the source of objectives as well as the definition and statement form. Bobbitt's sources of objectives are derived from two of the three areas: subject matter and practical action. Bobbitt indicates:

Current discussion of education reveals the presence in the field of two antagonistic schools of educational thought . . . the subject results: the enriched mind, quickened appreciations, refined sensibilities, discipline, culture . . . and efficient practical action in a practical world.<sup>5</sup>

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<sup>1</sup>Ibid., p. 6.

<sup>2</sup>Fishbein, "The Father of Behavioral Objectives Criticizes Them: An Interview with Ralph Tyler," p. 56.

<sup>3</sup>Shane and Shane, "Ralph Tyler Discusses Behavioral Objectives," p. 44.

<sup>4</sup>Ibid.

<sup>5</sup>Bobbitt, The Curriculum, p. 3.

Bobbitt affirms that both are right. "We have simply to do with two levels of functioning . . . efficiency of action and completeness of character."<sup>1</sup> Bobbitt designs a model distinguishing between two levels of educational experience: the play level and the work level. In a series of four horizontal boxes, the play level laterally influences three work levels: (1) development results or the power to think, feel, and act, (2) work activities, and (3) fruits of labor. Tyler does not deal with these three activities like Bobbitt.

Bobbitt also identifies five specific areas of adult functions which create activities: occupational efficiency, education for citizenship, physical efficiency, leisure occupation, and social intercommunication.<sup>2</sup> Tyler, on the other hand, provides no single classification of aspects of life because none is wholly satisfactory. Tyler does, however, cite several possible taxonomies of areas of adult function.<sup>3</sup>

Upon the sources of objectives, Bobbitt and Tyler disagree. In Basic Principles, Tyler explains the criticism against the use of activity analysis or the studies of contemporary life as the sole basis for deriving objectives. Tyler names three criticisms for deriving objectives from this source alone which include: (1) identification of contemporary activities does not alone indicate their desirability, (2) identification of contemporary activities from the present does not account for a changing society, and (3) adult activities are not neces-

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<sup>1</sup>Ibid., p. 6.

<sup>2</sup>Ibid., pp. vii-viii.

<sup>3</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 20.

sarily interesting to children.<sup>1</sup> To address these criticisms, Tyler states that "an acceptable educational philosophy" removes the first criticism, and he uses the school philosophy in that way. For the second criticism, Tyler explains that "a student's intelligent understanding of basic principles" of how the society works can dismiss that criticism. About the third criticism, Tyler believes, "Studies [of contemporary society] indicate directions in which objectives may aim, while the choice of particular objectives . . . takes into account student interests and needs."<sup>2</sup> Tyler's three sources of objectives respond to these three criticisms and extend beyond Bobbitt's single source of objectives, which is adult life.

In general, it appears that Tyler and Bobbitt differ more than they agree. The important means and ends dichotomy is the same, but other basic assumptions and logic differ: adult life is not the "end" for Tyler's rationale as it is in Bobbit's theory, objectives are not specific, and school learning differs from learning in society for Tyler but not Bobbitt. It is, however, also Tyler's additions to the rationale that create a second major difference between the two curricularists. In the rationale: (1) four questions are created, (2) three different sources of objectives are identified, (3) recommended procedures rather than only activity analysis operationalizes the four fundamental questions, (4) one way rather than the way of curriculum-making is presented, (5) philosophy screens objectives to incorporate the values of a given school, (6) psychology screens objectives making them less univer-

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<sup>1</sup>Ibid., pp. 18-19.

<sup>2</sup>Ibid., p. 19.

sal and more idiosyncratic with the chosen theory of learning, and (7) the evaluation alters objectives in a continuous cycle. The assumptions differ and the additions differ.

The Tyler Rationale is less influenced by Bobbitt than it is by Dewey and Judd. It is true that Bobbitt was engaged in the measurement movement, but his engagement was through scientific management. But it has also been shown that Tyler's paradigm is based upon Dewey's rationale, The Sources of a Science of Education. Dewey's and Judd's scientific approach is Tyler's legacy and, since science and scientism are mutually exclusive, they both cannot influence Tyler. An authoritative study of the efficiency movement, Education and the Cult of Efficiency, which explains Bobbitt's leadership in scientific management, excludes Tyler as part of the group. Yet, Tyler's critics identify him with this cult.

About Bobbitt's influence in contrast to Judd, Counts, and Charters, Tyler himself states, "Bobbitt was a nice old gentleman. . . . In my opinion Bobbitt did not have much originality. In terms of minds, Counts, Judd, and Charters had much more searching and inquiring minds."<sup>1</sup> Bobbitt's mechanistic view of education, his simplistic view of the science of education, and his conservative view of what society is rather than should be provided his approach to curriculum-making. Tyler's view of education is complex; his use of science is as a trained scientist and social scientist, and his view of society is as a progressive. The Tyler Rationale is not a derivative of the Bobbitt

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<sup>1</sup>Ralph W. Tyler Interview with George Antonelli, August 26, 1971.

approach. Tyler's legacy is traced from Dewey and Judd.

### Mentor Legacy of Werrett Charters

W. W. Charters received his doctoral degree in Methods in History Teaching at the University of Chicago in 1904 under John Dewey's chairmanship. For several years, Charters is a teacher and a principal in secondary schools before he becomes a professor of education in 1907. When a professor of education at Carnegie Institute of Technology, he writes Curriculum Construction, in 1923, a pioneer study in curriculum from a functional point of view. Between 1925-1928, Charters is a professor of education at the University of Chicago and from 1928-1942, a professor of education and the Director of the Bureau of Educational Research at Ohio State University.<sup>1</sup> During his tenure at the University of Chicago, The Commonwealth Teacher Training Study of 1929 is his major research project. Charters' areas of concentration include: "methods of teaching, teaching the common branches, curriculum construction, and the teaching of ideals."<sup>2</sup>

Charters is interrelated with other influencers and mentors of Tyler. Charters especially acknowledges his indebtedness to Dewey's ideas and to Franklin Bobbitt in the preface to Curriculum Construction.<sup>3</sup> Seguel, an authority on the interrelationship between Dewey and Charters, cites several of Dewey's influences, particularly Dewey's idea

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<sup>1</sup>Cattell and Ross, eds., Leaders in Education: A Biographical Directory, p. 185.

<sup>2</sup>Ibid.

<sup>3</sup>W. W. Charters, Curriculum Construction (New York: Macmillan Co., 1923), p. viii.

of knowledge as method and method as knowledge. Charters writes in Curriculum Construction, "All the content of curriculum is methodic. Everything taught or discovered, recorded or achieved, has been a method. . . ." <sup>1</sup> Seguel also identifies Dewey's influence upon Charters' interpretation of the social character of education.

If subject matter were created originally to satisfy social needs, as Dewey had suggested, it was surely evident that such needs were continuing. Charters wondered whether these needs could safely be ignored or whether there was some subject matter that must be taught to satisfy them. <sup>2</sup>

Charters is also interrelated with Thorndike, Judd, and Bobbitt, as part of the measurement movement. Charters is more influenced by Thorndike than Judd, but both leaders serve on an Educational Research Committee, "concerning the . . . revision of school and college curricula with a view to a possible reorganization . . . of the American educational system," <sup>3</sup> which sponsors Charters' Commonwealth Teacher Training Study. Like Counts, and all other Tyler mentors, Charters is a member of the graduate faculty of the Department of Education under Judd and a member of the Society's Committee on Curriculum-Making for the Twenty-Sixth Yearbook of the National Society for the Study of Education.

The greatest similarity among mentors is between Charters and Bobbitt, whose work resembles each other in their involvement in: (1) the scientific management movement, (2) the social efficiency trend,

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<sup>1</sup>Ibid., p. 74.

<sup>2</sup>Seguel, The Curriculum Field: Its Formative Years, p. 91.

<sup>3</sup>W. W. Charters and Douglas Waples, The Commonwealth Teacher-Training Study (Chicago: University of Chicago Press, 1929), p. xi.

(3) the new mental measurement and experimental theory of psychology, (4) their intent to streamline and modernize education, and (5) the reorganization of knowledge around social activities. Curriculum-making for both Charters and Bobbitt is based upon activity analysis with the slight shift in emphasis by Charters to the job aspect of adult activity in contrast to Bobbitt's more inclusive five categories identified in The Curriculum. Seguel guesses "that Bobbitt in . . . The Curriculum formulated a method that W. W. Charters had been reaching toward for years."<sup>1</sup> The vantage points from which Charters and Bobbitt shape their curriculum perspective differs, mainly because Charters' emphasis is more upon instruction and Bobbitt's upon administration.

It is Charters and Tyler who enjoy the most multi-faceted and extended mentor-student-colleague relationship from among Tyler's professors at the University of Chicago. As a student, Tyler is in three graduate courses in techniques of curriculum construction taught by Charters. In the fall of 1926, Tyler is invited by Charters to assist in The Commonwealth Teacher Training Study about which Charters reports, "The statistical techniques utilized in the study were developed and supervised by Ralph W. Tyler, University of North Carolina. . . ." <sup>2</sup> As Director of the Bureau of Educational Research at Ohio State University, Charters invites Tyler to Head the Division of Accomplishment Testing in the Bureau in 1929, and while at Ohio State University Charters invites Tyler to collaborate in his project focused upon the training of

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<sup>1</sup>Seguel, The Curriculum Field: Its Formative Years, p. 90.

<sup>2</sup>Charters and Waples, The Commonwealth Teacher-Training Study, p. xi.

engineers at the Rochester Athenaeum and Mechanics Institute. It is Charters and his colleague at Ohio State, Boyd Bode, who introduce Tyler as a candidate for the position of Director of the Evaluation Staff of the Eight Year Study.

The reasons for analyzing Charters' influence upon Tyler are twofold: first, The Tyler Rationale is purported to be a derivative of the Bobbitt-Charter's conceptual method and second, the extended collaborative relationship and the number of similarities in their research give cause to assume that Charters' influence upon Tyler is significant in Tyler's logic and assumptions about curriculum. As explained in the fourth chapter of this investigation, "Tyler's Career and Contributions to Curriculum," and as Tyler himself suggests, the twenty-three year working relationship between them influences his career more than it influences the rationale. Charters' influence upon the rationale and not upon Tyler's career is, however, the concentration of this investigation.

Both Charters' and Bobbitt's steps of curriculum construction have activity analysis as their bases for obtaining curriculum objectives. In 1922, Charters defines activity analysis and curriculum construction explaining his interpretation of "two clear-cut theories concerning the relation of the curriculum to the activities of the individuals."<sup>1</sup> One theory maintains content should come from the specialist and that the learner uses what he needs and the other theory explains that the use to which knowledge will be put determines the knowledge

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<sup>1</sup>W. W. Charters, "Activity Analysis and Curriculum Construction," Journal of Educational Research 5 (May 1922): 358.



needed. Activity analysis can advance beyond the second theory of natural selection by making "an analysis of the situation to which adjustment is to be made and then developing an organism which meets these conditions in a superior way."<sup>1</sup> The theory of activity analysis holds that "the structure of a subject varies with its function and its content with its use."<sup>2</sup> Activity analysis includes mental and physical activities and simple and complex activities.

Charters' analysis technique had its prototype in Frederick Taylor's earlier model from industry and was designed by Charters to obtain educative objectives in an efficient way. In 1919, Charters "began . . . a labor in which he would spend the major portion of his professional life--the job analysis of a host of adult occupations and the construction of curriculum and teaching methods in them."<sup>3</sup> Among these occupations are: pharmaceuticals, radio education, veterinary medicine, recreation leadership, secretarial duties, leadership in industry, and women's activities. From 1928-1942, Charters supervises and influences several other job analyses of occupations. Although activity incorporated the progressive idea of linking the curriculum to life experience, it departed from the progressive rationale by reducing curriculum to an analysis of adult activity and thereby overlooked the authentic life of the learner.<sup>4</sup> This is one crucial difference between the Bobbitt-Charters' model and the Tyler Rationale.

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid., p. 359.

<sup>3</sup>Seguel, The Curriculum Field: Its Formative Years, p. 93.

<sup>4</sup>Tanner and Tanner, Curriculum Development: Theory into Practice, p. 23.

Charters' rules for curriculum construction include: (1) determine the major objectives of education by a study of the life of man for its social setting, (2) analyze these objectives into ideals and activities to the level of working units, (3) arrange these in order of importance, (4) raise them to position of higher order activities of high value for children but of low value for adults, (5) determine the important items for school and deduct those better learned outside, (6) collect the best practice in handling these ideals and activities, and (7) arrange the material in instructional order according to psychological nature of children.<sup>1</sup>

After the fourth step, Charters considers psychological factors relating to the ability and interests of the learner. Charters believes that "important material must be taught, even though, to the child, intrinsic interest and evident utility be lacking."<sup>2</sup> To Charters, "the learner exercises an increasingly important effect on the curriculum."<sup>3</sup> Tyler extends Charters' view of the importance of the learner in the original rationale of 1950 by placing "studies of the learner" as the first source of objectives. In Tyler's most recent statement of the rationale in 1976, one of the two new emphases is upon the importance of the active role of the learner.

When collecting curriculum materials, Charters includes these considerations: the objectives must be set up, the terms of the curriculum selected, and in the selection a process of evaluating each item

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<sup>1</sup>Charters, Curriculum Construction, p. 102.

<sup>2</sup>Ibid., p. 100.

<sup>3</sup>Ibid., p. 95.

in terms of objectives must be constantly performed. These three considerations by Charters are similar to the divisions in the rationale with one addition in the rationale, which is to organize learning experiences.

According to Charters, "The objectives of an educational institution are the product of three factors--social needs, student interests, and institutional facilities."<sup>1</sup> Tyler's objectives compare with Charters in that, for Tyler the learner's needs and interests are the prime source of objectives; the studies of contemporary society, which parallel Charters' social needs, are the second source; but suggestions of subject-matter specialists rather than institutional facilities are the third source.

The source of many concepts in the Tyler Rationale are suggested in Charters' Curriculum Construction, but the influence upon the rationale by Charters is less significant than the other predecessors: Dewey, Thorndike, Judd, and Counts. The Charters' and Tyler's models both begin with objectives and incorporate evaluation, but the differences are numerous and include: (1) one model is mechanistic and the other experimental, (2) one model presents questions and shows an interrelationship among them and the other does not, (3) the sources of objectives differ, (4) the earlier model has a static orientation to society and the latter a dynamic definition of society, (5) one perceives the child as a miniature adult and the other views the child in stages of development, and (6) one model is comprised of exhaustive

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<sup>1</sup>W. W. Charters, "Selecting Institutional Objectives," Personnel Journal 12 (June 1933-April 1934): 7.

particularized objectives and the other selected, general, but clearly stated objectives. Although Charters includes the awareness of psychology, he does not go beyond the point to recommend a way to utilize psychology. Since Charters' model is a derivative of Bobbitt's concept, greater insight can be gained into the influence of Charters upon the Tyler Rationale in the prior section, which analyzes the Bobbitt legacy to Tyler.

Curriculum Influence of the Twenty-Sixth Yearbook  
of the National Society for the Study  
of Education

A final major influence in shaping Tyler's curriculum perspective is the NSSE's Twenty-Sixth Yearbook. To understand another shaping force behind Tyler, it is important to know the purpose and nature of the yearbook and Tyler's response to it. Tyler himself states that the two volumes of NSSE's Twenty-Sixth Yearbook "are influential in shaping his thinking and understanding of curriculum-making."<sup>1</sup> Published the year Tyler entered the University of Chicago for his doctorate, four of his professors: Franklin Bobbitt, W. W. Charters, George Counts, and Charles Judd, were members of the Society's Committee on Curriculum-Making and several are contributing authors. Their intent for the yearbook was to direct efforts "to the preliminary problem of method" and "to unify or reconcile, the varying and often seemingly divergent or even antagonist philosophies of the curriculum."<sup>2</sup>

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<sup>1</sup>Interview with Ralph W. Tyler, Chicago, Ill., April 1984.

<sup>2</sup>Guy Montrose Whipple, ed., "Editor's Preface," The Foundations and Techniques of Curriculum-Construction, in Twenty-Sixth Yearbook of the National Society for the Study of Education, pt. 1 (Bloomington, Ill.: Public School Publishing Co., 1926), p. ix.

In the mid-1920s Harold Rugg, Director of the yearbook, explained the curriculum problem:

It is becoming increasingly apparent that educational leaders must reconstruct the public school curriculum from a consideration of American life as a whole, from a synthetic view of it which shall embody its cultural aspects, politics, industry, and business, city and country life, impact of groups upon each other, the American rhythm expressing itself in active accomplishments--everything.<sup>1</sup>

Rugg describes the problem in the retrospect of the past century.

Not once in a century and a half of national history has the curriculum of the school caught up with the dynamic content of American life . . . decade by decade the curriculum has lagged behind the current civilization. Although the gap between the two has been markedly cut down in the last three quarters of a century, nevertheless, the American school has been essentially static and academic. Today much of the gap persists.<sup>2</sup>

Rugg's historical survey "revealed conspicuous changes in the curriculum and in the techniques by which it was constructed."<sup>3</sup> Changes occurred in purpose, leadership, method, content, and organization. The yearbook reports these changes.

Entitled The Foundations and Techniques of Curriculum-Construction, the yearbook is divided into Part I "Curriculum-Making: Past and Present" and Part II "The Foundations of Curriculum-Making." Both are prepared under the direction of Harold Rugg of Teachers College, Columbia University. "The chief purpose of the yearbook is the inventory and appraisal of curriculum-making in American schools--past and

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<sup>1</sup>Harold Rugg, "Three Decades of Mental Discipline: Curriculum-Making via National Committees," The Foundations and Techniques of Curriculum-Construction, in Twenty-Sixth Yearbook of the National Society for the Study of Education, pt. 1 (Bloomington, Ill.: Public School Publishing Co., 1926), p. 51.

<sup>2</sup>Rugg, "Curriculum-Making in Laboratory Schools," p. 113.

<sup>3</sup>Ibid.

present."<sup>1</sup> Rugg cautions that it is important that those who construct curriculum must maintain an overview of the total situation. The premise of the yearbook is, "Synthesis is needed especially because of the gap between school and society and between curriculum and child growth."<sup>2</sup> Rugg further states that curriculum-making must become "comprehensive, all embracing, and continuous, not partial and intermittent, as it has been during a century of national development."<sup>3</sup> The yearbook presents three kinds of information: an historical review, a description and evaluation of contemporary and innovative practices, and a statement of foundational principles for curriculum reconstruction.<sup>4</sup>

Part I of the yearbook is divided into five different sections. Section I "is an outline of the major movements of curriculum-making, the chief trends and the crucial forces operative in a century of development."<sup>5</sup> This section sets in relation the work done by three groups: "(1) the national committee composed of subject matter specialists, (2) the experimenters in the laboratory schools, and (3) the students of the more 'scientific' study of education."<sup>6</sup>

The other sections establish several significant influences, Sections II-IV provide a description and evaluation of current programs as well as methods of curriculum construction with examples given of "progressive curriculum-construction in six public school systems" and

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<sup>1</sup>Harold Rugg, "Foreword," The Foundations and Techniques of Curriculum-Construction, in Twenty-Sixth Yearbook of the National Society for the Study of Education, pt. 1 (Bloomington, Ill.: Public School Publishing Co., 1926), p. x.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid., p. xii.

<sup>5</sup>Ibid., pp. xii-xiii.

<sup>6</sup>Ibid., p. xiii.

eleven private laboratory schools.<sup>1</sup> In Section V, a review and critique of the ten years of progress made from 1916-1926 in job analysis of occupations and professions and in character and trait analysis are presented.

Three tasks for curriculum-making are identified: (1) the determination of fundamental objectives, (2) the selection of activities and materials of instruction, and (3) the discovery of the most effective organization. Rugg believes, "All three tasks are of vital importance to the proper construction of curriculum. Consciously or implicitly, the curriculum-maker is always guided by its objectives in the selection of activities or other materials of instruction, and in their organization and grade-placement."<sup>2</sup> Five special fields of work are represented in the total enterprise of constructing curriculum for a public school system:

(1) the study of contemporary American life--the physical and natural world, economic, political, and social institutions, culture--every aspect; (2) the study of child capacities, interests, rates of learning, etc.; (3) educational administration--child accounting, daily program, and the like; (4) educational measurement, statistical measurement, statistical methods, and controlled experimentation; and (5) the professional study of specific fields of subject matter, including specialized documentation and authentication.<sup>3</sup>

Five other types of studies are specifically called for by Rugg which include: (1) studies of skills and facts of proved worth; (2) studies of basic concepts, generalizations, institutions, and problems which

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<sup>1</sup>Ibid.

<sup>2</sup>Rugg, "Three Decades of Mental Discipline: Curriculum-Making via National Committees," p. 51.

<sup>3</sup>Ibid., p. 53.

are needed for an understanding of contemporary life; (3) studies dealing with grade-placement of material; (4) studies of pupil difficulties, errors, and other problems of learning; and (5) studies of job analysis in the vocations and professions.<sup>1</sup>

Part I of the yearbook provides a description and critical synthesis of curriculum-making, and Part II presents a general statement of the foundational principles upon which the next steps in the reconstruction of the school curriculum should be taken. Part I includes articles by mentor-authors, Charters and Counts, and Part II includes articles by Bobbitt, Charters, Counts, and Judd. All of Tyler's mentors were members of the Society's Committee on Curriculum-Making. This overlap between mentor-author doubled the influence upon Tyler, who remarked as recently as 1973:

Much of my thinking was strongly influenced by this publication [NSSE's Twenty-Sixth Yearbook] because I had worked with a number of people who had been responsible for its preparation. They pointed out that we were talking about subjects as though they were ends in themselves. . . . Rather, these pioneers said, we should look at questions--What is it that students can learn? How can they develop into persons who can take responsible positions in a rapidly changing society? This made me and many other persons in the field of curriculum begin to realize that we had to look at the outcome of learning rather than to look at the labels.<sup>2</sup>

Tyler again describes the importance and influence of the NSSE's Twenty-Sixth Yearbook in an article written for the NSSE's Seventieth Yearbook in which he explains:

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<sup>1</sup>Rugg, "Curriculum-Making and the Scientific Study of Education Since 1910," pp. 78-80.

<sup>2</sup>Shane and Shane, "Ralph Tyler Discusses Behavioral Objectives," p. 46.



The consensus reached should suggest that monumental achievement which the Twenty-Sixth Yearbook represented not only in furnishing a critical review of current practices and outlining steps for the future, but also in clarifying the problems which pioneer curriculum watchers were encountering in codifying the conclusions they were reaching regarding the proper perspectives, approaches, and assumptions likely to be helpful in dealing with these problems . . . throughout the next two decades (1926-1947).<sup>1</sup>

Tyler believes that the yearbook was a guiding factor in the development of curricula in the United States and several foreign countries.

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<sup>1</sup>Tyler, "Curriculum Development in the Twenties and Thirties," p. 41.

## CHAPTER VII

### THE TYLER GENEALOGY: THE PRESENT (1930-1980)

#### Examination of the Tyler Influence: Ohio State University and the University of Chicago

Ralph Tyler's impact on the field of curriculum begins in the 1930s, builds in the 1940s and 1950s, and sustains its importance throughout the 1960s to the present. During this period, Tyler influences many curricularists with whom he associates at the two universities, Ohio State University (1929-1938) and the University of Chicago (1938-1953), where he held extended appointments. In this twenty-five year period, Tyler is an influential mentor and colleague at the two universities. Concurrently he was the director of two major research projects, the Eight Year Study, headquartered first at Ohio State University and later at the University of Chicago, and the Cooperative Study, headquartered at the University of Chicago. Both research projects functioned through a series of workshops and involved professors from the two universities. Tyler was also Head of the Examiner's Office at the University of Chicago to which he appointed several colleagues.

Although no longer university affiliated in 1953, Tyler remains influential in the field through several key involvements. Beginning in 1953, Tyler directs the Center for Advanced Study in the Behavioral Sciences and beginning in the mid-1960s, Tyler participates in the conferences to initiate the National Assessment of Educational Progress.

Throughout these decades, Tyler is also engaged as a national and an international consultant on numerous projects within and without academia. The importance of the Tyler Rationale itself also has sustaining significance upon curriculum theorists and practitioners in the field.

Tyler and the Tyler Rationale have been shaping influences upon many of Tyler's students and colleagues, who, like Tyler himself in the previous decades, are prominent in the field today between the 1950s and 1980s. From among these graduate students and colleagues, four different groupings create what might be called a Tyler legacy. In this Tyler genealogy, the rationale links the legacy of many past important curricularists: John Dewey, Edward Thorndike, Charles Judd, George Counts, W. W. Charters, and Franklin Bobbitt, with many present day leaders in the field.

The Tyler influence has made an impact on curricularists of varying degrees of prominence in the curriculum and evaluation fields. Four different branches comprised of twenty-five curricularists carry on the Tylerian principles of curriculum, instruction, and evaluation in a variety of different ways. Each branch emanates from one of two universities, and each is comprised of colleagues and graduate students, many of whom are associated with Tyler in research projects, the Examiner's Office, or the Center for Advanced Study in the Behavioral Sciences.

The three main bases for the selection of the curricularists are: questionnaires completed by Ralph Tyler relating to students and

colleagues at Ohio State University and the University of Chicago,<sup>1</sup> the William Schubert Mentor-Student genealogy,<sup>2</sup> and references in the Tyler literature and Tyler interviews. Four additional guidelines, described more thoroughly in the section of methodology, help to refine the selection process.<sup>3</sup> The four guidelines include: (1) the duration of the relationship, (2) the number of relationships between Tyler and the curricularist, (3) the prominence of the curricularists, and (4) the significance of the influence of the Tyler Rationale. These four guidelines aid the selection process because they exclude the numerous collegial relationships of shorter duration and those with fewer associations. The curricularists selected associated with Tyler in several of the following ways: a Tyler student; a professor appointed by Tyler or a colleague; a collaborator in the Eight Year Study, the Cooperative Study, or another research project; a University Examiner; or a fellow at the Center for Advanced Study in the Behavioral Sciences.

This refinement of the selection process limited the number of curricularists to twenty-five. (See Figure 6.) For each of these curricularists, the prominence was determined by several criteria that were used to exclude the less well known students and colleagues. The criteria of prominence include: the listing of the curricularist in William Schubert's index of 1,138 curriculum texts from 1900-1980 as

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<sup>1</sup>See Appendix A.

<sup>2</sup>Schubert, "Origins of the Curriculum Field Based on a Study of Mentor-Student Relationships," p. 37.

<sup>3</sup>See Chapter II, which describes the methodology, pp. 25-27.

## Tyler Genealogy: The Influence upon Present Curricularists (1930-1980)

	Stu- dent	Pro- fessor	Eight Year Study	Cooper- ative Study	Exami- ner's Office	Center Behavioral Sciences
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## Grouping I--Mentor and Colleague Influence at Ohio State University

Edgar Dale	UC-	OSU				
Lily Detchen	OSU		x	x		
Louis Heil	OSU	UC	x	x	x	
Louis Rath		OSU	x			
Harold Shane	OSU	OSU	x			

## Grouping II--Mentor and Colleague Influence at the University of Chicago: Prominent Curricularists

Benjamin Bloom	UC	UC	x	x	x	x
Lee Cronbach	UC	UC	x		x	x
John Goodlad	UC	UC				
Hilda Taba		OSU+UC	x			
Herbert Thelen	UC	UC	x			

## Grouping III--Mentor and Colleague Influence at the University of Chicago

Edgar Friedenberg	UC	UC		x	x	
Chester Harris	UC	UC	x			
Earl Johnson	UC	UC		x		
David Krathwohl	UC				x	x
Christine McGuire	OSU+UC	UC	x			
Kenneth Rehage	UC	UC				
Ole Sand	UC					
Louise Tyler	UC					
James Wilson	UC					x

## Grouping IV--Colleague Influence at the University of Chicago

George Barton	OSU-	UC		x		
Paul Diederich		UC	x		x	
Harold Dunkel		UC		x	x	
Maurice Hartung		OSU+UC	x		x	
Virgil Herrick		UC				
Joseph Schwab		UC			x	

Key: OSU = Ohio State University  
 UC = University of Chicago  
 - = Tyler not present at that time  
 x = Curricularist involved

Fig. 6. An illustration of the possible six kinds of relationship between Ralph Tyler and those curricularists influenced by him.

well as other curriculum histories and in the Biographical Dictionary of American Educators or other similar sources.<sup>1</sup>

After the selection process was completed, each curricularist was surveyed through a Mentor-Student Questionnaire, which focused upon the influence of the Tyler Rationale on the curricularist.<sup>2</sup> Of the twenty-five questionnaires, twelve were completed and four were not. Six curricularists are deceased and three are elderly and could not respond. Curricularists who responded to the questionnaire include: Lee Cronbach, Paul Diederich, Harold Dunkel, Edgar Friedenber, Chester Harris, Maurice Hartung, David Krathwohl, Kenneth Rehage, Harold Shane, Joseph Schwab, Herbert Thelen, and James Wilson. Curricularists who are deceased include: George Barton, Louis Heil, Virgil Herrick, Louis Raths, Ole Sand, and Hilda Taba.

For each curricularist, the major writings were perused in terms of the influence of the Tyler Rationale on the curricularist's contribution to the field. A more cursory examination was undertaken in terms of the general influence of Tyler upon the curricularist's contribution. An analysis of the contribution of the curricularist to the field in general was not undertaken since the focus of the investigation is only on the influence of the Tyler Rationale upon Tyler's colleagues.

The approach for discussing the influence of the Tyler Rationale upon the curricularist includes: (1) a brief description of the

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<sup>1</sup>Ibid.

<sup>2</sup>See Appendix B.

professional interests, (2) an identification of the associations with Tyler, and (3) a short analysis of the influence of the Tyler Rationale, when present in the work of the curricularist. The curricularists, whose contribution to the field is strongly influenced by the rationale are discussed in greater depth than those where the influence is not as strong. Those curricularists whose contributions are not strongly influenced by the rationale, but who collaborated with Tyler in other important ways are discussed briefly. The decision to include the curricularist is based upon the earlier set of criteria applicable to the original selection; therefore, whether the influence of the rationale upon the curricularist is significant or insignificant the relationship with Tyler is described.

In the four different groupings of the curricularists, it is important to recognize that Tyler's influence changes as his accomplishments and his stature in the field increase. In many cases, the word influence is defined as an interchange between two colleagues. This definition is more applicable at Ohio State University than at the University of Chicago. The exception to this definition of the word influence occurs when the Tyler Rationale is at the base of the contribution or of the curriculum model of the curricularist. In these cases, the curricularist himself usually identifies the influence.

Of the four groupings of curricularists, the earliest branch of the Tyler legacy has its roots in the mentor-student and colleague relationships established at Ohio State University when Tyler begins his career between 1929-1939. Of the five curricularists comprising this grouping, four were students and colleagues. Tyler, during this period, is engaged in the Service Studies at Ohio State University, the development of his evaluation process, and the Eight Year Study. This

grouping: Edgar Dale, Lily Detchen, Louis Heil, Louis Raths, and Harold Shane, vary in their degree of prominence in the curriculum field and in the kinds of working relationships with Tyler. The influence of Tyler on this grouping pre-dates the publication of Basic Principles and focuses heavily upon the field of evaluation, which is just beginning to emerge in importance. The thrust of Tyler's influence in this grouping is predominantly the Eight Year Study, and the influence is mainly an exchange of ideas about evaluation.

A second branch of the Tyler legacy has its origins in the mentor-student and colleague relationships at the University of Chicago, when Tyler accepts the appointment as Chairman of the Department of Education. This grouping of curricularists and evaluators ranks among the most prominent in the country today. Graduate students who become colleagues at the University of Chicago include: Benjamin Bloom, Lee Cronbach, John Goodlad, and Herbert Thelen. A fifth prominent curricularist is the late Hilda Taba, who unlike the others was not a graduate student at the University of Chicago, but was a colleague at both Ohio State and the University of Chicago for the duration of twenty-five years. The prominent curricularists of the grouping include: Bloom, noted for the development of the taxonomy of cognitive objectives; Cronbach, distinguished Stanford University professor and national evaluator; Goodlad, renowned for his conceptual system of principles of curriculum and instruction; Thelen, famed for his group theories; and Taba, acknowledged for her seven step curriculum theory. Taba, Thelen, and Bloom also create instructional models. Two of these professors, Bloom and Thelen, remain and become professor emeritus at



the University of Chicago; others accept positions at different California universities.

A third grouping of Tyler students from the University of Chicago also carry on the Tyler tradition. In this grouping of nine curricularists, who are important but not as prominent in the field as the prior grouping, five students: Edgar Friedenberg, Chester Harris, Earl Johnson, Christine McGuire, and Kenneth Rehage, are appointed to the faculty of the University of Chicago by Tyler. Other University of Chicago doctoral students in this grouping, who studied under Tyler, gain recognition in areas of mutual interest to Tyler. Of this category, Ole Sand and Christine McGuire contribute to nursing and medical education, and James Wilson contributes in the area of Cooperative Education. Other of Tyler's students, David Krathwohl, becomes well known for the development of the taxonomy of affective objectives, and Louise Tyler is acknowledged for her work in psychoanalysis and curriculum. Most of this grouping attend the University of Chicago later in Tyler's career, when the Eight Year Study and the Cooperative Study are completed, and a different pattern of collaboration emerges. Earlier graduate students participate in Tyler's research projects; now, for this grouping, Tyler participates in the curricularists' research projects, which he frequently helped to arrange.

Professors based at the University of Chicago, who were Tyler's colleagues but not Tyler students create a fourth branch of the Tyler legacy. Most prominent in this grouping are professors and colleagues who include: Harold Dunkel, Maurice Hartung, Virgil Herrick, and Joseph Schwab. Other professors of stature also include: George Barton, a

curriculum theorist, and Paul Diederich, known for his work at the Educational Testing Bureau in Princeton, New Jersey.

From among many curricularists, these fifteen former students, most of whom become professors at the University of Chicago, and these ten professors from both Ohio State University and the University of Chicago are selected because of the influence of Tyler upon their contribution to curriculum. Important among the reasons for Tyler's influence upon these curricularists are: the importance of the Tyler Rationale in the field; Tyler's active leadership in the field over an extended period of time; the significant and influential appointments held by Tyler within and without academia; the inherent nature of the role of an evaluator's position, which provides mutual access among evaluator, theoretician, and practitioner; and Tyler's position as a consultant. The Tyler Rationale influences each member of these four groupings of students, colleagues, and collaborators that constitute the Tyler legacy differently, but for each curricularist the impact is significant.

Grouping I: Tyler's Mentor and Colleague Influence  
at Ohio State University

A first branch of the Tyler legacy stems from Tyler to students and colleagues associated at Ohio State University. This grouping of curricularists has the most number of collaborative relationships with Tyler for the longest period of duration. The curricularists' prominence in the field varies. The three most prominent in the grouping have earned reputations in different curriculum areas: Louis Rath in theory for values education, Harold Shane in theory for future education, and Louis Heil in educational measurement. Three of the grouping:

Lily Detchen, Louis Heil, and Harold Shane were students at Ohio State University and three: Edgar Dale, Louis Rath, and Harold Shane, were professors at Ohio State University. Harold Shane was both. Four are involved in the Eight Year Study, and Detchen and Heil move with Tyler to the University of Chicago because of their involvement in the Eight Year Study. Later, both also become engaged in the Cooperative Study of General Education and members of the committee that helps to create the taxonomy of cognitive objectives edited by Benjamin Bloom in his book by the same name. Some also become involved in other of Tyler's professional interests. The curriculum literature created by this grouping is considerable, but it is Rath, Shane, and Heil who are most prolific.

The influence of the rationale on the contribution of Edgar Dale is insignificant. Edgar Dale receives his Ph.D. from the University of Chicago in education in 1928, one year after Tyler receives his doctoral degree. Dale and Tyler meet again in 1929, when W. W. Charters invites Dale to the post of curriculum and Tyler to the post of testing in the Bureau of Educational Research at Ohio State University. Dale and Tyler work together from 1929-1939, when Tyler accepts the appointment to the University of Chicago and Dale remains at Ohio State University until 1970. In 1947, Dale joins with Tyler as a participant in the Curriculum Theory Conference, initiated by Tyler and Virgil Herrick, designed to inspire theory development in the curriculum field. Dale's professional interests are directed to educational media primarily.

Dale is an acknowledged major contributor to the study of educational communications, and he contributes seven books to that field

between 1935-1972.<sup>1</sup> Dale is involved in three yearbooks between the 1950s and 1960s; two concentrate on communication and media for education. One text is the Thirteenth Yearbook of the John Dewey Society, which reflects on the past development and present challenges of media and communication for educational purposes. The other, the Fifty-Third Yearbook of the National Society for the Study of Education, entitled Mass Media and Education describes the application of media for educational purposes. The only reference to Tyler in Dale's work exists in a chapter written for the Sixty-Sixth Yearbook of the National Society for the Study of Education. In his chapter, "The Historical Setting of Programmed Instruction," Dale links the application of the Tyler Rationale to work in programmed instruction. Dale states, "A key factor in programmed instruction is the detailed specification of objectives of instruction in behavioral terms. Prominent among those who emphasized activity analysis and behavioral specifications are Franklin Bobbitt, W. W. Charters, and Ralph Tyler."<sup>2</sup> Dale explains that Tyler insisted that objectives of a course are explained in behavioral terms to provide feedback and that "the relationship of these processes to programmed instruction is quite clear."<sup>3</sup>

Tyler, however, rejects the basic idea of programmed instruction when he states that the use of programmed materials "brings into

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<sup>1</sup>John F. Ohles, ed., Biographical Dictionary of American Educators, vol. 1 (Westport, Conn.: Greenwood Press, 1978), p. 346.

<sup>2</sup>Dale, "The Historical Setting of Programmed Instruction," p. 33.

<sup>3</sup>Ibid., p. 36.

sharp contrast the differing formulations of objectives and theories of learning between those who perceive the learner as being conditioned by the learning and those who perceive the learner as an active agent exploring learning situations."<sup>1</sup> Dale identifies with the first tradition and Tyler identifies with the later.

Edgar Dale and Ralph Tyler are colleagues of long standing, but Dale's curriculum pursuit is directed to goals removed from Tyler's repertoire. Edgar Dale is a participant in the 1947 Curriculum Conference, but Dale and Tyler differ about their perceptions of the learner and their definition of the behavioral objective. Tyler's influence appears to be present but not significant to Dale's contribution.

The contribution of Lily Detchen is not strongly influenced by the rationale. Lily Detchen is a doctoral student at Ohio State University in 1935 after receiving her master's degree from Louisville University. At this point in time, Tyler is in the Bureau of Educational Research at Ohio State University and just beginning the Eight Year Study, which is headquartered in Columbus. Between 1938-1939, Detchen is a research assistant on the Evaluation Staff of the Eight Year Study. From 1939-1942, Detchen also works with Tyler on the Cooperative Study of General Education. Detchen moves to the University of Chicago when Tyler accepts his new appointment. During World War II, Detchen becomes involved in another Tyler area of professional interest, education for the military. Detchen is appointed by Tyler as the Director of the

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<sup>1</sup>Tyler, "New Dimensions in Curriculum Development," p. 26.

Evaluation Program for the United States Army Extension Division.<sup>1</sup> In the early 1950s, Detchen also becomes a contributor to the committee that develops the taxonomy of cognitive objectives. After collaborating in these three different capacities, Detchen accepts a position at Chatham College from which she retires. Detchen's areas of professional interest are research and evaluation in secondary and higher education.<sup>2</sup>

Detchen is an active contributor and collaborator in the Tyler legacy, but she does not significantly transmit or transform Tyler's work. Essentially, her participation was to assist in the research of the projects that led to the Tyler Rationale. Detchen's work is not published in any books and only in a few articles.

The exchange between Louis Heil and Tyler is significant in Heil's contribution. Louis Heil and Ralph Tyler are associated in at least six different collaborative relationships. Heil receives his doctoral degree at Ohio State University in 1931, two years after Tyler accepts the appointment at Ohio State University. Heil's professional interest in educational measurement in the field of science parallels Tyler's focus. It should be recalled that Tyler is also a trained scientist in physics, taught science teachers, and writes about science throughout his career. Heil, like Tyler, contributes to the science literature in articles both related and unrelated to education.

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<sup>1</sup> Interview Questionnaire, Krathwohl to Stone, September 5, 1984.

<sup>2</sup> Cattell and Ross, eds., Leaders in Education: A Biographical Directory, p. 274.

In 1931, Tyler's professional activity is related to measurement and science; Tyler is engaged in applying Service Studies in higher education with a focus on biology and zoology. This activity, in which Heil becomes involved, is the basis for Tyler's later evaluation theory, which is the basis of the Eight Year Study. Tyler and Heil's intellectual connections are important and of long duration.

The major strand of influence traceable from Tyler to Heil is based upon evaluation. In 1937, Heil is appointed an associate professor of education at Ohio State University. Tyler at that time holds a half time position at Ohio State and spends half time directing the Eight Year Study. Tyler appoints Heil to the Evaluation Staff first at Ohio State University and when Tyler moves to Chicago, he appoints Heil a professor of education at the University. Between 1939-1942, Heil is both a professor and on the Evaluation Staff. Later, Heil is also invited to join the Evaluation Staff of the Cooperative Study in General Education and is appointed a member of the Office of Examiners at the University of Chicago.<sup>1</sup> After Chicago, Heil joined the faculty of Brooklyn College of the City University of New York, from which he retired.

Tyler's interchange with Heil can be traced through four topical areas: evaluation, the workshop, professional education, and research. Heil writes about evaluation and the Cooperative Study in an article entitled "Workshop Proposal for Continuous General Education at the College Level" in which he translates the findings of the Coopera-

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<sup>1</sup>Ibid., p. 476.

tive study into generalizations for college education. Upon the completion of the Cooperative Study, Heil becomes involved in the committee that creates the taxonomy of cognitive objectives by way of improving research. This involvement from 1949-1953, is followed by Heil's focus upon yet another of Tyler's interests, professional education.

Utilizing the principles of the Tyler Rationale, Heil establishes a research project in an attempt to create curriculum for nursing education. Heil describes his research as, ". . . a general plan regarding the development of needed tests to evaluate sensitivity, perception, and problem solving in the emotional aspects of cancer nursing. . . ." <sup>1</sup> Between 1956-1958, Heil develops and reports this project, which is undertaken in the Tyler model of research. Heil makes his own sizeable contribution to measurement.

Louis Heil, a Tyler contemporary, helps to create the Tyler legacy through his collaboration in most of Tyler's research projects and professional activities. Heil's contribution to the Tylerian tradition is through the development and application of the general principles of curriculum and especially evaluation.

The influence of the Tyler Rationale on the curriculum contribution of Harold Shane is significant. Between 1937-1939, Harold Shane is a student of Tyler at Ohio State University, where Shane earns both his master's and doctoral degrees. Shane assists Tyler in the Eight Year Study while at Ohio State, where he later becomes an

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<sup>1</sup>Louis M. Heil, Norma Cavaglieri, and Ruth Wilson, An Investigation of Student Nurse Achievement in Nurse-Patient Relations and Problem Solving in Emotional Aspects of Cancer Nursing (Brooklyn, N.Y.: Office of Testing and Research, Brooklyn College, 1958), p. 1.



assistant professor of education in 1941, after Tyler accepts the appointment at the University of Chicago. Shane, between 1946-1959, leaves Ohio State University and accepts a position in the Chicago suburbs. The location enables Shane to sustain an active working relationship with Tyler.

Shane becomes the Superintendent of the Winnetka, Illinois public schools and later, in 1949, a professor of education at Northwestern University until 1959. From 1959-1965, Shane, after leaving Northwestern University, becomes the Dean of the School of Education at Indiana University, where he remains in the Department of Education at present. Shane's professional interests include: future's research, curriculum, and elementary education.<sup>1</sup> The first area of interest is the most recent and is unrelated to Tyler; the other two areas transmit the Tyler Rationale.

Shane is prominent in his field and the author or co-author of more than 500 publications. Among the more than 100 books for which he is either author or major author are such well known titles as Evaluation and the Elementary School Curriculum, Creative School Administration, Curriculum Change Toward the 21st Century, and Education for a New Millennium. Shane is also well known for his recent articles in the 1980s about the "Silicon Age and Education," which describe the implications of the fourth revolution in human communication involving computer and schooling, education, and learning. Shane's writings are directly associated with three other members of the Tyler genealogy:

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<sup>1</sup>Cattell, Cattell, and Ross, eds., Leaders in Education: A Biographical Directory, p. 984.

author and co-editor with John Goodlad of The Elementary School in the United States, the Seventy-Second Yearbook of the National Society for the Study of Education, author of a profile of John Dewey,<sup>1</sup> which is published in four languages, and interviewer and author of an article, "Ralph Tyler Discusses Behavioral Objectives."<sup>2</sup>

About Shane's sizeable contribution to the curriculum field, it should be noted that the focus from the 1950s to the 1970s is upon elementary education with an emphasis on the language arts. "His monographs: Research Helps in Teaching the Language Arts, Improving Language Arts Instruction Through Research, and Linguistics and the Classroom Teacher, were among five published by the Association of Supervision and Curriculum Development."<sup>3</sup> Other publications of the 1960s, also focusing upon elementary education and language arts education, include: Beginning Language Arts Instruction with Children, Improving Language Arts Instruction in Elementary Schools, and Guiding Human Development.

Shane, now a university professor of education at Indiana University states about Tyler's influence upon his work in elementary education, "Many of my 512 publications are influenced by Tyler, especially Evaluation and the Elementary School Curriculum."<sup>4</sup> This Tyler

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<sup>1</sup>Harold Shane, "Perfiles de educadores: John Dewey," Perpectivas, vol. 13, no. 3 (1983).

<sup>2</sup>Shane and Shane, "Ralph Tyler Discusses Behavior Objectives."

<sup>3</sup>Interview Questionnaire, Shane to Stone, September 20, 1984.

<sup>4</sup>Curriculum Vita of Harold G. Shane, 1984-1985.

influenced book was voted as "Outstanding Book of the Year" in the annual Enoch Pratt Memorial Library Poll, which is published in the National Education Association Journal. The book applies Tyler's principles of evaluation to the elementary school. Few if any, of the evaluation assumptions and logic differ from Tyler's plan.

The exchange between Louis Rath and Tyler is observable in Rath's early work. The late Louis Rath was first acquainted with Tyler at Ohio State University, where Rath was a doctoral student and later a professor in the Department of Education, and Tyler was in the Bureau of Educational Research. Rath is published frequently in those early years between 1932-1940 in several journals but especially in the Educational Research Bulletin, a publication introduced by W. W. Charters, Head of the Bureau of Educational Research at Ohio State University.

The concentration of Rath's early publications is essentially upon tests and measurements and criticisms of extant tests, such as the math grade placement tests introduced by the Illinois Math Committee of Seven. Between 1935-1938, Rath becomes the Associate Director of the Eight Year Study and the emphasis in his writing shifts from tests to evaluation. For example, in 1936, Rath writes about such topics as "Basis for Comprehensive Evaluation" or in 1938 about "Evaluating the School Program" and "Techniques for Test Construction." Many of Rath's and Tyler's interests dovetail, and Rath not only helps to contribute to the Tyler literature on evaluation during that period but also becomes prominent in the field of evaluation through his position as Associate Director of the Eight Year Study for three years.

Throughout his career, Rath is a prolific author and a prominent evaluator, but he is not listed in Who's Who in American Education, Leaders in Education, the Biographical Dictionary of American Educators, or the Directory of American Scholars. Rath's contribution between the 1940s and the 1950s sustains his earlier emphasis upon evaluation. No longer associated with the Eight Year Study, Rath continues to write about evaluation in "Appraising Changes in Values in College Students," "Instruments for Identifying Needs," and "Tests of Emotional Needs." Rath and Tyler belong to the same school of thought on evaluation. In the early 1940s, Rath promotes the workshop movement, introduced by Tyler during the Eight Year Study at Ohio State University, and finds application for its usefulness at the college level. In the 1950s, Rath writes about the role of evaluation in research but begins to discuss values theory, his later preoccupation. Rath's name is more frequently allied with his values clarification theory developed later in his career than with his contribution to evaluation, which comprised the bulk of his work early in his career.

Beginning in the late 1960s, Rath begins his concentration on values education. Rath collaborates with two authors to explain his theory of values in a book entitled Values and Teaching: Working with Values in the Classroom, published in the mid-1960s. The thesis of the text is that the complexity of modern life has made the world an increasingly confusing place. The erosion of family life, increased mobility, the intrusion of the media, the decline in religion, and the tendency of teachers to teach facts are contributing to the confusion. To answer this dilemma, Rath posits a theory of values and a methodol-

ogy to enable teachers to help students clarify values. This Rath's work does not appear to be similar to his earlier work nor in the Tyler tradition.

In the same decade, Teaching for Thinking: Theory and Application, written with another group of authors, examines behavior as it relates to thinking. Rath states, "There have been relatively few theories in the field of education which are helpful to teachers in the solution of behavior problems related to learning."<sup>1</sup> In this book, Rath quotes Tyler's early article from 1933 on learning entitled, "Permanency of Learning," but the text cannot be conceived of as part of the Tyler tradition except perhaps for its emphasis, like Judd and Tyler, upon the higher rather than the lower mental processes.

Rath and Tyler collaborate on evaluation for a period of time during the Eight Year Study, and Rath becomes interested in the workshop movement resultingly, but Tyler's influence appears to be minimal.

Grouping II: The Mentor and Colleague Influence at the  
University of Chicago Upon Curricularists Who  
Become Prominent in the Field

A second branch of the Tyler legacy is traceable to doctoral students at the University of Chicago during the period when Tyler first becomes the Chairman of the Department of Education at Chicago. This grouping of curricularists all become professors at the University of Chicago, and all except John Goodlad participate in the Eight Year Study. Bloom also participates in the Cooperative Study of General

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<sup>1</sup>Louis E. Rath, Arthur Jonas, Arnold Rothstein, and Selma Wasserman, Teaching for Thinking: Theory and Application (Columbus, Ohio: Charles E. Merrill Books, 1967), p. 291.

Education, and Bloom and Cronbach become Examiners in the Examiner's Office at the University of Chicago. Later both are invited to become fellows for a year at the Center for Advanced Study in the Behavioral Sciences, when Tyler is the Director of the Center.

This grouping has contributed two curriculum models, which are derivative or extensions of the Tyler Rationale; designed several instructional models; extended Tyler's evaluation theory; and written approximately sixty books of importance to the curriculum area. These five curricularists have also contributed new ideas unrelated to the Tyler Rationale. Of the four groupings, these curricularists' contributions are most influenced by the Tyler Rationale. This grouping is most prominent and prolific and most referenced in the curriculum literature.

#### Benjamin Bloom

Benjamin Bloom is a prominent curricularist from the University of Chicago, who extends the Tyler tradition to the field today. Benjamin Bloom is also a well known evaluator in the country and among the most recognized and prolific of Ralph Tyler's students. Bloom and Tyler work together in more capacities than any other of Tyler mentor-student based relationships. Bloom is one of the three Tyler colleagues, including Hilda Taba and John Goodlad, who designs a curriculum model; he is also one of the two Tyler students, besides Lee Cronbach, who advances new ideas for evaluation. From among the Tyler descendants, Bloom is perhaps the most orthodox in transmitting and transforming the Tyler legacy of the 1950s.

While a doctoral student, who studied under Tyler at the Uni-

versity of Chicago, Bloom, between 1939-1940, becomes an assistant and later a college examiner in the Examiner's Office at the University of Chicago. At that time, Tyler is both the Chairman of the Department of Education and Head of the Examiner's Office. Bloom participates in the Eight Year Study and during academic year 1939-1940 is also a research assistant for the Cooperative Study in General Education. In 1943, Bloom earns his Ph.D., and Tyler appoints him to the Department of Education at the University of Chicago, where Bloom remains throughout his career. After Tyler leaves the University, he invites Bloom to be a fellow at the Center for Advanced Study in the Behavioral Sciences in 1959.

Bloom's major professional interests include: educational psychology, test and measurements, research on changes produced by different educational methods, and abstract thinking and problem solving.<sup>1</sup> Only the first two interest areas coincide directly with Tyler's influence. The influence of these colleagues upon each other is apparent in much of Bloom's work. The influence of the Tyler Rationale is most evident, however, in two books written by Bloom.

The Tyler legacy transmitted in Bloom's work can be traced directly in two of Bloom's books on principles of curriculum, instruction, and evaluation. The two books are The Taxonomy of Educational Objectives, Handbook I: Cognitive Domain, which extends the usage of Tyler's curriculum rationale, and the Handbook on Formative and Summative Evaluation of Student Learning, which reiterates the Tyler Ratio-

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<sup>1</sup>Cattell and Ross, eds., Leaders in Education: A Biographical Directory, p. 97.

nale as its foundation. The second book is made possible through Bloom's fellowship at the Center for Advanced Study in the Behavioral Sciences by invitation of Tyler. Another of Bloom's books, All Our Children Learning, traces the influence of the Examiner's Office at the University of Chicago, when Tyler is the director and changes the emphasis from testing to evaluation. Bloom's views on evaluation are influenced by Tyler unlike his instruction model. Bloom's instruction model, called mastery learning, is only indirectly related to the Tyler tradition in the sense that the model is in the ends-means tradition.

Bloom and a Committee of College and University Examiners develop a Taxonomy of Educational Objectives, Handbook I: Cognitive Domain to assist practitioners and researchers in writing and evaluating objectives. The book conceptualizes and classifies a taxonomy of educational objectives in the cognitive domain. A taxonomy is defined as a classification of behaviors which represent intended outcomes. The purpose of the handbook is to help educators discuss curriculum and evaluation problems with greater precision. Part I of the text explains the history, the nature and development of the taxonomy, and the relationship of objectives to curriculum development. Part II of the text identifies six classes of cognitive objectives in a hierarchical ordering from simple to complex objectives which include: knowledge, comprehension, application, analysis, synthesis, and evaluation. The assumption underlying the taxonomy is that objectives in one class of human behavior are likely to use and build upon behaviors from preceding classes.

The Taxonomy of Educational Objectives has a direct relation-



ship with Tyler. As Bloom explains, "The idea for this classification system was formed at an informal meeting of college examiners attending the 1948 American Psychological Association Convention in Boston."<sup>1</sup>

According to Bloom, the committee and the editor must take responsibility for the product, although credit for the idea should be more widely distributed to members on the committee including Ralph Tyler to whom the book is dedicated and several of Tyler's former students: Lee Cronbach, Lily Detchen, Chester Harris, Louis Heil, David Krathwohl, and Christine McGuire. Later, Krathwohl becomes the major author for the second handbook on the affective domain.

The Bloom handbook on cognitive objectives and the Tyler Rationale are interrelated through several similar curriculum and evaluation assumptions and logic. Bloom states: "It was the view of the group that educational objectives stated in behavioral form have their counterparts in the behavior of individuals."<sup>2</sup>

A second Tylerian assumption regarding the role of the teacher is inferred through a problem which the committee explains:

There was some concern expressed . . . that the availability of the taxonomy might tend to abort the thinking and planning of teachers with regard to curriculum. . . . The process of thinking about educational objectives, defining them, and relating them to teaching and testing procedures was regarded as a very important step on the part of teachers. . . .<sup>3</sup>

The division, at least between two of the three domains, the cognitive and the affective domains, relates directly again to Tyler's explana-

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<sup>1</sup>Bloom, ed., et al., Taxonomy of Educational Objectives, Handbook I: Cognitive Domain, p. 4.

<sup>2</sup>Ibid., p. 5.

<sup>3</sup>Ibid.

tion of different kinds of objectives. Bloom states, "A second part of the taxonomy . . . describes changes in interests, attitudes, values, and the development of appreciations. . . ." <sup>1</sup> This language is similar to Tyler's thoughts expressed in the first chapter of Basic Principles, which explains objectives.

Another direct assumption from the rationale provides a third organizing principle for the taxonomy. Bloom explains, "It was further agreed that in constructing the taxonomy every effort should be made to avoid value judgments about objectives and behaviors." <sup>2</sup> According to Tylerian view, the philosophy of the school provides the determination of values. The handbook also extends Tyler's theory of evaluation as part of the curriculum process. In the introduction to the text, the statement reads, "Curriculum builders should find the taxonomy helps them to specify objectives so that it becomes easier to plan learning experiences and prepare evaluation devices." <sup>3</sup> As is clear, The Bloom taxonomy is a logical extension or an improved technique that can be useful in planning and evaluating learning experiences for curriculum developed in the Tyler model.

In another handbook of a different order, Handbook on Formative and Summative Evaluation of Student Learning, of which Bloom is the major author, Bloom utilizes Tyler's principles of curriculum, instruction, and evaluation as the foundation for newer ideas about evaluation and learning. Bloom repeats the basic principles of the Tyler Rationale in the first two chapters of Section One of the handbook almost

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<sup>1</sup>Ibid., p. 7.

<sup>2</sup>Ibid., p. 6.

<sup>3</sup>Ibid., p. 2.

verbatim in order to prepare the reader for the chapter on "Learning for Mastery," which introduces Bloom's new curriculum model. Section Two of the handbook, "Using Evaluation for Instructional Decisions," adds the language, summative and formative evaluations, to indicate newer roles and means for evaluation essentially defined by Tyler. Section Three, "Evaluation Techniques for Cognitive and Affective Objectives," extends from Bloom's and Krathwohl's two handbooks on the taxonomy of objectives for the cognitive and affective domains. The text includes a fourth section on new evaluations systems. The text concludes by applying evaluation to learning in preschool and to nine subject matter disciplines. Both of these Bloom texts directly advance the development of curriculum in the Tyler model.

In the latter text, Bloom explains his instruction model called mastery learning, which is a new contribution to the field based upon John Carroll's conceptual learning model. Carroll's purpose for developing the learning model was to formulate a model for school learning to account for why pupils succeed or fail in school. The variables involved in Bloom's mastery learning, which are drawn from the Carroll model include: aptitude, quality of instruction, ability to understand instruction, perseverance, and the time allowed for learning.

Bloom's strategy for mastery learning adds strategies to the Carroll model which include: preconditions, operating procedures, and outcomes. Bloom defines preconditions as the specifications of the objectives and content of instruction necessary for informing students and teachers about expectations. The operating procedures are intended to provide feedback for supplementary instruction. The outcomes are

the evaluation component. Bloom hypothesizes, "If the system of formative evaluation, diagnostic-progress tests, and summative evaluation achievement tests, informs the student of his mastery of the subject, he will come to believe in his own competence."<sup>1</sup> Bloom reasons that motivation for further learning is one of the important consequences of mastery learning. Bloom concludes, "Perhaps the clearest evidence of affective change is the interest the student develops for the subject he masters."<sup>2</sup>

The Bloom mastery learning model remains in the ends-means tradition although it differs somewhat from Tyler's views of objectives. To accomplish the goals of the Bloom model of learning for mastery, "attention must be focused on small units of instruction, and criterion-referenced tests must be used to determine whether a student possesses skills required for success in each step in the learning sequence being taught."<sup>3</sup> It should be remembered that Tyler differs with Bloom and is more interested in general rather than specific statement of objectives. Both agree on the necessity of active participation by students, but Tyler is more concerned than Bloom with higher rather than only lower mental processes.

A third Bloom work is indirectly influenced by Tyler but not by the Tyler Rationale. When Bloom is a fellow at the Center for Advanced

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<sup>1</sup> Benjamin S. Bloom, J. Thomas Hastings, and George F. Madaus, Handbook on Formative and Summative Evaluation of Student Learning (New York: McGraw-Hill Book Co., 1971), p. 56.

<sup>2</sup> Ibid.

<sup>3</sup> Ornstein and Levine, An Introduction to the Foundations of Education, p. 459.

Study in the Behavioral Sciences, at the time that Tyler is the director, he begins the work for Stability and Change in Human Characteristics. "The book . . . represents an attempt to identify stable characteristics to describe the extent to which such characteristics are stabilized at various ages and to determine the conditions under which this stability may be modified."<sup>1</sup> No traceable evidence to Tyler's work is evident, but the format of the work-study pattern at the Center suggests a communication between Tyler and Bloom about the latter's new work.

The influence of Tyler's leadership in the Examiner's Office at the University of Chicago upon Bloom's concepts of measurement and evaluation are traced to Bloom himself in another work. Bloom was Tyler's assistant in the Examiner's Office at the University of Chicago, where he worked closely with Tyler over an extended period of time. In his book, All Our Children Learning about measurement, one chapter, "Changing Conceptions of Examining at the University of Chicago," contrasts the first period of the Examiner's Office from 1931-1939 with the second period from 1939-1953, under Tyler's influence. Regarding the latter period Bloom explains Tyler's perspectives. "Examining had to be seen as part of the total educational process and as having consequences beyond the accurate clarification of achievement or beyond the production of good examinations."<sup>2</sup> Tyler's view and Bloom's view about evaluation are similar.

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<sup>1</sup> Benjamin S. Bloom, Stability and Change in Human Characteristics (New York: John Wiley & Sons, 1964), p. 2.

<sup>2</sup> Benjamin S. Bloom, All Our Children Learning (New York: McGraw-Hill Book Co., 1981), p. 251.

Tyler influences the school of thought about evaluation to which Bloom belongs. Of the numerous publications by both on the topic, two articles best demonstrate the similarity between these two colleagues. In 1951, Tyler writes a pertinent paper, "The Functions of Measurement in Improving Instruction," which views test development as a strategy for training the teacher in service.<sup>1</sup> Tyler's approach values test making as much as the test or the test data. Bloom follows most of Tyler's basic principles of evaluation as described earlier in the discussion of his Handbook on Formative and Summative Evaluation. But even greater similarity is demonstrated by an article written by Bloom ten years after Tyler's article entitled, "Quality Control in Education."<sup>2</sup> Bloom's remarks are representative of the school of thought about evaluation introduced by Tyler. Bloom states:

The criterion for determining the quality of a school and its educational functions would be the extent to which it achieves the objectives it has set for itself. . . . Participation of the teaching staff in selecting as well as constructing evaluation instruments has resulted in improved instruments on one hand and on the other it has resulted in clarifying the objectives of instruction and in making them real and meaningful to teachers. . . .<sup>3</sup>

Bloom's definition follows Tyler's definition of evaluation in Basic Principles. For both Bloom and Tyler, evaluation measures objectives and is a positive teacher training activity. Both Tyler and Bloom also describe curriculum making and evaluation as integral parts of each other.

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<sup>1</sup>Ralph W. Tyler, "The Functions of Measurement in Improving Instruction, in Educational Measurement, ed. E. F. Lingquist (Washington, D.C.: American Council, 1951).

<sup>2</sup>Benjamin Bloom, "Quality Control in Education," in Tomorrow's Teaching (Oklahoma City, Okla.: Frontiers of Science Foundation, 1961).

<sup>3</sup>Ibid., p. 3.

Tyler's influence on Bloom's curriculum perspective is significant. Benjamin Bloom's two different kinds of handbooks on cognitive objectives and on evaluation are directly traceable to the Tyler Rationale. Each provides extended ways to utilize the rationale. Although it is not Tyler's viewpoint, Bloom's instruction model, learning for mastery, illustrates one application of behavioral objectives. Bloom's application of the Tyler Rationale illustrates its effectiveness for planning curriculum utilizing different learning theories. The foundation of Bloom's work is the Tyler Rationale. Some colleagues, like Herbert Thelen state, ". . . Bloom is more Tylerian than Tyler himself."<sup>1</sup> Other colleagues, like Lee Cronbach, classify Tyler and Bloom in the same school of thought about evaluation.

#### Lee Cronbach

Lee Cronbach, now a professor emeritus at Stanford University, receives his doctoral degree in educational psychology and measurement from the University of Chicago in 1940, when Tyler is Chairman of the Department of Education. Cronbach becomes prominent in the field of education as a testing, measurement, and evaluation expert. Tyler and Cronbach are intellectual associates through a number of different relationships that extend beyond forty years. Cronbach was not only a doctoral student but also an assistant on the Eight Year Study, a professor at the University of Chicago, an Examiner, and a member of the committee that helped to design the National Assessment of Educational Progress. Cronbach considers himself "a measurement-evaluation off-

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<sup>1</sup> Interview Questionnaire, Thelen to Stone, July 6, 1984.

spring of Ralph Tyler along with Benjamin Bloom.<sup>1</sup> Cronbach collaborates with Bloom on his taxonomy of cognitive objectives.

Cronbach concentrates on evaluation, which he divides from curriculum when he states, "I have never been in the curriculum field except for a few programs which sought help in evaluation or called on educational psychologists for consultation."<sup>2</sup> Cronbach admits no particular awareness of the publication of Basic Principles, when it was first available in 1947 and in 1949 in two different forms. During that time, Cronbach was an assistant professor of educational psychology at the University of Chicago from 1946 to 1948 and later a professor of education and psychology at the University of Illinois from 1948 to 1962.

Although Cronbach's area is not curriculum per se, it is surprising that Cronbach did not hear about Basic Principles at the time of publication when he was a professor at the University of Chicago. Cronbach says, however, that he encountered Tyler's curriculum point of view even before arriving at the University of Chicago.<sup>3</sup> Cronbach first encounters Tyler's viewpoint when he studies under Henry Morrison before entering the University of Chicago.<sup>4</sup> Cronbach's second encounter is when he does his student teaching in one of the thirty schools participating in the Eight Year Study in 1935. The first time Cronbach

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<sup>1</sup>Interview Questionnaire, Cronbach to Stone, July 7, 1984

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

<sup>4</sup>Henry C. Morrison devised the Morrisonian unit curriculum and instructional system that greatly influenced high school curriculum planning from 1920 to 1950.



collaborates with Tyler is when he is invited as a research assistant on the Evaluation Staff of the Eight Year Study between 1939-1940. At the end of the Eight Year Study, in 1942, Cronbach becomes a visiting member of the educational faculty at the University of Chicago.

Tyler and Cronbach extend their early relationship to the later years of their career, when Cronbach is at Stanford University and Tyler is also in Palo Alto, California directing the Center. Tyler invites Cronbach to become a member of the Technical Advisory Committee of the National Assessment of Educational Progress between 1963-1970. In 1965, Tyler also invites Cronbach to the Center for Advanced Study in the Behavioral Sciences.

Tyler's theory of evaluation is important to Cronbach's theory of testing and his approach to evaluation. Cronbach is considered a major contributor in the field and many of his books are considered classics. Among Cronbach's important publications on testing, is an early book, Essentials of Psychological Testing, which is published in 1949, with later editions in 1960 and 1970. As the title indicates, the text provides an explanation of the testing concept; it also discusses the kinds of ability and performance tests available. In the preface, Cronbach highlights books, which he judges to be major sources of achievements in the evaluation field. In this listing, he includes Smith and Tyler's volume, Appraising and Recording Student Progress, about the evaluation of the Eight Year Study. In the text Cronbach also acknowledges the importance of Tyler's testing theory of 1934, which is also called Tyler's evaluation theory, described in Tyler's Constructing Achievement Tests. Cronbach's book also illustrates Tyler's

important influence on evaluation, which is apparent in one section of the book on educational measurement. In that section, Cronbach adopts Tyler's criteria for defining a test.

In 1954, when Educational Psychology, Cronbach's second important book, is published, Cronbach is an accomplished researcher. The purpose of this text is to translate research findings on learning into the form of principles useful to the classroom teacher. Cronbach credits Tyler in this book for Cronbach's viewpoint on evaluation. Educational Psychology is the book most strongly influenced by Tyler according to Cronbach, who comments:

In 1946, when I was asked to teach Tyler's Educational Psychology course he had been giving at Chicago; his stance, stressing the psychology most useful for teachers rather than that of traditional interest to psychologists, strongly influenced the way I shaped my 1954 textbook, which became a standard.<sup>1</sup>

A third book written by Cronbach, Psychological Tests and Personnel Decisions is not directly related to Tyler's work, but it was revised by Cronbach during a fellowship at the Center for Advanced Study in the Behavioral Sciences in 1965. The demand in the field was great for this text that posited, "Decision theory is more important as a point of view than as a source of formal mathematical techniques for developing and applying tests."<sup>2</sup> Other of Cronbach's major publications also focus on measurement, but they also are not directly traceable to the Tyler frame of reference. These later books published during the 1970s, include: Dependability of Behavioral Measurement and

<sup>1</sup> Interview Questionnaire, Cronbach to Stone, July 7, 1984.

<sup>2</sup> Lee J. Cronbach and Goldine Gleser, Psychological Tests and Personnel Decisions, (Urbana: University of Illinois, 1965), p. viii.

Mental Tests and Cultural Adaptation. But two recent books of the 1980s, Toward Reform of Program Evaluation and Designing Evaluations of Educational and Social programs, are in Cronbach's words, "modern versions of Tyler in certain respects and depart from Tyler in others."<sup>1</sup>

As Cronbach explains, Tyler and he agree about evaluation in certain important ways and disagree in certain other important ways. For example, Cronbach identifies himself with Tyler's "decision-objectives-strategy" evaluation. Cronbach calls Worthen and Sanders mistaken in their placement of him as an evaluator in the "judgmental strategies" classification. Worthen and Sanders, in Educational Evaluation: Theory and Practice, classify evaluators into judgmental strategists, decision-management strategists, and decision-objectives strategists.<sup>2</sup> Worthen and Sanders place Lee Cronbach, Michael Scriven, and Robert Stake in the judgmental strategists classification, but Cronbach explains, "I have an appreciable distance from [Michael] Scriven, and [Robert] Stake is [also wrongly classified] and positively opposed to evaluation being judgmental. In my view, that [evaluation being non-judgmental], is one of the lessons I learned from Tyler."<sup>3</sup>

Tyler and Cronbach also agree in essence upon a broad definition of evaluation. Cronbach states that evaluation is the collection and use of information to make decisions about an educational program,

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<sup>1</sup> Interview Questionnaire, Cronbach to Stone, July 7, 1984.

<sup>2</sup> Lee J. Cronbach, "Course Improvements Through Evaluation," in Educational Evaluation: Theory and Practice, by Blaine R. Worthen and James R. Sanders (Belmont, Calif.: Charles A. Jones publications, Wadsworth Publishing Co., 1973), pp. ix-x.

<sup>2</sup> Interview Questionnaire, Cronbach to Stone, July 7, 1984.

which can be separated into: (1) course improvement, (2) decisions about individuals, and (3) administration regulations.<sup>1</sup> Cronbach believes that the greatest service evaluation can perform is to identify aspects of the course where revision is desirable. Tyler's five uses of evaluation are basically similar.

What Tyler names a "basic notion regarding evaluation" is that the process determines to what extent the educational objectives are actually being realized by the program of curriculum and instruction.<sup>2</sup> The values and the uses of evaluation from Tyler's viewpoint include: (1) the identification of the strengths and weaknesses of the program, (2) an influence on learning, (3) the individual guidance of pupils, (4) the identification of points that need further attention, and (5) a source of information to the school clientele about the success of the school.<sup>3</sup> The uses of evaluation between the two curricularists bear a great resemblance.

As Cronbach reminds us, however, he and Tyler also disagree on several points about evaluation as well as agree. At least three points of disagreement include: the relationship between evaluation and curriculum development, the role of the teacher in evaluation, and the place and the personnel for evaluation. It should be recalled that Tyler defines curriculum development by integrating evaluation as one of the four questions. Cronbach, on the other hand, does not view

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<sup>1</sup>Cronbach, "Course Improvements Through Evaluation," p. 44.

<sup>2</sup>Tyler, Basic Principles of Curriculum and Instruction, pp. 105-6.

<sup>3</sup>Ibid., pp. 123-25.

evaluation as part of curriculum development. Cronbach states, that Tyler describes "both curriculum-making and evaluation as integral parts of classroom instruction. . . ." <sup>1</sup> Cronbach criticizes this outlook and calls it "far from that of course improvement" <sup>2</sup> because he sees the emphasis on the teacher activity rather than on the test as test results or test improvement.

Cronbach and Tyler disagree on the role of the teacher in evaluation. Tyler considers the teacher's role essential as he explains in the final chapter of Basic Principles. Cronbach takes the opposite viewpoint from Tyler. Cronbach states:

Evaluation becomes a local and beneficial teacher training activity, [and] the benefit is attributed to thinking about the data to collect. Little is said about the actual use of test results; one has the impression that when test-making ends, the test itself is forgotten. Certainly there is little enthusiasm for refining tests so that they can be used in other schools, for to do so would be to rob those teachers of the benefits of working out their own objectives and instruments. <sup>3</sup>

A third point upon which Cronbach and Tyler disagree is the assumption about who develops curriculum. Tyler is an advocate of teacher developed curriculum for a given school based upon the school philosophy which helps to determine the objectives. Cronbach holds the opposite assumption and states:

The current national curriculum studies assume that curriculum making can be centralized. They prepare materials to be used in much the same way by teachers everywhere. It is assumed that having experts draft materials, and revising these after tryout, produces better instructional activities than the local teacher would be likely to devise. <sup>4</sup>

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<sup>1</sup>Cronbach, "Course Improvements Through Evaluation," p. 47.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid., p. 48.

In the early 1960s, Cronbach is a participant in the thirty-three member Woods Hole Conference, which spearheaded the curriculum movement to which Cronbach refers. Jerome Bruner describes the results of the Conference in Process of Education about which Cronbach and Tyler disagree. Tyler's views during the 1960s have already been clarified; Tyler disagrees with curriculum developed centrally. Cronbach states, "I had much to do with Bruner when he was entering the field and I supported his work."<sup>1</sup>

In Cronbach's view, Tyler, made a substantial contribution to testing. By describing testing in an historical perspective, Cronbach identifies Tyler's viewpoint and his own indebtedness. Cronbach writes:

Prior to 1935, the pupil was examined mostly on factual knowledge and mastery of fundamental skills. Tyler's research and writings of that period developed awareness that higher mental processes are not evoked by simple factual tests, and that instruction that promotes factual knowledge may not promote--indeed, may interfere with --other important educational outcomes.<sup>2</sup>

Cronbach states that Tyler and his students demonstrated that tests can be designed to measure general educational outcomes. He also explains that twenty years after the Eight Year Study, "Its testing techniques are in good repute, but we still know very little about what these instruments measure."<sup>3</sup>

Cronbach credits Tyler's views on testing again in 1973 when he references Tyler's work described in Charles Judd's Education as

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<sup>1</sup> Interview Questionnaire, Cronbach to Stone, July 7, 1984.

<sup>2</sup> Cronbach, "Course Improvements Through Evaluation," p. 48.

<sup>3</sup> Ibid.

Cultivation of the Higher Mental Processes. Cronbach credits Tyler for changing the total view in the field. Cronbach explains:

Tyler's research and writings of that period developed awareness that higher mental processes are not evoked by single factual tests, and that instruction that promotes factual knowledge may not produce--indeed, may interfere with--other common educational outcomes. Tyler . . . and [his] students demonstrated that tests can be designed to measure general educational outcomes such as ability to comprehend scientific method.<sup>1</sup>

On the other hand, Cronbach also faults Tyler's approach to evaluation in several ways. Cronbach states that "we still know very little about what the instruments measure."<sup>2</sup> Cronbach suggests that the limitation is the result of those, like Tyler, who "describe curriculum making and evaluation as integral parts of classroom instruction. . . ."<sup>3</sup> Cronbach insists that in his view, "When evaluation is carried out in the service of course improvement, the chief aim is to ascertain what effects the course has . . . what changes it produces in pupils."<sup>4</sup> The chief aim to Cronbach does not involve teacher activity to take precedence over improved test instruments.

Cronbach did not have a curriculum theory, but generally attributes his approach to Tyler. Cronbach explains:

The theory of instruction in my educational psychology course follows Tyler in emphasis on the pupil as motivated to solve problems. This idea was borrowed from Dewey via Tyler. . . . The emphasis on the general development of the student as distinct from his mastery of specific lessons, this emphasis on transfer came from Dewey and Judd and Tyler reinforced it.<sup>5</sup>

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<sup>1</sup>Worthen and Sanders, Educational Evaluation: Thoery and Practice, pp. 45-46.

<sup>2</sup>Ibid., p. 48.

<sup>3</sup>Ibid., p. 47.

<sup>4</sup>Ibid.

<sup>5</sup>Interview Questionnaire, Cronbach to Stone, July 7, 1984.

Cronbach states, "I think [Henry] Morrison . . . was the source of my basic orientation to objectives; he must have been an influence on Tyler, but I don't recall Tyler's citing him."<sup>1</sup> Tyler does not name Morrison an influence upon his view about objectives in several interviews on the topic.

Cronbach attributes many of his views on evaluation until the early 1970s to Tyler's school of thought. The similarities between the two colleagues are as identifiable as the differences. Both Tyler and Cronbach expand their views on evaluation throughout the years, and Cronbach describes his two books on evaluation published in the 1980s as similar to Tyler's viewpoint.<sup>2</sup>

#### John Goodlad

Goodlad receives his Ph.D. in education at the University of Chicago in 1949, when Tyler is Chairman of the Department of Education. Goodlad returns again to the University of Chicago between 1956-1960, but Tyler has already departed to direct the Center for Advanced Study in the Behavioral Sciences. In 1960, Goodlad's university appointment is as professor and the Director of the University Elementary School of the University of California at Los Angeles and later, in 1967, Goodlad also becomes the Dean of the Graduate School of Education. At present, Goodlad remains in that position and is also Director of Research for the Institute for Development of Educational Activities.

Goodlad's career focuses upon many professional areas of interest but predominant among them are: curriculum, childhood educa-

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid.



tion, and teacher education. Goodlad is the author or co-author of more than twenty books and numerous articles which reveal him as an important contributor to teaching and learning, elementary education, curriculum inquiry, the nature and purpose of schools, and changes in schools. Goodlad's publication, Behind the Classroom Door, which examines the effect of the curriculum changes of the 1960s upon the elementary school, gains him academic as well as national recognition as a curricularist. John Goodlad's conceptual system of curriculum study is important in the field and a derivative of the Tyler Rationale.

Goodlad first introduces his curriculum model in 1966 in The Development of a Conceptual System for Dealing with Problems of Curriculum and Instruction, which is co-authored with Maurice Richter. Thirteen years later, in 1979, in a book Goodlad edits, Curriculum Inquiry: The Study of Curriculum Practice, he returns to the curriculum model, which he calls a conceptual scheme for the practice and study of curriculum. Goodlad's conceptual model for curriculum utilizes the four questions of the Tyler Rationale as its foundation and, like Tyler, Goodlad's approach synthesizes theory and practice.

The sources, concepts, and their interrelationships within Goodlad's model demonstrate the immanence of the Tyler Rationale. In Goodlad's view, an adequate conceptual system or a model for the curriculum field provides a bridge between the conduct of practice and the effort to develop concepts and theories. Goodlad defines a conceptual system:

By conceptual system, I mean a carefully engineered framework designed to identify and reveal relationships among complex, related, interacting phenomena; in effect, to reveal the whole where whole-

ness might not be thought to exist. Such a system consists of categories obstructed from the existential phenomena. The system is designed to describe and classify categories which can be readily discussed and manipulated at consistent, clearly identifiable levels of generality and which can be developed from different perspectives.<sup>1</sup>

Goodlad describes the challenge of developing a conceptual scheme.

"The problem of the practitioner is to gain perspective, to see things as related. The problem of the theoretician is to stay sufficiently close to practice to avoid assuming his own . . . world of action."<sup>2</sup>

The origination of the model explains the reason for the immanence of the Tyler Rationale in it. In 1966, John Goodlad and his colleagues at the University of Chicago attempt work toward a conceptualization of curriculum. To develop a conceptual scheme, these curricularists examine curriculum models from the 1920s and 1930s including Bobbitt's How to Make a Curriculum, Bonser's The Elementary School Curriculum, Charters' Curriculum Construction, Henry Harap's The Technique of Curriculum Making, and Edgar Draper's Principles and Techniques of Curriculum Making. In Goodlad's analysis of these texts, he finds these models geared more for practice than for theory. Goodlad and his colleagues then examine Tyler's Basic Principles of Curriculum and Instruction about which Goodlad states, "Tyler's rationale . . . proved particularly useful in pulling together into a related set of

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<sup>1</sup>John I. Goodlad and Maurice N. Richter, Jr., The Development of a Conceptual System for Dealing with Problems of Curriculum and Instruction, USOE Cooperative Research Program, Project no. 454 (Los Angeles: University of California, 1966), p. 1.

<sup>2</sup>John I. Goodlad, ed., Curriculum Inquiry: The Study of Curriculum Practice (New York: McGraw-Hill, Book Co., 1979), p. 19.

questions matters which often had been addressed disparately before."<sup>1</sup>

Through Goodlad's analysis of the Tyler Rationale, the influence upon Goodlad's conceptual system can be observed. Goodlad explains:

Tyler identified at least the major commonplaces of curriculum: the elements about which curriculum makers must make decisions, on which researchers must focus, and to which theorists must pay attention in formulating their theories and conceptions. These have to do with ends and means and the relationship among them.<sup>2</sup>

Realizing, as does Tyler, this interrelationship of theory and practice, Goodlad designs a conceptualization for the practice and the study of curriculum. Goodlad's intention for his curriculum model is ". . . to conceptualize . . . an intellectual approximation of existing sociopolitical reality; we advocated no revolutionary overthrow of the system whereby curriculum decisions are made. We proposed, rather, that it be improved or enriched through the infusion of rationality."<sup>3</sup> By the word rationality, Goodlad simply means imbued with reason or understanding. About the intention of his model, Goodlad reveals, "At a minimum, they [curriculum developers] should turn as often as possible to relevant knowledge, rather than to single studies or hearsay, and should both be aware of what is being done at other levels of decision making and seek some coordination of effort."<sup>4</sup>

What Goodlad recognizes is the usefulness of the Tyler Rationale in meeting Goodlad's criteria for an effective model. First Tyler remains sufficiently close to practice to avoid assuming his own world

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<sup>1</sup>Goodlad, ed., Curriculum Inquiry: The Study of Curriculum Practice, p. 19.

<sup>2</sup>Ibid., p. 20.

<sup>3</sup>Ibid., p. 23.

<sup>4</sup>Ibid.

of action. Second, Tyler's system provides the bridge between the conduct of practice and the effort to develop theory. Third, Tyler's model pulls together into a set of questions disparate matters of curriculum. Finally, the Tyler Rationale is imbued with reason. Far from being based upon a single study, the rationale is based upon the practice of fifty years with roots in the concepts of the turn of the century curricularists. Goodlad's model attempts to improve and enrich upon this Tyler foundation.

Goodlad's conceptual system for dealing with problems of curriculum and instruction is first presented in a five part book. The book explains what Goodlad means by a conceptual system in curriculum, defines essential terms, analyzes decisions and levels of decisions, discusses curriculum ends and means, and presents a tentative conceptual plan of his own. Goodlad's intent is to formulate a conceptual system to guide theory building, research, and planning in the field.

Goodlad's definition of curriculum is a set of learning outcomes reasoning that to select learnings without concern for ends is to behave irrationally and that a completely value-free position is impossible. In Goodlad's emphasis upon rationality, the conceptual system calls for decision making on three levels: (1) the instructional decision level of the teacher(s), (2) the institutional decision making level of the faculty under the leadership of administrators, and (3) the societal decision making level of lay boards and legislators. This conceptual system is to guide theory building, research, and planning in the field in a rational and comprehensive way. (See Figure 7.)

## Goodlad's Curriculum System

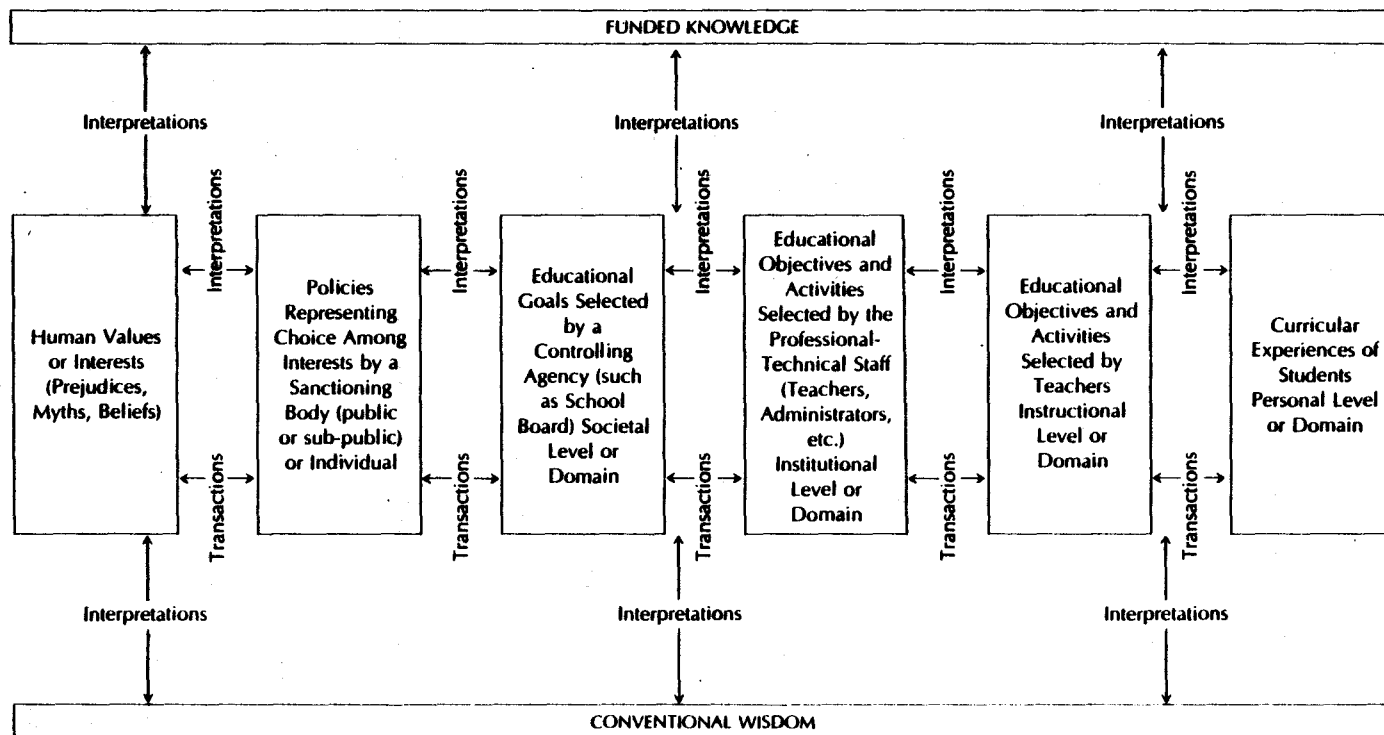


Fig. 7. John Goodlad's revised conceptualization for the practice and study of curriculum.

SOURCE: John I. Goodlad and Associates, Curriculum Inquiry: The Study of Curriculum Practice (New York: McGraw-Hill Book Co., 1979), p. 22.

Goodlad's conceptual system "embraces substantive political-social and technical-professional issues, problems and processes," which relate to the three levels of decision making.<sup>1</sup> Substantive practices are defined as those which take into account the goals including: what is taught, how what is taught is arranged or evaluated, and what evaluation procedures are used. In this interpretation, Goodlad incorporates Tyler's four questions into three new contexts for decision making. Goodlad redirects Tyler's questions, couched in the language of what should or ought to be taught, to what is taught.

The political-social practice pertains to processes through which different views of what is described are placed in public competition and usually achieve a temporary status of primacy. These views, according to Goodlad, range from parochial interests to noble interests of the future. Political-social decisions are frequently made by school boards and state and local authorities or by various groups of educators, often in collaboration with parents or community representatives.

The technical-professional practice requires specialized knowledge and skills and enters all levels of practice. These decision makers usually involve individuals and groups making up staffs of educational institutions, who are faced with achieving goals for the whole range of intended learnings in the educational system.

Two other components in the Goodlad conceptual system, which are added to the Tyler questions, include the concepts of funded knowl-

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<sup>1</sup>Ibid., p. 28.

edge and conventional wisdom. Goodlad explains:

If curriculum planning were fully rational--which . . . it is not--funded knowledge from a host of fields and contexts would provide the prime data source. But the existence of knowledge does not assume its use. There is disagreement over what constitutes valid knowledge, and the extent to which that society values knowledge as a basis for choosing among alternatives.<sup>1</sup>

For Goodlad, a major goal in curriculum planning is to choose funded knowledge over conventional wisdom in all of these decision making processes. The similarity among Dewey's sources of the science of education, Hilda Taba's seven step process and explanation, and Tyler's rationale is apparent when examined by Goodlad's criteria for effective curriculum inquiry. Taba's text, Curriculum Development: Theory and Practice and Goodlad's criteria appear most highly compatible.

Goodlad's conceptual frame is in the ends-means tradition. It incorporates Tyler's four questions but views the questions in a different frame of reference. Upon reflection of his original scheme ] Goodlad in 1979, explains, ". . . since we used Tyler's four questions as illustrative of those [questions] curriculum makers seek frequently to answer, we picked up the criticism of all those who object to Tyler's work in curriculum on the grounds that it is delivered from an industrial or engineering model."<sup>2</sup> Goodlad wishes the group had avoided the misunderstanding but calls the debate between the humanists and the behavioral empiricists oversimplified. Goodlad confirms:

It is now relatively easy to see how we might have avoided at least such misunderstanding as stemmed from our perceived identification with one side of a long curricular debate. . . . But both adherence to and rejection of the essentially Western (linear) industrial model of human behavior . . . [for] curriculum planning are so

<sup>1</sup>Ibid., pp. 35-36.

<sup>2</sup>Ibid., p. 23.

strong in our society that avoiding misunderstanding in any attempt to conceptualize what is and then employ essentially this same configuration in suggesting how what is might be improved is virtually impossible.<sup>1</sup>

Goodlad, like John Dewey and Ralph Tyler before him, pinpoints one of the basic curriculum problems since it was first identified by Dewey in The Sources of a Science of Education in 1929. Tyler's attempt to resolve the debate is to incorporate three sources of objectives: the learner, society, and subject matter, into his rationale as did Hilda Taba. Herbart Kliebard and others criticize the Tyler and Taba solution.<sup>2</sup> John Goodlad's solution is to avoid "perceived identification" with the Tyler Rationale by "pointing out that activity does not always arise out of purposes; often there is activity before or without purpose." Those who attempt to resolve the dilemma such as Dewey, Tyler, Taba, and Goodlad attempt to solve it in a similar way. John Goodlad's conceptual scheme carries out the Tylerian tradition with modification and elaboration that attempt to make curriculum inquiry more rational. The fundamental questions posed by Tyler remain central.

#### Hilda Taba

Unlike the other curricularists in this grouping, the late Hilda Taba receives her Ph.D. degree from Columbia University in 1932 and not the University of Chicago. Between 1936-1938, however, Taba is at Ohio State University and a member of the Evaluation Staff of the

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<sup>1</sup>Ibid., pp. 23-24.

<sup>2</sup>Kliebard, "Reappraisal: The Tyler Rationale," p. 71.



Eight Year Study. In 1939, Taba moves to Chicago as an Associate on the Evaluation Staff of the Eight Year Study and becomes a professor of education at the University of Chicago and for part of the period until 1945, she is also the Director of the Curriculum Laboratory. Hilda Taba is placed in this grouping because of the extent and variety of interrelationships with Tyler, her prominence in the curriculum field, the strong similarity between the Tyler and the Taba curriculum models, and the Taba-Tyler scientific approach to curriculum.

Taba is a prolific author beginning in 1932, when she writes The Dynamics of Education, at the onset of her career, until 1967, when death terminates her work as a professor of education at San Francisco State College. Taba concludes her appointment at the University of Chicago in 1959 to accept an appointment at San Francisco State College. Taba and Tyler collaborate on several curriculum projects, and each evolves a similar rationale.

During the Eight Year Study, both Taba and Tyler begin to elaborate a sequence of questions to be asked and an order of steps to be taken in curriculum planning.<sup>1</sup> Similar to Tyler, Taba over a period of twenty years from 1942-1962, working as a curriculum consultant in several school systems and teaching courses in curriculum development, also tests and refines the scheme of questions and answers which she helps to develop. Taba states, "A real chance at a large-scale application of the idea [the four questions] came in connection with the

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<sup>1</sup>Hilda Taba, Curriculum Development: Theory and Practice (New York: Harcourt, Brace & World, 1962), p. vi.

project on Intergroup Education," which Taba directed.<sup>1</sup> In 1945, Taba explains the Intergroup Education in Cooperating Schools Project by stating:

There were no traditions and few precedents for curriculum in human relations. Furthermore, the essential focus of teaching in this field required a theoretical framework from which to work because the idea could not be contained in any one single subject or in any one particular type of experience.<sup>2</sup>

Taba's Intergroup Education research is divided into three different phases: (1) the development of educational approaches, (2) the design of new tools and techniques, and (3) the creation of methods of training to resolve the national conflict in the 1940s caused by the lack of intergroup understanding.

Using the sequence of the four questions asked in the Eight Year Study to interrelate the theory and practice of curriculum-making, Taba undertakes this large scale research. In a scientific approach to curriculum-making, Taba develops pilot studies and curriculum designs. She also trains educational workers and develops administration for the application of Intergroup Education. Taba's large scale research involved eight staff members, 250 local projects in seventy-two schools, and the combined efforts of 2,500 classroom teachers. The scope of the undertaking was on a grander scale than the Eight Year Study.

In New York City between 1945-1948, Taba directs this experimental intergroup project, which is sponsored by the American Council on Education, and between 1949-1953, she reports the project. After

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<sup>1</sup> Ibid.

<sup>2</sup> Ibid.

four years of work, Taba writes four volumes: Curriculum in Intergroup Relations, Diagnosing Human Relations, Intergroup Education in Public Schools, and Leadership Training in Intergroup Education, which describes this experiment. As a result of the experimental project, the Center of Intergroup Education was established at the University of Chicago, and Taba returns to Chicago and directs the Intergroup Education Center from 1948 until 1951. In 1955, Taba writes School Culture: Studies of Participation and Leadership, which generalizes her research in intergroup studies for use in schools.

This major research is one demonstration of Taba's scientific approach to curriculum development as inquiry. The project is also an indication of the similarity between Tyler's and Taba's research approach in the Eight Year Study. After the Eight Year Study, Tyler applies the research process to the Cooperative Study in General Education between 1939 and 1945; whereas Taba's opportunity for a large scale research undertaking does not occur until 1945. Tyler reports his curriculum inquiry as a result of the curriculum development of the Eight Year Study and the Cooperative Study. Taba, on the other hand, reports her curriculum inquiry as a result of the curriculum development of the Eight Year Study and the Intergroup Project. Tyler's brief explanation of his rationale is published in 1950 and Taba's fuller statement in 1962. The Taba Intergroup Project was lauded as a "distinctly pioneer research."<sup>1</sup>

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<sup>1</sup>Hilda Taba, Elizabeth Hall Brody, and John T. Robinson, Intergroup Education in Public Schools (Washington, D.C.: American Council on Education, 1952), p. v.

Two similarities are especially evident among Dewey, Tyler, and Taba concerning the sources of a science of education. Taba also agrees with Dewey's conclusion that "Education science is not found in books, nor in experimental laboratories, nor in classrooms where it is taught, but in the minds of those engaged in directing educational activities."<sup>1</sup> Like Tyler, from her educational activities, Taba also develops a theory. A second similarity among the three curricularists is traceable to another undertaking, with a different focus on the science of education, in which Tyler and Taba collaborate and the result is Adolescent Character and Personality

In 1949, when Taba returns from New York, she becomes co-editor with Robert Havighurst of Adolescent Character and Personality. This book examines how other disciplines can help to create a science of education, as Dewey explains it. One of the principles for a science of education, as Dewey states it is, "the science of education is not independent"; therefore, the sources outside of education must be examined.<sup>2</sup> Taba and Tyler explore these sources when Tyler establishes a Committee of Human Development consisting of faculty members from various departments of the University of Chicago, whose fields of study relate to the development of children and adults. Tyler, chairman of this committee, Taba, a member, and others create a collection of articles to demonstrate the different contributions to education from a variety of disciplines. Members of the committee include students of

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<sup>1</sup>Dewey, The Sources of a Science of Education, p. 32.

<sup>2</sup>Ibid., p. 40.

biology, sociology, education, and psychology.<sup>1</sup> Understanding that education is not a science but has to use disciplines to create a science of education, Taba, several years later, remarks:

The sources available to educational thinking have . . . expanded tremendously. This expansion has made available concepts that can be used to strengthen the conceptual framework of educational thinking. If this new knowledge is to be used profitably, [planners] . . . need to recognize that knowledge from other fields does not yield direct answers to educational problems.<sup>2</sup>

Taba's explanation is a paraphrase of Dewey's sources of a science of education.

A third and most important similarity between Taba and Tyler is shown in Taba's book, Curriculum Development: Theory and Practice. Taba's curriculum model is defined in 1962, but it is in the making since the Eight Year Study. In the preface to Curriculum Development: Theory and Practice, which describes the model, Taba states, "This book attempts to . . . examine the theory of curriculum development, to reach into fields other than education for strengthening thinking about curriculum, and to link what has transpired with current ideas and problems."<sup>3</sup> After establishing the purpose of the text, Taba identifies its etiology by explaining, "The book has been in the making for over twenty years,"<sup>4</sup> a statement identifying the origins of her work in the Eight Year Study. The Eight Year Study concludes in 1942, exactly twenty years prior to the date of publication of her model in 1962.

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<sup>1</sup>Robert J. Havighurst and Hilda Taba eds., Adolescent Character and Personality (New York: John Wiley & Sons, 1949), p. vii.

<sup>2</sup>Taba, Curriculum Development: Theory and Practice, p. v.

<sup>3</sup>Ibid., p. vi.

<sup>4</sup>Ibid.

Taba further verifies these roots when she explains:

The idea that there must be a system of thinking about curriculum planning occurred to Dr. R. W. Tyler after a rather confusing meeting on curriculum planning in the 1930s in which conflicting proposals for curriculum designs were being debated. Following this meeting, Dr. Tyler and the writer [Taba] began to elaborate a scheme for a sequence of questions to be asked and an order of steps to be taken in planning curriculum. The writer tried these out in the next workshop [1937] held by the Eight Year Study.<sup>1</sup>

In 1945, Taba first describes the curriculum scheme about which she later states, "These steps are comparable to a sequence proposed in a syllabus by Tyler (1950)."<sup>2</sup> Tyler's first statement follows five years after Taba's earliest presentation. In 1962, about that earlier scheme upon which she and Tyler experimented, Taba remarks:

Although the particular answers that the scheme of thinking provided earlier no longer hold, the scheme itself seems to be appropriate to the issues of today. It seems to help in bringing some order into the chaotic positions now held in regard to curriculum and even to suggest a new vitality for many emphases that were alive in the 1930s. . . . One of these emphases is the analysis of the thought processes produced by the evaluation staff of the Eight Year Study.<sup>3</sup>

Taba in these statements, suggests an exploration of her role in the creation of the four questions during the Eight Year Study.

Taba's curriculum text is divided into four parts: the foundations for curriculum development, the process of curriculum planning, the design of the curriculum, and the strategy of curriculum change. Taba's examination of the four theoretical foundations of educational programs regarding society, culture, learning, and subject matter yields a structured synthesis. The absence of such a framework before this time has led to criticism of the curriculum of the schools. Taba

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<sup>1</sup> Ibid.

<sup>2</sup> Ibid., p. 12.

<sup>3</sup> Ibid.

conceives of curriculum development as a rationale task requiring orderly thinking and indicates that the order follows seven steps:

- Step 1: Diagnosis of needs
- Step 2: Formulation of objectives
- Step 3: Selection of content
- Step 4: Organization of content
- Step 5: Selection of learning experiences
- Step 6: Organization of learning experiences
- Step 7: Determination of what to evaluate and of the ways and means of doing it.<sup>1</sup>

These seven steps incorporate the original four questions of the Tyler Rationale but divide the selecting and organizing steps between content and learning experience. Taba adds Step 1, diagnosis of needs, which Tyler incorporates in his recommended procedures for needs and interests studies; and Step 3 and Step 4 on content, which Tyler incorporates with the selection and organization of learning experiences. Taba is clearer about knowledge as an intellectual foundation or as a source of objectives.

Although the similarities are greater; the differences between the rationales are important. The Tyler Rationale presents four fundamental questions; whereas, Taba's model is presented in seven steps. The Tyler Rationale can begin with any question, but the interrelationship in the Taba model proceeds from Step 1 to Step 7. In Basic Principles, Tyler defines the rationale as only "one way of viewing an instructional program."<sup>2</sup> In contrast, Taba's explanation is based upon the assumption that there is "an order [in curriculum development] and that pursuing it will result in a more thoughtfully planned and a more

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<sup>1</sup>Ibid.

<sup>2</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 1.

dynamically conceived curriculum."<sup>1</sup> Taba extends Tyler's concept of teacher involvement to create dynamic strategies for change. Taba's five hundred page presentation of her theory incorporates a conceptual scheme of curriculum making. Tyler's somewhat more than one hundred page presentation includes only the four questions and the explanation of recommended procedures for answering them.

Taba explains her approach to designing the curriculum, a word which Tyler first uses in his 1976 statement of the rationale. To Taba, the function of theory for curriculum is expressed in this statement, ". . . a theory should not only define problems, with which curriculum development must deal, but also elaborate the system of concepts which must be used to assess the relevance of these data to education."<sup>2</sup> Tyler in his work fulfills the former but not the latter criteria for theory in Basic Principles. Taba, in her text, fulfills both. Taba identifies what she considers the decisions that need to be made about: general aims of schools, specific objectives of instruction, major areas or subjects, specific content to be covered, the type of learning experiences, evaluation, and the overall pattern of curriculum.<sup>3</sup> It should be recalled that Goodlad also added the decisions to be made to his conceptual system.

Placing them in an historical perspective, Taba identifies what she considers the conflicts or confusions in curriculum development, which her conceptual system then addresses. Chief among the conflicts

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<sup>1</sup>Taba, Curriculum Development: Theory and Practice, p. 12.

<sup>2</sup>Ibid., p. 9.

<sup>3</sup>Ibid., pp. 6-7.



she includes are "those philosophical and psychological theories regarding the nature of the individual, the nature of learning, the goals of our culture, and the role of the individual in that culture."<sup>1</sup> Taba, at this point in the 1960s states that there is no coherent theory of learning and only scattered hints about the basic character of the American culture. When these conflicting ideas are applied to curriculum making, she says, they cease to be mere theoretical details but "they acquire pragmatic importance."<sup>2</sup> Taba also identifies the pluralism of values as well as the piecemeal approach to curriculum revision, a lack of methodology, and a certain sterility as sources of confusion. Like Tyler, Taba criticizes the deductive nonexperimental approach to curriculum development which she says, "tends to end in a curriculum which either is unattainable in practice or when put into practice, becomes much like the preceding one."<sup>3</sup> This observation by Taba is corroborated by the work of Goodlad explained in Behind the Classroom Door.

To avoid sterility, Taba believes that before new ideas can emerge about the design of scope and sequence sufficient experimentation with smaller units of curriculum is needed to settle the problems connected with curriculum building. Taba states:

There is reasonable ground for believing that if the sequence in the curriculum development were reversed--that if, first, teachers were invited to experiment . . . and then, on the basis of these experiments, a framework were to be developed--curriculum development would acquire a new dynamic.<sup>4</sup>

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<sup>1</sup> Ibid., p. 7.

<sup>2</sup> Ibid.

<sup>3</sup> Ibid., p. 8.

<sup>4</sup> Ibid., p. 9.

Like Tyler, Taba believes in the integral role of the teacher to develop curriculum, but she adds the new dimension about when and how the teacher should be involved.

Curriculum making, which follows a scientific procedure must, in Taba's judgment, include the following elements: the learner, the learning process, the cultural demands, and the content of the disciplines. To Taba, "Scientific curriculum development needs to draw upon analysis of society and culture, studies of the learner and the learning process, and analyses of the nature of knowledge in order to determine the purpose of the school and the nature of its curriculum."<sup>1</sup> Tyler's rationale includes criteria for these elements, elements to which Tyler returns to re-examine his rationale from 1950 until 1976.

Taba and Tyler express many similarities about the definition of the sources of objectives. Taba, however, explains these foundations and Tyler describes procedures to make the choices of objectives. Taba states that an educational program is directed by the expectations of certain outcomes and, "the chief activity of education is to change individuals in some way: to add to the knowledge they possess, to enable them to perform skills . . . to develop certain understandings, insights and appreciations."<sup>2</sup> The three sources of objectives Taba identifies are: the culture and society, the learner, and the subjects. The purposes derived from these sources, Taba states, "are not --nor should they be--mutually exclusive."<sup>3</sup>

On the basic sources of objectives and the purposes of objec-

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<sup>1</sup>Ibid., p. 12.

<sup>2</sup>Ibid., p. 194.

<sup>3</sup>Ibid., p. 195.

tives, Taba and Tyler agree, but Taba's explanation of the educational objective is more elaborate than Tyler's. Taba explains the function of objectives on the general level, which describe school-wide outcomes and on the specific level, which describes behaviors to be attained for a particular unit, a subject area, or a grade level. Taba sees the necessity for "an integrated view of common objectives overarching across many parts of the program by which to guide supplemental analyses of the unique contributions of various subjects."<sup>1</sup> Taba also explains principles to guide the formulation of objectives. Of the six principles she identifies, most are similar to Tyler. Taba sees objectives as developmental "representing roads to travel rather than terminal points."<sup>2</sup> It is also important to recognize that Taba classifies objectives into several groups: knowledge, reflective thinking, values and attitudes, sensitivities and feelings, and skills.<sup>3</sup> Taba, Tyler, and Bloom agree that the scope of objectives should be broad enough to encompass all types of outcomes for which the school is responsible.

The organization of Taba's text is far more elaborate than Tyler's. Taba and Goodlad possess a greater similarity in developing a conceptual system. Part I of the text describes Taba's model, Part II includes chapters on diagnosis, objectives, criteria for selecting the organizing content, the selection and organization of learning experience, and evaluation. Part III deals with the conceptual framework for curriculum development. In Part IV, Taba indicates the necessity for

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<sup>1</sup>Ibid., p. 197.

<sup>2</sup>Ibid., p. 205.

<sup>3</sup>Ibid., pp. 211-28.

curriculum development not only to follow a rational scheme for planning its various elements, but also to have a methodology for developing these elements and for relating them to each other. Taba states, "This methodology includes the ways of deciding who plays the various roles in curriculum making, who makes the decisions and suggestions about the ways in which these roles may supplement each other, and how these decisions may be coordinated and rendered consistent."<sup>1</sup> Taba's design is considered by some superior to Tyler's rationale.

In 1967, Mauritz Johnson praises Taba's rationale as a superior curriculum design in the field. As a member of a commission charged by the Association for Supervision and Curriculum Development to consider and evaluate curriculum designs, Mauritz Johnson commends Hilda Taba's definition of a curriculum design. Johnson explains:

Perhaps the best known design for curriculum development is Taba's . . . seven step elaboration of Tyler's . . . four-step design. . . . Both designs encompass instruction as well as curriculum, as Tyler indicated at the outset by stating that the questions were those that must be answered . . . in developing any curriculum and plan of instruction. Thereafter, however, Tyler fails to distinguish between the two.<sup>2</sup>

Mauritz Johnson praises the Taba design because:

Taba indicates that the "central problems of curriculum design are to determine the scope of expected learning, to establish a continuity of learning and proper sequence of content, and to unify ideas from diverse areas. . . ." Dealing as it does with intended results ("expected learning") and being uncontaminated with instructional (means) considerations, this notion of curriculum design would seem to be a useful one.<sup>3</sup>

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<sup>1</sup>Ibid., p. 14.

<sup>2</sup>Mauritz Johnson, "On the Meaning of Curriculum Designs," Curriculum Network Theory, no. 3 (1969), p. 8.

<sup>3</sup>Ibid.

Taba's contribution to the field has been praised but it has not become prominent as many others and should be re-discovered.

Unlike Tyler, Taba also creates an instruction model. Joyce and Weil in Models of Teaching identify Taba's instructional model in the family of information processing instruction models. The authors state that Taba, ". . . developed a series of teaching strategies designed to develop inductive mental processes, especially the ability to categorize and to use categories. . . ." <sup>1</sup> Taba analyzes thinking from a psychological and logical point of view and believes that thinking skills should be taught using specific teaching strategies designed for the task. Taba, who popularized the term teaching strategy creates three models, the concept formation model, the interpretation of data model, and the application of principles model. Taba applies the third model in A Teacher's Handbook to Elementary Social Studies: An Inductive Approach. These instructional models are not directly traceable from Tyler's work with Taba, but the Judd-Tyler influence on higher order mental processes is evident as is Dewey's Types of Thinking and Benjamin Bloom's Taxonomy of Cognitive Objectives.

Taba is a distinguished member of the Tyler legacy not only in the origins of the Tyler Rationale during the Eight Year Study, but also in the scientific approach to education. Taba's elaboration of the rationale in 1962, twelve years after Tyler's publication, is a scholarly documented presentation of the seven step process to curriculum development and a conceptual system for theory and practice.

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<sup>1</sup> Bruce Joyce and Marsha Weil, Models of Teaching, 2d ed. (Englewood Cliffs, N.J.: Prentice-Hall, 1980), p. 48.

Taba's book examines theory of curriculum development and reaches into fields other than education for strengthening thinking about curriculum. In this way, she and Goodlad are similar.

Taba emphasizes the foundations of curriculum and includes similar sources to Tyler, but Taba includes an analysis of current conceptions of the function of the school, a topic Tyler excludes. Tyler names contemporary society as a source, but Taba includes an analysis of culture as a foundation. Both include the learner as a foundation of curriculum, but Taba incorporates an analysis of learning theories and of the concept of intelligence and mental development. She also incorporates a discussion of the ways to maximize the transfer of training, a concept of importance to Tyler in 1950 and again in 1976. Taba focuses upon social and cultural learning and the extension of learning, which Tyler emphasizes in 1976 but only hints about in 1950. Taba includes a much more elaborate analysis of the nature of knowledge, a topic of considerable importance in the 1960s, than did Tyler in the original rationale. Tyler at this point in the 1960s also discusses the interrelationship of knowledge in several articles.

It appears that the Taba and Tyler texts are historically interdependent and take turns building on each other. When Taba assists Tyler in the Eight Year Study during the 1930s, they apparently both formulate the four questions. In 1950, Tyler develops his incomplete statement, which he is now revising. Then, in the 1960s, Taba builds upon the four questions based on her own research and develops a seven step process in which the Tyler Rationale is immanent. But at that time, Taba places the model in a conceptual scheme comprised of an

elaborate analysis of foundations, which utilizes the sources of a science of education, namely psychology, sociology, and anthropology. Taba also places the seven step process in a conceptual design for curriculum. Building upon Tyler's final chapter about the use of the rationale, Taba describes her perception of the use of a curriculum rationale. Taba adds new and different procedures to Tyler's procedures and creates a new phrase, strategy of curriculum change, which includes both individual and group participations in the change process.

Then in the 1970s, it seems that Tyler in several different articles on the rationale builds upon Taba's ideas. In 1976, Tyler explains two new emphases in curriculum development reflecting Taba's earlier discussion. One new emphasis is upon the active role of the learner and the concept of transfer of training, a topic to which Taba dedicated a chapter. Tyler's other new emphasis is upon the non-school areas of learning, a concept described by Taba in chapters on the extension of learning and on social and cultural learning.

The similarities between Taba and Tyler create an interesting and valuable interchange, which is synergized by John Dewey's The Sources of a Science of Education, Benjamin Bloom's taxonomy of cognitive objectives, and John Goodlad's Curriculum inquiry. Unlike Tyler, Taba does not develop ideas about evaluation but utilizes Tyler's views verbatim.

#### Herbert Thelen

Now an emeritus professor in the Department of Education at the University of Chicago, Herbert Thelen was awarded his Ph.D. from

Chicago after two years of study between 1942-1944. Thelen first met Tyler as his professor in the famous Education 360 course. Thelen was appointed to the staff of the University of Chicago in 1945 about which he explains, "Tyler was chairman of my Ph.D. committee, . . . my employer in the United States Armed Forces Institute, . . . my boss when I was an instructor and an assistant professor in the Department [of Education], . . . and a collaborator in an article on instruction in the NSSE Yearbook."<sup>1</sup> Tyler recalls other working relationships between Thelen and him. Tyler cites the Eight Year Study and a research project, Classroom Studies in Chemistry for Rural Youth.<sup>2</sup> Thelen, however, is not listed on the Evaluation Staff of the Eight Year Study in the five volumes which describe the project.

Thelen's professional interests are in the main dissimilar from Tyler's major concerns. Thelen's contribution is primarily to the emerging science of group dynamics as well as curriculum and instruction. Thelen is the author of several well known books and over 200 articles. His earliest book, Dynamics of Groups at Work, written in 1954, and his most recent magnum opus, The Classroom Society: The Contribution of Educational Experience, written in 1981, both focus on the group process in education as does Education and the Human Quest. This last book also introduces Thelen's instruction model, and Classroom Grouping for Teachability investigates the way in which resources of teachers and students can be utilized more effectively for educational

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<sup>1</sup> Interview Questionnaire, Thelen to Stone, July 6, 1984.

<sup>2</sup> Interview Questionnaire Two: "Professors at the University of Chicago," Tyler to Stone, July 9, 1983.



purposes in the classroom.<sup>1</sup> The earliest of Thelen's books credits "Tyler for his insistence on operationality as the sine qua non of meaning in ideas,"<sup>2</sup> which sums up Tyler's main influence on Thelen's contribution.

Thelen contributes to the group process through his instruction model classified by Joyce and Weil as a social interaction teaching model. The purpose of this group investigation model, as Thelen calls it, is the "development of skills for participation in democratic social process through combined emphasis on interpersonal group skills and academic inquiry-skills."<sup>3</sup>

Thelen is one of the prominent members of the Tyler legacy although his work does not apparently build upon or extend the Tylerian principles of curriculum. Tyler and Thelen collaborate in an article on instruction, but it is Thelen who is recognized for this instruction model and Tyler does not develop one. Thelen does, however, build upon Tyler's evaluation process.

Thelen's stance on evaluation shows general similarity with Tyler. Thelen advocates evaluating: (1) the competence each student develops, (2) the growth of the classroom into a learning community, (3) the development of the school and official parts of the school system, (4) the organized school system in relation to nationalizing

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<sup>1</sup>Herbert A. Thelen, Classroom Grouping for Teachability (New York: John Wiley & Sons, 1967), p. v.

<sup>2</sup>Herbert A. Thelen, Dynamics of Groups at Work (Chicago: University of Chicago Press, 1954), p. vii.

<sup>3</sup>Joyce and Weil, Models of Teaching, p. 12.

influences, and (5) the changing conception of the overall educational enterprise of the nation.<sup>1</sup> On the other hand, Thelen finds operations research the only necessary evaluation. Other evaluation, he believes, is undertaken for political reasons which have nothing to do with curriculum and instruction.

Although Tyler's rationale is not directly traceable in Thelen's major writings, Thelen describes the effectiveness of the rationale. "It [the rationale] helps define the scope and the detail curriculum theory must take into account."<sup>2</sup> Thelen states that Tyler did not have substantive theories but, "What he [Tyler] had was methodology of curriculum--the set of understandings the researcher has about how to approach his task."<sup>3</sup> Because, in Thelen's view, these were not principles about the nature of learning per se, Tyler could be equally supportive of mastery learning and its opposite, which Thelen calls, "his own sort of Deweyan inquiry."<sup>4</sup> Thelen judges that Tyler had a great impact in all parts of education, but he criticizes the application of Tyler's rationale. Thelen states, "The way his [Tyler's] ideas have been used is as a bastardized step-by-step procedure, a cookbook approach."<sup>5</sup> Thelen also comments that he does not know of anyone who actually pushed Tyler's metatheory further than Tyler did.

About Tyler's influence upon Thelen's work, Thelen explains, "People like me fleshed out ideas about the social-cognitive-emotional

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<sup>1</sup>Thelen, Dynamics of Groups at Work, p. vii.

<sup>2</sup>Interview Questionnaire, Thelen to Stone, July 6, 1984.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

<sup>5</sup>Ibid.

processes of education--the theory rather than the metatheory."<sup>1</sup>

Thelen assesses Tyler's contribution by explaining:

In general, Tyler posed the questions curriculum makers have to contend with and thus indirectly defined or stipulated the criteria an adequate treatment would have to meet. He was also helpful in emphasizing the kinds of decisions curriculum makers have to make and in suggesting how alternatives could be generated.<sup>2</sup>

Thelen's contribution to the curriculum field is substantive and his work at the University of Chicago is extensive, but Thelen's intellectual interests are focused in a direction different from Tyler. Thelen's prominence in the field, unlike Bloom, Goodlad, and Taba is, not on curriculum theory but on group theory. It is Dewey who has an apparent influence on Thelen's approach to learning and Thelen who influences Taba's thoughts on group dynamics, which is important to her introduction of curriculum strategies for change.

The contribution of this grouping of prominent curricularists from the University of Chicago to the field in general is substantial. The impact of the Tylerian principles of curriculum, instruction, and evaluation on their work is also significant. The most important impact in carrying on the Tyler tradition of curriculum development and inquiry is upon Bloom's taxonomy of objectives and his handbook for evaluation and more importantly upon Taba's and Goodlad's curriculum systems.

Both Taba's and Goodlad's curriculum systems incorporate the Tyler Rationale, and both "elaborate the system of concepts which must

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid.

be used to assess the relevance of these data to education.<sup>1</sup> The addition to the Tyler Rationale that Taba and Goodlad provide is a basis for "decisions [which] need to be made competently, on a recognized and valid basis, and with some degree of consistency."<sup>2</sup> Like Tyler, both Taba and Goodlad bridge the conduct of practice with theorizing. Both create curriculum theory from curriculum development or practice. Taba's system, even more than Goodlad adds to the sources of a science of education. Her system incorporates other disciplines from the behavioral and social sciences including especially psychology, anthropology, and the emerging science of group dynamics, which she operationalizes for curriculum.<sup>3</sup> Taba and Goodlad extend the Dewey-Tyler paradigm into a conceptual scheme for curriculum inquiry, but neither adds a new division of curriculum not included in the Tyler Rationale.

Grouping III: Tyler's Mentor and Colleague Influence  
at the University of Chicago

A third branch of the Tyler legacy can be traced to nine curricularists who were doctoral students at the University of Chicago, when Tyler was the Chairman of the Department of Education from 1939 to 1953. These former students are less prominent than the prior grouping of University of Chicago students, but they are well known in the curriculum field.

Two of this grouping: Chester Harris and Christine McGuire

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<sup>1</sup>Taba, Curriculum Development: Theory and Practice, p. 6.

<sup>2</sup>Ibid., p. 7.

<sup>3</sup>Ibid., p. 5.

collaborate on the Eight Year Study, but most arrive at the University of Chicago later in Tyler's career, when the study is completed. Two members, Edgar Friedenberg and Earl Johnson, collaborate in the Co-operative Study. Five of the nine graduate students become professors at the University of Chicago. The influence of the Examiner's Office is also less pronounced in this grouping and only two professors: Edgar Friedenberg and Christine McGuire, were Examiners. Tyler also invites David Krathwohl and James Wilson to become fellows at the Center for Advanced Study in the Behavioral Sciences.

The general thrust of this grouping seems to be the application of the Tyler Rationale to various areas and levels of education. For example, Christine McGuire develops curriculum based upon the Tyler Rationale for medical education, Ole Sand for nursing education, and James Wilson for Cooperative Education. Louise Tyler traces the rationale through the literature of the behavioral objective.

The evaluation theory of Tyler influences the work of Chester Harris, who contributes to the technical aspects of the field, and David Krathwohl, who extends the work of Benjamin Bloom and Ralph Tyler to improve research through the taxonomy of affective objectives. The contributions of Edgar Friedenberg and Earl Johnson appear to be outside of the Tyler tradition because their areas of concentration relate more to the social sciences than to curriculum theory. Kenneth Rehage's concentration appears to be more upon teaching than upon theory.

The curriculum literature of this grouping is diverse and uneven in importance but still prolific. Nine authors have published more than fifty texts. Of these texts, more than half of them report

applications of the Tyler Rationale, and two curricularists' writings report curriculum developed scientifically. Two curricularists: Earl Johnson and Louise Tyler, are recognized as great teachers. This grouping transmits the Tyler legacy through application in different areas but does not transform or extend the rationale.

Assistants on the Evaluation Staff of the  
Eight Year Study

Chester Harris and Christine McGuire are participants on the Evaluation Staff of the Eight Year Study. Harris' work in evaluation is not influenced by Tyler but McGuire's curriculum and evaluation contribution is strongly influenced. Before entering the University of Chicago, Chester Harris is a participant in the Eight Year Study first as a teacher at East High School in Denver, Colorado, one of the thirty schools in the Study, and later as a research assistant appointed by Tyler to the Evaluation Staff. In 1939, the same year Tyler becomes the Chairman of the Department of Education at the University of Chicago, Harris enters the University to earn his doctorate in statistics and measurement, his chief professional interest. Tyler is the chairman of Harris' dissertation committee and provides Harris with a two year assistantship.

Upon Harris' completion of his Ph.D., Tyler appoints him as an assistant professor in the Department of Education. In 1948, Harris accepts an appointment as a professor of education at the University of Wisconsin, where he remains until 1970. During that time, Harris is one of the committee members who helps in the creation of Benjamin Bloom's taxonomy of objectives. In 1970, Harris accepts an appointment

to the School of Education at the University of California at Santa Barbara, his present position.

Harris' major area of interest is focused upon evaluation rather than upon curriculum. Harris' concentration is upon the technical problems in measurement and sampling about which he writes. In 1963, Harris edits a text about Problems in Measuring Classroom Change, which is related to Tyler's concerns. The book reports proceedings of a conference sponsored by the Committee on Personality Development in Youth of the Social Science Research Council. Harris reports, "This committee had been engaged since 1957 in stimulating research dealing with the development of personality. The chairman of the committee was Ralph Tyler."<sup>1</sup>

Harris is the major author or an editor of three other texts: Analyses of Concept Training, Problems in Criterion-Referenced Measurement, and Achievement Test Items--Methods of Study, all of which concentrate upon technical and statistical aspects of evaluation. Harris considers Karl Holzinger and Leon Thurston, professors in statistics and measurement at the University of Chicago, major influences upon his career rather than Ralph Tyler. It is Thurston who was the first Head of the Examiner's Office before Ralph Tyler assumed the position, and it was Tyler, who changed the direction of the office by his new views of tests and measurement.

Tyler's evaluation process and research theories made a greater impact on Christine McGuire, who was also a member of the Evaluation

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<sup>1</sup>Interview Questionnaire, Harris to Stone, June 2, 1984.

Staff of the Eight Year Study. Christine McGuire and Ralph Tyler collaborate in five different capacities between 1938-1953. McGuire receives her master's degree at Ohio State University in 1938, when Tyler is a member of the Bureau of Educational Research at Ohio State and the Director of the Evaluation Staff of the Eight Year Study, which is then headquartered at Columbus.

Tyler invites McGuire to become a member of the Eight Year Study Evaluation Staff, and when the staff of the Eight Year Study moves to the University of Chicago, McGuire moves with the staff. At the University of Chicago, McGuire concurrently earns her Ph.D. between 1938-1941. Tyler then appoints McGuire to the faculty of the University of Chicago during the two decades between 1941-1961, first as an instructor and in 1950 an associate professor of education.

While on the faculty at the university, McGuire is a member of the committee, comprised of Ralph Tyler and several other Tyler students, who help design Bloom's taxonomy of cognitive objectives. In 1961, McGuire becomes the Associate Director of Medical Education at the University of Illinois, and a decade later she takes the position of professor of medical education and educational psychology in the College of Education at the University of Illinois.

McGuire's professional interests derive, at least in part, from her work with Ralph Tyler and include: testing and evaluation of professional competence, medical education, and teaching and testing of problem solving skills. Among her publications, many of them relate to her work with Tyler such as a review of the nature and uses of examinations in medical education, the validity and reliability of oral exami-



nation in assessing cognitive skills in medicine, or the educational program research and development for health maintenance organizations.<sup>1</sup>

Assistants in the Cooperative Study and/or the Examiner's  
Office at the University of Chicago

Three of Tyler's graduate students, also professors at the University of Chicago, are affiliated with Tyler's work in two other capacities: the Cooperative Study of General Education and the Examiner's Office. Earl Johnson and Edgar Friedenberg are members of the Cooperative Study and Friedenberg and David Krathwohl are Examiners.

Earl Johnson is associated with Tyler in three different capacities: a student, a colleague, and a researcher in the Cooperative Study of General Education. Johnson earns both his master's degree and later, in 1941, when Tyler is Chairman of the Department, his doctoral degree in sociology from the University of Chicago. From 1932-1959, Earl Johnson was a member of the faculty of the University of Chicago first as an instructor of sociology and later as Chairman of the Committee on the Divisional Master's Degree in the Social Sciences, an interdisciplinary program which included several integrated social science courses.<sup>2</sup>

Between 1939-1941, Johnson is a research associate in the social sciences on the staff of the twenty-two college Cooperative Study in General Education. The Cooperative Study, it should be remembered, is one of the two major research projects that leads to the

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<sup>1</sup>Jacques Cattell Press, ed., Leaders in Education, 5th ed. (New York: R. R. Bowker Co., 1974), p. 695.

<sup>2</sup>Ohles, ed., Biographical Dictionary of American Educators, p. 711.

development of the Tyler Rationale. "Besides consulting with social science faculty members from each of the participating schools, Professor Johnson directed two institutes or workshops on the social sciences in general education for college and university faculty members during the summers of 1939 and 1940."<sup>1</sup> In 1939, Tyler introduced the first teacher workshop at the University of Chicago replicating the effective format of the workshop designed for the Eight Year Study.

Earl Johnson is a prolific author of articles published in a wide variety of journals. His panoply of diverse titles of books also reveals a broad intellect and an exemplary scholar. From the completion of his doctorate until 1983, at the age of eighty-eight, Johnson has written over twenty books.<sup>2</sup> His intellectual interests: general education, sociology and the social sciences, and social studies education, are reflected in his writings.<sup>3</sup> Earl Johnson is also a distinguished teacher greatly admired by his students as indicated in a publication, The Humanistic Teachings of Earl S. Johnson, which was created by his students to honor him as a teacher.

The major relationship between Tyler and Johnson was during the Cooperative Study, which influenced Johnson's perception of curriculum. Johnson's approach to curriculum is as a subject matter specialist more than as a curricularist. Both Tyler and Johnson believe in the importance of social studies in the curriculum, and both believe in an interdisciplinary organization for the social studies, which was one

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<sup>1</sup>Earl S. Johnson, The Humanistic Teachings of Earl S. Johnson, ed. John D. Hass (Boulder, Colo.: Westview Press, 1983), p. 4.

<sup>2</sup>Ibid., p. 5.

<sup>3</sup>Ibid., p. 6.

organizing plan for disciplines in the Cooperative Study.

As a leading social studies educator, Johnson was invited as one of the architects to the new social studies curriculum in the 1960s. Johnson advocated an integrated rather than an isolated approach to the social studies curriculum.<sup>1</sup> Writing in Theory and Practice of the Social Studies, Johnson refers to Tyler's steps in testing and evaluation. Johnson also makes reference to Smith and Tyler's volume about the Eight Year Study, Appraising and Recording Student Progress. Johnson's collaboration with Tyler results in his application of Tylerian principles to a discipline.

Edgar Friedenberg was a student of Tyler between 1945-1946, at the University of Chicago, where Tyler was his thesis supervisor. Friedenberg's special field is social foundations and after he receives his Ph.D., Tyler appoints him as an instructor and later an assistant professor in the Office of the University Examiner until 1953. During this time Friedenberg is also a member of the staff of the Cooperative Study of General Education, headquartered at Chicago. Friedenberg also teaches the basic methodology course in the Division of the Social Sciences. At present Dr. Friedenberg is a professor of education at Dalhousie University in Halifax, Nova Scotia. Friedenberg and Tyler's professional interests are compatible but not overlapping.

A review of the Friedenberg literature reveals that he has written about ten books between 1954-1981, which focus on the adolescent growing up in America. None concentrates upon curriculum, in-

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<sup>1</sup>Ohles, ed., Biographical Dictionary of American Educators, p. 710.

struction, or evaluation. One book, influenced by work in the Examiner's Office, is Self-Perception in the University: A Study of Successful and Unsuccessful Graduate Students. The book examines the relationships which successful graduate students in the social sciences establish and maintain with their university in contrast to those established and maintained by unsuccessful graduate students. The content of this book relates directly to Friedenberg's work at the Examiner's Office, a post which he leaves the year prior to the publication of the text in 1953.

About Tyler's influence on his work, Friedenberg explains:

Ralph's influence was essentially something to define my thoughts against. He is far too intelligent and wise a man not to understand what the schools are really doing; but he never flags in his efforts to help them do better. He represents . . . the establishment position at its most humane and perceptive. . . .<sup>1</sup>

Friedenberg, unlike Tyler, has less faith in the schools, which he believes exist primarily as means of social control and for issuing credentials. He states that what is taught in schools is essentially of a ceremonial character only. Friedenberg's viewpoint on curriculum theory is also contrary to Tyler's view. Friedenberg favors the reconceptualists, especially Michael Apple's Ideology and Practice in Schooling and Paul Willis' Learning to Labour, but he is not confident that they are going to accomplish much.<sup>2</sup>

David Krathwohl, who was more strongly influenced by the Tyler Rationale than Friedenberg, was also an Examiner at the University of

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<sup>1</sup>Interview Questionnaire, Friedenberg to Stone, June 1, 1984.

<sup>2</sup>Ibid.

Chicago. Now a professor of education at Syracuse University, David Krathwohl receives his bachelor's, master's, and doctoral degrees at the University of Chicago. Krathwohl was a student of Tyler from 1946-1949, Krathwohl was a student in the famed Education 360 during the period when Basic Principles was a syllabus. As a graduate student in the Board of Examiner's Office, Krathwohl prepared Social Science Divisional Exams under Tyler, who also was a member of Krathwohl's dissertation committee.

Krathwohl's professional interests: educational psychology and measurement, parallel Tyler's interests.<sup>1</sup> After the completion of his doctorate, Krathwohl accepts appointments to the Department of Education at the University of Illinois, Michigan State University, and Syracuse University, where he is at present.

Krathwohl does not publish frequently, but is a contributing author to the Taxonomy of Educational Objectives, Handbook I: Cognitive Domain and the major author of Handbook II: Affective Domain. The popularity of these handbooks, which are direct offspring of the Tyler Rationale, is validated by the eighteenth printing of the first and the ninth printing of the second book between their respective first publication dates and 1974. Krathwohl writes, "The success of Taxonomy of Educational Objectives, Handbook I: Cognitive Domain, has spurred our work on the affective domain. As is indicated in the text,

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<sup>1</sup>Cattell Press, ed., Leaders in Education, p. 614.

we found the affective domain much more difficult to structure, and we are much less satisfied with the results."<sup>1</sup>

Part I of the second handbook describes the nature of the affective domain and the classification structure prepared for it, and Part II gives the classification structure in detail and describes the evaluation of affective objectives at each level of the structure.<sup>2</sup>

The first handbook, discussed in the section describing Benjamin Bloom's interrelationship with Tyler, is dedicated to Ralph Tyler. Tyler's intellectual, financial, and personal influence upon the handbooks is considered significant by the authors and participants. About this influence, Krathwohl writes, "Tyler's theory penetrates the work. It deals with behavioral objectives, and it grew out of the general education movement where Tyler's work first applied. If I am correct, one can find Tyler's steps and rationale almost completely restated in that work."<sup>3</sup>

Early in his career, from 1949-1955, Krathwohl, while in the University Examiner's Office at the University of Illinois, followed Tyler's steps in the rationale vigorously in much of the work he developed. Krathwohl in describing Tyler's general contribution to evaluation, states, "Tyler's ideas have continued to influence my thinking about evaluation. He [Tyler] anticipated most of the problems that

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<sup>1</sup>David R. Krathwohl, Benjamin S. Bloom, and Bertram B. Masia, Taxonomy of Educational Objectives, Handbook II: Affective Domain (New York: David McKay, Co., 1964), p. vii.

<sup>2</sup>Ibid.

<sup>3</sup>Interview Questionnaire, Krathwohl to Stone, September 5, 1984.

have been rediscovered and elaborated upon at length in the evaluation literature."<sup>1</sup>

Krathwohl believes that Tyler's rationale is very useful for evaluation, "but that Lee Cronbach's [Tyler's student] most recent writing, Designing Evaluations of Educational and Social Programs, comes closer to expressing my [Krathwohl's] point of view. . . ."<sup>2</sup> It should be recalled that Cronbach extends Tyler's basic conception of evaluation but divides evaluation from curriculum and calls the particular work referenced by Krathwohl "a modern version of Tyler in certain respects."

Krathwohl's contribution to the field is limited. His emphasis, essentially in evaluation, like Bloom's is a direct extension of Tyler's principles of curriculum and evaluation. David Krathwohl and Herbert Thelen, another Tyler colleague, collaborate on Studies of Human Interaction, an audio-visual taped class discussion.

#### Doctoral Students and Professors at the University of Chicago

Graduate students who were appointed by Tyler as professors at the University of Chicago in the late 1940s until 1953 include: Edgar Friedenberg, Chester Harris, Earl Johnson, Christine McGuire, and Kenneth Rehage. Of these five curricularists, all were associated with Tyler in another capacity except for Kenneth Rehage who is noted as a teacher rather than a curricularist influenced by the Tyler Rationale.

Kenneth Rehage was a student of Tyler between 1940-1949, during

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid.

which time he was also a teacher at the Laboratory School of the University of Chicago. Rehage was a professor of education from 1949-1957, when he also became the Dean of Students of the Social Science Division until 1972, and Dean of Students of the Graduate School of Education from 1965-1974.

Rehage's and Tyler's major collaboration was in a Social Studies Curriculum Project at the Laboratory School of the University of Chicago when Rehage was a teacher at the Laboratory School before he was a student in Tyler's Education 360 course on Basic Principles and Education 197 entitled Construction of Achievement Tests. Rehage was also involved in many of Tyler's seminars on curriculum and served on the Board of Directors of the National Society for the Study of Education since 1972, where Tyler has served virtually continuously. Rehage also "participated in a number of surveys of public school systems and higher education institutions for which Dr. Tyler was either director of the survey or a senior member of the survey team."<sup>1</sup>

Rehage has written articles but not books and served as editor of the National Society for the Study of Education Series on Contemporary Educational Issues from 1971-1974. During this period, Rehage invites Tyler to edit two publications from the society: Accountability in Education and Crucial Issues in Testing.

Rehage's professional interests include: curriculum and instruction and teacher education.<sup>2</sup> Rehage states, "I have not published

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<sup>1</sup> Interview Questionnaire, Rehage to Stone, May 3, 1984.

<sup>2</sup> Cattell Press, ed., Leaders in Education, p. 898.



a great deal. When I have written on curriculum matters, I have leaned heavily on Tyler's rationale. . . . He was most influential in shaping my approach to problems of curriculum and instruction, as well as evaluation."<sup>1</sup> Rehage describes his view of the Tyler Rationale. "I view it as still a powerful contribution to curriculum theory, in spite of criticisms of it. Most criticisms I have seen seem to me not to have been based on a careful reading. . . ." <sup>2</sup>

### Doctoral Students at the University of Chicago

Doctoral students, who studied under Tyler at the University of Chicago, but who did not collaborate with Tyler in any other official professional capacity other than the curricularists already identified include: Ole Sand, Louise Tyler, and James Wilson. These curricularists are influenced by Tyler in their mutual areas with Tyler of professional interests and in their scientific approach to curriculum.

In 1981, a collection of essays, entitled Education in the 80s: Curricular Challenge, was dedicated to the memory of the late Ole Sand. In it the editors describe Sand's contribution to curriculum. "Ole Sand . . . served as a catalyst, causing diverse groups of people to discuss educational issues and to listen to each other. He delighted in uncovering new issues. . . . He strove for a balance between the theoretical and the practical."<sup>3</sup> The editors of this memorial

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<sup>1</sup> Interview Questionnaire, Rehage to Stone, May 3, 1984.

<sup>2</sup> Ibid.

<sup>3</sup> Lois V, Edinger, Paul L. Houts, and Dorothy V. Meyers, eds., Education in the 80s: Curricular Challenge (Washington D. C.: National Education Association, 1981), p. 9.

volume invited Ralph Tyler to write the opening chapter, "Societal Expectations for the American School: A Long View." Tyler, who was Sand's mentor at the University of Chicago where Sand earned his Ph.D., collaborated with Sand on Sand's major contributions to curriculum development.

Sand met Tyler when Sand was a doctoral student and research assistant at the University of Chicago in the late 1940s. After earning his doctorate, Sand accepted appointments at Wayne State University and at the University of Washington where his professional interests focused upon: the control and interdependent role of the school in American society, the social studies curriculum, and curriculum for basic nursing education. The contribution Sand makes to curriculum strongly adheres to the assumptions and logic of the Tyler tradition. The Tyler influence is especially important in Sand's research in nursing education and in his curriculum work in social studies.

In his work in curriculum development, Sand makes explicit application of the Tyler Rationale to tasks for social studies. For the design of a social studies curriculum, Sand transforms the four fundamental questions of the Tyler Rationale into ten important tasks:

- (1) study children and youth, (2) study contemporary society . . . ,
- (3) study what others have done, (4) formulate and use a philosophy, (5) develop a defensible theory of learning, (6) formulate clear objectives which indicate both behavior and content, (7) develop creative learning experiences, (8) select instructional materials, (9) organize learning experiences to provide for continuity, sequence, and integration; and (10) evaluate the extent to

which each individual attains the objectives, with particular emphasis on behavioral change.<sup>1</sup>

These ten tasks are a delineation of the identical tasks that are recommended procedures to operationalize Tyler's four questions with only the slightest variation.

In the same year that Sand is applying the Tyler Rationale to the social studies discipline, he is concurrently using the model to develop curriculum for basic nursing education. At this time, Sand is the Director of the Curriculum Research Project in Basic Nursing Education for the School of Nursing at the University of Washington, where he undertakes a five year curriculum research project on basic nursing education. The five year project is reported in three volumes: Curriculum Study in Basic Nursing Education, Evaluation in Basic Nursing Education, and An Experience in Basic Nursing

The influence of the Tyler Rationale and Tyler's approach to research and evaluation are immanent in the project. This curriculum development for nurse education is scientifically approached in the same fashion as the Eight Year Study. The numerous similarities include: (1) the research is instigated to solve a curriculum problem, (2) new curriculum is developed scientifically, (3) the research extends over a period of years, (4) the research involves many people, and (5) it is reported in several volumes.

The research also parallels Tyler's interest in professional

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<sup>1</sup>Ruth Ellsworth and Ole Sands, "Tasks to be Done in Improving the Social Studies Curriculum," Improving the Social Studies Curriculum, in Twenty-Sixth Yearbook of the National Council for the Social Studies (Washington, D.C.: National Council for the Social Studies, 1955), p. 237.

education. Tyler is interested in professional education and for each volume writes the forward. In the first forward, Tyler explains:

The report of the rebuilding of the program for the education of nurses at the University of Washington is addressed not only to faculties of schools of nursing but to college and university faculties generally. . . . The report can be read as a straight forward account of a very important project in the reconstruction of nursing education, but it can also be read as a documentary record of the tasks to be undertaken and the steps to follow in a comprehensive program of a college or university.<sup>1</sup>

The actual conceptual outline of the book also replicates the determinants of the Tyler Rationale. The research is described by Tyler who says:

The author of the report describes the general problems the faculty is attacking, problems that are basic in the building of any program of curriculum and instruction: What aims to seek? How to select learning experiences that are effective in reaching goals sought? How to organize the content and learning activities to increase their effectiveness? How to appraise the results of the program so as to have a sound basis for continual improvement?<sup>2</sup>

It should be recalled that Tyler is engaged throughout his career in curriculum development for all levels of education from elementary to professional schools and that with Ole Sand as with Christine McGuire, Tyler collaborated in applying the Tyler Rationale to both nursing and medical education. Tyler himself undertook a number of his own projects focused on nursing and medical education later in his career as a consultant.

Like Ole Sand and Christine McGuire, James Wilson also has a specific focus in the curriculum field. Wilson's concentration is upon

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<sup>1</sup>Ole Sand, Curriculum Study in Basic Nursing Education (New York: G. P. Putnam's Sons, 1955), pp. ix-x.

<sup>2</sup>Ibid., p. ix.

another of Tyler's concerns, cooperative education. At present, James Wilson is the Asa Knowles Professor of Cooperative Education and the Director of the Cooperative Education Research Center at Northeastern University in Boston.

Between 1948-1954, Wilson attains a Ph.D. at the University of Chicago and was a student under Tyler's mentorship. For twenty years prior to attending the University of Chicago, Wilson is on the staff of the Rochester Institute of Technology, where Tyler is a consultant and Wilson is responsible for Tyler's visits for fifteen years. It should be recalled that Tyler was introduced to the Rochester Institute through W. W. Charters, where both worked on a work-study program for engineers. It is Tyler who recommended Wilson as the principal researcher for a National Study of Cooperative Education from 1950-1960 for which Tyler was the Chairman of the Committee. Wilson and Tyler are also associated on the National Commission for Cooperative Education.

Wilson acclaims his indebtedness to Tyler more than to the Tyler Rationale.<sup>1</sup> A review of Wilson's literature indicates that all publications focus on one topic area, cooperative education. Several Wilson publications credit Tylerian principles as their basis. Work-Study College Programs: Appraisal and Report of the Study of Cooperative Education is a report of the research which Wilson conducts with Tyler as Chairman of the Study Committee. Tyler counsels Wilson in

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<sup>1</sup>Interview Questionnaire, Wilson to Stone, August 4, 1984.

the plan, the data collection and analysis, and the final report for which Tyler writes the introduction.

In another publication, a chapter, "Conceiving Cooperative Education," written for Developing and Expanding Cooperative Education, Wilson again "asserts that cooperative education is an educational strategy that applies the Tylerian curriculum model, [and] the crucial and single reference used for the text is Tyler's Basic Principles of Curriculum and Instruction."<sup>1</sup> In this book concerning new directions for experiential learning, Tyler also writes a chapter on evaluation of cooperative education.

Similarly, in two other publications, Tyler's support, contribution, and acclaim in the areas of experience-based learning is recognized. In a thematic issue of the Journal of Cooperative Education, which concentrates upon program evaluation of cooperative study, Wilson is guest editor and Tyler is a contributing author. Wilson's A Handbook for Evaluating Cooperative Education Programs explains a model for program evaluation derived from Tyler's theory of evaluation.

The influence of the Tyler evaluation model upon Wilson's work is as significant as Wilson's concentration upon cooperative learning. Since Tyler's collaboration in the project to train engineers with W. W. Charters at the Rochester Institute, Tyler has a keen respect for cooperative education reasoned from Thorndike's theory of transfer. Wilson too states, "I am essentially a pragmatist who was influenced at

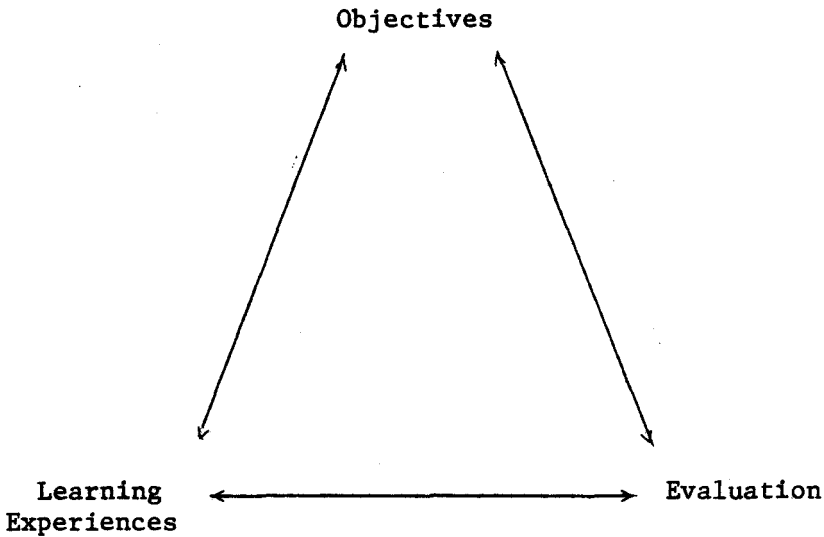
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<sup>1</sup>Ibid.

an early age by both Ralph Tyler and W. W. Charters. Perhaps the single diagram I have used most in my career is the one which represents Tyler's notion of the educational process."<sup>1</sup>

Wilson's Rendition of the Tyler Rationale

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Figure 8. James Wilson's rendition of the Tyler Rationale.

Wilson explains the importance of the Tyler model by calling it conceptually functional. He says that the rationale "provides focus for planning, execution, and assessment."<sup>2</sup> Wilson calls the model "elegant in that it is generalizable to small instructional units, courses, curricula, programs, and total institutions. It can be used for educational planning and program development."<sup>3</sup>

Louise Tyler is also a doctoral student at the University of Chicago. But unlike Ole Sand and James Wilson, she does not pursue an area of professional interest in common with Ralph Tyler. Louise Tyler

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<sup>1</sup> Ibid.

<sup>2</sup> Ibid.

<sup>3</sup> Ibid.

earned all her degrees through the Ph.D. at the University of Chicago. In the late 1940s, when studying for her doctorate, Louise Tyler was a graduate assistant who taught the famous Education 360 course in Ralph Tyler's absence.<sup>1</sup>

On the staff of the University of California at Los Angeles since 1969, Louise Tyler is currently a professor of education in the area of curriculum and instruction. Her professional interests are teaching, evaluation of curriculum and instruction, and the implications of psychoanalysis for education.

In 1970, Louise Tyler writes a valuable practical book entitled A Selected Guide to Curriculum Literature: An Annotated Bibliography.

In the preface she states, "The framework of ideas of this volume are a result of my education at the University of Chicago. It has provided the ground plan from which my ideas and my selection of colleagues, activities, and values all continue to emerge."<sup>2</sup> The annotated bibliography is evoked by the intellectual disagreement in the field regarding educational objectives. Louise Tyler states that the purpose of the book is to "serve as an intellectual instrument to enable the reader to understand the character and direction of curriculum as it currently exists . . . and to redirect some of the formulations of ideas about curriculum."<sup>3</sup>

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<sup>1</sup>Interview Questionnaire, Krathwohl to Stone, September 5, 1984.

<sup>2</sup>Louise L. Tyler, A Selected Guide to Curriculum Literature: An Annotated Bibliography (Washington, D.C.: National Education Association, 1970), p. 3.

<sup>3</sup>Ibid., p. 5.



Louise Tyler begins the guide with an explanation for the selection of the titles incorporated in her text. The explanation begins with a discussion of Basic Principles of Curriculum and Instruction about which she states:

Curriculum, until recently, has been conceived as an ends-means process. [Ralph] Tyler's syllabus . . . has been a focus for much discussion. In some cases (for example, Goodlad) there has been acceptance of Tyler as far as he has gone but a necessity to be more comprehensive has emerged. In other cases (Macdonald, Heubner) there is criticism of the technical conception and some suggestions for other directions.<sup>1</sup>

Based upon this explanation, Louise Tyler outlines topics and selects references, which she annotates. Each reference relates to the analysis of the present state of the curriculum field regarding the disagreement over objectives. For each reference, the structure of the work is analyzed and the content is explained. Louise Tyler then writes a brief criticism and interrelates the selections she includes. Just as in this volume, in a second book, Evaluating and Choosing Curriculum and Instructional Materials, Louise Tyler's basic premises regarding the principles of curriculum, instruction, and evaluation, are traceable to Ralph Tyler.

This third grouping of curricularists carry on the Tylerian tradition by applying the principles of curriculum, instruction, and evaluation in the field. The areas in which application is made is also frequently of interest to Tyler. These areas include: social studies, professional education, and cooperative education. From this grouping of nine professors, no advancement to curriculum inquiry has

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<sup>1</sup>Ibid., p. 9.

been contributed as in the second grouping of prominent curricularists. The major research projects are limited to professional and cooperative education. Krathwohl's taxonomy of objectives is perhaps the greatest advancement of the rationale from this grouping.

Grouping IV: Tyler's Influence upon Colleagues  
at the University of Chicago

A fourth branch of the Tyler heritage also originates from the University of Chicago. This branch is comprised of six professors from the University of Chicago, who interrelate with Tyler in the Eight Year Study, the Cooperative Study in General Education, the Examiner's Office, or the Curriculum Theory Conference of 1947. Each of these six activities was under the leadership of Tyler at the University of Chicago. It should be recalled that between 1939 and 1945 both the Eight Year Study and the Cooperative Study are headquartered at the University of Chicago and that Tyler was the head of the Examiner's Office. Additionally, in 1947, Tyler and his colleague, Virgil Herrick, arranged the Curriculum Theory Conference at the University of Chicago.

This fourth grouping of professors on the faculty of the Graduate School of Education include such distinguished curricularists as: Maurice Hartung and Paul Diederich, Harold Dunkel and Joseph Schwab, and George Barton and Virgil Herrick. These professors are paired according to the major activities in which they were involved with Tyler. Hartung and Diederich's additional involvement was the Eight Year Study and the Examiner's Office. Dunkel and Schwab were also in the Examiner's Office. Dunkel was on the staff of the Cooperative Study, as was Barton, who with Herrick was part of the Curriculum

Theory Conference. Two colleagues: Hartung and Barton, were previously associated with Tyler at Ohio State University before Tyler appointed them to the faculty at the University of Chicago.

None of this grouping of curricularists was Tyler's student, unlike the previous grouping of curricularists. In contrast to the previous grouping of professors, where Tyler's influence was demonstrated essentially through the application of the rationale by his students to curriculum development, this grouping demonstrates a more significant influence of Tyler. Comprised of evaluators and theorists, in the main, this grouping with one exception, makes a contribution to theory which is affected by Tyler's basic principles of curriculum instruction, and evaluation.

#### Tyler's Influence on Colleagues Through the Eight Year Study and the Examiner's Office

Tyler's colleagues, Maurice Hartung and Paul Diederich, both recognized for their contributions to evaluation, are influenced by Tyler's views during the Eight Year Study. Maurice Hartung, now a retired professor emeritus at the University of Chicago, joins Tyler in 1935 at Ohio State University during the Eight Year Study. When Tyler accepts the Chairmanship of the Department of Education, Hartung also moves to the University of Chicago and continues his work with Tyler until 1953. At the University of Chicago, Hartung, a professor of mathematics and education, is also associated with Tyler as a University Examiner. Hartung and Tyler are contemporaries, whose undergraduate backgrounds and cooperative undertakings, parallel in many ways. Hartung reveals that he was strongly influenced by the Tyler Rationale since

the Eight Year Study. Hartung also interprets Tyler's role in the field from the 1930s through the 1950s. Hartung's undergraduate majors, like Tyler's, are physics and mathematics. In 1931, Hartung earns a Ph.D. from the University of Wisconsin with mathematics as a major field, and in 1932, he begins his work in teacher education at the University of Wisconsin. Hartung's areas of professional interest include: mathematical education, curriculum methods, and evaluation.

Hartung is the co-author of an elementary arithmetic series which includes more than twenty-five books as well as several other books directed to mathematical education. His approximate fifty articles and chapters for journals and yearbooks concentrate almost solely upon mathematics. Hartung credits Tyler's specific influence upon several articles: two focusing on critical thinking, another concentrating upon the basic principles of evaluation, and one regarding motivation and learning.<sup>1</sup>

Tyler's major impact upon Hartung occurs during the Eight Year Study to which Hartung is a major contributor. Hartung is chosen to be the mathematical representative on the staff from 1935-1938. Between

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<sup>1</sup>See Maurice L. Hartung, "The Development of Critical Thinking in Secondary Youth," *Frontiers of Secondary Education* (Syracuse: School of Education, Syracuse University, 1956), pp. 50-59; "Teaching Reflective Thinking in High School," *High School Journal* 41 (April 1958): 320-24; "Motivation for Learning in Mathematics," *The Learning of Mathematics*, in *Twenty-First Yearbook of the National Council of Teachers of Mathematics* (Washington, D.C.: National Council of Teachers of Mathematics, 1953), pp. 42-68; "Basic Principles of Evaluation," *Evaluation of Mathematics*, in *Twenty-Sixth Yearbook of National Council of Teachers of Mathematics* (Washington, D.C.: National Council of Teachers of Mathematics, 1961), pp. 21-42.

1938-1941, Hartung serves as Associate Director of the Evaluation Staff. About his responsibilities Hartung states:

Much of the responsibility fell to me for planning with the staff, for supervising the technical and statistical aspects of the project, for the preparation of the reports, and finally for editing them for publication and seeing them through to the press.<sup>1</sup>

During this six year period Hartung creates a number of evaluation instruments, which are used in the Eight Year Study.<sup>2</sup>

In the nine articles written by Hartung during this six year period when he is affiliated with the study and an associate professor at Ohio State University, at least seven articles concern evaluation of mathematics. Hartung discusses the need for reorientation of high school mathematics, teaching scientific method in mathematics classes, evaluating appreciation of cultural values in mathematics, problems in evaluation, and mathematics and progressive education.<sup>3</sup> The titles of these articles reveal the association between Hartung's major professional interest and the progressive challenge of the Eight Year Study.

Hartung's second major involvement with Tyler is at the University of Chicago when Hartung teaches Education 360. Hartung reports that, "When Tyler was away I often taught Education 360. Eventually I taught it regularly . . . and in my absence either Kenneth Rehage or John Goodlad taught it."<sup>4</sup> Hartung remembers Tyler allocating Saturday

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<sup>1</sup> Interview Questionnaire, Hartung to Stone, September 21, 1984.

<sup>2</sup> Ibid.

<sup>3</sup> Curriculum Vita of Maurice L. Hartung.

<sup>4</sup> Interview Questionnaire, Hartung to Stone, September 21, 1984.

afternoons to dictate his lectures to his secretary in order to produce the syllabus for this course. It is this syllabus that becomes Basic Principles. Hartung states, "It [the syllabus] was never really edited . . . and there are all sorts of imperfections in the published document."<sup>1</sup>

Hartung interprets what he believes to be Tyler's major contributions from 1935-1950. The first contribution Hartung identifies is the objective. "Tyler had identified a series of major concepts useful or needed by curriculum workers and one of his greatest contributions was his emphasis upon defining objectives."<sup>2</sup> Hartung suggests that an examination of important, early curriculum documents will show objectives discussed only as fragments, which were frequently confused with cardinal principles. Hartung states that after Tyler began emphasizing objectives in terms of behavior, a strong movement developed in that direction. Hartung calls Tyler the prime mover in "breathing a little behavior" into these principles.<sup>3</sup> As a consequence of Tyler's contribution, behaviors are now written with two or three dimensions, which Hartung credits to Tyler.

Two other contributions, which Hartung ascribes to Tyler, from his first hand viewpoint of the 1930s to the 1950s, include Tyler's role in evaluation and Tyler's ability to bring clarity out of confusion. Hartung states, "In the 1930s, the emphasis was on tests and measurement; evaluation was a broader concept and under the dominance of measurement. Tyler must, I think, be given credit for bringing

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

about this change."<sup>1</sup> About Tyler's role as an educator, Hartung states that Tyler's advice was wisely sought and wisely given.

Hartung devises his own curriculum model, which he describes as similar to Tyler's rationale. Hartung visualizes the following model, which is unpublished.

#### Maurice Hartung's Curriculum Model

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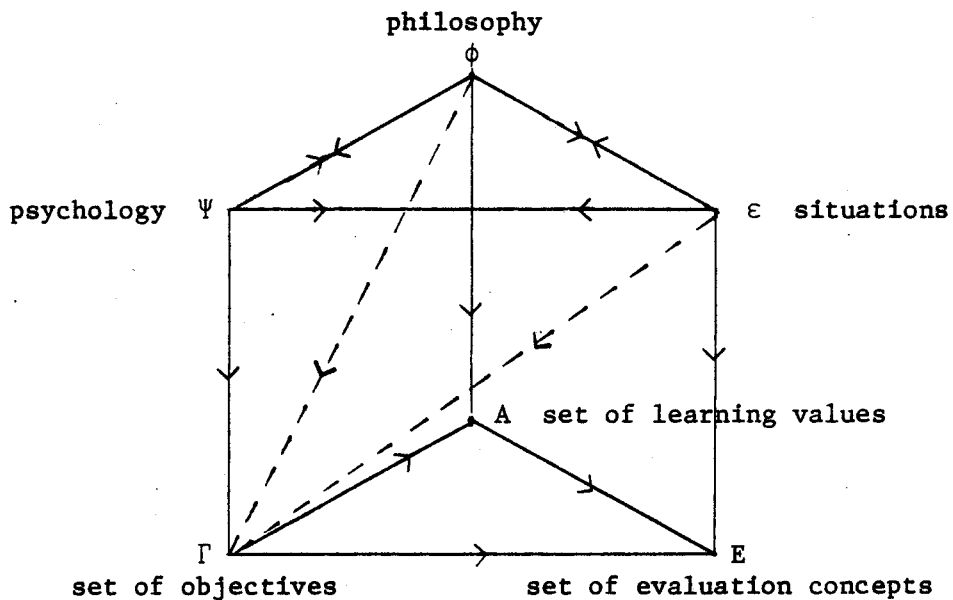


Fig. 9. Maurice Hartung's curriculum model based on Ralph Tyler's Rationale as presented for Education 360 at the University of Chicago.<sup>2</sup>

For Hartung's model, he explains, "The top triad of concepts is influenced by Tyler but the way they are related is quite different. Instead of screens all three variables are sources of ideas."<sup>3</sup> The

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

bottom triad incorporates three terms: set of objectives defined as Tyler defines them; a set of learning activities or experiences defined in the Deweyan sense as behavior in a particular situation; and a set of evaluation concepts, principles, and data.<sup>1</sup>

The model also consists of the components and the interrelationships to be considered as a set of operations which follow certain principles. Hartung explains that his focus and the focus of curriculumists was "to clarify the ideas, bring out the complexity of the field, [and] examine and stress the relationships between major components in a systematic way."<sup>2</sup>

The difference between the Hartung model and the Tyler Rationale are identifiable. First, Tyler poses four questions with recommended procedures for answering the questions as "one way of viewing an instructional program as a functioning instrument of education."<sup>3</sup> Tyler poses the question, which can be answered in any order and does not draw a model. Second, Tyler applies philosophy and psychology as screens to filter objectives derived from three sources: the learner, contemporary society, and subject matter. In contrast, Hartung's top triad combines the screens and the sources and uses all as sources. The similarities in the models, however, surpass the differences and illustrate ways in which the model is extended by Hartung and used for instruction purposes at the University of Chicago in Education 360.

Hartung states that Tyler's influence permeated his thinking

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid.

<sup>3</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 1.



since 1935. Hartung provides an example that illustrates not only Tyler's influence on his thinking about curriculum but also thinking about evaluation. Hartung was one of the five United States representatives on a mathematics advisory committee at an International Education Association Meeting in Caen, France in 1962. The goal of the study was to produce a set of objectives in mathematics for twelve countries.

"When it appeared that the study was about to be stillborn because of views on evaluation," Hartung reports, "I was able to save an embryo study using Tyler's views."<sup>1</sup> Hartung elaborates Tyler's views:

I was able to make them [the international group of mathematicians] see that rather than evaluate course by course and country by country, we could test in general and interpret the results in terms of differences of curriculum in each country.<sup>2</sup>

This illustration introduces one among many examples of Tyler's international influence in evaluation related both to mathematics, as in the more recent work in Japan, and to curriculum and evaluation in general.

Maurice Hartung's contribution to evaluation is related almost solely to mathematics. On the other hand, Paul Diederich's contribution to evaluation, which was also influenced by the Eight Year Study, is not so specifically focused upon one discipline. When his evaluation is discipline centered, Diederich's focus is upon the field of English.

Paul Diederich was a professor of education at the University of Chicago, appointed by Tyler in the early 1940s. Diederich remained at the University of Chicago until he became a member of the Educational

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<sup>1</sup>Interview Questionnaire, Hartung to Stone, September 21, 1984.

<sup>2</sup>Ibid.

Testing Bureau in Princeton, New Jersey. Diederich's professional interests include: Latin, teaching English, testing, and evaluation. Diederich's publications are few in number because most of his work has been developing tests. Diederich's view on evaluation is best expressed in his work, "A Cooperative Evaluation Program," and "Cooperative Evaluation in English," two articles co-authored with Frances Link. Diederich's testing and evaluation theories are in the Tylerian tradition.<sup>1</sup> Diederich both helped to create the research for the Tyler Rationale and applies the Tyler theory of testing and evaluation to his work.

Diederich collaborates with Tyler in two capacities: he is a six year member of the Evaluation Staff of the Eight Year Study from 1935-1941 and an Examiner in English on the Board of Examiners at the University of Chicago from 1941-1949. Diederich, whose work concentrates almost solely upon evaluation, states, "Since my work was entirely in measurement, and we had separate staffs concerned with curriculum development, I was not . . . affected by his [Tyler's] ideas about curriculum. . . ." <sup>2</sup> Diederich explains his introduction to the field for which he credits Tyler:

I was teaching Latin in the Ohio State University High School (1932-1935), next door to Tyler's office in the School of Education. Seeing that I was interested in classroom experiments, he

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<sup>1</sup>In 1965, the author was Chairman of the English Department at The Francis W. Parker School, where Paal Diederich was the consultant. Tyler's curriculum rationale was used at this Eight Year Study School, where Diederich assisted with new evaluation models again in 1968.

<sup>2</sup>Letter from Diederich to Stone, October 3, 1984.

recruited me for his Evaluation Staff [which] switched me [from Latin] to . . . educational measurement.<sup>1</sup>

Diederich underscores several significant insights about Tyler's work in evaluation between 1935-1949. Diederich states:

I have never worked with anyone who was so obviously a blazing incandescent genius . . . Tyler set little store by the numerical result of an investigation. He always had it computed in order to ensure careful work, but he knew that he could change the figure almost at will by improving the experimental treatment. . . . All he cared about was the effect evaluating had on the teachers who did it.<sup>2</sup>

Diederich's remarks underscore the reason for the emphasis Tyler places upon the role of the teacher in curriculum development. "In Tyler's view," Diederich continues, ". . . the specialist was there to help-- never to take over the task of evaluation. The only ones who were truly in a position to evaluate . . . were the teachers."<sup>3</sup>

Like Tyler, Diederich also becomes interested in the teacher workshop movement introduced during the Eight Year Study. Diederich co-authors a book entitled Professional Education for Experienced Teachers, which is "an attempt to record . . . the thinking of many persons as to the basic principles and program which have characterized the so-called workshop movement in teacher education."<sup>4</sup> The purpose of

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<sup>1</sup>Interview Questionnaire, Diederich to Stone, October 3, 1984.

<sup>2</sup>Paul B. Diederich, "After Tyler, What?" Article distributed to the fourteen member committee for the 1967 Association of Supervision and Curriculum Committee Yearbook, January 25, 1965. Personal Collection of Paul B. Diederich, pp. 1-42.

<sup>3</sup>Ibid., p. 2.

<sup>4</sup>Kenneth L. Heaton, William G. Camp, and Paul B. Diederich, Professional Education for Experienced Teachers: The Program of the Summer Workshop (Chicago: University of Chicago Press, 1940), p. vii.

the book is to benefit teachers, educators in colleges and universities, and administrators and supervisors of instruction. The content of the book incorporates the history of the five years of experimentation since 1936; the characteristics, organization, and administration of the program; and the effectiveness and significance of the workshop. Tyler is a member of the Committee of Workshops of the Progressive Education Association about which Diederich reports and, it should be recalled, the innovator of the concept.

Diederich also provides insights into Tyler's principles and practices about testing. Diederich recalls Tyler's "valuation paradigm" for the production of a valid test. The valuation paradigm had four steps: (1) put down in writing exactly what the student will do if he learns what you are trying to teach, (2) collect a sample of the criterion behavior in its purest form, (3) try short cut measures, and (4) put measures through item analysis.<sup>1</sup> Diederich remarks about the importance of Tyler's views. "Tyler believed that knowing and feeling are forms of doing," an assertion that Diederich calls a clairvoyant vision of behavior.

Diederich also helps to clear the argument in the field between the views held by behaviorists and those held by Tyler about the number of objectives. The behaviorists' need is for numerous precise objectives. "Tyler always indicated only five or six objectives for any one course and no more," Diederich clarifies.<sup>2</sup> In his reflections

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<sup>1</sup>Diederich, "After Tyler, What?" p. 3.

<sup>2</sup>Letter from Diederich to Stone, October 3, 1984.

about the Eight Year Study Diederich states, "In this report, Appraising and Recording Student Progress, he [Tyler] was most concerned with showing how people tackled the job of developing instruments in hitherto neglected areas. . . ." <sup>1</sup> Diederich explains that Tyler believed, "Better crude evidence of something important . . . than the most refined evidence of something that teachers already know . . . or don't care about." <sup>2</sup>

From the period, 1939-1953, when Tyler was University Examiner and Diederich was an Examiner in English at the University of Chicago, he suggests two other important insights about Tyler's views concerning examination. From Tyler's earliest research, Diederich states that Tyler remains consistent in his views about facts as part of tests. Tyler's view, according to Diederich, is "the time and weight given to recall facts never exceed thirty percent of the test." <sup>3</sup> Diederich also explains Tyler's views on examinations, particularly in English, during that period. Diederich says that Tyler wanted tests in which the ideas learned in class were applied to works not discussed in class. Because Tyler was interested in the concept of transfer of training, "If literary analysis was taught then Tyler gave a selection on the exam in which the student could apply the analytical skill." <sup>4</sup>

In 1967, Diederich explains his analysis of how far Tyler advanced the evaluation field in an article to a fourteen member group of evaluators. Diederich writes, ". . . I wanted to explain how far Tyler

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<sup>1</sup>Diederich, "After Tyler, What?" p. 5.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid., p. 6.

had advanced the state of the art and . . . ask them . . . how they proposed to add anything to his ideas."<sup>1</sup> With one of the fourteen members of the 1967 Supervision and Curriculum Development Yearbook Committee, Diederich co-authors two chapters of the yearbook. The Chapters, "A Cooperative Evaluation Program" and "Cooperative Evaluation in English," ". . . give a better idea of what Tyler had in mind than anything reported in Volume II of the report of the Eight Year Study," Diederich states.<sup>2</sup>

In 1984 Diederich's estimate of Tyler's knowledge and perspective on evaluation was summed up by him after spending many years as a member of the Educational Testing Bureau in Princeton, New Jersey. Diederich states, "Tyler knew as much about statistics as the moguls of measurement at the College Board, but he always played down its part in measurement, being more concerned with the effects that careful measurement could have on teachers."<sup>3</sup>

Tyler's influence upon his colleagues in evaluation, Maurice Hartung and Paul Diederich, who also collaborated in the Eight Year Study and the Examiner's Office, is appreciable. Both colleagues contribute substantially to the field, and both, some fifty years later, praise the genius of Tyler in evaluation. Diederich also puts into perspective the importance Tyler places upon the role of the teacher. This concept, which is introduced by Counts, developed by Tyler, further advanced by Taba and Goodlad, is criticized by Cronbach and also

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<sup>1</sup>Letter from Diederich to Stone, October 3, 1984.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

by Schwab. This tradition of teacher involvement in evaluation and curriculum, influenced by the Eight Year Study, was initiated to bridge the gap between the conduct of practice and the development of theory by those who do not practice.<sup>1</sup> The tenet is a basic principle of the scientific approach to education as defined by Dewey.

Tyler's Influence on Colleagues Through the Cooperative Study and/or the Examiner's Office

Two of Tyler's colleagues, Harold Dunkel in the humanities field and Joseph Schwab in the science field, were both undergraduate and graduate students at the University of Chicago. Tyler invites both to join the faculty of the Graduate School of Education and appoints each to teach the Philosophy of Education Course in the department. Both professors are also appointed to the Examiner's Office; Dunkel is the Examiner in languages and Schwab the Examiner in biological sciences. Dunkel also becomes a participant in the Cooperative Study. The Tyler Rationale is more influential on Schwab's than on Dunkel's approach to curriculum. Schwab develops a curriculum model; Dunkel places his emphasis differently.

Tyler appoints Dunkel to the faculty of the University of Chicago in 1939 from which Dunkel retires. From 1939 until 1952, the year prior to Tyler's leaving the University, Dunkel is a member of the University Examiner's Office. Although Dunkel is not an evaluation specialist, it should be remembered that Tyler preferred examiners who were generalists over those who were testing specialists. As a col-

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<sup>1</sup>Interview with Ralph W. Tyler, Chicago, Ill., April 1984.

laborator in the Cooperative Study of General Education, Dunkel is the author of one of the four volumes, which is entitled General Education in the Humanities. The volume describes the research study from the humanities viewpoint. Tyler more than the Tyler Rationale influences Dunkel's contribution to the field. In the dedication of one of his books, in fact, Dunkel credits Tyler for his assistance calling the dedication "a small recompense for thirty years of moral and often financial support."<sup>1</sup>

Dunkel's professional interests focus upon curriculum foundations and histories. Dunkel, for example, has written books about such educators as Johann Herbart, John Dewey, and Alfred North Whitehead and an article on Francis Parker. On the other hand, Schwab's interests are more allied with Tyler.

Joseph Schwab began his undergraduate work at the University of Chicago in 1931 as a student in biology, when the influence of Robert Maynard Hutchins, the president of the University, was being felt. Schwab earns his Ph.D. in genetics from the University of Chicago in 1939. In 1939, Tyler invites Schwab to become an Examiner, and, in 1949, he invites Schwab to teach the Philosophy of Education course in the Graduate School of Education. Schwab's areas of professional interest include: philosophy of education, curriculum, science education, and teaching and learning inquiry. Schwab is the author of several recognized books in the curriculum field and over fifty articles on curriculum and other areas of his professional interests. It is in

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<sup>1</sup>Harold B. Dunkel, *Herbart and Education* (New York: Random House, 1969), p. ii.



the early 1940s when Schwab is an Examiner in Biology that Tyler influences Schwab. It is, however, in the 1950s and 1960s that Schwab becomes a Tyler critic. Later, Schwab reverses his position.

Tyler's influence upon Schwab in the Examiner's Office is described by two interpreters of Schwab's contribution to curriculum:

As an examiner in biology he [Schwab] worked in the late thirties with Thurston's successor, Ralph Tyler, and assimilated Tyler's concern for the articulation of courses and curriculum and testing procedures . . . that was to become the hallmark of Tyler's contribution to the theory of curriculum development.<sup>1</sup>

Schwab's contribution to curriculum changes from 1940 until 1960. In the 1940s Schwab was one of the key members of the group of faculty at Chicago committed to the reforming concerns of President Hutchins. About this period, it is said that Schwab's conception of liberal education was inchoate.

He [Schwab] believed in discussion teaching, in the potential importance of the Great Books, and in the tractability of science for general education; he was passionately concerned with the relationships between science, values, and education--the theme of his first published paper on education.<sup>2</sup>

In 1942, Schwab "found the intellectual structures he needed to bring his ideas [on curriculum] into focus."<sup>3</sup>

Between 1942-1950, Schwab participated with others in translating Hutchins' view of higher learning into a five year program for the University of Chicago. Schwab's specific contribution was a course in natural sciences. "The curricular task was one of ordering an

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<sup>1</sup> Joseph J. Schwab, Science, Curriculum, and Liberal Education: Selected Essays, ed. Ian Westburg and Neil J. Wilkof (Chicago: University of Chicago Press, 1978), p. 9.

<sup>2</sup> Ibid.

<sup>3</sup> Ibid., p. 10.

approach to the significance of culture seen in its own terms and of developing means and methods which might enable students to encounter the essence of this culture."<sup>1</sup> The central curricular tasks were based upon three key notions. "One [notion] was the idea of culture and its elements . . . [the] second centered on the development of an understanding of what was problematic in the culture . . . the third . . . [was] the person experiencing and seeking to resolve problems given him by his culture. . . ." <sup>2</sup> By the late 1950s, this experiment in liberal education could no longer be sustained by the University of Chicago.

During the early 1960s, when the national focus for secondary school curriculum centered upon the sciences, "Schwab was seen as a spokesman for the importance of discipline-based teaching of science in the schools."<sup>3</sup> Schwab identified himself with the structuralist point of view, although he realized that there was a fundamental difference between his viewpoint and the conventional subject centered perception of curriculum. The difference is described, "For Schwab to understand a work . . . was to seek to enter the mind of the scientist . . . with a consciousness of the theory that they held as lying itself in a tradition. Interpretation in this broad sense became coordinate with metaphysics."<sup>4</sup>

In this decade, Schwab wrote the BSCS biology, but the texts were different from what Schwab wanted. "Part of the problem Schwab faced was . . . the assimilation of his novel views of the structure of

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<sup>1</sup> Ibid., p. 11.

<sup>2</sup> Ibid., p. 12.

<sup>3</sup> Ibid., pp. 24-25.

<sup>4</sup> Ibid., p. 26.

the disciplines into more conventional schemes."<sup>1</sup> Schwab, however, becomes a leading advocate of the disciplinary doctrine that governed the reforms in curriculum following Sputnik. Schwab is considered representative of the conceptual-empiricist group of curriculum theorists.<sup>2</sup> His essay, "The Concept of the Structure of a Discipline," and his contributions to two widely read symposia on the themes of structures, "Structures of the Disciplines: Meaning and Significances" and "The Structure of the Natural Sciences," published in 1964, in The Structure of Knowledge and the Curriculum become the basic texts for the structuralists.<sup>3</sup>

Schwab criticizes the Tyler Rationale for the second time in the 1960s. Schwab first criticizes the rationale in 1950, when it is published, because of Tyler's position or rather lack of position on philosophy. In the 1960s, Schwab again complains:

The models, the metatheory, and metametatheory are all over the place. Many of them . . . are irresponsible--concerned less with the barriers to continual productivity in the field of curriculum than with the exploitation of the exotic and the fashionable among the forms and models of theory. . . .<sup>4</sup>

This condemnation is accompanied by Schwab's three indictments about the curriculum field: (1) the field of curriculum is moribund, (2) curriculum reached this state by reliance on unexamined theory and in-

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<sup>1</sup> Ibid., p. 25.

<sup>2</sup> Giroux, Penna, Pinar, Curriculum and Instruction, p. 51.

<sup>3</sup> Schwab, Science, Curriculum, and Liberal Education: Selected Essays, p. 25.

<sup>4</sup> Joseph J. Schwab, "The Practical: A Language for Curriculum," School Review 78 (November 1969): 6.

adequate tasks, and (3) curriculum energy must be diverted from the theoretical to the practical. Schwab states:

It will be clear from these remarks that the conception of curricular method proposed here is immanent in the Tyler rationale. This rationale calls for a diversity of talents and insists on the practical and eclectic treatment of a variety of factors. Its effectiveness in practice is vitiated by two circumstances. Its focus on "objectives," with their massive ambiguity and equivocation, provides far too little of the concrete matter required for deliberation and leads only to delusive consensus. Second, those who use it are not trained for the deliberative procedures it requires.<sup>1</sup>

By 1969, Schwab appears to have abandoned his discipline centered stance on curriculum development. Schwab describes the disciplinary doctrine, for which he was a spokesman, as in a state of collapse resulting from the student-protest movement and the demand for curricular relevance. Of course, a major cause of the crisis was Schwab's and other subject-matter specialists' domination of curriculum. In his 1969 book, College Curriculum and Student Protest, Schwab posits that the curriculum field can be transformed if the theoretical is redirected to three modes of operation: the practical, the quasi-practical, and the eclectic.

In four papers written between 1969 and 1973: "The Practical: A Language for Curriculum," "The Practical: Arts of Eclectic," "Praktische Legitimierung von Curricula," and "The Practical 3: Translation into Curriculum," Schwab changes his viewpoint. He arrives at several conclusions similar to the propositions in the Tyler Rationale. First, Schwab concedes the Counts-Tyler position that other participants in curriculum deliberations besides subject matter specialists

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<sup>1</sup>Ibid., p. 22.

are essential. Second, Schwab accedes to the Dewey-Tyler idea that theory is in the end the most practical of all. Third, Schwab agrees with Tyler's viewpoint that no single source is adequate to provide a basis for decision-making in curriculum.

In 1984, Schwab himself states: "Four of my papers, titled Practical 1, Practical 2, Practical 3, and Practical 4 . . . utilize the same working principles as Ralph Tyler's guide . . . used in his graduate course (Education 360)."<sup>1</sup> Schwab explains his most recent work in relationship to the Tyler Rationale:

In some respects my papers are critical of Tyler's emphasis on objectives but for the same reason as his emphasis on teachers' habits. When Tyler wrote his guide, teachers' curricular activities provided little or no clear sense of purposes of the curricular changes commended, hence left it impossible to determine whether the curricular change involved was an effective one. In my day, teachers were obsessed with making lists of objectives. Hence, it became necessary to re-assert the relations of ends and means.<sup>2</sup>

Schwab also explains how Tyler influenced his work in other ways. "I am indebted to Tyler as an exemplar of the profession of educator: honest, unashamed of his craft (a rarity unfortunately), intellectually able, and continually concerned to know the problems which faced educational practice."<sup>3</sup> Schwab also relates a second influence. "A major concern of my teaching-learning as enquiry--at the high school and college level has other intellectual sources but owe their pursuit to Tyler's example as an educator."<sup>4</sup>

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<sup>1</sup>Ibid., p. 23.

<sup>2</sup>Interview Questionnaire, Schwab to Stone, August 27, 1984.

<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

Tyler's Influence on Colleagues Through the  
Curriculum Theory Conference

The late George Barton was affiliated with Tyler in several professional capacities from 1930-1953, and the late Virgil Herrick was associated with Tyler between 1940-1948 in one major undertaking. Both Barton and Herrick are participants in the Curriculum Theory Conference of 1947 held at the University of Chicago when they are on the graduate faculty of the Department of Education.

The Curriculum Theory Conference was convened under the leadership of Ralph Tyler and Virgil Herrick. The goal of the Conference, with proceedings described in Toward Curriculum Theory, is to inspire curriculum theorizing. Other members of the 1947 Curriculum Conference: B. Othanel Smith, Herman Frick, Gordon Mackenzie, J. Paul Leonard, C. Max Wingo, William Alexander, Hollis Caswell, and former Tyler student, Edgar Dale, hoped for a more ambitious outcome than inspiration.<sup>1</sup> George Barton is also a conference participant.

In his reflections about the conference thirty years later, Tyler indicates that "the intent had been to develop tenets of theory that could more effectively explain and defensibly propose curriculum activity and research."<sup>2</sup> Tyler expressed some satisfaction that "the conference resulted in statements of conviction about what a sound curriculum theory should embrace, but he lamented that the desired theoretical formulations were beyond attainment at that conference."<sup>3</sup> Tyler, Herrick, and Barton's hopes for the conference were similar

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<sup>1</sup>Schubert, Curriculum Books: The First Eighty Years, p. 132.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

to the expectations of the luminaries who developed the Twenty-Sixth Yearbook under Harold Rugg just twenty years prior.<sup>1</sup>

The origins of the conference began with a Battle Creek, Michigan curriculum project. During Herrick's tenure at the University of Chicago, he and Tyler work together for several years with elementary and secondary schools in the seven counties surrounding Battle Creek, Michigan on a project to improve educational opportunity and achievement of the rural children and youth in that area. The project, undertaken concurrently with the Eight Year Study and the Co-operative Study of General Education, possessed similarities.

About this project, Tyler reports, "To obtain the contribution of other faculty members, graduate students, local teachers, and administrators, we conducted a continuing seminar during most of the time in which the project was operating."<sup>2</sup> To Herrick and Tyler, these seminar discussions revealed the paucity of coherent intellectual structure in most curriculum projects. Both noted that several rationales were serving to guide the process and procedures of curriculum building. Tyler explains:

We found no explicit statements of assumptions, basic concepts, principles and generalizations, and modes of validation for the procedures. Our curriculum seminar clearly expressed the need for theoretical constructs in order to relate different curriculum efforts, conflicts, and questions for investigation. . . . A curriculum theory would include explanations of observed phenomena,

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<sup>1</sup>Interview with Ralph W. Tyler, Chicago, Ill., April 1984.

<sup>2</sup>Tyler, "Toward Improved Curriculum Theory: The Inside Story," p. 251.

but also would need to justify proposed designs for educational practice.<sup>1</sup>

This collaborative work between Herrick and Tyler in Battle Creek, Michigan was the immediate stimulus for the Curriculum Theory Conference at which Tyler presented the fourth chapter of Basic Principles. It has been suggested that the experience of the conference was the catalyst that induced Tyler to write the syllabus for Education 360 that same year.<sup>2</sup>

In the introduction to Toward Improved Curriculum Theory, compiled and edited by Herrick and Tyler, several observations regarding curriculum concerns of the late 1940s are drawn. The two colleagues observe that the most prevalent view of the past two decades from 1930-1950 admits the importance of curriculum theory but considers the pressing problems of the moment to be the one of putting into practice the already known and tested generalizations regarding teaching and learning. A second view relates the improvement of educational programs to the advancement of knowledge in the fields of learning, human development, study of society, and the field of instructional practices and educational organizations. The third viewpoint considers the first two essential but emphasizes an area of scholarship which considers its responsibilities to be the study and the synthesis of

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<sup>1</sup> Ibid.

<sup>2</sup> Interview with Ralph W. Tyler, Chicago, Ill., April 1984.



of the products of the second school of thought.<sup>1</sup>

The topics of the conference related to these three viewpoints and included: the orientation of curriculum theory to its task; the organization of curriculum, problems of sequence, curriculum planning and development; and the identification of the next steps toward a theory.<sup>2</sup> The supposition and purpose of the Herrick-Tyler Conference was to develop an adequate theory to guide curriculum development both agreeing that little progress had been made since the publication of the Twenty-Sixth Yearbook of the National Society for the Study of Education.

Barton's contribution to the conference is a statement on "Educational Objectives--Improvement of Curricular Theory About Their Determination." Barton's article, which is included in Louise Tyler's annotated bibliography of important works on the behavioral objective, explains a general theory of values for determining objectives. Barton proposes that a systematic way of making value judgments is essential and all inclusive principles for doing so are needed. Barton characterizes these principles as systematic rather than as anti or pro anything. Barton does not provide procedures to operationalize this theory but rather his solution is to train personnel in skills of

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<sup>1</sup>Virgil E. Herrick and Ralph W. Tyler, eds., Toward Improved Curriculum Theory (Chicago: University of Chicago Press, 1950). p. iii.

<sup>2</sup>Ibid., pp. v-vi.

communication to enable them to communicate general philosophical principles.

Tyler first meets Barton when Barton is an instructor in philosophy, education, and social science at Rochester Athenaeum and Mechanics Institute from 1930-1939, and Tyler is an assistant to W. W. Charters in his engineering education research project. In 1940, Barton attains his doctorate at Ohio State University, but it is after the time Tyler is affiliated with Ohio State. Tyler appoints Barton, between 1939-1946, an assistant professor of education at the University of Chicago in the basic program of liberal arts education for adults. Concurrently, between 1939-1945, Barton is also a member of the Staff of the Cooperative Study in General Education and a participant in the Curriculum Conference. Barton's professional interests include: philosophy, education in philosophy and ethics, philosophy of education, the humanities in general education, and the determination of the aims of education.<sup>1</sup>

Virgil Herrick earns his undergraduate and graduate degrees and spends the major part of his career as a professor of education at the University of Wisconsin. Between 1940-1948, however, Herrick accepts a Tyler appointment to the Department of Education at the University of Chicago. Later he is on the faculty of Syracuse University. Herrick and Tyler are colleagues and friends, who collaborate on several publications, Toward Improved Curriculum Theory and Intelligence

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<sup>1</sup>Cattell and Ross, eds., Leaders in Education: A Biographical Directory, p. 59.

and Cultural Differences: A Study of Cultural Learning and Problem Solving. The latter wins one of the fifty most significant books on education award in 1952. Herrick is also an evaluator, who collaborates with a Tyler student, Chester Harris, on a chapter concerning evaluation in Research for Curriculum Development.

The interpretation of Herrick's contribution to the curriculum field, is insightful in understanding that "Virgil Herrick recognized the need for disciplined curriculum theory and devoted a sizeable portion of his professional labor to the exploration and development of this discipline."<sup>1</sup> In the view of the three interpreters of Herrick's work: James Macdonald, Frank May, and Don Andersen, Herrick's contribution to the field was only partially original and partially based upon the ideas of other educational leaders.

Herrick's more than 160 publications both resemble Tyler's work and have an original cast. Like Tyler, Herrick's curriculum model is also in the ends-means tradition with an empirical, rational, and systematic orientation. Herrick identifies four propositions in his rationale which include: (1) the immediate condition of the child and his concerns are the central basis for curriculum planning, (2) personal concerns of the child and the development of his concerns provide a basis for dealing with the social needs of the society, (3) the basis for a planning unit is the teacher and the class group,

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<sup>1</sup>Don W. Andersen, James B. Macdonald, and Frank B. May, eds., Strategies of Curriculum Development: The Works of Virgil E. Herrick (Columbus, Ohio: Charles E. Merrill Books, 1965), p. v.

and (4) curriculum planning is a cooperative effort of the teacher, the pupil, the staff, and the community.<sup>1</sup>

The propositions are similar to the propositions of the Tyler Rationale but greater emphasis is placed upon the learner. The approach to objectives is also similar except Herrick devises a different statement form for objectives. In the Herrick model objectives can be defined by three methods: essential components, operational definitions, and behavior factors.

The review of the Herrick literature reflects other similarities in emphases between Herrick and Tyler. Both emphasize teacher involvement and teacher in-service education and they both define instruction and evaluation as part of curriculum. They also share a desire to move toward a descriptive theory of curriculum--one which isolates and defines the basic curricular components and their relationships. They share a commitment of scientists toward description, explanation, and control of phenomena. Tyler and Herrick are committed to the idea that the analysis of the teaching operations should be central to the development of curricular and instructional theory and practice and that research and theorizing which disregard the central operations of teaching are doomed to early extinction despite their popularity.

Tyler is invited to deliver the Virgil Herrick Memorial Lecture in 1967 at which time he describes Herrick. Tyler reflects:

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<sup>1</sup>Ibid., p. 147.

Virgil Herrick was an admired friend for more than twenty years and a colleague of mine for nearly ten. He was a pioneering and outstanding scholar in the field of school curriculum. He never failed to raise searching questions regarding basic theoretical conceptions and to seek dependable evidence regarding current formulations. His solid work and his dynamic personality remain to guide and challenge all of us working in this field.<sup>1</sup>

This distinguished grouping of colleagues at the University of Chicago extend and apply Tyler's principles of evaluation nationally and internationally and to a variety of disciplines: mathematics, language, and biological sciences at levels of education from elementary to the university. For a decade Schwab criticizes the Tylerian model. But three of the grouping: Hartung, Herrick, and later Schwab develop curriculum models in the Tylerian tradition.

Tyler's influence on present day curricularists is highly identifiable when examined from the vantage point of those with whom he collaborates at the University of Chicago and Ohio State University. Of the five different groupings of colleagues, influence can be traced to both curriculum theory and practice in the field.

Among the most observable interchange between Tyler and these five groupings of colleagues is with the grouping comprised of curricularists who were students of Tyler early in his career at the University of Chicago. The members of this prominent grouping include: Benjamin Bloom, Lee Cronbach, John Goodlad, Hilda Taba, and Herbert Thelen, who were also professors at the University of Chicago

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<sup>1</sup>Tyler, The Challenge of the National Assessment, p. 1.

and participants in Tyler's research projects and/or Examiners in the Office of Examiners at the University of Chicago. Of this grouping, the curriculum models of Hilda Taba and John Goodlad and the curriculum contribution of Benjamin Bloom show the greatest interchange with Tyler. The other grouping of curricularists who made a significant contribution and reveal Tylerian influence are the professors appointed by Tyler that comprise the last grouping.

## SUMMARY

### Purpose of the Study

This study traced the legacy of the Tyler Rationale from its origins in the formative years of the curriculum field (1890-1930) to its influence on curriculum theorists of the present day (1930-1980). The study attempted to answer four questions: (1) What was Tyler's definitions of the principles of curriculum, instruction, and evaluation as set forth in the Tyler Rationale? (2) How did Tyler originate and modify these principles of curriculum, instruction, and evaluation? (3) What curricularists between 1890 and 1930 influenced the Tyler Rationale? and (4) What colleagues and students at Ohio State University and the University of Chicago did Tyler's rationale influence?

### Organization of the Study

The question regarding Tyler's definition of the principles of curriculum, instruction, and evaluation was answered by reviewing the literature written by Tyler, examining Tyler's intellectual foundations, and analyzing two books, Constructing Achievement Tests and Basic Principles of Curriculum and Instruction.

The second question of the study concerning the development and modification of the rationale was answered through an analysis of Tyler's general contribution to curriculum and his career path. The origins of the rationale were examined in Tyler's research from 1930 until the publication of the rationale in Basic Principles of Curricu-

lum and Instruction in 1950. Since the publication of the rationale, the modifications of Tyler's basic principles of curriculum, instruction, and evaluation were traced through Tyler's major statements. From 1950 until 1976, Tyler wrote several major statements of clarification and modification. For the most significant of these statements, he used the word "new" in the title to indicate their importance.

The third question covering the influences of the early curricularists upon the rationale was answered through an analysis of the major writings of Tyler's mentors at the University of Chicago and writings of general intellectual influences in the curriculum field during the formative years of the discipline. The sources of influence were identified through the use of the William Schubert Mentor-Student Genealogy, from Tyler's own indication of the curricularists who influenced him, and from references in the literature. Major references to curricularists who influenced Tyler were found in the NSSE Twenty-Sixth Yearbook and in Basic Principles of Curriculum and Instruction.

The final question regarding the influence of the Tyler Rationale upon his students and colleagues at Ohio State University and the University of Chicago was answered through an analysis of the major writings of those colleagues who are acknowledged in the field and influenced by the rationale. An examination of the major writings of more than twenty-five curricularists illustrated that several curricularists, prominent in the field today, were influenced by Tyler's principles of curriculum, instruction, and evaluation.



Findings About the Investigative Question Regarding  
the Definition of the Principles of Curriculum,  
Instruction, and Evaluation

The literature review of Tyler's writings revealed two theoretical texts as most important in defining Tyler's principles of curriculum, instruction, and evaluation. Constructing Achievement Tests set forth the early plan for evaluation in 1934, and Basic Principles of Curriculum and Instruction, in 1950, incorporated the evaluation process into a curriculum plan "for viewing, analyzing, and interpreting the curriculum and instruction program of an educational institution."<sup>1</sup> The literature review also indicated that Tyler presented modifications of the rationale in a series of major statements: the 1958 new criteria statement on tasks appropriate for schools, the 1964 statement on the interrelationship of knowledge, the 1966 statement on new dimensions in curriculum development identifying ten principles for effective learning, the 1968 statement on the procedures for the National Assessment of Educational Progress, and the 1976 new emphases statement on the transfer of training by the active learner between school and non-school areas of learning. Since 1976, Tyler did not add any "new" statements to the rationale. The revision of the original text is in process and due for publication in 1985.

An analysis of Tyler's intellectual foundations in his undergraduate and graduate education in science, mathematics, educational psychology, and philosophy demonstrated how these disciplines influenced Tyler's approach to curriculum. Tyler's approach to the study

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 1.

of curriculum making was basically as a scientist and not as a philosopher.

The scientific approach to education that provided Tyler with an attitude, principles, and techniques for curriculum making was derived, at least in part, from John Dewey. Dewey's definition of the sources of the science of education applied by Tyler included: (1) a science of education is not formed by isolated conclusions but rather by linking various findings to form a coherent system, (2) a science of education cannot borrow techniques but must search and grope to find them, (3) the word rule can only be applied if scientific results furnish a rule for conduct based upon observation and technique, (4) a science of education is not in books or in classrooms but in the minds of those engaged in directing educational activities, (5) a science of education is not independent and sources outside of education must be examined, and (6) the content of education is educational practices which are the final test of the value of the conclusions of all research.<sup>1</sup> To examine the rationale with integrity, means to examine it within this coherent pattern of the scientific approach and not as an isolated model of principles detached from practice. Dewey and Tyler illustrate that the conduct of practice is related to the development of principles. Much of the criticism of the rationale is based upon too myopic a view.

The Tyler Rationale was developed from principles of curriculum derived through this scientific approach to curriculum development.

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<sup>1</sup>Dewey, The Sources of a Science of Education, pp. 23-33.

Curriculum inquiry was derived through curriculum development from the Service Studies at Ohio State University, the Eight Year Study of secondary schools, the Cooperative Study of General Education for six colleges, and the National Assessment of Educational Progress of different groups of students in the nation. The research was initiated by Tyler in 1930 and continues in 1984. The Tyler principles of curriculum, instruction, and evaluation are in the ends-means tradition with an empirical, rationale, and systematic orientation. As a scientist, Tyler is committed to description, explanation, and control of phenomena.

Influenced also by his educational foundations in mathematics and educational psychology, Tyler placed emphasis upon measurement and evaluation. Tyler's scientific approach to curriculum was through evaluation. Tyler considered instruction and evaluation as part of curriculum. In the development of the rationale, Tyler first answered the question regarding evaluation the earliest in his career.

Basic Principles of Curriculum and Instruction, Tyler's first published statement of the rationale, was initially introduced during the Eight Year Study as four major curriculum problems. Tyler's identification of the curriculum problems and methodology was influenced by John Dewey's The Child and the Curriculum and the NSSE Twenty-Sixth Yearbook. In the text, Tyler enunciated the curriculum problems as four fundamental questions to answer in analyzing any plan of curriculum and instruction. Additionally, Tyler developed recommended procedures to answer these four questions. In the 1950 version, an attempt was made to show the interrelationship of the questions and the recom-

mended procedures. In the clarification and the modification of the rationale from 1950 until 1976, Tyler concentrated on these inter-relationships.

In 1902, Dewey named the same three sources of objectives as did Tyler in 1950. Dewey called his sources: "the immature undeveloped being"; "certain social aims, meanings, and values incarnate in the natural experiences of the adult"; and "the specialization and division of curriculum."<sup>1</sup> Dewey underscored the importance of the interactive relationship of these three sources of objectives. Dewey held that "below all other divisions in pedagogic opinion lies . . . opposition" among curricularists about these three sources.<sup>2</sup> It was Dewey, who anticipated the problem that Tyler attempted to resolve by including all three sources of objectives, which previously divided the child-centered, the society-centered, and the discipline-centered curricularists.

In 1927, the consensus of the NSSE Twenty-Sixth Yearbook, which also addressed the matter of selection and organization of subject matter, concluded that curriculum should be developed "from the starting point of the needs of the learner, irrespective of the content and boundaries of existing subjects."<sup>3</sup>

In 1950, Tyler included the three sources beginning with both needs and interests of the learner as the starting point. Tyler de-

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<sup>1</sup>Dewey, The Child and the Curriculum, pp. 8-11.

<sup>2</sup>Ibid., p. 8.

<sup>3</sup>Rugg, The Foundations of Curriculum-Making, p. 13.

lineated procedures for deriving objectives from this source as well as the sources of contemporary life and subject matter. Tyler included in Basic Principles criticisms concerning the derivation of objectives solely from one source and attempted to interrelate or provide procedures to make the sources interactive.<sup>1</sup>

Tyler is criticized in the literature, however, for treating the three sources separately rather than interactively, which appears to be a misinterpretation of Tyler's intention.<sup>2</sup> Tyler attempted to make the sources interactive through recommended procedures. The thrust of Tyler's research and modifications in the rationale from 1950 until 1976 was centered mainly upon the sources of objectives. Tyler re-examined each source of objectives and the form in which objectives should be stated. In two major statements: the 1966 statement and the 1976 statement, Tyler suggested procedures to interrelate the three sources with each other and the objectives with the learning experiences to make the learner and the environment interactive.

The four questions have become the model for an ends-means approach to curriculum, a scheme which has served curriculum workers widely. The four questions have strengths but also have limitations. Curricularists need to ask if Tyler's four questions are the fundamental ones or if others need to be raised. In 1976, Tyler confirmed them again as the four fundamental questions. Curriculum makers need also to ask if the curriculum-making should limit the use of the questions

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, pp. 18-27.

<sup>2</sup>Kliebard, "Reappraisal: The Tyler Rationale," p. 71.

to viewing and analyzing curriculum as Tyler specified in 1950 or if the use can be extended to developing and implementing curriculum as Tyler suggested in his 1974 and 1976 statements.

The recommended procedures for answering the questions are also popular but have been less widely used than the questions. The procedures, however, also have limitations. The procedures recommended for answering Question One on objectives are the most controversial. Tyler recommended three prime sources of objectives: the learner, contemporary life, and subject matter, and two screens, psychology and philosophy, to help in the selection process. Tyler's statement about how objectives interact was incomplete, his explanation of the sources unclear, and the approach for using the two screens criticized.

The problem with objectives was further exacerbated because of imprecise words or misunderstood meanings. It is unclear whether Tyler intended to discriminate between what he called the sources of objectives, when referring to the learner and to contemporary society, and the suggestions from subject matter specialists, when referring to knowledge as a source of objectives. The difference between sources and suggestions is disparate.

The lack of clarity in the form in which objectives were stated caused still greater confusion. Tyler, unfortunately used the phrases educational and behavioral objectives interchangeably when, in his perspective, they are different from each other. Tyler's educational objective possesses specified characteristics: (1) Tyler used "behavior in the broad sense to include thinking and feeling" and not in the nar-

rower sense of the behaviorist;<sup>1</sup> (2) Tyler defined objectives as "general modes of reaction to be developed rather than highly specific habits to be acquired";<sup>2</sup> (3) Tyler recommended a smaller number of consistent highly important objectives in preference to a large number of precise objectives; (4) Tyler encouraged clarity of statement form, which is frequently confused with specificity, and finally (5) Tyler was interested in higher mental processes and not only lower mental processes and in the process of the learner and not only the product of learning. The form in which objectives are to be stated has been clarified by Tyler at least once in each decade from 1950-1980. In 1964, Tyler called the manner in which an objective should be stated one of the persistent questions of the rationale.

Tyler directed his rationale to a major question concerning the purposes of the school in the 1930s. In the first sentence of Basic Principles, he stated, "Many education programs do not have clearly defined purposes."<sup>3</sup> Tyler's point of view was "that no single source of information is adequate to provide a basis for wise and comprehensive decisions about objectives of the school."<sup>4</sup> Since, however, the major question the rationale addressed is to determine the purposes of the school, the words: purpose, goal, and objective, should not be used synonymously. Most curricularists find it necessary to differentiate among the goal or aim of education, the purpose of the school, and the objectives of curriculum. In Tyler's model this should be an important

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 3.

<sup>2</sup>Ibid., p. 43.

<sup>3</sup>Ibid., p. 3.

<sup>4</sup>Ibid.

distinction because the purpose of the school helps to determine the selection of curriculum objectives.

The confusion among purposes, objectives, and goals caused ambiguity and presented another controversial area, the role of values, in the recommended procedures for selecting objectives. To determine educational objectives, Tyler placed importance on values stating that in the final analysis, objectives were matters of choice which must be considered value judgments of those responsible for the school.<sup>1</sup>

Tyler's procedures to make objectives value judgments was to use the philosophy of the school as a filter explaining, "One section of an educational philosophy would outline the values . . . essential to satisfying an effective life."<sup>2</sup> Tyler did not, however, recommend a procedure for preparing a statement of school philosophy, he simply suggested some questions that the philosophy had to answer.

This area of objectives regarding the role of values causes concern in the twentieth century. That the technological culture of the twentieth century is in danger of submerging social and human values seems to be a national concensus. "Many who judge the problem of values to be the most compelling find it at the same time the most perplexing one."<sup>3</sup> Between 1950 and 1976, Tyler made only a brief comment about values stating that Basic Principles of Curriculum and Instruction was not a philosophy. At present the lack of clarity about values extends to many important aspects of formulating objectives:

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<sup>1</sup> Ibid.

<sup>2</sup> Ibid.

<sup>3</sup> Taba, Curriculum Development: Theory and Practice, p. 391.



the identification of the values, the differentiation among types of values, and the analysis of behaviors that would teach those values. Several curricularists in the Tyler genealogy address this point, but Louis Raths, George Barton, and Hilda Taba are perhaps most conspicuous.

The recommended procedures for answering the second fundamental question concerning selecting learning experiences was briefly developed in the 1950 rationale. Tyler referred to a learning experience as "the interaction between the learner and the external environment to which he can react."<sup>1</sup> Tyler cited five principles for learning but did not indicate how to select or organize such an interaction between the learner and the environment. Tyler, later between 1958 and 1976, recommended procedures for answering the second question, which focused upon this interaction. When Tyler recommended procedures to answer the learner's interaction with the environment question, he called it the implementation question. For procedures to answer the learning question, Tyler's focus was redirected from the purposes of schools to the interaction between curriculum content and curriculum methods. His focus also changed from the curriculum plan to the curriculum implementation or development and from school related learning to school and non-school areas of learning.

The recommended procedures for the final two questions about organization and evaluation received the least attention in Tyler's writing and in the literature of criticism about the rationale. In

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 41.

the most recent statement about the rationale, Tyler replaced the words "organizing learning experiences" with "designing learning experiences."<sup>1</sup> Tyler promised in an article in 1966 to return to this question about organizing learning experiences but he did not. The recommended procedures for answering the evaluation question were Tyler's original contribution and the basis of the rationale. Although Tyler gave considerable emphasis to evaluation in his writings generally and suggested that the data from the National Assessment of Educational Progress might change evaluation, he postponed making any re-statement.

The use of the rationale was briefly described by Tyler in the fifth chapter of Basic Principles. Because of the inadequate explanation and because the rationale is sometimes not read closely, its use is often misunderstood by curriculum-makers. Tyler was clear in his explanation of the active role of the teacher and the role of other experts in the curriculum planning process, but he was less clear about the application of the rationale. Tyler said little about the interrelationships among the four fundamental questions and the interrelationships among the procedures for answering them.

Except for a brief statement, the 1950 rationale did not address the interrelationships. When using the rationale, Tyler wrote that it was unnecessary for "the sequence of steps to be followed."<sup>2</sup> Tyler indicated that attacks on the program could begin at any point

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<sup>1</sup>Tyler, "Two New Emphases in Curriculum Development," p. 66.

<sup>2</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 83.

"provided the resulting modifications were followed through the related elements until eventually all aspects of the curriculum have been . . . revised."<sup>1</sup> Because educational objectives are "the most critical criteria for guiding the other activities of the curriculum-maker," the curriculum-maker can determine objectives by developing new ones or by reconfirming or modifying present objectives.<sup>2</sup> Just as with the questions, the procedures apparently can also follow in any order.

The mistaken use of the rationale by curriculum workers is usually a result of the rationale being applied as a series of steps to follow. While the four step process might be valuable, Tyler did not intend the rationale as a series of steps either in the 1950 or in subsequent statements about the rationale. Confusion on this point still exists today.

It should be noted that a Tyler colleague, Herbert Thelen, criticized the use of the rationale as steps. In contrast, Hilda Taba, another of Tyler's colleagues, did, in fact, design her curriculum model as a seven step curriculum process instead of a four question model. It is not that a several step process is inappropriate. Rather, the point is that Tyler did not intend his rationale as steps in the interrelationship among the questions. Tyler's proposed utilization of the rationale is as a series of recommended procedures to answer four fundamental questions when "viewing, analyzing, and interpreting," and later he added developing, "the curriculum and instructional program of an educational institution."<sup>3</sup>

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid., p. 40.

<sup>3</sup>Ibid., p. 3.

Implications Concerning the Definition of Curriculum,  
Instruction, and Evaluation Principles

The analysis of the 1950 statement of Basic Principles indicated that Tyler's contribution to curriculum was traceable to Dewey and to the NSSE Twenty-Sixth Yearbook. This Tyler contribution consists minimally of the formulation of the curriculum problems into four fundamental questions, the definition of an educational objective that helped to determine the purposes of the school, the recommendation of procedures for answering the four fundamental questions, and the incorporation of evaluation as part of the curriculum process. The analysis also indicated that misinterpretation of the rationale was frequently the result of unclear, incomplete, or repeated necessary statements by Tyler clarifying the same procedures. Frequently, misinterpretation was also a result of a lack of close reading by the critics. Problems of interpretation are also caused by the need for Tyler to modify his explanation as new data from research indicated. In the scientific approach, this continuous experimentation was essential.

Findings About the Investigative Question Regarding  
the Development and Modification of  
the Rationale

The study also attempted to answer a question about the development and the modification of the rationale. The study traced the origins of the rationale in Tyler's own research between 1930 and 1950 and the modifications between 1950 and 1976, the most recent statement before the revision of the rationale in 1985. Tyler's approach to education was scientific; therefore, his research was at the basis of his

theory. The roots of the principles of curriculum, instruction, and evaluation were in practice.

In the twenty years between Tyler's earliest work in instruction, Research Methods and Teachers' Problems, published in 1930, and the rationale, Tyler attempted to advance the "arbitrary procedures for instruction" to "systematic procedures for instruction" to the recommended procedures of the 1950 statement. In 1930 to 1939, Tyler applied the systematic procedures for instruction in what he called Service Studies at Ohio State University. From this application, Tyler derived an evaluation process described in Constructing Achievement Tests. The Service Studies' research provided the principles and the recommended procedures to answer the fourth question about evaluation in the 1950 rationale.

Between 1934 and 1942, the procedures for evaluation became the basis for the Eight Year Study, during which time Tyler's research provided the recommended procedures to answer the first curriculum question, "What educational purposes should the school seek to attain?" Tyler's concurrent research between 1939 and 1945, the Cooperative Study in General Education, was the practice from which Tyler derived the recommended procedures for the third question of the rationale regarding organizing the learning experiences.

The rationale was first published in 1947 as a course syllabus two years after the Cooperative Study was completed, but the recommended procedures to the second question of the rationale concerning learning were not fully developed until after the data of the National Assessment of Educational Progress provided material.

Upon publication of the rationale, Tyler immediately began to clarify and modify the rationale through a scientific approach to curriculum. The major data for modifying the rationale derived from the National Assessment of Educational Progress and from consulting experiences. After 1950, Tyler began to merge the recommended procedures for the four fundamental questions into a new form. Again, Tyler proceeded methodically to analyze the questions and the procedures. Tyler began with Question One on objectives and proceeded to Question Two on learning experiences. To date, Tyler has not re-examined the organization or the evaluation questions of the rationale.

Between 1953 and 1964, Tyler re-examined each recommended procedure of the first question. The major modification focused upon the sources of objectives. Beginning in 1953 and again in 1956, Tyler translated youth needs into teaching goals and clarified the role of the school in 1958 with six new content criteria for schools. In 1958, the key criterion of these six criteria for curriculum development was "the emphasis on tasks appropriate for schools." In that same year, Tyler also introduced nine conditions essential for selecting learning experiences, which he called new criteria for curriculum methods. In 1964, Tyler interrelated another 1958 content criteria for knowledge with four guidelines for curriculum methods. During this decade, he completed the modifications of procedures for Question One regarding the content of objectives for curriculum.

Beginning in 1958, Tyler re-examined the recommended procedures to answer the second question about learning and, by 1966, Tyler introduced ten guiding principles for selecting learning experiences that

replaced most of the earlier guiding principles of the 1950 rationale. Tyler did not re-examine the third and fourth questions of the rationale before 1984.

In 1976, Tyler revealed a new form or at least new interrelationships among the procedures of the rationale. Tyler placed two new emphases upon curriculum development. Having already ascribed the six tasks for the schools in 1958, the interrelationship between knowledge and the learner in 1966, and the new conditions and principles for selecting learning experiences in 1958 and 1966, Tyler was ready to explain the new formulation of his rationale in 1976. In the new formulation, Tyler divided school tasks from non-school tasks and asked the schools to emphasize tasks appropriate to them and to help reconstruct the educational environment so other educative agencies could assume their appropriate tasks. In the 1950 statement, Tyler presented the psychology of learning as a screen and curricularists chose the learning theory. But in 1976, Tyler selected the Dewey learning theory of active involvement of the learner. In the 1976 new emphases statement, the active learner is to transfer training from the school to the non-school areas of learning in an educational environment that has been reconstructed.

#### Implications of the Origins and Modifications of the Rationale

The analysis of the origins of the rationale in Tyler's own research demonstrated how a scientific approach resulted in curriculum development becoming curriculum inquiry. "Science signifies . . . the existence of systematic methods of inquiry, which, when brought to bear

on a range of facts, enable us to understand them better and to control them more intelligently. . . ."<sup>1</sup> Tyler's major research projects provided the data from which he developed the rationale.

Another major implication indicated that curricularists supported Tyler's major research projects. Charles Judd confirmed Tyler's findings in the Service Studies of Ohio State University in his book, Education as Cultivation of the Higher Mental Processes. Lee Cronbach supported Tyler's research of the Eight Year Study explaining that "its testing techniques are in good repute today."<sup>2</sup> Additionally, Tyler's research complied with Dewey's definition of the science of education. As Dewey stated, "No genuine science is formed by isolated conclusions, no matter how scientifically correct the technique . . . science does not emerge until these various findings are linked up together to form a relatively coherent system."<sup>3</sup> From 1930 to 1976, Tyler's data formed a relatively coherent system.

The investigation also showed that the Tyler Rationale has many strengths and weaknesses and has been the subject of great controversy over the past fifty years. The model, however, appears to be a paradigm that is the basis for consensus in the field. One major criticism of the rationale was that Tyler treated curriculum as a technological process. Some curricularists suggested that the weakness could be overcome by treating the sources of objectives as organically interactive

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<sup>1</sup>Dewey, The Sources of a Science of Education, p. 9.

<sup>2</sup>Cronbach, "Course Improvements Through Evaluation," p. 48.

<sup>3</sup>Dewey, The Sources of a Science of Education, p. 22.



as they were treated during the Eight Year Study by Giles, McCutchen, and Zechiel. Another major criticism stated that the rationale is mechanistic in the manner of Franklin Bobbitt and for the purpose of transforming "the crude raw material that children bring to school into a finished and useful product." It is true that the rationale has been and can be used from the technological or mechanistic viewpoint. But it is also true that the rationale can be used from the opposite viewpoint.

Curricularists from the opposite viewpoint have also criticized the rationale. Those who have criticized the rationale, however, have in their own models tended to follow the same proposal as Tyler. For example, in the reconceptualists' effort to develop an alternate model to the Tyler Rationale, they have used similar questions and similar curricular sources and screens. The reconceptualist proposal suggested as an alternative to the Tyler Rationale appears to be an alternative philosophy to the behavioristic school and not alternate questions or curriculum divisions and sources.<sup>1</sup>

Some criticisms of the rationale are sustained because of lack of clarity and other criticisms because of misreading. Tyler between 1950 and 1976 addressed many of the criticisms and clarified the rationale. The problems caused by the confusion of the rationale by those who apply it, such as the behaviorists, or those who reject it, such as the reconceptualists, remains. The rationale cannot be confused with the school of thought of those who apply it.

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<sup>1</sup>Tanner and Tanner, Curriculum Development: Theory into Practice, p. 92.

Findings About Curricularists Who Influence  
the Tyler Rationale

The origins of the rationale from 1890 to 1930 reveal that the rationale possesses important early conceptual roots in the formative years of the field. Tracing the intellectual ancestry of the rationale showed that Tyler developed a curriculum paradigm rooted in significant ideas of early educational psychology. The earliest roots of Tyler's scientific approach to curriculum are in the psychology of William James, who influenced John Dewey and mentored Edward Thorndike, and Wilhelm Wundt, who mentored Charles Judd. The Dewey and Thorndike influence was transferred from concepts in the field. Influence on the rationale from Judd was traced from the mentor-student relationship. Charles Judd, an educational psychologist, was one of several mentors, who also included: W. W. Charters, Franklin Bobbitt, and George Counts, who influenced the rationale. Of this grouping, John Dewey's influence stemming from his book, The Sources of a Science of Education, made one of the most significant impacts on the Tyler Rationale.

John Dewey's influence is evident in Tyler's scientific approach to education and in Tyler's selection of a learning theory. Dewey described the science of education and from that foundation, Tyler began to develop the techniques, principles, attitudes, and the sources of a science of education. Dewey's approach was to base principles of education upon practice, which Tyler did. Tyler from 1930 until 1950, undertook three major research projects from which he derived principles of curriculum and instruction. Between the late 1960s and the present, Tyler utilized the data from the National Assessment

of Educational Progress as one basis for the modifications he made in the new emphases statement of 1976. Tyler's principles were derived from practice.

Dewey believed that education was not an independent discipline but relied upon other disciplines which had to be functionalized for use in curriculum. Tyler functionalized other disciplines such as psychology, sociology, anthropology, and other of the behavioral sciences as sources of education. Throughout Tyler's career, he wrote many articles about utilizing research in education.

Dewey's influence is apparent not only in Tyler's scientific approach to education, but also in the sources and determinants of the Tyler Rationale. Dewey identified the three sources of objectives: the learner, society, and subject matter, and Tyler operationalized them with recommended procedures. The rationale explains how to use these sources to derive objectives.

Dewey's learning theory of experience, which describes the learner interacting with the environment on a continuum of experience, was suggested as a learning theory in the 1950 rationale. The Dewey learning theory was identified again in the modifications of the rationale in 1976.

Edward Thorndike's influence upon the Tyler Rationale was also significant in terms of what Tyler accepted or rejected from Thorndike's theories. Tyler accepted Thorndike's theory of transfer of training but rejected Thorndike's stimulus-response psychology. In the 1950 statement of the rationale, Tyler cites Thorndike's theory of

transfer in relationship to "contemporary life" as a source of objectives. Tyler explains, "Studies of transfer . . . indicated that the student was much more likely to apply his learning when he recognized the similarity between the situations encountered in life and the situations in which learning took place. . . ." <sup>1</sup> In the 1976 statement of the rationale, Tyler again cited Thorndike's transfer theory. In this more recent formulation, Tyler explained the interaction of the active learner, who transfers training from the school to the non-school areas of learning. Tyler and Thorndike also have similar roots in their attacks on faculty psychology. "Perhaps the most stunning attack, aside from Thorndike's 1924 study on the idea that certain subjects have superior transfer to intelligence was delivered in the Eight Year Study." <sup>2</sup> Thorndike's transfer theory influenced the rationale both in 1950 and the 1976 statements.

Upon the topics where Thorndike and Tyler disagree, Tyler accepted Judd's positions. In Basic Principles, Tyler stated that he rejects Thorndike's theory that learning consists of building connections between specific stimuli and specific responses. According to Thorndike's theory, the objectives must be "specific ones, very numerous, and of the nature of specific habits." <sup>3</sup> Judd, on the other hand, "showed that many types of learning could be explained largely in terms

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 18.

<sup>2</sup>Tanner and Tanner, Curriculum Development: Theory into Practice, p. 85.

<sup>3</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 16.

of the learner's perceiving general principles."<sup>1</sup>

Charles Judd's influence on the rationale can be clearly traced to three areas. Tyler's general definition of the objective to include general behaviors, attitudes, and feelings derived from Judd's research. Tyler and Judd also agreed that the process of learning was equally if not more important than the product of learning. Both agreed also that emphasis in education should be on higher as well as upon lower mental processes. Tyler's first chapter in Judd's text, Education as Cultivation of the Higher Mental Processes, explains Tyler's research from Ohio State University and Judd's research at the University of Chicago that explains this similar intellectual emphasis.

Three other mentors also influenced Tyler's rationale. Franklin Bobbitt and W. W. Charters' influence is most significant in Tyler's use of task analysis as one of the recommended procedures of the rationale. George Counts influenced Tyler's explanation of the different personnel including teachers and other experts involved to develop curriculum. Counts is also significant in his influence upon Tyler's definition of the role of the school. This influence can especially be seen in 1958, when five new curriculum methods to identify school appropriate tasks were added to the rationale. Of Tyler's five new tasks, four are identical to Counts' tasks for schools, which Counts identified earlier. Tyler, in 1976, concurs with Counts' viewpoint that anyone "who constructs a program of education on the assump-

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<sup>1</sup>Ibid., p. 42.

tion that the school is the only important educational institution is building on sands."<sup>1</sup> Counts too was influential in the 1950 and the 1976 explanations of the rationale.

Implications of the Influence Upon the Tyler Rationale  
from the Formative Years

John Dewey was the most significant influence on the Tyler Rationale; The Sources of a Science of Education and Basic Principles create a curriculum paradigm for the field. Dewey presented the sources of a science of education and Tyler presented the principles of curriculum, instruction, and evaluation. Dewey identified the curriculum problems or divisions, and Tyler formulated them into fundamental questions, recommended procedures for answering the questions, and showed the interrelationships among them. Both curricularists arrived at their positions through practice which created theory. Dewey contributed a learning theory and Tyler related the theory to curriculum development in his 1976 statement of new emphases. Tyler contributed the process of evaluation which he also related to curriculum. Together they created the principles of curriculum, instruction, and evaluation from a scientific approach to education.

Other curricularists also influenced the Tyler Rationale. The influence was considerable and some critics suggested that Tyler's contribution was not sufficiently original. For a rationale to be grounded in the roots of the formative years of the new field of curriculum is, however, not a criticism of the rationale but a strength.

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<sup>1</sup>Counts, "Some Notes on the Foundations of Curriculum-Making," p. 175.

Paradigms are not created out of nothing or at least should not be. Paradigms in the sciences and the social sciences should be created from the world of practice. A paradigm denotes not only the entire constellation of beliefs, values, and techniques shared by the practitioners but also concrete problem solutions as models for solving other problems.

Paradigms do not eliminate debate in the field but provide for a consensual basis in the field. The Dewey-Tyler paradigm provides for some consensus in the field, and, although some curricularists criticize the rationale, their models usually follow the Dewey-Tyler paradigm.

Findings About Curricularists Whose Contribution  
Is Influenced By the Rationale

Tracing the influence of the rationale upon Tyler's students and colleagues from 1930 to 1980 revealed that the rationale was influential in the contribution of prominent curricularists of the present. Analyzing the curriculum contribution of twenty-five selected curricularists, who were associated with Tyler either as a student, a professor, a colleague, an Examiner at the University of Chicago, or on one of Tyler's major research projects showed that the rationale remains influential in the field today.

From among the twenty-five curricularists, whose major contribution to curriculum was studied, many contributed to the research that created the rationale. Several developed research projects similar to Tyler's design, such as Hilda Taba with the Intergroup Study, Ole Sand's research on nursing education, or James Wilson's research on co-

operative education. Some extended the usefulness of the Tyler Rationale into other areas; such as, Benjamin Bloom and David Krathwohl, who developed the taxonomy of cognitive and affective objectives to aid in curriculum research.

Several other curricularists applied Tyler's curriculum rationale to education in professional schools; such as, Christine McGuire for medical education, again Ole Sand for nursing education, and Lily Detchen for education for the military. Still other curricularists applied Tyler's rationale to curriculum development such as Harold Shane applied Tyler's rationale to the evaluation of elementary schools, and Maurice Hartung applied Tyler's principles to instruction and evaluation in mathematics.

From among those twenty-five curricularists, four prominent curricularists carry on in the Tylerian tradition to which they also contribute their own ideas. Benjamin Bloom developed two handbooks, one a taxonomy of objectives and the other an evaluation handbook based upon Tylerian principles. Lee Cronbach distinguished himself in educational psychology and measurement and credited Tyler's advanced views in the 1930s. Cronbach acknowledged the importance of Tyler's principles of testing, the significance of the instruments used in the Eight Year Study, and the decision-by-objectives' approach to evaluation. Cronbach and Tyler disagreed on points concerning measurement and evaluation, but Cronbach described the importance of Tyler's contribution to the field generally and to his own work specifically.

John Goodlad developed a conceptual system to guide theory



building, research, and planning in the field. Goodlad's conceptual system adheres to the Tyler Rationale, which he extended in his model. Goodlad's model incorporates Tyler's four questions and adds three new contexts for decision-making: instructional decision-making, institutional decision-making, and societal decision-making. Goodlad also added two other dimensions which he calls funded knowledge and conventional wisdom. Goodlad acknowledged the Tyler Rationale as the foundation of his model.

Hilda Taba's curriculum rationale and Tyler's are similar. Taba and Tyler appear to influence each other mutually. Taba and Tyler dealt with the same curricular problems during the Eight Year Study, but Taba's seven step rationale was not published until 1962, twelve years after the Tyler Rationale. After a meeting during the Eight Year Study, Tyler and Taba elaborated a scheme for a sequence of questions to be asked and an order of steps to be taken in planning curriculum, which Taba tried out in a 1937 workshop. Taba, however, awaited the completion of one major research project, the Intergroup Study, before she wrote her text in which she designed the seven step rationale. Taba and Tyler models overlap.

#### Implications of the Influence of Tyler Upon Present Day Curricularists

The Tyler Rationale connects some prominent curricularists of today: Bloom, Cronbach, Goodlad, and Taba, with important curricularists of the formative years of the new field including: Dewey, Thorndike, Judd, Counts, Charters, and Bobbitt. This intellectual as-

sociation provides the tradition or history of the educational objective and of the scientific approach to education carried on today by important curricularists in the field; especially, Taba, Goodlad, and Bloom. These prominent curricularists continue to follow Tylerian principles making the rationale an effective model in the field for the past fifty years from 1930 until 1980.

Some of Tyler's colleagues, such as Joseph Schwab and Harold Dunkel, who originally were critics of the rationale, at present consider it a valuable model. Tyler's impact on the curriculum field began in the 1930s, built in the 1940s and 1950s, and sustained its importance in the 1980s.

#### Further Research

This study focused on the sources and the effects of the Tyler heritage from past to present. An in-depth investigation of any one of these important influences upon the Tyler Rationale could provide an improved understanding of the curriculum field in the Tylerian tradition. Studies could be undertaken, for example, to examine in greater depth the influence of Dewey, Thorndike, Judd, Charters, Counts, or Bobbitt. The influence of Counts has not been recognized in the literature before and, in fact, Tyler criticized the Counts-Ruggs' curriculum proposal in the NSSE Twenty-Sixth Yearbook. Tyler does not make reference to Counts in his writings, but some of their ideas bear great resemblance.

In-depth studies could also be undertaken to examine the influ-

ence of Tyler on Bloom, Goodlad, or Taba. The mutual influence between Taba and Tyler is of special importance for investigation. A study of Hilda Taba's contribution to the curriculum field per se would also be beneficial to understanding her important contribution.

An examination of the means-ends tradition in curriculum-making to show the influence of the curricularists from the University of Chicago and other areas would be beneficial. The behavioral objective could be traced from Wilhelm Wundt and William James to the present in order to explore the ends-means dispute in the curriculum field.

An investigation of the literature of support and the literature of criticism of the Tyler Rationale, especially because of the misunderstanding of the behaviorist application of the rationale, could clarify an unnecessary dispute that is not constructive in the field.

The tracing of another branch of the William Schubert Mentor-Student Genealogy to understand the development of thinking in an attempt to recreate the past in order to discover who engineered the development, what its course was, and what influenced it, would be of value to place curricularists in historical perspective.<sup>1</sup>

Further research on Tyler's contribution to the curriculum field is important because it is substantial and because he continues to write and to be published nationally and internationally. In 1984, two articles on educational objectives and evaluation will be published in the International Encyclopedia of Education.

Although the Tyler Rationale is the centerpiece of Tyler's con-

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<sup>1</sup>Seguel, The Curriculum Field: Its Formative Years, p. 2.

tribution to the field, his ideas extend to many other horizons.

Throughout his career, Tyler has been a consultant of national and international prominence. Tyler has helped to solve practical as well as theoretical problems of importance on the local, national, and international scale. Students, teachers, professors, and scholars have benefitted from Tyler's contributions.

A humble man, Tyler does not acknowledge this contribution, but many recipients publicly credit his help. A number of books are dedicated to Ralph W. Tyler in addition to those books that comprise the Tyler legacy. Tyler helped to formulate the Elementary and Secondary Education Act of 1965. He also assisted in the education process in China and Japan, in Sweden and Ireland, in emerging African countries, in Israel, and other countries, where he continues to be invited. Legislators and presidents of the United States have given tokens of gratitude for his contributions.

In 1984, Tyler is in the process of revising his major text, Basic Principles of Curriculum and Instruction. About the revision, Tyler stated that he is just going to clarify a few incomplete ideas and add a few more examples of how to use the rationale making it applicable to institutions of higher learning and professional schools.<sup>1</sup> The field can expect greater modifications than those expressed by Tyler.

From 1950 until the present, each procedure to answer Questions One and Two of the four fundamental questions: "What educational pur-

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<sup>1</sup>Interview with Ralph W. Tyler, Chicago, Ill., April 1984.

poses should the school seek to attain? and What educational experiences can be provided that are likely to attain these purposes?"<sup>1</sup> has been examined, clarified, or modified. In 1966, Tyler promised that grist from the National Assessment of Educational Progress would provide data to clarify or modify Questions Three and Four: "How can these educational experiences be effectively organized: and How can we determine whether these purposes are being attained?"<sup>2</sup>

The new statements of 1958, 1966, and 1976, clarified and modified the first, second, and somewhat the third question of the rationale. The fourth question has not yet been addressed. In the revised Basic Principles of Curriculum and Instruction, we can anticipate the incorporation of these modifications from 1958 to 1976. We can also anticipate new changes for the fourth question of the rationale regarding evaluation. Tyler began the rationale with the evaluation question, it is appropriate that he end with modifying the rationale with the same question.

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<sup>1</sup>Tyler, Basic Principles of Curriculum and Instruction, p. 1.

<sup>2</sup>Ibid.

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<sup>1</sup>All reference entries by Ralph W. Tyler are listed chronologically.

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APPENDIX A

FOUR QUESTIONNAIRES SENT TO RALPH W. TYLER

Questionnaire One: Graduate Students--University of Chicago

1. Were these all graduate students at the University of Chicago?
2. How well known are they in curriculum?
3. Are they living or deceased?
4. Have I missed any important names?
5. Do you have an address or a contact for each?

Name	Was Student	Was Not Student	Well Known in Curriculum	Moderately Well Known in Curriculum	Living or Deceased	Address or Contact
Bloom						
Cronbach						
Goodlad						
Hartung						
Raths						
Rehage						
Sand						
Thelen						
L. Tyler						
C. Harris						
C. McGuire						
Other						

Questionnaire Two: Professors at the University of Chicago

1. Were they a professor at University of Chicago?
2. Did you hire them?
3. In what capacity did they work?
4. How long?
5. What was your working relationship?

Name	Was/Was Not Professor	Did/Did Not Hire	Worked on the Following Projects	Period of Time	Address or Contact
Taba					
Diederich					
Bloom					
Cronbach					
Thelen					
Goodlad					
Rehage					
Other					



Questionnaire Three: Students at Ohio State University

1. Who were they?
2. How important in the Field of Curriculum?
3. In what capacity did you work with them besides being a student?
4. Address and/or contact.

Name	Importance in Curriculum Field	Capacity in Which You Worked With Them	Address/Contact

Questionnaire Four: Other

What other people did you have a sustained working relationship with in the field of curriculum?

Name	Importance in Curriculum Field	Working Relationship	Address/Contact

APPENDIX B

INTERVIEW QUESTIONNAIRE: TYLER MENTOR-STUDENT RELATIONSHIPS

## INTERVIEW QUESTIONNAIRE

## TYLER MENTOR-STUDENT RELATIONSHIPS

1. Name \_\_\_\_\_
2. Address \_\_\_\_\_
3. Present Position \_\_\_\_\_  
\_\_\_\_\_
4. Affiliations with curriculum--organizations and activities in the past and at present  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. Were you a student of Ralph W. Tyler? (circle one) Yes No
6. In what years were you his student? 19\_\_ to 19\_\_ At what University? \_\_\_\_\_
7. What degree were you pursuing? \_\_\_\_\_
8. What courses did he teach in which you were enrolled? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. Were you enrolled in the famous Education 360 from which Basic Principles of Curriculum and Instruction developed? (circle one) Yes No If Yes, please elaborate on the experience and your involvement.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



15. Please identify your major publications and identify Tyler's intellectual influence on each work or in general?
  
  
  
  
  
  
  
  
  
  
16. What was the influence of Tyler's rationale on your curriculum theory? How did his principles of curriculum by objectives, or his principles of instruction on selecting and organizing learning experiences, or his principles of evaluation influence your thinking on curriculum?
  
  
  
  
  
  
  
  
  
  
17. What is your curriculum theory? Have you developed a new model? Explain.
  
  
  
  
  
  
  
  
  
  
18. Giroux, Penna, and Pinar in their text, Curriculum and Instruction have "three perspectives on curriculum": Traditionalists (Tyler), Conceptual-Empiricists (Bruner), and the Reconceptualists (Pinar). In which theoretical group do you place yourself? Explain.

19. Blaine Worthen and James Sanders in their text, Educational Evaluation: Theory and Practice, classify evaluation into three camps: (1) Decision-Objectives Strategies (Tyler), (2) Decision-Management (Stufflebeam), and (3) Judgmental (Stake and Scriven). Have you been involved in any evaluations? If so with which of the three camps are your practices most affiliated?
20. Have you developed an evaluation model? Explain.
21. Tyler's rationale has been criticized over the past thirty years. What is your view of the value of his model? His contribution to curriculum theory?
22. Would you please identify Tyler's critics and the titles of their publication/article in which it can be found.





APPROVAL SHEET

The dissertation submitted by Marie Kirchner Stone has been read and approved by the following committee:

Dr. Allan Ornstein, Director  
Professor, Curriculum and Instruction, Loyola

Dr. Gerald Gutek  
Professor, Foundations and History and  
Dean, School of Education, Loyola

Dr. Diane Schiller  
Assistant Professor, Curriculum and Instruction, Loyola

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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Date

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Director's Signature

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12/4/84

Date

Allan Ornstein

Director's Signature