1986

Interdisciplinary Research Methodology for Secondary Level Social Studies: A Teaching Unit Concerning the Holy Shroud of Turin

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Then said a teacher, Speak to us of Teaching.

And he said:

No one can reveal to you aught but that which already lies half asleep in the dawning of your knowledge.

Teachers who walk in the shadow of the temple, among their followers, give not of their wisdom but rather of their lovingness.

If they are indeed wise they do not bid you enter the house of their wisdom, but rather lead you to the threshold of your own mind.

Kahlil Gibran
Adapted from The Prophet
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ABSTRACT OF THE DISSERTATION

INTERDISCIPLINARY RESEARCH METHODOLOGY FOR SECONDARY LEVEL SOCIAL STUDIES:
A TEACHING UNIT CONCERNING THE HOLY SHROUD OF TURIN

In the past decade, numerous educational leaders have been critical of the quality of achievement of the educational system of the United States. Declining scores on standardized tests and the Scholastic Aptitude Test, illiteracy and the inequality of educational opportunities for America's youth were a few of the concerns documented by educational leaders.

In an effort to correct some of the existing problems, reform measures have been delineated by various commissions and educational authorities. The use of interdisciplinary curriculum, particularly in Social Studies, was among the suggestions for improving the quality of education. The purpose of this study was to present historical research concerning the Holy Shroud of Turin which could be used to demonstrate the development of an interdisciplinary curriculum approach suitable for use by instructors of secondary level Social Studies.

An historical methodology research design was chosen to indicate the techniques utilized in gathering data concerning the Shroud of Turin. Data for the teaching unit
concerning the Holy Shroud was acquired from a variety of sources. Public, university and college libraries were contacted for pertinent materials and the investigator's personal library and files also contained materials related to the Holy Shroud. Written and oral communications with renowned sindonologists yielded invaluable information for this study. Individuals whose Religious Orders, had, at one time, housed the Holy Shroud also proved to be valuable sources of information.

As a result of this extensive research, an interdisciplinary teaching unit concerning the Holy Shroud of Turin was presented. Further, the techniques, skills, tools, and information necessary for use by educational practitioners who wish to integrate interdisciplinary learning into their classrooms were presented. In conclusion, recommendations were made for consideration by educators as a means of improving the curriculum, particularly in relationship to secondary level Social Studies.
CHAPTER I
INTRODUCTION AND STATEMENT OF THE ISSUE

In the past decade, numerous educational evaluators and researchers have been critical of the quality of the achievement of the students within the educational system of the United States. For example, the National Commission on Excellence in Education, in its report, A Nation at Risk,¹ painted a concerned portrait of American schools. The Commission wrote that statistics related to American education indicated that illiteracy is rampant among Americans; students' average scores on standardized tests are lower in the 1980s than in 1957 when Sputnik was orbited; the test scores of American students compare unfavorably with scores of students from other industrialized nations. Additionally, the Commission cited factors relating to the overall decline of the average score achieved by students on the Scholastic Aptitude Test (SAT). Furthermore, the Commission noted that the decline of SAT scores considered to be superior (650 or higher of a possible score of 800), were further indices of the decline of achievement in a number of areas in American secondary schools. Moreover, the Commission cited declines in science achievement, the increase of remedial mathematics classes at the college level and the inability to utilize

¹
"higher order" intellectual skills, as overt indicators of the decline in achievement of American education.\cite{2}

In addition to the findings of the National Commission on Excellence in Education, the Paideia Group,\cite{3} composed of educators who met over a seven year span, has been critical of the educational system of the United States. The Paideia Group issued the \textit{Paideia Proposal}\cite{4} which, in part, stated that the goals of an American school included providing

\begin{quote}
"equal educational opportunity not only by giving to all its children the same quantity of public education - the same number of years in school - but also by making sure to give to all of them, all with no exceptions, the same quality of education."
\end{quote}

In the opinion of the Paideia Group, the American educational system has met with partial success in regard to educational opportunity: The goal of giving children equal education in terms of quantity has been reached; the goal of equal quality during the twelve years of schooling has not been reached.\cite{6}

In an effort to correct some of the existing problems within the American educational system, the \textit{Paideia Proposal} delineated reform measures. In part, the reforms proposed by the Paideia Group included the abolition of the multi-track system and its replacement with a one-track system of schooling, the abolition of specialized classes and vocational preparation. Further, the Paideia Group proposed the instituting of schooling which is "general and
liberal" because "it prepares our children to be good citizens and to lead good human lives."

It should be noted that national, state and local educational commissions continue to search for the elusive solution to rectify the ills that plague the American educational system. During that quest, numerous task forces on education made major recommendations concerning reform. For example, the authors of A Nation at Risk proposed that secondary level graduation requirements be augmented nation-wide which would strengthen academic achievement among American high school students. In order to graduate, students would have to demonstrate proficiency in English, Social Studies, Science, Mathematics, and Computer Science. For those students planning to enter college, the authors recommended taking two years of foreign language during their high school program. Additionally, Mortimer Adler, who on behalf of the Paideia Group wrote the Group's recommendations, expressed the belief that curriculum should be diverse in subject content. He proposed that no electives should be offered and that all students should take an identical three-dimensional curriculum. The first of those three areas would concentrate on the students' acquisition of organized knowledge through the study of humanities-oriented subjects, mathematics and science and the social studies. The second academic area of Adler's proposal emphasized the
development of intellectual and learning skills through classes such as reading, writing, calculating and observing. The third and final area of Adler's proposal was designed to expand upon student values through a Socratic teaching approach.\textsuperscript{10} Moreover, the College Entrance Examination Board in its study, \textit{Academic Preparation for College: What Students Need To Know and Be Able to Do},\textsuperscript{11} recommended that curriculum competencies be achieved through the development of specific intellectual skills which the study detailed. The reformers' recommendations, therefore, emphasized that specific guidelines be established by curriculum leaders in order to implement the recommendations expressed by such educational commissions as the National Commission on Excellence in Education and the Paideia Group.\textsuperscript{12}

One significant study of secondary education was funded by the Carnegie Foundation for the Advancement of Teaching. The Trustees commissioning the Carnegie Study agreed that high school education had "been weakened by reduced support, declining public confidence, and confusion over goals."\textsuperscript{13} Further, Ernest L. Boyer, the president of the Carnegie Foundation for the Advancement of Teaching, suggested that a large abyss existed between "school achievement and the task to be accomplished."\textsuperscript{14} Boyer concluded that the need for reform is justified and that the "battle for the future of America"\textsuperscript{15} must be fought in
the public schools by pursuing a carefully delineated framework for reform. A summary of Boyer's guidelines showed that they encompass the following areas: Goals; curriculum; teachers' teaching and learning; technology; structure; school leadership; campus-community ties; community support.\textsuperscript{16}

In addition to the guidelines presented by Boyer, he also proposed a "core of common learning"\textsuperscript{17} designed to "provide education of high quality for all students."\textsuperscript{18} Boyer proposed that language, history, civics, science, mathematics, technology, health, a vocations seminar, and a senior project done independently, be a part of each student's academic preparation. Within each subject area, differing numbers of courses would be required. For example, language courses would be required in five areas and three courses would be required within the history component of Boyer's recommendations. Boyer's concerns for curriculum development included a perceived need for clarification of educationally-related goals and a need to see curriculum in the broad context of global awareness. In those regards, Boyer's report coincided with reports issued by other national commissions, in calling for a core curriculum.

The need for a core curriculum for American students also was expressed by educator John I. Goodlad. In his report, \textit{A Place Called School}, Goodlad proposed that a core
curriculum be established, not of common courses, however, but of common concepts, principles, skills, and reasoning skills. Goodlad believes that those core concepts should be learned through courses in the "five fingers of human knowledge and organized experience" which Goodlad defines as being the arts, vocations, society and social studies, language and literature, and mathematics and sciences. Goodlad further states that this core curriculum will alleviate the problems present in the American educational system which are declining test scores, lack of parental and societal support, lack of curricular goals and lack of leadership among educators. Further, Goodlad perceives additional problems in the schools as evidenced by declining SAT scores, lack of discipline, mandatory busing, lack of resources, inadequately trained teachers, and reduced levels of literacy. Goodlad, then, concurs with the majority of education reports encouraging curriculum reform which have been published within the past decade.

In conjunction with the preceding recommendations for achieving educational reform, Jo Ann Cutler Sweeney and Gloria Contreras believe that Social Studies curriculum leaders may become pivotal change agents in the vanguard of educational leaders who must re-channel the American educational system from its current state into an era of excellence. In that regard, Social Studies curriculum
leaders may, therefore, have an opportunity to focus upon the totality of the Social Studies domain. That domain refers to the subjects which instruct students about the relationship people have with their social environment as well as with their physical environment. The purpose of Social Studies curriculum, therefore, is seen as the development of "informed, ethical and effective citizens" who understand their "intellectual inheritance and their civic responsibilities."

In the past, Social Studies traditionally have been construed to include history, political science, economics, sociology, geography, and anthropology. However, recent trends in the Social Studies curriculum encompass a broader array of subjects, including psychology, law, women's studies, minority studies and global awareness. Such a profusion of disciplines provides the learner with an opportunity to become knowledgeable in various fields. This expansion of disciplines within the Social Studies provides cohesiveness for the educator who is providing teachers with diverse interdisciplinary curriculum. Additionally, the Social Studies is an avenue in which students may be presented with values held important in both their own culture as well as in the cultures of persons in all areas of the world.

John Goodlad, as a leader in curriculum research, stresses the need for the Social Studies curriculum to
emphasize an understanding and appreciation of cultures different from ours and to see American culture as one society among numerous societies, all of which have an interdependence upon one another. The acknowledgement of diverse values will allow the student not only to become a valuable citizen within his or her own society, but also to become a contributing citizen of global society. This awareness of the "interdependent world" should be compounded with an awareness of futurity. To achieve that end, this global view may be presented by educators through an interdisciplinary curriculum perspective.

Furthermore, William Dobkin declares that the Social Studies is "a dynamic discipline because it relates to an ever-changing world society." To insure that this dynamism is apparent to both teachers and students, it becomes incumbent upon the curriculum leaders of the Social Studies to strengthen the Social Studies curriculum to be presented to the educational instructors of America's youth. Additionally, the strengthening of the Social Studies curriculum underscores the need for the inclusion of practical knowledge. In order to provide guidelines for Social Studies curriculum writers, the National Council for the Social Studies has provided nine delineated curriculum guidelines for the Social Studies. Among those guidelines is one which emphasizes the need to include a practicality within the material presented.
practicality, the strength and value of the Social Studies curriculum will be undermined, because classroom practitioners desire functional materials.

The recommendations given by various educators for strengthening the Social Studies curriculum have stated the need for studying history. History is seen as being "central to all fields of the humanities" and as "a synthesizing discipline." As such, the value of history is underscored by its frequent inclusion in what is referred to by educational reformers as the "core curriculum." In that regard, Ernest Boyer, in his report, High School, stated that he believed history should be part of the core curriculum and should involve a study of United States history and either Western Civilization or Non-Western Civilization. In addition to their overall recommendations concerning the curriculum, the authors of A Nation at Risk specifically recommended three years of Social Studies which incorporated the study of history in order to facilitate an understanding of "both ancient and contemporary ideas that have shaped our world." Likewise, Mortimer Adler espoused the need for studying history in a "sequential and systematic" manner. Historical instruction allows students to "step into another time and place and to experience it as a whole." As such, the inclusion of history in the curriculum may place emphasis on the skills required to research history.
Without that emphasis, the student will not be able to experience fully the flavor of historical studies. Since history is deemed by the previously mentioned educational leaders and authors to have value, the merit of history and its placement within the curriculum should be noted by curriculum leaders in their development of curriculum.

Educators involved in the development of curriculum may find it helpful to remember that historical research could be of primary concern to teachers regardless of their academic area of expertise because it provides the link between subjects of seemingly diverse fields. Since history encompasses many disciplines, it "serves as an excellent medium for handling the interrelationship of human existence." A cogent understanding of this "interrelationship" can be achieved through historical research which effectively utilizes interdisciplinary methodology. It is through historical research that interdisciplinary methodology can be utilized effectively. For example, chemistry is a science utilizing experimental methodology, yet through historical research, chemists of the past are known, and their scientific contributions are known to present chemists and will be preserved for future generations of chemists. Likewise, Charles Darwin's studies while he was on-board the Beagle have scientific implications. The findings and research resulting in his theory of evolution have had vast ramifications in history,
anthropology, religion, and philosophy. Thus, it is the historian who has provided the insightful background through which numerous disciplines have advanced in knowledge. The historian must rely heavily on precise research skills if insightful interdisciplinary background information is to be achieved.

The awareness of the need to emphasize interdisciplinary studies and Social Studies, particularly history, has been received well by historians and those persons who prepare history curriculum for teaching. The role of the historian is diverse and widespread. The noted French historian, Marc Bloch, believed that an historian should observe, analyze, explore, criticize, and entertain. In addition to Bloch's concepts of the role of the historian is the view of the American historian, Barbara Tuchman who sees the historian as a distiller of information, an artist, and an interpreter. Another American historian, Robin W. Winks, views the role of the historian as analogous with that of the detective; that is, one who collects, interprets and explains facts. Winks further perceives the historian as a teacher, researcher and writer. Moreover, James West Davidson and Mark Hamilton Lytle concur with Wink's concept of the historian as detective.

Since historians have been viewed as being multi-talented persons with numerous professional
responsibilities, it would appear that historians would be motivated to solve historical enigmas or to shed light on historical events that lack substantial documentation. In that regard, historians should consider utilizing a multidisciplinary approach to reach tentative conclusions to historical enigmas.

Most historians relish an historical mystery and the opportunity to solve it, thus adding to the large mosaic of human knowledge. Many classic examples of the historian as detective can be found in history. For instance, the archaeologist Howard Carter solved the mystery of the boy-pharaoh, Tutankhamen, when the young monarch's tomb in the Valley of the Kings was discovered in 1922. Another archaeologist, Heinrich Schliemann, proved that the legendary Troy existed and that the Iliad and Odyssey of the blind bard, Homer, were true. Other historical mysteries have been solved by Thor Heyerdahl's successful re-creation of ancient mariner exploration. His classic voyages onboard the Ra, the Kon-Tiki, the Tigris, and the Brendan have added to the knowledge which we possess concerning the capabilities of ancient seamen. Historians face numerous unsolved historical mysteries: Is Arthur's Camelot fact or fable? Did Richard III murder his two nephews in order to usurp their claims to the throne of England? Did the Norsemen land in North America centuries before Columbus sailed from Spain for the
New World? Those elusive mysteries have yet to be resolved. However, historians continue to search for clues.

In order to search for historical clues, an interdisciplinary approach is suggested by historian Robin W. Winks. For centuries, historians have pondered the significance of Stonehenge. Additionally, archaeologists have attempted to determine the capability of the Chinese to have explored the American west coast as early as the fifth century. Likewise, archaeologists and anthropologists have endeavored to decipher the sudden collapse of the Mayan empire. Numerous researchers from various academic disciplines have speculated on the existence, fate and subsequent demise of Atlantis. Such captivating and multi-disciplinary enigmas surely should pique the curiosity of both teachers and learners. To that end, curriculum leaders may provide an opportunity to help teachers present those mysteries to their students.

In fulfilling curriculum needs for students and teachers, a dilemma may arise for curriculum designers. This dilemma pertains to the teacher's research competencies in obtaining data related to historical mysteries. Frequently teachers are unaware of methods available to obtain factual information about topics which are not routinely covered in textbooks. For example, topics of an interdisciplinary nature readily provide
students with the opportunity to explore the connection concerning the diverse subjects which they have studied, yet teachers rarely utilize an interdisciplinary approach in their methodology. For instance, numerous artifacts of renown could be studied efficaciously from an interdisciplinary framework. Two examples from American history and two examples from a global approach follow to demonstrate this concept.

One example from American history is the Statue of Liberty. In 1986, the Statue of Liberty centennial is being celebrated. An interdisciplinary study of Lady Liberty provides an opportunity to focus on curriculum involving architecture, art, French history, American history, Franco-Anglo relations, immigration studies, literature about the Statue of Liberty, as well as numerous related areas.60 A second example from American history is the Brooklyn Bridge. In 1982, the centennial of the Bridge was commemorated. A study of the Brooklyn Bridge might focus on curriculum concerning engineering, architecture, social implications of the persons affected by the Bridge's presence, and other Bridge-related topics. Two internationally significant and well-known monuments which offer opportunities to focus on interdisciplinary learning are the Eiffel Tower in Paris and the Great Pyramid near Cairo. The list of possible examples is limited only by the teacher's imagination and creativity.
STATEMENT OF THE ISSUE:

Educational researchers stress the responsibility of curriculum leaders to provide tools which fellow educators need to present meaningful and relevant materials. The purpose of this research is to present historical research concerning the Holy Shroud of Turin in order to demonstrate the development of an interdisciplinary curriculum approach for use in secondary level Social Studies classes.

An historical enigma worthy of interdisciplinary research first came to this researcher's attention in a one-page article of the December 10, 1973 issue of Newsweek. The article served as an introduction to the Holy Shroud of Turin by presenting a brief historical overview of the Shroud and a reference to the possibility that the Shroud was the burial cloth of Christ. This author's curiosity was piqued and led to avocational investigative research concerning the Shroud, an internationally recognized artifact. As the author's contacts with renown sindonologists multiplied, it became apparent that a study of the Shroud encompasses multidisciplinary fields and that the Shroud has significant interdisciplinary ramifications. Since the Holy Shroud of Turin is an object which has provided sindonologists within multiple disciplines an opportunity to add knowledge to the Shroud's history, the investigator desired to develop an interdisciplinary curriculum guide concerning the Shroud.
that would be useful to fellow Social Studies practitioners. For example, philosophers might choose to study the nature of man in relationship to the ordeal of crucifixion and the manner of man who would inflict that form of execution upon another man. Additionally, biologists might wish to study the Shroud to determine if the features of the image anatomically are correct. Further, scientists might elect to study the Shroud in order to date the shroudal material. Moreover, historians might prefer to view the Shroud's historical sequence as an area of research interest. Botanists may choose to study the pollens imbedded in the material to ascertain the various geographic locations where the Shroud has been retained. Thus, it can be seen that the interdisciplinary avenues of research available to sindonologists are plentiful. Therefore, teachers within numerous disciplines may choose to utilize the data obtained by Shroud researchers to introduce interdisciplinary learning into their classrooms. This introduction of interdisciplinary learning might employ the Shroud as the artifact used, or some other artifact of interdisciplinary significance could be used as the subject to be studied.

In pursuing interdisciplinary research concerning the Shroud of Turin, this researcher is intrigued by two primary factors. First, the Holy Shroud of Turin is a remarkable artifact which has garnered attention from
diverse academic disciplines. The focus on its possible use as the burial cloth of Jesus has netted attention from a wide spectrum of organizations and from devoutly religious persons, as well as from non-religious persons. For each person ready to confess belief in the authenticity of the Shroud, there is a committed non-believer who is ready to offer evidence against the Shroud's authenticity. It is that clash of contradictory and differing positions which this author believes lends credence to studying the Shroud from an interdisciplinary perspective.

Second, the interdisciplinarity of the Shroud is evidenced by studies conducted on the Shroud from the perspective of various academic disciplines: History; Archaeology; Art; Physics; Chemistry; Theology; Medicine; Anatomy. The rationale for selecting the Holy Shroud of Turin as an example of an interdisciplinary curriculum is that the research offers an historical study as a curriculum example to utilize various skills of the historian and to share the development of those skills with fellow educators. This example primarily will emphasize secondary level education, although the research skills propounded are viable across the curriculum spectrum. The research will be interdisciplinary in nature and the researcher will apply the research steps necessary for teachers to prepare and to present interdisciplinary studies. Mastery of those elementary research skills will
allow teachers to present innovative curriculum to their students.  

LIMITATIONS OF THE STUDY:

Research, whether quantitative or qualitative in nature, has certain limitations. In the field of historical research, obtaining primary sources is in itself, a limitation confronting the historian. To have the primary sources translated accurately and objectively is a further limitation affecting the study. In addition, forged documents, missing links between related documents, fragmentary pieces of evidence, and low quality documents are also specific limitations facing the historian. Moreover, documents in which the author has taken literary or artistic license may plague the historian.

This study primarily is limited to documents which have been translated into English. This limitation is designed to permit easier teacher facilitation of this research and to permit similar duplication of research by the teacher. When translated documents are used, the translator's credentials will be determined prior to using sources which have been translated. Documents in foreign languages will be translated by qualified translators within San Diego county. Additionally, the translation services available through the Association of Scientists and Scholars International for the Shroud of Turin (ASSIST) will be utilized. Moreover, the author will note
discrepancies within a document or between documents and will take any such discrepancies into account. For instance, a significant discrepancy which occurs in Shroudal research concerns the spelling of the surname of the original owner of the Shroud. Frequently, the family name is spelled as de Charny, yet, in some documents, it is spelled as de Charnay and de Charney. The difference in spelling seems unworthy of lengthy semantical arguments, yet sindonologists have not determined conclusively whether or not the two spellings refer to one family or to two different families, or to different branches of the same family.

One critical limitation concerning this study involves the authenticity of the Shroud as the cloth in which Jesus was buried. It is not the expectation nor the purpose of this researcher that persons reading this historical research will be convinced that the Shroud is, or is not, the burial cloth of Christ. That decision must be made on an individual basis and the researcher will not attempt in this research document to sway persons to either decision.

When the historian has obtained documents applicable to the research, the historian will use two tests to probe the authenticity of the documents: Internal criticism, to ensure against the usage of biased or subjective perspectives, and external criticism, a second standard against which an historian measures documents.68
External validity includes questioning the document's origins to determine if the document is an original, a copy or a forgery. Further questions might include determining the authorship of the document, where the document was written and the circumstances under which the document was written. Moreover, external validity concerns determining whether more than one copy of the document exists and if so, whether or not there are discrepancies in the copies. Further, the historian uses external validity to determine if the document contains anachronisms. In short, if historical accuracy and objectivity are to be achieved, the historical researcher cannot allow himself or herself to be deluded.

The test of internal validity involves the historian's critique of a document. For example, an historian would want to check the credibility of the author: Could the author have experienced the event in the manner which he or she claims? Could the author have been present where he or she purported to be? Did the author have verifiable expertise relating to the event being described? What was the purpose for which the author was writing? How much time had elapsed between the event and the author's writing? Is the evidence presented in the source corroborated by any other contemporary sources? Does the author seem to have presented a generally credible source? In sum, the historian must analyze the documents being used
for internal validity prior to accepting the material contained within the document. The ultimate determinant as to whether or not the historian considers usage of a document, is painstaking scrutinization of both the external and internal characteristics of a document.71

**DEFINITION OF TERMS:**

In order to facilitate common conceptualization of information, the following terms are defined:

**CURRICULUM:**72

Curriculum is the course of study, the instructional materials and the experiences which are designed to achieve broad goals and objectives. The purposes of curriculum are grounded in a viable theoretical framework. That theoretical framework involves the establishment of curriculum criteria, which are the underlying guidelines upon which curriculum decisions are based. The criteria might include cognizant awareness of the need for flexibility, allowance for individual differences, the teaching of values, etc. Planning of curriculum implies that curriculum is thoughtfully and rationally delineated, based on experience, theory, research, past methodology, and ideology.

**GOALS:**73

Goals encompass the desired end product. The goals may be global in content and are determined frequently for
societal expectations. Additionally, goals of the curriculum leader should concern futurity.

**HOLY SHROUD OF TURIN:**

The Holy Shroud of Turin is a linen cloth approximately fourteen feet long and four feet wide. It bears the anatomically correct image of a man who was crucified. The cloth traditionally has been believed to be the cloth in which Jesus was buried following His crucifixion.

To date, no evidence concerning the Shroud has been unearthed which would disprove the theory that Jesus is the man whose image is visible. Conversely, no irrefutable evidence has been found to support the contention that the cloth was wrapped around the crucified Jesus.

**IMAGE OF EDESSA:**

In 544, a cloth which had on it the image of a man's face was discovered in a brick wall in Edessa (now known as Urfa, in southern Turkey). This image was considered to be that of Christ's head or face. The cloth was considered to possess miraculous powers.

**INTERDISCIPLINARY:**

Interdisciplinary refers to any program which encompasses more than one discipline. Interdisciplinary learning is seen as an opportunity to integrate material in
a broader context than would be possible through the study of an isolated subject, topic or discipline.

**KNIGHTS TEMPLAR:77**

The Knights Templar were a Religious Military Order formed by St. Bernard of Clairvaux, who preached the Second Crusade. The purpose of this Religious Military Order was to escort Christian pilgrims safely through the Holy Lands, which were controlled by the Moslems. The Templars took the three traditional monastic vows of poverty, chastity and obedience. The Order was dissolved for political purposes in 1310 by Philip IV of France. Charges of treason were advanced and the Templars' Master and numerous other Templars were executed.

**OBJECTIVES:78**

Objectives involve the purposes which the curriculum designers desire the curriculum to achieve. Objectives are the means through which goals may be realized and consequently, must consider societal expectations. Objectives are also an integral part of curriculum criteria.

**PRIMARY SOURCE:79**

A primary source is the testimonial accounting of an event by an eye-witness to that specific event. The primary source is a valuable tool with which researchers
work because none of the facts surrounding a specific event have been interpreted by non-witnesses. Primary sources are essential to the researcher since an eye-witness account is information that is "underived [and] first-hand."

SECONDARY SOURCES: 80

Secondary sources are used heavily by the typical researcher. Those sources include information which is not accumulated through first-hand experience of an eye-witness. Secondary sources are in essence a compilation of information contained within primary sources. Researchers utilizing secondary sources should realize that the facts contained within the source are the interpretation of primary sources by another researcher. Thus, bias, either intentional or unintentional, may be present within a secondary source.

SINDONOLOGY: 81

Sindonology is the study of the Holy Shroud of Turin. The word sindon is Greek and it means shroud. Logos is Greek and it means "study of."
CHAPTER I
NOTES


On August 26, 1981, the then Secretary of Education, T. H. Bell, directed a task force to present a report on the quality of education in the United States. On April 26, 1983, the eighteen members of the National Commission on Excellence in Education released its report, entitled A Nation at Risk: The Imperative for Educational Reform. The commission members were chaired by David P. Gardner and the Vice-Chair was Yvonne W. Larson. The other members of the Commission were William O. Baker, Anne Campbell, Emeral A. Crosby, Charles A. Foster, Jr., Norman C. Francis, A. Bartlett Giamatti, Shirley Gordon, Robert V. Haderlein, Gerald Holton, Annette Y. Kirk, Margaret S. Marston, Albert H. Quie, Francisco D. Sanchez, Jr., Glenn T. Seaborg, Jay Sommer, and Richard Wallace.

2 Ibid., pp. 8-9.

3 The Paideia Group was chaired by Mortimer J. Adler and was comprised of twenty-two members. The Group was funded by the John D. and Catherine T. MacArthur Foundation whose support allowed the members to initiate their research. The members of the Paideia Group were Jacques Barzun, Otto Bird, Leon Bostein, Ernest L. Boyer, Nicholas L Caputi, Douglas Cater, Donald Cowan, Alonzo A. Crim, Clifton Fadiman, Dennis Gray, Richard Hunt, Ruth B. Love, James Nelson, James O'Toole, Theodore T. Puck, Adolph W. Schmidt, Adele Simmons, Theodore R. Sizer, Charles Van Doren, Geraldine Van Doren, and John Van Doren.


5 Ibid., p. 4.

6 Ibid., p. 6.

7 Ibid., p. 18.

8 Ibid., p. 20.

9 A Nation At Risk, p. 24.


In the Spring, 1980, the Board of Trustees of the Carnegie Foundation for the Advancement of Teaching approved a proposal to study the secondary education system of the United States. The twenty-eight members of the National High School Panel were Myron Atkin, Beverly Joyce Bimes, Derek Bok, Anne Campbell, Joan Ganz Cooney, Lawrence A. Cremin, Alonzo Crim, Walter Cronkite, Emeral A. Crosby, Patrick L. Daly, Norman Francis, Mary Hatwood Futrell, James R. Gaddy, Peggy Hanrahan, Leslie Koltai, Marigold Linton, William M. Marcurren, Ralph McGee, James L. Olivero, Rayma C. Page, Alan Pifer, Lauren Resnick, Tomas Rivera, Adele Simmons, Virginia V. Sparling, Robert R. Wheeler, W. Willard Wirtz, and Daniel Yankelovich.

Simmons, Cremin, Crim, Koltai, Linton, Pifer, Resnick, and Rivera are also Trustees of the Carnegie Foundation for the Advancement of Teaching. The final report of the Panel was prepared by the President of the Carnegie Foundation for the Advancement of Teaching, Ernest L. Boyer, who released the report in 1983.


15. Ibid.

16. Ibid., p. 7.

17. Ibid., p. 116.

18. Ibid.


John Goodlad's research efforts for A Place Called School were conducted under the patronage of the Institute for the Development of Educational Activities, Inc. and the
Laboratory in School and Community Education, affiliated with the Graduate School of Education at the University of California at Los Angeles. The advisory committee to Goodlad's research consisted of the chairman, Ralph W. Tyler and members Gregory Anrig, Stephen K. Bailey, Lawrence A. Cremin, Robert K. Merton, and Arthur Jefferson.

20Ibid.

21Ibid., pp. XV-XVI.

22Ibid., p. 13.

23Ibid., p. 14.


interdisciplinary nature of Social Studies.

30 Goodlad, A Place Called School, p. 213.


35 Allen, Education In The 80s, p. 18.

36 Downey, History In The Schools, p. X.

37 Ibid., p. 11.


41 Downey, History In The Schools, p. 11.

Allen, Education In The 80s, p. 43.


Ibid., p. 138.

Ibid., p. 55.

Ibid., p. 79.

Ibid., p. 5.


Ibid., p. 18.

Ibid., p. 6.


Ibid., p. XIV.


See, for example, note 52 above, for Winks' analogy of the historian as detective.


57 See Geoffrey Ashe, The Discovery of King Arthur (Garden City, New York: Doubleday, 1985) for one historian's explanation of the Camelot legend. Ashe approached his research by utilizing the historian's role as detective.


60 For an overview of teaching aids concerning the Statue of Liberty, see Liberty Centennial Student Campaign Manual (New York: The Statue of Liberty Ellis Island Centennial Commission, 1984). For additional information concerning the Statue of Liberty, see Joel Sleed, "The Lady's Light Led Millions to Ellis Island," The Tribune, July 4, 1985, p. C-1, c. 1 and "Has Miss Liberty Towered in New Jersey All This Time?" The Tribune, August 12, 1985, p. A-14, c. 5.


63 A sindonologist is a person who studies the Shroud.

64 This innovative curriculum must not be viewed as enrichment studies, but rather as being fundamental and necessary. Only through vigorous efforts to improve curriculum will the American educational system be improved.

The American historian Henry Steele Commager provides insight into a philosophical limitation which faces the historian. Commager refers to the "role of fortuity" (p. 4) as being what he calls a "sobering limitation" (p. 44). He reminded historians that what sources are available are only a small part of the totality of sources. He points out that Polybius wrote forty volumes of his Histories and that only five have survived; that Livy's History of Rome had 142 books and that thirty-five have survived. Survival sources, according to Commager, are a matter of luck (p. 4). See Henry Steele Commager, The Nature and Study of History (Columbus, Ohio: Charles E. Merrill Books, Inc., 1965).


67 Most of the documents concerning the Shroud were translated into English during the twentieth century. However, some documents related to the Knights Templar were available in English during the mid-nineteenth century.

68 Internal criticism also is referred to as internal validity. External criticism also is referred to as external validity.


72 J. Gaylen Saylor and William M. Alexander, Planning Curriculum for Schools (New York: Holt, Rinehart and


78 See Olivia, Developing the Curriculum, p. 154.


CHAPTER II
REVIEW OF THE LITERATURE

Educators increasingly are turning to interdisciplinary curriculum as an alternative means of presenting information to students. Interdisciplinary studies are not to be construed as the panacea which will resolve all the needs in the American educational system. Rather, interdisciplinary methodology may be seen as a viable alternative to present methods used to educate America's youth. Interdisciplinary courses are seen by Robert R. Newton, S.J., as providing "coherence and a reassuring sense of the underlying unity of the educational process..." Further, Newton refers to the interdisciplinary curriculum as one of the "most persistently urged and consistently neglected efforts" which could enhance curriculum presentations. Newton advocates interdisciplinary classes so that students and teachers may see the unity of subjects and their relationship to each other. 

Interdisciplinary studies have both positive and negative factors which should be weighed by curriculum leaders before the introduction of interdisciplinary studies is a fait accompli. The majority of teachers are schooled in a specific discipline and are not the
recipients of an interdisciplinary education and consequently, may feel uncomfortable presenting interdisciplinary materials. With increasing demands on teachers, few teachers are able to keep abreast of the latest research in their specific discipline and it becomes more difficult for educators to keep current in an interdisciplinary atmosphere. Further, interdisciplinary courses require a profuse amount of preparation on the part of the participating faculty members, preparation time which may be difficult to allocate. 4

In addition to a lack of time for teacher preparation, Louis Barrilleaux and Edward L. Norman believe that teachers tend to ignore interdisciplinary learning because it "is difficult to promote" 5 and consequently, educators have returned to the traditional lecture approach. Barrilleaux and Norman continued their critique of the American education system by stating that the lack of interdisciplinary learning has led to "mistrust, insecurity and institutional thinking" 6 compounded with a decrease of identity, the self-perpetuation of hierarchies and a dearth of creativity. 7 Barrilleaux and Norman suggested introducing interdisciplinary learning into the educational system as a means of rectifying some of the existing problems. 8

Barrilleaux and Norman believe that the educational leaders of the American school system are willing to adopt
interdisciplinary learning and that the educational system currently contains four concepts which the authors referred to as "essentials" if interdisciplinary learning is to occur: All learners need a healthy self-concept; all learners must realize that life experiences are learning experiences; all learners must be prepared to examine content and method instead of exclusively relying upon what the instructor imparts; all learners must realize that learning is a life-long activity. Barrilleaux and Norman concluded that interdisciplinary learning is possible and that the survival of the American education system is dependent upon it.

Jean L. Pottle is an educator who concurs with Barrilleaux and Norman that interdisciplinary learning is needed and that it can provide a "solid foundation for learning." Pottle believes that students are unable to perceive the relationship between subjects because "they see different techniques, times and textbooks assigned to different subjects." Her solution to this problem is to recommend the introduction of interdisciplinary learning into the curriculum, even though that approach does require more time to plan and organize.

Pottle's belief that interdisciplinary learning can provide students with the capability to see relationships was echoed by Benjamin I. Troutman, Jr., who stated that the combining of disciplines leads to a "more complete and
coherent canvas of man - one that provides more power, penetration, and insight than any single isolated discipline can."\textsuperscript{15} Further, Troutman saw all disciplines as being "mutually reinforcing"\textsuperscript{16} and he believed that through an interdisciplinary approach, learners are able to "gain a broader and more comprehensive view of man."\textsuperscript{17}

In addition to the beliefs of Pottle and Troutman, Mary Cohen noted the problems facing persons who wish to implement interdisciplinary learning within the American educational system. Cohen saw the major stumbling blocks as inadequate teacher preparation, a lack of broad goals and guidelines by which to institute an interdisciplinary curriculum and a lack of funds with which to implement new educational programs.\textsuperscript{18} Cohen stated, however, that interdisciplinary learning "is a stage in the development of new disciplines"\textsuperscript{19} and that impediments to interdisciplinary learning will be transcended, ultimately so that "we will prepare youth and ourselves to understand and perhaps to shape the world."\textsuperscript{20}

The concept that the teaching of interdisciplinary studies could lead to influencing world events was seconded by Pat Watters who saw interdisciplinary studies as providing an "increasing awareness about global issues...and the community at large."\textsuperscript{21} Additionally, Watters perceived interdisciplinary learning as being analogous to "an umbrella stretching across all
disciplines." Watters saw the major problems facing educators desiring to incorporate interdisciplinary learning into the curriculum, as being teachers' hesitation to undertake presenting interdisciplinary studies and the lack of funding for such programs.

An educator who concurs with proponents of interdisciplinary learning who believe that relationships are amplified effectively, is Marjorie C. Miller. She sees the "ability to take disparate 'units' and to note that they are relevant to a wide variety of wholes" as a value of interdisciplinary curriculum. Further, Miller believes that traditional learning approaches impede students from making connections necessary to perceive the whole. To Miller, however, interdisciplinary learning "encouraged diversity" and allows learners "a unique mode of querying the world."

Further proponents of interdisciplinary learning are Barbara Hursch, Paul Haas and Michael Moore who present an interdisciplinary learning model which they believe would "loosen, although not discard, the shackles of the disciplines." Their model, they believe, eliminates the deficiencies of utilizing the traditional disciplines as the vehicle through which learning is transferred. Those deficiencies include ignoring some aspects of cognitive development, such as the ability to integrate or organize information from diverse disciplines; specialized terms
used in specific disciplines not being understood universally or used across disciplines. Their model, they maintain, would include integrative studies grounded in the learning theories of John Dewey, Jean Piaget and William Perry. Usage of the learning theories of those three educators would provide a common foundation upon which to base an interdisciplinary curriculum. That common foundation, according to the authors, would have several attributes: It would provide a skills-oriented approach to teaching; it would be applied to a wide range of topics; it would provide students with the tools with which to reflect upon material presented to them. Additionally, the authors present the teacher's obligation to develop interdisciplinary curriculum around concepts which are significant and which are related to more than one discipline. If more than one discipline is incorporated into the goals, the "students can challenge conclusions and eventually work toward a more comprehensive understanding of the problem at hand." According to Hursch, Haas and Moore, once students achieve the goal of challenging and reflecting upon information received, they no longer will be passive, but be capable of, and expected to, "think, challenge, infer, and synthesize disparate elements of information."

Earl J. McGrath concurs with Hursch, Haas and Moore that interdisciplinary work should have as its chief
purpose the task of integrating "relevant knowledge around a significant issue," but he believed that the Soviet launching of Sputnik in 1957 sounded "the death blow for integrated courses" because "experimental curriculum adventures [such as interdisciplinary classes]... were abandoned." McGrath, however, believes that there is room for optimism that interdisciplinary learning can be revived. McGrath believes that the leaders of the educational systems of the United States are moving toward a curriculum emphasizing "a broader education directed at the key human issues of our time." Additionally he maintains that Americans are desirous of having the skills necessary to handle societal issues such as "crime, pollution, political corruption, unemployment, inflation, and a host of other equally pressing matters of social policy" which will cause educational leaders "to conduct an incisive review of current educational policies and practices."

To help educators accomplish such goals, McGrath presents an overview of the steps needed for the introduction of interdisciplinary courses into the curriculum: The first step needed is the identification of the "major social, personal, and civic problems of the day." McGrath then believes that representatives of the academic departments which would be involved in those "problem areas" should meet to determine what aspects of
their disciplines would be helpful in shedding light on the topics. After common ground has been established, the task of designing a program which would address the issues needed to be accomplished. McGrath cautions that the program of instruction must avoid the "superficial treatment of complicated subjects," yet, he provided few suggestions concerning the development of the course, except to suggest that representatives of each department involved and an ad hoc committee of qualified members and administrators be involved in the program development.

M. Gordon Wolman is in agreement with numerous proponents of interdisciplinary learning concerning the difficulties of establishing an interdisciplinary curriculum. Wolman sees the problem areas as being multiple: Philosophical concepts; faculty involvement; students' interest; curriculum content; funding of the program; evaluation of the program. Like McGrath, Wolman believes that "society's needs appear to warrant continued multidisciplinary efforts despite the educational programs."

William H. Newell concurs with interdisciplinary learning supporters who believe "that the problems now faced by our society transcend the bounds of disciplines and that their solution requires the breadth of vision and the skills of synthesis and integration developed by interdisciplinary liberal education." Newell posits
several reasons why he believes that interdisciplinary courses are not widespread: Declining enrollment in schools; fiscal problems; student disinterest. However, Newell believes that those problems can be overcome, thus allowing interdisciplinary studies to emerge "in symbiotic relationship with the disciplines, rather than [being] competitive and antagonistic" for "interdisciplinary studies build directly upon the disciplines while offering their distinctive contributions." Newell believes that interdisciplinary studies are necessary in order to train students to see "the larger picture, to develop skills of integrative thinking or synthesis." As a consequence of the value of interdisciplinary learning, Newell believes that integrated studies will expand in the 1980s.

Kenneth D. Roose agrees with advocates of interdisciplinary curriculum who maintain that interdisciplinary learning provides insight into other disciplines and that interdisciplinary practitioners are "the most creative and advanced thinkers in the disciplines who pose cutting-edge questions." Additionally, Roose believes that practitioners in the interdisciplinary field are active in that area because of "their ability to see interrelations." Roose posed several difficulties which may face curriculum leaders who champion interdisciplinary learning. He believes that a lack of co-operation between departments might retard attempts to integrate the
curriculum. Additionally, he foresees problems with funding, faculty expertise or faculty willingness to teach interdisciplinary classes. The final difficulty which he predicts will cause a problem in introducing interdisciplinary curriculum is gaining administrative support because of the intricacies inherent in the execution of an interdisciplinary program.

Musafer Sherif and Carolyn Sherif present four theses concerning interdisciplinary learning. The Sherifs state that the need for interdisciplinary curriculum will continue; curriculum co-ordinators have failed to define the rationale and necessity for interdisciplinary courses; disciplines need each other to complement the knowledge of separate disciplines; most problems of implementing an interdisciplinary curriculum are minor in nature.

Edmund C. Short and Thomas J. Jennings, Jr. believe that a narrow view of curriculum causes educators and students to be isolated from the realities of the world in which they live. Consequently, Short and Jennings believe that an interdisciplinary approach which is "holistic and makes use of the collective effort of the disciplines" should be incorporated into the curriculum. That incorporation, according to the two authors, would allow for the optimum "inputs available in a complex, global society. It attempts to deal with the conjunctive domain in a way which separate disciplines cannot." Finally,
according to Short and Jennings, incorporation of interdisciplinary learning "compensates for global problems, change, information growth and changing truth by utilizing all available human resources."\(^{56}\)

Theodore J. Kowalski opines that an integrated curriculum has as its foundation the intent "to combine concepts, skills and generalizations from several disciplines"\(^{57}\) and that one of the major strengths of interdisciplinary learning is the "intended emphasis upon greater generalizations in learning and upon developmental processes..."\(^{58}\) Kowalski provides his list of possible hinderances for the implementation of an interdisciplinary curriculum and among those problems, Kowalski believes that teacher preparation, funding and lack of administrative support are foremost.\(^{59}\) In those regards, Kowalski concurs with the majority of proponents of interdisciplinary learning.

Georges Gusdorf postulates his theory that educators view interdisciplinarity "as a kind of epistemological panacea"\(^{60}\) and that interdisciplinary learning "sometimes seems more like a slogan...in the ideological debate [of scholars and educators]."\(^{61}\) Gusdorf believes that interdisciplinarity involves not the "juxtaposing, but rather the pooling of knowledge"\(^{62}\) which "focuses on the borders and intersections between disciplines"\(^{63}\) in order to provide "a point of convergence"\(^{64}\) between various
disciplines. Additionally, Gusdorf believes that interdisciplinary learning is valuable because it opens communications between different disciplines and allows for a mutually beneficial exchange of knowledge between various disciplines.\textsuperscript{65} Gusdorf cautions, however, against the reduction of knowledge within the numerous disciplines to what he refers to as "a lowest common multiple or a highest common factor."\textsuperscript{66} Rather, he states that interdisciplinarity should allow for the growth of the individual in a holistic manner and that the compartmentalization of knowledge could restrict the range of knowledge to which an individual could be exposed, particularly the knowledge which could be absorbed from "the multiplicity of individual vocations and the many different aspects of world cultures."\textsuperscript{67}

Another opinion concerning interdisciplinary learning is expressed by Arthur E. Garner who believes that there are three specific reasons why educators choose to implement interdisciplinary curriculum: To enhance the usage of equipment, resources and facilities; to use effectively the skills and talents of the faculty; to facilitate effective instruction.\textsuperscript{68} Garner continues his remarks by stating that interdisciplinary course planning involves careful planning, faculty co-operation and effective administrative leadership and support.\textsuperscript{69} Garner concurs with numerous supporters of interdisciplinary
curriculum who believe that there are difficulties in implementing interdisciplinary courses. Garner foresees problems in relationship to teacher expertise, funding, availability of appropriate instructional materials, and teacher incompatibility in planning mutual objectives and reaching mutual consensus concerning the philosophical parameters of the program. In conclusion, Garner states his belief that in the implementation of an interdisciplinary curriculum, the "gain will be worth the pain."

In regard to interdisciplinary learning, George Beltz and John Shaughnessy maintain that the major emphasis of interdisciplinary curriculum is the improvement of instruction. Beltz and Shaughnessy's views concerning obstacles in implementing interdisciplinary learning within the curriculum coincide with other major advocates of interdisciplinary courses: Teachers must be able and willing to teach interdisciplinary classes; careful planning must be involved; students must see the program as valuable. Additionally, the administration must be supportive and committed to the interdisciplinary program.

Concepts concerning interdisciplinary learning and its implementation into the curriculum are issues which have been addressed by Social Studies curriculum leaders. Richard E. Gross believes that one important aspect of
interdisciplinary learning in the Social Studies curriculum "is related to process and techniques." Gross thinks that too little time is spent within Social Studies classes on relational aspects of topics because teachers do not utilize varied methodology and teachers do not challenge students. Additionally, Gross maintains that Social Studies educators must "emphasize the development and acquisition of the key knowledges, skills, and attitudes" in order for Social Studies curriculum to "achieve their major impact on U. S. youth." Gross is of the opinion that Social Studies educators could achieve success within their field by utilizing interdisciplinary learning.

Another supporter of interdisciplinary learning is Joe B. Hurst who maintains that any methodology used within the Social Studies classroom should rely on a number of disciplines in order to help students learn concepts and relationships. Additionally, Hurst expresses his belief that teachers must be prepared and willing to conduct personal research in order to present interdisciplinary material to students. Hurst believes that through personal research, teachers can present material which includes "powerful, relevant generalizations" so that the Social Studies curriculum will not remain "devoid of powerful content..." Another proponent of the positive aspects of interdisciplinary learning is Raymond H. Muessig who
believes that interdisciplinary learning within the Social Studies could provide more flexibility in the curriculum. Muessig also believes that interdisciplinary learning would allow faculty expertise to surface, since teachers could present material which interests them. Muessig cautions Social Studies teachers who choose to approach their subjects from an interdisciplinary perspective not to add components to their curriculum and to view those additions as being interdisciplinary in nature. Rather, Muessig suggests that since "materials do not paste on or plug in," teachers should "infuse [materials], integrate [materials], or forget it." Among those who support an interdisciplinary approach in the classroom is Jonathon C. McLendon. He believes that the Social Studies "have become interdisciplinary to a considerable degree" because educators have seen interdisciplinary courses as a solution to the problems faced by Social Studies educators concerning the myriad topics that are needed to be included within the Social Studies framework of curriculum. McLendon views those numerous topics as being a part of the so-called new Social Studies, consisting of classes such as ecology, international relations and contemporary issues and he believes that a multidisciplinary learning environment best prepares students to assume their positions as citizens of the United States.
The Social Studies curriculum, according to Leonard S. Kenworthy, "lends itself best to integration" and it is the Social Studies curriculum which "needs to be enriched by other areas in the curriculum." Additionally, Kenworthy believes that the Social Studies can be combined effectively with curriculum related to science, health, art, music, and language arts. In conclusion, Kenworthy believes that "the opportunities for integration and correlation" between the Social Studies and those courses are plentiful.

According to Dale L. Brubaker, interdisciplinary learning in the Social Studies provides for an "integrated or unified approach" through which educators may present significant topics. Brubaker believes that for Social Studies to utilize interdisciplinary learning effectively, teachers should be proficient in one or two areas of the Social Studies disciplines, which he defines as sociology, anthropology, economics, political science, psychology, geography, and the field of history. If teachers possess that capability, Brubaker believes that students will learn more because of the diversity of information to which they will be exposed.

Although Geoffrey Partington is a proponent of interdisciplinary learning, he cautions Social Studies curriculum leaders against attempting to integrate the Social Studies curriculum in toto. He avers that it is
impossible for "all parts of the seamless robe of knowledge" to be examined simultaneously. Additionally, Partington cautions against attempts by Social Studies teachers to make forced connections within the curriculum in order to have the curriculum appear to be interdisciplinary in nature. Those "casual assemblages" according to Partington, are of "dubious value" and do not enhance the Social Studies curriculum, nor the students' learning atmosphere. Partington, therefore, advises that interdisciplinary curriculum planning involves the careful selection of materials and topics.

The link between acceptable curriculum and the success of interdisciplinary learning is further stressed by Len Herbst who maintains that it is the Social Studies curriculum which will allow for the integration of key social and societal issues into the learning experiences of students. Additionally, Herbst believes that Social Studies curriculum leaders are needed to prepare materials which will reflect the integrated wholeness of the Social Studies so that key concepts will be presented which will allow "children to develop understandings, skills, attitudes, and abilities to deal with human relationships and to solve social problems." If those key concepts are developed, as Herbst suggests, teachers will welcome the opportunity to present issues of societal
Anthony E. Conte and John D. McAuley are proponents of interdisciplinary learning in the Social Studies because "Social Studies is a multidiscipline science...[which] has the potential to expose students to major and significant concepts from diverse disciplines...." Those two adherents of interdisciplinary learning within the Social Studies curriculum believe that an on-going evaluation of interdisciplinary curriculum will allow for "the optimal use of multidisciplinary materials and ensures a continuum of learning." Additionally, Conte and McAuley believe that interdisciplinary learning within the Social Studies curriculum can be achieved best through the implementation of an Individually Guided Education (IGE) program. The IGE allows each student to progress at an individual pace and Conte and McAuley deem the IGE as the means "by which a multidisciplinary approach can be achieved" because "opportunities abound for the interfacing of curricular areas."

Based upon the current literature, it would appear that innumerable Social Studies teachers have experimented with interdisciplinary learning in their classrooms. Innovative educators have combined Social Studies curriculum with disciplines ranging from English to engineering. For example, stamp collecting has been used to teach history, biography, significant historical events,
language arts, science, geography, and art. The musical ballads of the contemporary Canadian musician Gordon Lightfoot were used by one educator to teach geography skills. Those skills included general geographical concepts, nautical charts, map annotation, map compilation, and weather maps. The teaching of medieval monasticism became the vehicle through which one educator presented information on medieval art, architecture and music. Additionally, information was presented by students on monastic Orders, hermits and saints, while other classmates painted windows to resemble the stained glass windows of medieval churches.

Other avenues of interdisciplinary learning have been used by Social Studies teachers to relate the value of archaeology to various Social Studies disciplines. Archaeology is seen within an interdisciplinary light, providing "hands on" educational experiences for students. One educator involved both a speech class and a drama class in conjunction with an archaeology class by having the drama and speech students videotape the archaeology dig. Additionally, the art classes were involved in the preparation of still photographs of the excavation. Another approach utilizing audiovisual materials involved the use of film and drama within the history classroom. By co-ordinating textbook topics with appropriate films such as a study of the Depression with the 1935 play, Waiting
for *Lefty*, and the 1937 film, *The River*, students were able to discern the impact of the Depression without having to rely completely on a textbook or teacher lectures.114

Language arts frequently are co-ordinated with the Social Studies in order to foster an integrated curriculum. In Chula Vista, California, for example, The Young Historians Project was implemented to integrate the language arts, mathematics and the Social Studies. Additionally, the Project involved oral history which utilized various language arts skills and involved the construction of historical time-lines, graphs and charts which foster mathematics skills.115 A second approach used to co-ordinate Social Studies and language arts skills was developed to utilize community resources. That approach used community resources such as museums, historic sites, local business industries, and governmental agencies in an effort to allow students to practice both Social Studies skills as well as language arts skills. Those skills were fostered by having students prepare interviews, written reports, comparisons of the accuracy of data, and by using written sources, such as periodicals, magazines and almanacs.116

Foreign languages and the Social Studies have the propensity to be incorporated successfully into an interdisciplinary environment. For example, according to Anna S. Ochoa and Lorraine A. Strasheim, a powerful display
of interdisciplinary co-ordination between the Social Studies and foreign languages could be achieved by blending an historical study of Latin America with a study of the Spanish language. Likewise when French, German and Italian language teachers combined their efforts with history classes involving European history, interdisciplinary learning has been achieved. Moreover, cultural fairs or festivals also have been an excellent means of combining interdisciplinary learning with Social Studies and foreign languages.\textsuperscript{117}

In attempts to infuse interdisciplinarity into the curriculum, a profusion of Social Studies teachers have combined aspects of the Social Studies with aspects of English or literature. In a 1935 publication, M. J. Stormzard and Robert H. Lewis urged an integration of American history and American literature in the senior year of high school. The authors stated that the integration of the Social Studies and English would result in the students' deeper understanding of the material.\textsuperscript{118}

A further example of course integration occurred in Mayfield, Ohio, where an experimental curriculum was designed to incorporate American history and American literature into an interdisciplinary course. The results of the integration allowed teachers to incorporate into the curriculum aspects of American art, architecture, music, and films, in addition to the literature and history of our
country. The success of the interdisciplinary venture on the eleventh grade level prompted faculty members to develop an interdisciplinary course offering for the twelfth grade students. That course combined three classes, English literature, sociology and civics, into a humanities class which utilized information from anthropology, art, sociology, literature, philosophy, history, architecture, and music to form one interdisciplinary course.

Mary Helen Dohan maintains that the Social Studies curriculum and English combine effectively to help students learn the etymology of words. That combination of classes allows students to understand words in the context of their origins and the historical events which led to the coining of the word. Examples which Dohan maintains are viable lessons for both the Social Studies and English are the words abolitionist and New Deal (U. S. history), ranch, bonanza and cafeteria (Spanish influence), banjo, jazz, and gumbo (African origin), moccasin, raccoon and squash (American Indian), zodiac (Greek), and algebra (Arabic).

Additional examples of the interdisciplinarity of Social Studies and English include the co-ordination of American literature reading lists with comparable time periods in American history. Combining a study of the Puritans in American history using readings from the Puritan time period or of writings about the Puritans, such
as *The Scarlet Letter*, provides students with a larger perspective of the Puritans and their impact on American society.\textsuperscript{122} According to Maurice Baer, an interdisciplinary approach to co-ordinate Western civilization with literature could involve the parallel reading of Shakespeare's *Anthony and Cleopatra* or *Julius Caesar* with a study of ancient Rome. Another example of Baer's would be to use Dicken's *A Tale of Two Cities* as background reading for an historical study of the French Revolution. Further, Baer suggests that the poetry of Rupert Brook, Edward Thomas and Wilfred Owen could be used to supplement the historical study of World War I. Baer also believes that using contemporary materials from the Social Studies and English could allow for a broader understanding by students.\textsuperscript{123}

Another example of integrating courses involves two Los Angeles, California teachers who combined their interests and expertise in history and literature into an American culture class through the use of novels, in lieu of traditional textbooks. That interdisciplinary approach included not only history and literature, but also art, philosophy and music. The five novels chosen to depict American history and literature were *The Scarlet Letter*, *The Deerslayer*, *The Adventures of Huckleberry Finn*, *The Red Badge of Courage*, and *The Great Gatsby*. When it was deemed appropriate, audiovisual materials were introduced to
reinforce lecture information. The class structure was designed to allow students an opportunity to see patterns and relationships which might not have been evident if the class had been conducted as two separate entities.124

Two Dallas, Texas teachers combined units from the seventh grade History of Texas class, with the seventh grade English class. By using the novel, Shane, in conjunction with a unit on Texas frontier life, students were presented with an interdisciplinary learning experience, through the harmonization of Social Studies and English curriculum. As part of the unit, the teachers provided written assignments applicable to both classes. A mock convention simulating an 1859 convention debating whether Texas should secede from the Union concluded the history unit, while an old-style Texas barbecue, attended by students in pioneer costumes, concluded the English unit. The teachers found the experience rewarding, as did the students.125

According to Harry Stein and Barry K. Beyers, one approach to combining the Social Studies and English curriculum involves the writing of historical résumés. After students in a history class have completed studying specific people of historical importance, the students are asked to prepare a written résumé, using correct English, grammar and sentence structure, concerning one of the persons in the study module. For example, after studying
Russia, students were asked to prepare a résumé for Ivan the Terrible using knowledge learned from their history class. Additionally, the authors suggest that students could prepare interviews of historical persons whom they have studied or they could prepare fictional diaries depicting historical epochs studied. Further, imaginary letters could be used to convey material learned in history class.126

In two college level courses, interdisciplinary co-ordination was utilized to present undergraduates with an integrated perspective of materials. At the California State College campus at Stanislaus, a semester course was designed to cover the Soviet Union in five areas: Economics, Literature; Geography; History; Political Science.127 Additionally, students attended a weekly cultural event which usually featured a film or speaker with topics relating to the Soviet Union. Students and professors perceived the course as having numerous advantages and one spin-off of the class was the introduction of a course entitled "The Medieval Scene." That class involved faculty from the departments of history, English, drama, art, music, and philosophy. Those professors presented a one-semester course on the Middle Ages utilizing an interdisciplinary approach to medieval life. Student response to "The Medieval Scene" was positive and the author, Samuel A. Oppenheim, believes that
additional interdisciplinary classes should be introduced into the curriculum.\textsuperscript{128}

A second collegiate approach to interdisciplinary learning was presented at the University of Denver. The course, "The Age of Newton," was a science class which was designed for the non-science major. The course outline covered the seventeenth century contributions of Isaac Newton in the fields of mathematics, astronomy, optics, and mechanics. While the class did not involve intensive Social Studies content, merely a brief historical overview of the seventeenth century, its purpose was to provide humanities-oriented majors an opportunity to experience science in a different manner, utilizing an interdisciplinary team of teachers from the fields of astronomy, mathematics and physics.\textsuperscript{129}

A third college providing interdisciplinary learning for the students is Worcester (Massachusetts) Polytechnic Institute, a private engineering college. The engineering students take one-fourth of their graduation requirements either in humanities-oriented classes or social science-oriented classes. Additionally, a seven-week project is assumed by each student with an emphasis on the relationship of technology to society, with each student being directed by faculty from both the sciences as well as the humanities or social sciences. The four-year curriculum of Worcester Polytechnic Institute, then, is
interdisciplinary in scope, with the institute's goal being to graduate engineers who see the role of the humanities and social sciences as being an integral component of the engineer and his or her role of society.\textsuperscript{130}

Thus, a review of the literature indicates that a considerable number of leading educators and curriculum designers state that interdisciplinary learning should become an integral part of the curriculum. Education leaders such as Newton, Troutman, Miller and Newell\textsuperscript{131} agree that interdisciplinary learning allows for the integration of material and that the integration of information into the curriculum seems to afford teachers an opportunity to challenge students in their learning environment. Additionally, integration of material within the classroom is seen as significant by Troutman, Watters and Miller.\textsuperscript{132} Moreover, Roose believes that interdisciplinary practitioners are able to understand relationships to a higher degree than non-practitioners of interdisciplinary learning.\textsuperscript{133} Interdisciplinary learning, then, can be seen to enhance curriculum through the opportunities given to learners to perceive relationships and assimilate integrated materials.\textsuperscript{134}
CHAPTER II
NOTES


2 Ibid.

3 Ibid.: 288.

4 Ibid.


6 Ibid.: 31.

7 Ibid.

8 Ibid.: 30.

9 Ibid.: 33.

10 Ibid.

11 Ibid.: 36.


13 Ibid.: 82.

14 Ibid.


16 Ibid.: 201.

17 Ibid.


19 Ibid.: 125.
20 Ibid.


22 Ibid.

23 Ibid.: 62.


26 Ibid.


28 Ibid.

29 Ibid.: 43-44.


31 Ibid.: 50.

32 Ibid.: 54.

33 Ibid.: 57.


35 Ibid.

36 Ibid.

37 Ibid.

38 Ibid.

39 Ibid.

40 Ibid.: 9.

41 Ibid.

43Ibid.: 803.


45Ibid.

46Ibid.


48Ibid.: 255.


50Ibid., p. 324.

51Ibid., p. 325.

52Ibid., pp. 326-327.


55Ibid.: 593. By conjunctive domain, Short and Jennings are referring to the integrative nature of interdisciplinary learning.

56Ibid.


61 Ibid.: 588.

62 Ibid.

63 Ibid.

64 Ibid.

65 Ibid.: 595.

66 Ibid.: 597.

67 Ibid.: 599.


69 Ibid.: 99.


71 Ibid.: 102.


73 Ibid.: 48-51.

74 Ibid.: 57


76 Ibid.

77 Ibid.
78 Ibid.


80 Ibid.

81 Ibid.: 142.

82 Ibid.


84 Ibid.


86 Ibid.

87 Ibid.


89 Ibid.

90 Ibid., pp. 207-209.


93 Ibid., p. 25.

94 Ibid., pp. 28-29.

95 Ibid., p. 29.


97 Ibid., p. 209.
98 Ibid.
99 Ibid.
100 Ibid., p. 208.
102 Ibid.: 69.
104 Ibid.: 55.
105 Ibid.: 52.
106 Ibid.: 55.
107 Ibid.
111 Ibid.: 274.
113 Ibid.: 6.


120 Ibid., p. 30.


128 Ibid.: 378.


131 See notes 3, 15, 24, and 44 above.

132 See notes 15, 21, and 24 above.


134 Information concerning alternative instructional methodologies is provided in Appendix C, page 319. The use of alternative methodologies within the Social Studies classroom could enhance students' ability to perceive relationships and further assimilate integrated materials.
CHAPTER III
RESEARCH DESIGN AND METHODOLOGY

The methodology employed in this research was an historical methodology research design which indicated the techniques used to gather the interdisciplinary data concerning the Holy Shroud of Turin. The historical research was gathered in order to present an interdisciplinary curriculum approach for use in secondary level Social Studies classes. For example, the techniques presented in chapter five and Appendix B included the skills and information needed to acquire and use primary sources, the value of secondary sources and the means by which data may be obtained. To amplify the value of both primary and secondary sources, the research included sections on the divergent avenues through which educators may obtain interdisciplinary reference materials.

The methodology used by the author to integrate interdisciplinary learning into the classroom, therefore, did not rely solely on theoretical concepts of historical research, nor was heavy emphasis placed on the philosophical standards of historical research. In regard to the methodology used, the author was cognizant of the need for teachers to feel comfortable when pursuing information which encompassed the broad areas of knowledge
inherent in interdisciplinary data. To that end, it was suggested that teachers pursue information on topics of personal interest, thus enabling them to draw upon strengths. Detailed research best explicates the subject being studied, yet teachers cannot be expected to spend an inordinate amount of time preparing only a small segment of a course. For that reason, materials used in the Shroudal research unit were those which could be obtained readily by classroom teachers and which had a practical application in the instruction of their students.

In keeping with this author's premise that educators presenting interdisciplinary curriculum in the classroom should select topics of personal interest, a topic of educational significance that was of interest to this investigator was chosen: How topics might be presented in an integrated manner. The author chose to conduct research on interdisciplinary learning in secondary level Social Studies because of past and present teaching experiences with Social Studies related courses.

Upon determining that the research would concentrate upon the value of interdisciplinary learning within the secondary level Social Studies curriculum, the author then determined a topic which could be presented in an interdisciplinary manner within the Social Studies classroom. The list of potential interdisciplinary topics was narrowed to five which could be of value within
secondary level Social Studies education: The development of an Archaeology textbook; the development of a curriculum concerning the Holy Shroud of Turin; the development of a curriculum designed to teach European history through novels; the development of a curriculum designed to teach a humanities class at the senior year level; the development of a studies skills curriculum for ninth grade students in a Social Studies class, concentrating on skills applicable across the curriculum.

The researcher determined that her strongest interest rested in research concerning the Holy Shroud of Turin, a topic which has intrigued this investigator for several years. An interdisciplinary approach to studying the Shroud could include material related to disciplines as diverse as history, mathematics, philosophy, physics, theology, and textiles.

Research conducted in an Advanced Research and Statistics class taken by the author in 1984 indicated that no legal impediments existed which would prohibit instruction on a religious subject, such as the Shroud of Turin, in either the public or private sector of the American education system. Assuaged by those legal caveats, the author chose to pursue extensive research on the Holy Shroud of Turin. Since 1979, this investigator has been collecting materials on the Shroud and communicating with internationally recognized
sindonologists. Historical research is painstaking and cannot be conducted in a haphazard manner. The research must be planned carefully if the research is to be of value to other historians. To that end, the research theory should be outlined in a preliminary manner so that the researcher has a tentative course of research.

In preparing to conduct historical research, it was necessary to determine answers to the following questions:  

1. Will the research to be undertaken contribute to historical knowledge?  
2. Are the desired research materials available to the researcher?  
3. Does the researcher have the monetary means needed to undertake and maintain this research?  
4. Does the researcher have the capability and desire to conduct research which will be on-going and could be of long duration?  
5. Does the researcher realize and accept the possibility that the research may indicate that a definitive conclusion may not be reached?  

The researcher determined that the five questions could be answered affirmatively. Then, the framework in which the research would be pursued was outlined in a more definitive manner. After analyzing those five queries and outlining the tentative framework, it was determined that the desired topic had merit and could add information to the pool of educational knowledge concerning interdisciplinary learning and could contribute to the historicity of the Shroud.
In the preparation of this research, the investigator began the search for materials on interdisciplinary learning by using various descriptors to seek the desired information. The basic descriptors included: Interdisciplinary learning; interdisciplinary curriculum; multidisciplinary learning; curriculum development; high school curriculum; interdepartmental; secondary level curriculum; Social Studies; history; integrated curriculum; team-teaching. In searching for those descriptors, the Readers' Guide to Periodic Literature and the Current Index to Journals in Education (CIJE) were used to make a preliminary list of potential sources. Additionally, the following sources initially were used to locate sources of information: Education Index; Educational Administration Abstracts; Resources in Education (RIE).

In addition to the previously mentioned sources, information was gathered from local colleges. Books and articles were obtained from libraries at the University of San Diego, San Diego State University and the University of California at San Diego. The MELVYL computer system at the University of California at San Diego, which has an on-line catalog containing approximately 4,618,600 book titles as well as 1,610,185 periodical titles, was used to locate books and articles contained within the libraries of the University of California system and the library system of Stanford and the State University systems. When desired
articles were found to be housed at the University of California at Los Angeles and the University of California at Irvine, the researcher went to those universities and conducted research using those facilities. Additionally, the University of Southern California Library in Los Angeles was utilized to obtain material.

Not every article necessary to conduct this research was found within the Southern California area. To obtain materials from other geographic locations, the author utilized the inter-campus loan system through the University of San Diego library. After the University of San Diego librarian received bibliographical information from this writer the librarian then sent for articles at the University of California at Berkeley, Stanford University, the Graduate Theological Union at the University of California at Berkeley, the University of California at Davis, and the Oakland Public Library. Additionally, the researcher frequented public libraries in San Diego County, using the Serra System to obtain books from different libraries within the county which use that inter-library loan system.

In conjunction with the computer systems within the University of California system, the author also used the Educational Resources Information Center (ERIC) system to obtain information. The ERIC system was founded in 1965 by the Office of Education with the intent of making public to
interested parties the findings of current educational research. To that end, ERIC publishes *Resources in Education* (RIE) and the *Current Index to Journals in Education* (CIJE). The ERIC system has sixteen clearinghouses, each responsible for the cataloging, abstracting and indexing of documents pertinent to the clearinghouse. For example, the ERIC clearinghouse for Social Studies/Social Science Education was used frequently by this investigator to obtain research information on interdisciplinary learning and the Social Studies. Each clearinghouse publishes a newsletter available to persons who request it. Through that medium, the author was able to ascertain what, if any, research was being conducted concerning interdisciplinary learning. Additional services available to the researcher through ERIC include on-line computer searches and full text searches, where specific words, phrases or topics are programmed into a computer. Once programmed, the computer produces research cataloged with ERIC which contains the descriptors.

In searching for materials, this writer wrote over 100 publishing companies requesting that publication catalogs be sent. Addresses for those companies were found in different sources: *Associations' Publications in Print: 1984-1985*; *Books in Print: 1984-1985*; *A Guide to Publications of the Executive Branch*; *Third World Resource Directory*. Additionally, through professional contacts
with publishing companies and Social Studies Associations, the researcher regularly receives information from Social Studies-related firms. Those materials also were used to obtain addresses.

In combination with contacting publishing companies, the researcher also contacted numerous education associations and requested that each association send available publication catalogues and association-related literature. Associations contacted included the Council for Basic Education, the American Council on Education, the National Association of Secondary School Principals, and the National Education Association.

In addition to publishing firms and education-related organizations, this investigator frequented bookstores on college campuses, ranging from the San Diego area to as far north as the University of California at Santa Barbara. Through the bookstores, the author was able to learn what education texts were being used in different curriculum development classes at the following colleges and universities: The University of San Diego; San Diego State University; Point Loma College; Loyola-Marymount College; Mount Saint Mary's College; the University of California at San Diego, Los Angeles, Irvine, and Santa Barbara. In addition to those college bookstores, the author wrote various university and college-affiliated presses requesting that catalogues be forwarded. In that manner,
materials were received from universities such as Harvard, Yale, Princeton, Notre Dame, Purdue, Georgetown, Catholic University of America, the University of North Carolina, University of Oklahoma, University of Nebraska, University of Georgia, and the University of Chicago. In addition to college bookstores and presses, public bookstores were frequented for books which would prove useful. Bookstore owners from San Diego to San Francisco were contacted in search of useful material. Furthermore, other teaching professionals were contacted.

In order to complement the written sources obtained from journals and education-related publications, the researcher also used materials culled from newspapers and news-oriented magazines. For example, local San Diego area newspapers such as the Union, the Tribune and the Los Angeles Times were read in search of education-related articles. While the author realized that journalists frequently must rush such copies to press, information gained usually was verifiable and could provide insight into local, state and national trends related to the American education system. Likewise, magazines such as Time, Newsweek, and U.S. News and World Report provided information concerning the national mood as it related to the American education system. The author's professional reading related to education also proved to be a valuable source of information concerning curriculum trends in
American schools. Publications such as *Education Week*, *Educational Leadership* and *NASSP Bulletin* are read regularly by this researcher and are good sources of information. Those professional publications, coupled with the author's personal library, provided varied sources of material from which the author could draw.

In addition to written sources, this writer contacted educators who would be able to provide first-hand information concerning the value of interdisciplinary learning. Over 100 educators were contacted and asked to comment on the effectiveness of interdisciplinary learning based on their observations. The educational levels taught by those educators ranged from elementary school through college, in both the private and public sectors of education. Their input, based on actual teaching experience, complemented the theoretical nature of much of the written material accumulated for this study. In addition to written sources and private communication with local and state educators, this investigator also received valuable information concerning research through daily interactions with colleagues.

In the evaluation of curriculum, a myriad of meanings may be perceived by the term evaluation. The evaluation process may be broad, encompassing evaluatory methods for the curriculum of an entire school or school district, to encompassing the relatively small evaluation of a few
students' comprehension of one section of one chapter in a textbook. For the evaluation of a large project, it might be feasible to utilize the paradigms of such evaluators as Robert E. Stakes, Daniel L. Stufflebeam, Ralph W. Tyler, and Malcolm Provus. For small projects, such as a component of a curriculum, it might be appropriate to rely on the paradigm presented by curriculum leaders such as Leo H. Bradley, John D. McNeil and Fenwick W. English. Regardless of the evaluation methods used, the purpose of evaluation is constant: To measure the degree to which the purpose of the curriculum has been achieved; to ascertain the validity of the purpose of the curriculum; to determine the degree of appropriateness of the curriculum for the students to whom the material is being presented; to consider the activities chosen to help students attain the curricular goals; to consider the appropriateness of the materials chosen as vehicles to convey the curricular goals.

For the classroom teacher, evaluation methods could range from formal testing to the development of student-designed projects fashioned to indicate the student's comprehension of a topic. The teacher's evaluation tools should be designed to measure various levels of cognitive development so that student's thinking skills will be challenged and broadened.

At the end of each of the sections of research
concerning the Holy Shroud of Turin is found a check-list of specific terms and goals which students studying the specific sections should be able to answer. Each check-list is furnished for the instructor's use. Specific behavioral objectives are provided, realizing that teachers' objectives may vary, based on the material that has been covered. Furthermore, teachers' objectives should be based on the age of the students and the degree to which their cognitive skills have been developed. Based on those two factors, the lack of non-exhaustive specific behavioral objectives is not to be viewed as a lack of direction for educators using this interdisciplinary unit.

According to the English curriculum leader, Paul Hirst, objectives are a necessity, for objectives allow educators to know what it is that students are to learn. Although Hirst believes that objectives are needed, he does not perceive objectives as being inflexible. In fact, Hirst sees objectives as allowing individual responses to the objectives. The guidelines for the Shroudal interdisciplinary unit are founded on Hirst's premises that "teachers know what is to be learnt sufficiently specifically to be able to know when that is being achieved and when [it is] not."

Concurring with Hirst are the Scottish curriculum leaders, Steuart H. Kellington and Alison C. Mitchell. Kellington and Mitchell use objectives for a science
curriculum which are designed for the "less able,"17 the "average and more able"18 and the "most able."19 Even though those student capabilities are delineated for a science curriculum, the three generalizations universally are appropriate and applicable to any class.

This researcher also had a philosophical rationale for not presenting detailed and definitive behavioral objectives: Teachers should be viewed as having the expertise to implement a curriculum within their classroom and armed with personal proficiency and a professional demeanor, the men and women who work within the American educational system should be given the freedom to implement this curriculum unit within their classrooms as they deem appropriate. In that regard, this investigator echoes the thoughts of Stanford educator, Elliot W. Eisner: "Teachers need to have a stake in what they teach. They are not merely passive tubes or mechanical conveyors of someone else's ambitions and interests."20 With those considerations in mind, this investigator presented a unit concerning the Shroud of Turin designed to be implemented and evaluated within a classroom in a manner that the teacher perceives would be appropriate for the students to whom the material is being presented.21

The value of incorporating interdisciplinary learning into the curriculum within the school systems has been documented. Further, guidelines for using an historical
methodology research design have been delineated to assist educators who wish to present an interdisciplinary curriculum. Moreover, decisions which led to the specificity of the topic presented have been stated. Furthermore, techniques used to ferret out appropriate materials for presenting interdisciplinary curriculum involved a multiplicity of research methods, among which were written sources, professional contacts and personal communications.
CHAPTER III

NOTES

1 Virtually no legal precedent exists concerning the instruction of religious matter in private schools. The Supreme Court has upheld the rights of individuals to attend either private or public schools and the right of the schools to instruct in curriculum of a non-secular manner. However, the objective presentation of religious material within the public school classroom has guidelines which have been delineated by the United States Supreme Court. For instance, the Supreme Court has specified that the teaching of religion within an academic context is allowable within the public school system. Moreover, the Court affirmed the following principles in Abington Township v. Schempp:

1. A student's education is incomplete without instruction in comparative religions.
2. The Bible is a valuable literary and historical work.
3. School curriculum should include objective studies of various religions and the Bible.

Keeping the guidelines of the Supreme Court in mind, instructors within the public school sector should not hesitate to use the proposed curriculum merely because of its religious overtones. However, the Court cautioned in Abington Township v. Schempp that religion is legal as a proper academic pursuit only if the following criteria are met:

1. No preference is given to a specific religion (This is referred to as "affirmatively impartial").
2. There are no derogatory presentations of any religion, nor are there indications of approval or disapproval of any religious practice.
3. The purpose of the introduction of religious material into the classroom is done to provide instruction on what the religious material teaches and is not introduced for devotional reasons.

Thus, it would appear that the interdisciplinary curriculum concerning the Holy Shroud of Turin effectively
could be applied within the public school sector if the method of instruction conformed to the Supreme Court rulings concerning the academic pursuit of religious studies.


3 See for example, Robert McCormick and Mary James, Curriculum Evaluation in Schools (London: Croom Helm, 1983), p. 1, for an overview of the breadth of evaluation.


Stufflebeam's evaluation model is categorized as a decision-facilitative model known as the CIPP model. Stufflebeam's CIPP model contains four components: Context, which refers to the environment in which a program occurs and from which the goals are determined; input, which refers to the information available which will allow for the establishing and obtaining of program objectives; process, which refers to the effectiveness of procedures used to implement the program; product, which refers to the report submitted at the conclusion of the program which interprets the effect of the program.
85

6See for example, Ralph Tyler, *Perspectives of Curriculum Evaluation* (Chicago, Illinois: Rand McNally, 1967). Tyler maintains that curriculum should be evaluated in four specific stages:

1. Stage one involves the pre-planning of the proposed curriculum. This stage involves determining the potential value and effectiveness of the proposed curriculum through a review of the experiences of other people who have used similar curricular proposals and programs.

2. Stage two occurs when the program is implemented. This stage involves determining if the program implemented is the program desired; that is, are essential components of the program in effect or are some components being overlooked or ignored? This second stage may include insight into procedures which, if implemented, could prove to be more efficacious than the original procedures.

3. Stage three involves the need for continual feedback to persons involved in the program in order to keep the participants apprised of the status of the program.

4. Stage four occurs at the conclusion of the program when an analysis of the program's effectiveness is made. In stage four, the recommendation could be made that the program continue in its present form, or that the program, with modifications, continue, or the evaluation in stage four could recommend that the program be discontinued.


7See Malcolm M. Provus, *Discrepancy Evaluation for Educational Program Improvement and Assessment* (Berkeley, California: McCutchan Publishing Corp., 1971). Provus' model of evaluation is referred to as a discrepancy model. This evaluatory method delineates the standards of the program being implemented and then determines if a disparity exists between the standard previously determined and the actual execution of the program. If information is received which indicates that an inconsistency exists between the standards and the reality of the program, the
model then allows for the modification of either the program's standards or of the program's operation.


14 Ibid.
15 Ibid.


17 Ibid., p. 104.

18 Ibid.

19 Ibid.


21 One model of evaluation which could be used appropriately for the interdisciplinary unit on the Shroud of Turin is the model advocated by Egon Guba, which is referred to as a naturalistic evaluatory model. Guba's model presents his belief that evaluation should be ongoing and should be viewed as an integral component of the program, rather than an externally imposed program. This externally imposed evaluation, somewhat akin to the ex deus machina of the ancient Greek plays, may, according to Guba, become a politically motivated statement, rather than a truly qualitative evaluation.

A second evaluation model which could be used legitimately for the Shroudal unit is that model advocated by Robert E. Stake (see note four above). Stake's model is a descriptive evaluation model which allows for evaluation response to the requirements of the program's participants. Responsive evaluation such as Stake espouses, relies on normal communication with participants rather than the formalized communication elucidated through goals, objectives and standards which have been pre-determined prior to the advent of the program.
CHAPTER IV

RESEARCH METHODOLOGY RELATED TO THE ACQUISITION OF DATA CONCERNING THE HOLY SHROUD OF TURIN

This chapter contains a unit which will demonstrate how interdisciplinary research on a specific topic was conducted by this researcher and how that research could be utilized in a secondary level Social Studies classroom. The topic selected by this author to convey aspects of interdisciplinarity was the Holy Shroud of Turin. Specifically, the selection of the Holy Shroud of Turin as the example used in the interdisciplinary teaching unit enables the student to gather information from diverse disciplines such as History, Medicine, Anatomy, Chemistry, Art, Archaeology, and Physics and to comprehend the relationship among the disciplines. Further, a teaching unit concerning the Shroud could enable the student to collect information from wide-ranging sources and to organize significant ideas. A brief historical sequence concerning the Shroud is presented to provide a summation for educators who choose to use the Shroudal unit within their classrooms.

INTRODUCTION:

The Holy Shroud of Turin has been the object of religious veneration for centuries. The first known
presence in Europe of the Holy Shroud of Turin came at the close of the Fourth Crusade when it is hypothesized that a member of the Religious Military Order of the Knights Templar returned the relic to his home in France.¹ The Shroud has been an object of religious veneration for centuries, yet, within the past century, it also has become an object of scientific curiosity. Within the past decade, a marked increase in the interest of the scientific community has been evident. Concurrent with the increased scientific interest is the interest shown internationally by historians who believe that the Shroud's past transcends academic disciplines and who wish to fashion the Shroud's past history through the involvement of numerous disciplines and their adherents.

Even though the historicity of the Shroud is incomplete and at times, ambiguous, various sindonologists have investigated specific areas of concern about the Shroud. Until the late nineteenth century, the reputation of the Shroud as being the burial cloth of Jesus was based on devotional piety. In the late nineteenth century, however, this reputation was enhanced and broadened through the then relatively new development of photography. The Shroud was seen to possess unusual photographic properties which were discovered in 1898 by Secondo Pia. At that time, Pia, an amateur photographer from Piedmont, Italy, was given permission to photograph the Shroud while it was
on public display in the Cathedral of St. John the Baptist in Turin, Italy. Pia's photographic negatives and developed photographs showed that the Shroud had an inverse effect, that is, a non-developed negative appeared to be developed, and a developed photograph seemed to have the contrasts reversed. Pia's response to this unique reversal of photographic expectations was to believe that the Shroud possessed some extraordinary qualities which were the cause of the reversed images.²

Medical research concerning the Shroud which has been conducted since the early 1900s by Dr. Paul Vignon,³ to contemporary physicians such as the Americans, Dr. Anthony Sava⁴ and Dr. Robert Bucklin,⁵ has provided detailed data about the man buried in the Shroud. Within this past decade, physicists, chemists, radiologists, and biologists have added to that information by probing specific areas of Shroudal interest. That scrutiny has illuminated various facets of previously unknown Shroudal facts. The information gathered by diverse sindonologists has been done in a highly scientific manner. Despite their avid interest in Shroudal research, some of the prominent sindonologists acknowledge their lack of belief in Christian doctrines and beliefs: Yves Delage⁶ and Silvio Curto⁷ are self-avowed agnostics. Walter McCrone is a self-acknowledged skeptic about the authenticity of the Shroud and he believes that it is the work of a clever art
The diverse background of sindonologists and their respective theories surrounding Shroudal research lends itself to interdisciplinary research. This research could be applied to an interdisciplinary curriculum for secondary level Social Studies classes.

CHRONOLOGY OF RESEARCH INVESTIGATION:

For the educator who is considering utilizing an interdisciplinary approach to curriculum, the importance of the various sources of historical research involved in this author's construction of a comprehensive overview of the Shroud's interdisciplinary background and how those resources were located is stressed. For example, in an effort to gain Shroudal information, this investigator wrote to the Holy Shroud Guild in March, 1979. From that initial resource, written communication was established with several internationally known sindonologists, first of whom was Father Peter M. Rinaldi, S.D.B., Vice-President of the Holy Shroud Guild. Father Rinaldi, author of four books about the Shroud, sent resources concerning the Shroud and placed the author's name on the Guild's mailing list, thus enabling this researcher to receive the latest information regarding Shroudal research.

To further assist this investigator, Father Rinaldi provided name of persons whom he believed might share their Shroudal expertise, one of whom was Dr. John P. Jackson,
then affiliated with the United States Air Force Academy. Dr. Jackson's contribution to this research was the gift of a book, *Proceedings of the 1977 United States Conference of Research on the Shroud of Turin*, which was out of print at that time, but since which has been reprinted. Dr. Jackson also furnished the address of British sindonologist and author, Ian Wilson. Unfortunately, several attempts throughout 1981-1983 by this writer to contact Ian Wilson at his Bristol, England residence were fruitless. Likewise, efforts to contact Wilson through Doubleday Publishing Company, publishers of Wilson's book, *The Shroud of Turin: The Burial Cloth of Jesus Christ?* were unsuccessful.

The initial contact with the Holy Shroud Guild served to trigger correspondence between this researcher and Father Adam J. Otterbein, C.S.S.R., President of the Holy Shroud Guild. From June, 1979, to the present time, the correspondence primarily has centered on the possible connection between the Knights Templar and the Holy Shroud of Turin. Further, Father Otterbein has been supportive by sending numerous printed materials concerning the Shroud, suggesting book titles regarding the Shroud and forwarding to this author names and addresses of sindonologists throughout the United States whom he felt might be of assistance in Shroudal research.

As this investigator's Shroudal research advanced, it
became clear that numerous references alluded to papal statements concerning the Shroud. In an effort to verify those papal remarks, in June, 1979, this author wrote to the Archivist of the Vatican Library in Rome, Italy, requesting copies of specific papal statements. The July, 1979 response from the Archivist's secretary was disappointing, however: Research in the Vatican Library must be conducted in person by the researcher.  

As this research developed further, the possibility of a link existing between the Holy Shroud of Turin and the Knights Templar appeared to grow stronger. For that reason, this author wrote to the Temple Church in London, England, in an attempt to gain knowledge concerning the Temple of the Knights Templar in England during the latter part of the Middle Ages. The Anglican Vicar of London's Temple Church responded by sending a booklet which traced the history of the Temple Church and a copy of a contemporary prayer service held in the Temple Church.  

A further reference to the possible link between the Shroud and the Knights Templar was found in Ian Wilson's book, *The Shroud of Turin: The Burial Cloth of Jesus Christ*? That reference led this researcher to write to the Vicar of Temple Bruen in Lincolnshire, England. The Vicar, in turn, forwarded the address of the Anglican Vicar of St. Mary Templecombe in Templecombe, England who personally wrote a short history of the Knight Templar's use of St.
Mary Templecombe Church which he sent to this researcher.\textsuperscript{14}

The next avenue of research that was pursued in the search for information concerned the twelfth century Cistercian priest, St. Bernard of Clairvaux, who was the founder of the Templar Order. Since the Cistercian Order does not have a religious community in San Diego, this author located at the University of San Diego library, a book entitled, \textit{Ministries for the Lord}, which lists the addresses of all Catholic Religious Orders for men. From information gained from that listing, this researcher was able to write to a Cistercian Abbot, Anselm Nagy, of Irving, Texas, and a Cistercian monk, Father Basil Pennington of Spencer, Massachusetts for information concerning St. Bernard. As a result of those correspondences, in July, 1979, Abbot Nagy sent a list of Cistercian publications which were in turn used to obtain several books about St. Bernard.\textsuperscript{15} In March, 1982, after reading Father Pennington's book, \textit{Jubilee}, in which Father Pennington mentioned St. Bernard, this researcher wrote to Father Pennington requesting information about the writings of St. Bernard. In response, Father Pennington sent a list of Cistercian publications which concerned the requested resources.\textsuperscript{16}

Membership in the Medieval Academy of the Pacific (MAP) entitled this researcher to receive, among other benefits, an annual membership roster, complete with
members' names, addresses, their individual areas of interest, and their fields of expertise. In June, 1980, after utilizing the MAP directory to determine which fellow members shared an interest in monasticism, St. Bernard of Clairvaux, the Knights Templar, or Church history of the twelfth and thirteenth centuries, this researcher wrote three letters of inquiry. The letters were sent to MAP members Dr. Caroline Walker Bynum of the University of Washington, Dorette Sabersky of Santa Barbara, California. Although Sabersky did not respond, Bynum and Boswell provided additional sources of materials.17

In addition to the MAP membership directory, the author has obtained information from Chronica, MAP's quarterly publication. For example, the Spring, 1980 issue of Chronica contained an abstract of a paper concerning the Knights Templar which Dr. Anne Gilmour-Bryson of the University of Montreal had delivered at a conference sponsored by the Medieval Academy of America and which had been hosted by the Medieval Association of the Pacific. That abstract was the catalyst for writing to Gilmour-Bryson in June, 1980 to request a copy of the paper which had been presented at the Conference. In a July, 1980 response, Gilmour-Bryson declined to provide the requested copy, stating that the paper was only a preliminary study. Gilmour-Bryson did, however, make beneficial suggestions to aid this researcher in obtaining Templar Rule resources.18
Since Ian Wilson's book, *The Shroud of Turin: The Burial Cloth of Jesus Christ?* mentioned that a fire had swept the Poor Clare Monastery in Chambery, France in 1532, a time when the Shroud had been housed in the Poor Clare Monastery's Chapel, this researcher sought to contact someone in authority in the Poor Clare's French Monastery. The first inquiry was sent to the Poor Clare Monastery in Aptos, California in June, 1980, to seek the Chambery address. In answer to that query, Mother Mary of the Aptos monastery referred this author to Mother Superior Mary Frances of the Poor Clare Monastery in Roswell, New Mexico, who in August, 1980 sent the address of the Poor Clare Monastery in Paris, France.19

This researcher then composed a letter in English to send to the Mother Superior in Paris. The letter then was translated into French by a colleague, Kathleen Franzese, and one of the author's students, Natasha Piton, prior to its being mailed. In August, 1980, this investigator received a letter from Antoine Legrand of Versailles, France, to whom the Mother Superior of the Paris Poor Clare Monastery had forwarded this author's letter because Legrand is a sindonologist. Legrand's letter informed this researcher that his book, *Le Linceul de Turin* was being published and he planned to send a copy, which he did at a later date. Enclosed with the copy of Legrand's book was his request that this author mail him a copy of an article
concerning the Shroud which was in the June, 1980 issue of the National Geographic magazine. This writer complied with his request since a quid pro quo arrangement is commonplace among fellow sindonologists in an attempt to share their knowledge of the Shroud, which may, in turn, solve the enigma of the cloth.

In March, 1981, this researcher received a letter from Father Adam J. Otterbein which contained information about an April, 1981 exhibit concerning the Shroud, to be displayed in Santa Barbara, California at the Brooks Institute of Photography. For further details about the exhibit, this author wrote to the Public Relations Officer of the Institute. In response to that letter, Peter Skinner, the Institute's Director of Public Affairs, sent a letter concerning the exhibit, a press release and a map of the Santa Barbara area. Shortly thereafter, this investigator traveled to the exhibit which was of sixty days duration. The exhibit consisted of photographs taken by Vernon Miller, Chairman of Brooks' Industrial Scientific Department, and by other photographers who were present at the 1978 scientific investigation of the Shroud. The investigation took place in the Turin Cathedral where the Shroud is housed. At the Santa Barbara exhibit, this writer obtained literature which provided new avenues of information relating to this research.

A spin-off from the Santa Barbara exhibit was the
July, 1984 establishment of Educational Resources. In response to the public's requests for information concerning the Shroud, Vernon Miller of the Brooks Institute and a colleague, Barrie M. Schwortz formed the Santa Barbara (later moved to Los Angeles) firm which publishes a catalogue listing Shroud-related materials ranging from videotapes, slides and photographs, to written information. Upon request, the firm will send interested persons an updated publication list.22

This author's initial contact with internationally known Jesuit sindonologist, Father Francis L. Filas, came as the result of an advertisement in the August, 1981 issue of Biblical Archaeology Review. Father Filas had devoted several decades to studying the Shroud before he identified the characters on the coins which had been placed on the eyelids of the Shroudal image as being characters found on a Pontius Pilate coin. The Filas identification, which was confirmed by Drs. Alan and Mary Whanger and Dr. Robert Haralik, helped to pinpoint the date of the crucifixion of the man whose image is on the Shroud. The advertisement in the Biblical Archaeology Review concerned Father Filas' 7,000 word monograph of July, 1980, The Dating of the Shroud of Turin from Coins of Pontius Pilate, for which this researcher sent. In response to this investigator's August, 1981, request for the monograph, Father Filas sent the monograph and two photographs of the lepton showing its
placement on the eye of the Shroudal image. Moreover, Father Filas wrote a letter describing additional items available concerning his eye-coin identification. Those items were mailed, per this author's August, 1981, request, and were received in September, 1981.

This writer's request for Father Filas' monograph and other Shroud-related items led to placement on the Jesuit priest's mailing list. As a result of being on that list, literature was forthcoming concerning revised editions of Father Filas' monograph. In June, 1982, the 14,000 word revised edition of the monograph was issued. It was purchased by this researcher. Again, in January, 1984, a third and revised monograph containing 16,000 words became available and it was purchased for use in this research. In the latter part of 1984, Father Filas sent this author a gift of a 1985 calendar which he had assembled. Each month of the calendar featured a photograph of the Shroud. Sindonologists mourned the February 15, 1985, death of Father Filas, who died prior to the completion of his numismatic theory concerning the dating of the Shroud.

In a further effort to expand the knowledge base for this research, an editor in Nashville, Indiana was contacted after this researcher had read an article in a 1982 issue of the San Diego Catholic Diocesan newspaper, the Southern Cross. The article concerned Dorothy Crispino, the editor of a new publication, Shroud Spectrum
International. This author was unable to contact Crispino through the Southern Cross article; therefore, a Nashville, Indiana telephone operator was contacted to request the phone number and address of Crispino. Crispino was then contacted and arrangements were made for this writer's receipt of a subscription to the Shroud Spectrum International quarterly, which resulted in the acquisition of articles concerning the Shroud and the names and addresses of organizations which specialize in Shroud-related materials.

In 1982, the Reverend Albert K. Driesbach, Jr., founder and president of the Atlantic Center for Continuing Study of the Shroud of Turin, Inc., (ACCST), located in Atlanta, Georgia contacted this author, via telephone. Father Adam J. Otterbein had served as a liaison between this researcher and Father Driesbach, an Episcopalian priest, neither of whom had met or communicated prior to the telephone contact. Father Driesbach's call served a twofold purpose: Father Driesbach furnished the names of two Americans who are engaged in Shroudal research, Dr. Alan Whanger and Frank C. Tribbe; Father Driesbach requested a copy of this writer's Shroudal research findings for inclusion in the Center's collection of Shroud-related materials.

In 1983, an announcement in the Shroud Spectrum International stated that an exhibit about the Holy Shroud
was being shown in Santa Cruz, California at St. Joseph's Shrine. The article named Father Aldo Grasso, O.S.J. of St. Joseph's Shrine as being the organizer, so a request for further information about the exhibit was sent to him. Father Grasso responded by sending newspaper clippings about the exhibit and a brochure concerning the Holy Shroud, as well as a copy of Monsignor Giulio Ricci's book, *The Holy Shroud.* In 1985, Father Grasso, who is the Chaplain of the Santa Cruz Holy Shroud Society, assembled a permanent exhibit, housed in St. Joseph's Shrine, concerning the Holy Shroud.

In July, 1984, this researcher wrote to Richard Orareo who had compiled a fifteen year collection of Shroud-related articles. In response to the letter, in August, 1984, Orareo sent information about the Shroud-related articles which were listed in the Reader's Guide to Periodical Literature and in The Catholic Periodical Index. Additionally, in December, Orareo forwarded a bibliography packet relating to Shroudal materials. In exchange for the information which he had furnished, Orareo requested that any Shroudal-related written efforts undertaken by this author, as well as Shroud-related bibliographic information compiled by this writer, be sent to him.

The June, 1984 issue of the *Shroud Spectrum International* described an international organization designed to aid sindonologists in their research. The
organization, ASSIST, an acronym for Association of Scientists and Scholars International for the Shroud of Turin, Inc., primarily facilitates sindonologists' scientific and scholarly research by providing an interdisciplinary arena within which Shroudal research may be shared. For the benefit of sindonologists, ASSIST offers five components of Shroudal research which are categorized as photography and related fields, exact sciences, medical sciences, special fields, and such Shroud-related fields as art and theology. The five components are sub-divided into thirty-four related areas. Experts within each field are encouraged to share their research efforts with fellow sindonologists, many of whom have the ability to translate the research into, or from, foreign languages. As a result of the sindonologists' shared efforts, Shroudal material is available for dissemination in English, French, German, Italian, and Spanish. Furthermore, through information contained in the Shroud Spectrum International article about ASSIST, Paul Maloney, the General Projects Director of ASSIST was contacted. Correspondence with Maloney ensued and in July, 1984, Maloney proffered membership in ASSIST to this sindonologist and that membership was conferred by the Board of Directors in October, 1984. Membership in ASSIST, which numbers approximately fifty members, has enabled this researcher to directly network with other
sindonologists.

From the August, 1984, issue of Shroud Spectrum International, the address of Monsignor Giulio Ricci, Director of Centro Romana di Sindonologia, located in Rome, Italy was obtained. A letter was sent to Monsignor Ricci requesting to be placed on his mailing list and to be enrolled in a correspondence course concerning the Shroud which is prepared by Monsignor Ricci. In October, 1984, additional course material was requested and shortly thereafter, the Center's quarterly journal, Sindon, was received.

Information in the September, 1984 issue of Shroud Spectrum International led to a contact with Benedictine monk, Brother Joseph Marino, O.S.B., of St. Louis, Missouri. Brother Joseph maintains a "source sheet" which contains names and addresses of individuals who are currently conducting Shroudal research, as well as the names and addresses of organizations which stock Shroud-related materials. Since October, 1984, correspondence with Brother Joseph has been on-going and has placed this researcher in touch with several sindonologists, one of whom is David Schultz of Milwaukee, Wisconsin. It was Brother Joseph's belief that both this author and Schultz could be mutually helpful in their Shroudal research. For that reason, on October 24, 1984, correspondence began with Schultz who maintains an extensive bibliography of
materials concerning the Shroud. In November, 1984, Schultz sent a copy of his seventy-one page computerized bibliography which contains 899 articles and books related to the Shroud.26

An article contained in the June, 1985, issue of Shroud Spectrum International led to contact with Sister Damian of the Cross, O.C.D., who prior to 1983 was known as Dr. Eugenia Nitowski, a Biblical archaeologist. Sister Damian's continued interest in the Shroud was an outgrowth of her 1979 doctoral dissertation, Reconstructing the Tomb of Christ from Archaeological and Literary Sources, a portion of which pertains to Jewish burial customs. As a result of the on-going correspondence with Sister Damian, information has been gained concerning possible methods by which the Shroud image could have been transferred onto the Shroudal cloth.27

LIBRARY FACILITIES:

In addition to written correspondence with internationally recognized sindonologists, libraries were used to obtain research materials. For example, library indices such as Humanities Index, Historical Abstracts and Social Science Index were utilized. Additionally, the Catholic Periodical and Literature Index, Religious Index One: Periodicals, Religious and Theological Abstracts, Old Testament Abstracts, and New Testament Abstracts were
consulted in an effort to locate Shroud-related articles. Among the descriptors used to locate materials were The Holy Shroud of Turin, Shroud of Turin, Turin Shroud, Knights Templar, Templars, Crusades, Second Crusade, St. Bernard of Clairvaux, House of Savoy, and Savoy. Articles relating to those descriptors were noted and the bibliographies were perused for additional sources. Various libraries were visited by this writer to obtain the specific articles.

When articles were found to be housed at library locations to which the author could not travel, the research librarian at the University of San Diego was contacted and asked to request articles from libraries where the articles were housed. In that manner, articles were obtained from libraries such as the Graduate Theological Union at the University of California at Berkeley, the Oakland Public Library, the University of Southern California, the University of California at Davis, the University of California at Irvine, and the University of Notre Dame. Further, this writer contacted the University of Michigan to obtain dissertation abstracts for information on dissertations written in the fields of history, philosophy and religion. Similarly, the ERIC system was utilized to seek information about the Shroud and about the teaching of religion in the public school system.
In addition to the use of public libraries and university-affiliated libraries, this investigator has acquired numerous publications relating to the Shroud and has a personal library containing thirty-nine books and twenty-one journals concerning the Shroud. Moreover, private files contain thirteen monographs, fifty-two newspaper articles, approximately seventy-five journal and magazine articles, plus numerous newsletters from the Holy Shroud Guild and the Shroud of Turin Research Project.

In summary, a myriad of paths was transversed to obtain information for the historical research concerning this interdisciplinary study of the Holy Shroud of Turin. The historical researcher should not falter in the search for information despite encountering obstacles of seemingly fruitless leads, for as Will and Ariel Durant stated, "history is a precarious enterprise."28 The Durants also caution historical researchers that they may have to "operate with partial knowledge and be provisionally content with possibilities"29 when searching for historical clues.
CHAPTER IV
NOTES


2Secondo Pia, "Memoria sulla riproduzione fotografica della santissima Sindon," (1907), from an article written by Pia's son, Giuseppe Pia, published in Sindon, April, 1960. See chapter five, section ten below for additional information concerning Pia.


6Yves Delage, "The Image of Christ Visible on the Holy Shroud of Turin," a lecture given on April 21, 1902 to the Paris Academy of Sciences, Paris, France.

7Professor Silvio Curto is the curator of Turin's Egyptian Museum.

8Richard Conniff, "Geo Conversation: Walter McCrone," Geo (June, 1982): 10-17. See also Walter McCrone, "Shroud Image is the Work of an Artist," Skeptical Inquirer, Spring, 1982, pp. 35-36. For additional information about Dr. McCrone's viewpoint, see Jack A. Jennings, "Putting the


10 Dr. John P. Jackson, April 7, 1979, in private correspondence.


12 Vatican Library Archives Secretary, July 7, 1979, in private correspondence.


14 F. E. Wanh, April 24, 1981, in private correspondence.


16 Father M. Basil Pennington, O.C.S.O., March 25, 1982, in private correspondence.


18 Dr. Anne Gilmour-Bryson, July 4, 1980, in private correspondence.

19 Mother Mary, P.C.C., August 1, 1980, in private correspondence and Mother Mary Frances, P.C.C., August 27, 1980, in private correspondence.

20 Antoine Legrand, November 9, 1980 and December 30, 1980, in private correspondence.

The firm's address is Educational Resources, 2239 Vista Del Mar Place, Hollywood, California 90028.

Father Aldo Grasso, O.S.J., October 31, 1983, in private correspondence.

Richard Orareo, August 9, 1984, in private correspondence.

Paul C. Maloney, October 10, 1984, in private correspondence.

David Schultz, December 31, 1984, in private correspondence.


Ibid.
AN INTERDISCIPLINARY TEACHING UNIT:

THE HOLY SHROUD OF TURIN

University of San Diego

1986

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CHAPTER V

INTERDISCIPLINARY CURRICULUM UNIT CONCERNING
THE HOLY SHROUD OF TURIN

The instructor who chooses to present an interdisciplinary unit on the Holy Shroud of Turin will have certain goals in mind based on the teacher's knowledge of his or her students and on the teacher's expertise. The following goals are not presented, therefore, as being the only admissible goals, nor are they presented as being exhaustive. Rather, the goals are presented for the educator's consideration and as a catalyst for other goals which the user finds to be appropriate for the learners who will study the unit.

The objectives included in the unit are stated in a generic format and are not related specifically to a time frame or a grade level in order to provide flexibility for the classroom teacher.

GOALS:
1. Students should be active participants in the learning process.

2. Students should realize that there is an interconnection among numerous academic disciplines.

3. The cognitive skills of students should be developed and
4. The affective skills of the students should be broadened and stimulated.

5. The creative skills of students should be tapped and their development encouraged.

6. Learning how to compile and organize information should be fostered among students.

7. The Shroudal unit should allow students to discern facts through investigation.

8. Students should be able to distinguish between facts and opinions.

9. Students should be given opportunities to expand logical thought processes.

10. The competencies for drawing conclusions based on evidence presented should be promoted.

11. Students should be encouraged to develop an understanding of the value of chronology.

12. Students should be assisted in developing a capacity for thoughtful questioning.

13. Students should be supported in augmenting their capabilities for independent research.
14. Students should be able to use library resources effectively.

15. Students should be introduced to various methods of communicating historical information through such vehicles as written and oral reports, and visual modes.

16. Different learning styles should be fostered through the use of wide-ranging instruction and learning activities.

17. The students should be able to distinguish between primary and secondary sources.

18. The use of primary sources by students should be encouraged.

19. The value and role of secondary sources should be understood by students.

20. Students should be encouraged to use visual symbolism as a source of historical data.

With these goals in mind, interdisciplinary objectives are provided following each section of the curriculum unit. Educators using the unit are encouraged to view the suggested objectives from the perspective of numerous disciplines. Additionally, Social Studies teachers should
consider inviting colleagues who teach disciplines other than the Social Studies to participate in the instruction of the unit.
## The Interdisciplinary Nature of the Holy Shroud of Turin

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1. The Interdisciplinary Nature of the Holy Shroud of Turin
SECTION I
THE HOLY SHROUD OF TURIN

For many centuries, the Holy Shroud of Turin has been the subject of great veneration and an artifact of significant historical mystery. The holy relic currently is locked in a silver casket in the Royal Chapel of the Cathedral of St. John the Baptist, in Turin, Italy, where it has been for four hundred years. The main historical importance of the Shroud is primarily in the belief held by many, that it is the burial cloth of Jesus of Nazareth, a cloth for which complete documentation has existed for the last four centuries due to the Shroud's ownership by the House of Savoy, the Italian Royal Family. The last ruler of the House of Savoy, Umberto II, was deposed in 1946 at the conclusion of World War II. Until his death at his villa in Cascais, Portugal, on March 18, 1983, Umberto II remained the nominal owner of the Shroud.

The years preceding ownership by the Italian dynasty have been hidden until recent discoveries have begun to illuminate its past. Until a few years ago, the Shroud's authenticity was better supported by science than history. However, the Holy Shroud is known to be at least six hundred years old, because there are records of its first...
appearance in France in the 1350s. The family who owned it at that time refused to say much about the Shroud's origins.4

Although the Shroud is known to be at least six hundred years old, there are only a few historical clues relating to the history of the Shroud from Jesus' death until it appears in the Church of the Virgin Mary of Blacherne at Constantinople.5 The religious as well as lay travelers brought hundreds of relics to Constantinople's great churches starting at the time of Constantine I (306-337 A.D.). Among those relics were the fragments of the true cross; objects owned by the Saints, including the robe of the Holy Virgin; bones of the sainted martyrs; water from the Jordan River and stones from Mt. Calvary. Most were enclosed in reliquaries made from precious metals and mounted with jewels. Many of the reliquaries were constructed by the finest craftsmen of their time. Some of the finest reliquaries were believed to contain the original three nails from Christ's crucifixion, a number of fragments from the true cross and one small jeweled bottle (called an ampoule) which was believed to contain a few drops of the Savior's blood.6

To the Christian faithful, the relic par excellence of the early Church would be the cloth in which the crucified Jesus was wrapped. Many persons believe that this relic is the Holy Shroud of Turin, a rectangular shaped linen cloth
approximately fourteen feet long and three feet wide. The material has a herringbone weave which bears the anatomically correct image of a crucified man. He lies posed in an attitude of death, with his hands crossed over the pelvic area. Nail holes penetrate the wrists; the mark of a single nail penetrates his feet which lie left on top of right, in what has come to be the familiar artistic representation of Christ on the Cross.  

The image of the man on the Shroud revealed that he was about five feet ten inches tall; he had a beard and wore long hair in a pigtail gathered at the neck. The Shroud bears his image as seen from the front and from the back. Therefore, he must have been laid on one end of the cloth with the remainder drawn up over his head and across his body down over his feet. A pattern of dumb-bell shaped marks on his back suggest that he was scourged with a whip-like instrument that could have been a Roman flagrum. What appear to be blood spots ring his forehead; a wound on his right side is a sign that he was pierced by a weapon. Another puzzling feature of the Shroudal image has been that neither thumb was visible. Experiments with cadavers show that a nail driven through the wrist affects the median nerve, which causes the thumb to curl into the palm. The nail is placed in an area of the wrist called Destot's space which has no bone.  

The method of his crucifixion, the nails driven
through the wrists, rather than the artistic representations showing them in the palms of the hands is new to historians. Supportive evidence for this method of Roman crucifixion was discovered in 1968, when an Israeli bulldozer uncovered a Jewish cemetery from the New Testament period. Found in the cemetery was a skeleton with the heel bones nailed together, the first crucifixion victim ever found with the evidence of crucifixion still evident. Scratches on the bones revealed that nails had been driven through the wrists, not his palms.9

The early history of the Shroud has a number of gaps in its chronology. Most of these gaps appear to be related to the fact that the cloth at some time was folded and framed in such a manner that only the head could be seen.10 After the death of the few who knew the true proportions of the image on the Shroud, its real identity was forgotten. For that reason, the relic became confused with the story of St. Veronica's Veil, as well as several other legends all relating to some incident where Christ impressed His face on a cloth. The result, after many years, was that the cloth's true identity as the Shroud of Jesus was completely forgotten. Since that time, many people have come to believe that the Shroud is the burial cloth of Jesus. Until recently, this was a matter of faith, rather than scientific or historical evidence. However, recent investigations by sindonologists have begun to fill in the
gaps in the history of the Shroud. Those gaps could be filled and the complete history of the Shroud could be known through interdisciplinary research concerning the Shroud.
2. The photographic reversal of the facial image of the Shroud Photograph after the Holy Shroud Guild
SECTION I
NOTES


2 The owners of the Shroud since 1453 have been the Savoy, the Royal House of Italy. The last king of Italy, deposed in June, 1946 in the aftermath of World War II, was Umberto II (also known as Humbert). Following his death on March 18, 1983, his wishes were fulfilled and the Shroud's ownership was passed to John Paul II and to his successors. The Pope formally gave custody of the Shroud to the Archbishop of Turin. It is interesting to note that Umberto's II bequest of the Shroud was to the papacy, that is, the office of the pope, and not to the Papacy, the governmental system of the Roman Catholic Church. See "Shroud A Gift," Southern Cross, March 31, 1983, p. 2, c. 1 and "Custody," Southern Cross, December 8, 1983, p. 2, c. 1. For a brief biographical sketch of Umberto II, see Peter M. Rinaldi, S.O.B., "Humbert II of Savoy: 1904-1983." Shroud Spectrum International II (June, 1983): 2-5.

3 See sections three through seven, below, for an historical sequence of the Shroud.


6 Dembowski, p. 18, note 8. See also Joan Caroll Cruz, Relics (Huntington, Indiana: Our Sunday Visitor, Inc., 1984), pp. 2-8.
See art renditions of Christ's crucifixion such as the Arundel Manuscript (12th century), the Pähl Altarpiece (c. 1400s), Niccolo Alunno's Crucifixion (c. 1490), Rogier Van der Weyden's Christ Crucified (15th century), Paul Gauguen's The Yellow Christ (1889), and Graham Sutherland's The Crucifixion (1946).


See section three below.
OBJECTIVES FOR SECTION ONE: The Holy Shroud of Turin

The student will be able to perform the following tasks after the introduction of an overview of the Shroud:

A. Define or identify the following terms or people by passing a teacher-prepared quiz:
   1. Cathedral of St. John the Baptist
   2. Destot's Space
   3. flagrum
   4. House of Savoy
   5. reliquary
   6. Umberto II
   7. Veronica's Veil

B.

1. Write an essay of approximately 250 words in which the value of relics is analyzed by comparing the Shroud to a minimum of three other relics.

2. Indicate where the Shroud is located by correctly identifying Turin on a map of Italy.

3. Write an essay of approximately 250 words which describes the significance of Destot's Space in relationship to the Shroudal image.

4. Prepare at least ten questions concerning
Savoy ownership of the Shroud to ask Umberto II in a fictional interview with the deposed monarch.

5. Design a fictional interview with a master craftsman of the Middle Ages concerning the intricacies of preparing a reliquary using a "You Are There" approach.
SECTION II
ASPECTS OF ROMAN CRUCIFIXION

In considering the crucifixion of Jesus in relationship to the body wrapped in the Holy Shroud of Turin, it is necessary to realize that crucifixion as a means of execution was practiced by the Phoenicians, Scythians, Carthaginians, and Persians considerably prior to being practiced by the Romans. For example, Alexander the Great crucified 2,000 citizens at Tyre. It is conceivable that he had learned that form of execution from the Persians, whom he had conquered between 334-331 B.C.\(^1\) Likewise, it is conceivable that the Romans may have taken the crucifixion form of execution from the example set by Carthage where crucifixion was a frequent form of the death penalty.\(^2\)

The Romans and others used crucifixion primarily to deter crime, to punish criminals in a slow and inexorable manner and to shame the miscreant. It is known that the Romans primarily crucified conquered rebels and slaves. However, early Roman historians such as Caius Licenius, Labienus, Livy, and Valerius Maximus stated that even Roman citizens and senators were not exempt from that form of death penalty.\(^3\) Following the 71 B.C. uprising of Spartacus, 6,000 Roman slaves were executed. Furthermore,
as many as 500 Jews daily were crucified as sacrificial offerings to the gods during the Roman seizure of Jerusalem around 69 A.D. For the most part, however, during peaceful times, it was slaves who were crucified by the Romans.4

The Roman penalty of death on a cross consisted of three distinct phases: The flagellation; the crucifixion; the crurifragium.5 In regard to the flagellation, it was a legal preliminary punishment prior to the execution. After being stripped of his clothing, the victim's hands were tied to a stationary stake and he would be whipped by a trained man, known as a "lictor."6 The whip used, a flagrum,7 consisted of a short handle or a circular piece of wood to which leather strips were attached. At the end of each thong were affixed bits of bones called tali8 or small lead pellets called plumbatae.9 Each time the victim was flogged, the bones or the lead cut into the skin "until the flesh hung down in shreds."10

The number of lashes to be struck during the scourging varied: Judaic law strictly limited the strokes to forty (Deut. 25:3), while the Pharisees never exceeded thirty-nine lashes to insure against accidentally exceeding the lawful limit. The Romans, however, set no restrictions on the flagellation as long as the victim did not succumb: He was required to carry the patibulum11 to the designated site and to die on the cross, rather than from the scourging, which the Romans, in general, administered in a
zealous manner. According to Monsignor Giulio Ricci, archivist at the Vatican's Congregation for Bishops, at least ninety-eight, and possibly as many as 120, lashes can be counted on the Shroudal victim.12

The importance of the victim's ability to carry the patibulum becomes apparent in the second phase of the Roman death penalty. The cross used for the crucifixion consisted of two distinct pieces: The stipes crucis13 and the patibulum.14 The vertical beam (stipes crucis) was fixed in the ground. Normally, several stipites (a minimum of three)15 were permanently erected in areas under Roman domination, outside the city walls. Conversely, the cross-beam (the patibulum) was not stationary, as Roman practice required the condemned to have the patibulum tied across the shoulders throughout the agonizing march from the tribunal to the crucifixion site. The patibulum weighed approximately 110 pounds16 and was about six feet long, as the cross-bar originally had been used for barring doors.17

Upon the arrival of the procession of the condemned at the site of the stipites, the logistics of placing the patibulum onto the stipes was relatively simple. One of two methods could be utilized: Insertion of the patibulum, which had an oblong mortise at the center, onto the face of the stipes;18 placement of the patibulum at the top end of the stipes. Either method formed a basic "T" shape, with the former being called the crux immissa19 and the latter
being called the **crux commissa**,\(^{20}\) which was like the Tau in the Greek alphabet. Modern archaeologists conjecture that the Romans favored the Tau shaped cross for use in crucifixion.\(^{21}\)

In regard to the placement of the **patibulum** onto the **stipes**, historians are in disagreement as to the height of the location of the **patibulum**, in relationship to the vertical beam. In effect, there were two positions that were used: The **crux humilis**\(^{22}\) and the **crux sublimis**.\(^{23}\) Normally, the **crux sublimis** position was used in the crucifixion of persons whom authorities, Roman or otherwise, wished to display publicly. Such, for example, was the fate of the Roman General Marcus Atilius Regulus who met with defeat in Africa during the First Punic War. He was crucified and displayed in Carthage c. 250 B.C.

The **crux sublimis** was much taller than the six foot\(^{24}\) high **crux humilis** which was most frequently used for executions. The **humilis** position enabled the executioner to perform his work expeditiously, which was an important consideration: Crucifixion was commonplace and frequently the victims were executed in large numbers daily.

Following the arrival of the condemned at the execution site, one of two methods was used to affix the victim to the cross: Binding by rope or nailing. In binding by rope, the shoulders remained bound to the **patibulum** and the condemned's feet were lashed to the
stipes. In the nailing method, normally three, and at the most, four nails were used. The victim was unbound from the patibulum, which was then placed on the ground. After the victim was made to lie on the crossbeam with his arms extended toward the ends of the patibulum, the hands were nailed to the beam. The beam was raised and affixed to the stipes and the victim's crossed feet were then nailed to the upright beam. Of the two methods, the nailing technique was normally utilized and it should be noted that the methods were always separate. No evidence exists to suggest that a crucified person was subjected to both the nailing and roping methods at the same time.

It also should be noted that some crosses had a sedile, or possibly a supperdaneum, in addition to the stipes and the patibulum. The sedile was a projecting peg which the condemned straddled, while the supperdaneum served as a footrest. Either of those additions to the cross served to support the weight of the condemned, thus easing the weight on the nailed wrists. Lest it be thought that those additions were made as a consideration for the comfort of the victim, they were not. Actually, they allowed the victim to live longer, thus increasing the length of suffering to be endured.

"The whole scheme of crucifixion was progressive weakness under increasing pain." For that reason, crucifixion sometimes lasted for two days, according to
Origen, and Eusebius noted that some victims of crucifixion actually died of hunger. However, to end the condemned's suffering, the third, and final phase of the crucifixion was then enacted: Crurifragium began. The victim's legs were broken below the knees by a blow struck with a club.

As a result of the crurifragium, the victim no longer could place weight on his feet, nor could he draw up his legs to ease the body's weight from his arms. Consequently, that position forced inhalation. In turn, an overall contraction of the respiratory muscles resulted, causing the victim to be unable to expel the air that was trapped in the lungs. Most sindonologists agree that the real cause of death in crucifixion is asphyxia and tetany.

Through the entire crucifixion process from the flagellation to the crurifragium, the execution was legally administered under a military staff of legionaires, commanded by a centurion. The centurion was responsible for such details as requisitioning the soldiers, saddles, signs to be worn around the neck of the condemned, food for the soldiers who would stand guard at the foot of the crosses, and to provide an escort from the tribunal area to the stipites. Upon the arrival at the execution site, the soldiers were responsible, under the centurion's direction, to affix the condemned upon the cross. There the soldiers
were to remain on duty until the coup de grâce, a death blow to the heart, was administered. If relatives failed to claim the dead, the victim remained on the cross to be devoured by birds and wild beasts. If, however, relatives did claim the body of the crucified person, the coup de grâce, administered by a legionaire's thrust of a short javelin or a lancea, ensured that the victim was dead.
3. Umberto II, the last king of Italy, with John Paul II, the present custodian of the Holy Shroud of Turin.

Photograph after Shroud Spectrum International
SECTION II
NOTES


3 Barbet, A Doctor at Calvary, pp. 38-39.

4 Ibid.


7 Humber, The Sacred Shroud, p. 50.

8 Barbet, A Doctor at Calvary, p. 46.

9 Wilson, The Shroud of Turin, p. 48.


11 Barbet, A Doctor at Calvary, p. 46.


13 Barbet, A Doctor at Calvary, p. 39.

14 Ibid.

15 Bishop, The Day Christ Died, p. 274.


17 Barbet, A Doctor at Calvary, p. 41.

18 Bishop, The Day Christ Died, p. 274.
19 Barbet, A Doctor at Calvary, p. 41.

20 Ibid., p. 42.


22 Barbet, A Doctor at Calvary, p. 40.

23 Ibid.


25 Ibid., p. 279.

26 Barbet, A Doctor at Calvary, pp. 43-44, 48.

27 Ibid., p. 42.

28 Ibid., p. 43.

29 Ibid., pp. 42-43.

30 Bishop, The Day Christ Died, p. 284.

31 Barbet, A Doctor at Calvary, p. 72. See also Humber, The Sacred Shroud, pp. 56-57.

32 Ibid. See also Bishop, The Day Christ Died, p. 276.

33 Keller, The Bible as History, p. 388. See also Humber, The Sacred Shroud, p. 60 and Barbet, A Doctor at Calvary, pp. 84-85.


35 Barbet, A Doctor at Calvary, p. 51. See also Humber, The Sacred Shroud, p. 60.

36 Bishop, The Day Christ Died, pp. 267-276. See also Barbet, A Doctor at Calvary, pp. 49-52.

37 Wilson, The Shroud of Turin, p. 48.
OBJECTIVES FOR SECTION TWO: Aspects of Roman Crucifixion

The student will be able to perform the following tasks after the introduction of material concerning Roman crucifixion:

A. Define or identify the following terms or people by passing a teacher-prepared quiz:

1. coup de grâce
2. crux commissa
3. crux stipes
4. flagrum
5. lances
6. patibulum
7. plumbatae
8. sedile
9. supperdaneum
10. tali

B.

1. Indicate an ability to identify the three distinct phases of Roman execution on a cross by listing the phases in order.

2. Differentiate between the crux humilis and the crux sublimis by defining the two terms correctly.

3. Write an essay of approximately 250 words containing a minimum of three points of
reference isolating the reasons why a crucified victim died of asphyxiation and not from the direct effects of crucifixion.

4. Prepare an editorial, either pro or con, on the use of crucifixion as a means of execution, thus indicating an understanding of the reasons why the Roman Empire used crucifixion as an expedient form of capital punishment.

5. Indicate an understanding of the method by which one was crucified by orally describing the correct positioning of the body on the cross.
SECTION III

THE HISTORICAL SEQUENCE OF THE HOLY SHROUD OF TURIN:
1st CENTURY PALESTINE TO 1204

It was about 325 A.D. in his History of the Church, that Bishop Eusebius of Caesarea recorded that King Abgar V of Edessa, who reigned as the Toparch from 13 A.D. to 50 A.D., suffered from an incurable disease. The King, having heard of the miracles of Jesus, subsequently sent his messenger, Ananias, to Jerusalem to invite Jesus to come to Abgar to cure the King. In his History of the Church, the bishop quoted reputed correspondence between Jesus and the King. Eusebius noted that his source was letters which he translated from Syriac into Greek. He further noted that the letters were contained "in the Record Office of Edessa." It was during the course of the correspondence between the King and Jesus that Jesus was arrested, condemned to death and executed.

Shortly after the death of Jesus, early Scripture accounts agree that the disciples sent an evangelist named Thaddaeus to Abgar. Thaddaeus, one of the Apostles, was sent to Edessa. When Thaddaeus arrived in Edessa, he stayed at the home of Tobias, whose father was a Jew, originally from Palestine. When Thaddaeus was summoned to the Royal Palace, he carried with him what is now believed to have
been the Shroud, folded in such a manner as to show only the face or head. The evangelist placed it before his face and entered the king's presence in this manner. The instant that the king saw the features of Our Lord, Abgar's illness left him and he rose and walked to meet Thaddaeus:

...he asked about the likeness portrayed on the linen cloth. For when he had carefully inspected it he saw that it did not consist of earthly colors, and he was astounded by its powers...

Following Abgar's amazing physical recovery, Abgar ordered the relic to be preserved in a frame constructed with an inter-facing cross-hatch of gold and an oval or circular outline revealing only the face. This is the reason that later descriptions failed to mention that the cloth contained a full length representation, both front and back. Some scholars ascribe the folding and framing of the Shroud to Abgar's servant, Aggai, who was a craftsman skilled in gold and silks, as well as a converted Christian who became the leader of the infant Christian community at Edessa.

After the framing of the Shroud and the subsequent death of Abgar V in 50 A.D., the holy relic came into possession of Abgar's successor, his Christian son, Ma'nu V, who reigned for seven years. When Abgar's second son, Ma'nu VI succeeded to the throne in 57 A.D., he gained possession of the Shroud which caused concern for the safety of the relic since Ma'nu VI had never converted to
Christianity. To insure the security of the Shroud, the Christian community hid the sacred relic in a niche above the west gate of Edessa. Nearly five hundred years would elapse before the Shroud would be rediscovered in the aftermath of a flood in 525 A.D. At that late date, when the emperor Justin's nephew, Justinian (r. 527-565) dispatched engineers to divert the Daisan River and restore Edessa, the dismantling of the west, or Kappe Gate, of Parthian architecture, exposed the sacred treasure in the niche. From that time until 943 A.D., the Shroud became the most significant relic of the Christian community at Edessa. However, in the ensuing years, the Moslem peoples began to advance into the Byzantine Empire: Edessa fell to them, but its Christian community survived and retained possession of the Shroud.

In tracing the historical sequence of the Holy Shroud of Turin, research revealed that one of the earliest references to the Shroud is provided by Nicephorus Callistus (d. 1250). In his ecclesiastical history, written after the capture of Constantinople in 1204, Nicephorus wrote that in 436, the Empress Pulcheria had built the Basilica of St. Mary of the Blachernae and had placed there the burial linen of Jesus.

In addition to the records of Nicholas Callistus concerning the holy relic, the Shroud also is mentioned by St. Braulio, the Archbishop of Saragossa, Spain, from 635
to 651. In his 631 letter (called number XLII), St. Braulio wrote of the "winding-sheet in which the body of the Lord was wrapped." Another seventh century description of the Shroud is given by Adamnan, the abbot of the Benedictine monastery at Iona. He wrote of the 640 pilgrimage to Jerusalem undertaken by the French bishop Arculphus. Adamnan described Arculphus as having seen and kissed the "winding-sheet of the Lord which was placed over His head in the sepulchre." The veneration given the Shroud by Arculphus is substantiated also by the writings of the eighth century cleric, St. Bede the Venerable.

The importance of the Shroud prompted the aging Emperor Romanus Lecapenus to covet the holy relic for Constantinople. For that reason, in the spring of 943, John Curcuas, a general in the Byzantine army, besieged Edessa on the emperor's orders. John Curcuas promised four specific guarantees to the Edessans if the Shroud were given to him: The city would not be attacked; two hundred Moslems of high social standing would be freed from imprisonment by the emperor; twelve thousand silver crowns would be paid to Edessa; the city would be given in perpetuity immunity from attack by the emperor and his troops. After considerable time, lengthy negotiations and intrigue, the Moslem caliph of Edessa delivered the Holy Shroud to Abraham, the Bishop of Samosata. John Curcuas was not given the Shroud directly because the Edessan
leaders believed that the relic was too holy to be placed in the bloody hands of a soldier.13

Following the acquisition of the Shroud by the general, John Curcuas, the Shroud was taken to Constantinople. On August 15, 944, the Feast of the Assumption of the Virgin Mary,14 the Shroud was received by the emperor at Constantinople. The people of the city were overjoyed and a festival in the Shroud's honor was proclaimed. On August 16, after the holy relic had been apotheosized by the populous of the city, the Shroud was venerated in the Cathedral Hagia Sophia. Then the procession made its way to the Royal Palace, where it again was adored by those present in the Royal chambers. The Shroud was taken then to the Phares Chapel, a chapel contained within the Imperial grounds.15

Following the 944 display of the Shroud, records indicate that the relic again was displayed publicly in 1036 and 1058.16 Some tentative descriptions of the Shroud are recorded through the 10th century. By 1093, a document containing a description of relics connected with Jesus was recorded in the Imperial collection. Although the signature on the document is forged, this does not invalidate necessarily, the description which stated that the collection contained the linens which were found in the tomb after Jesus' resurrection.17

Another writer who described the Shroud was the
English Archbishop of Tyre, William. His visit to Constantinople in 1171 was marked by seeing the Shroud among the prized Imperial treasures. William viewed the relic with the King of Jerusalem, Amaury I, at a private viewing of the Shroud. William's writings described the sindon as being "the cloth which is called the sisne in which he (Jesus) was wrapped." A further record concerning the Shroud was written in 1201 by a Greek, Nicholas Mesarites, the Keeper of the relic collection in the Pharos Chapel. In his recording, Nicholas Mesarites told of his having defended the relic collection during the palace revolution. While defending the collection from the unruly mob, Nicholas addressed the rioters concerning the Shroud, which was part of the relic collection:

In this chapel Christ arises again, and the sindon with the burial linens is clear proof... ... defying decay, because it wrapped the mysterious, naked dead body after the Passion...

An important phase of the Shroud's history began at the onset of the 1200s, which marked a sad chapter in Western Christendom. In August, 1198, Pope Innocent III issued an encyclical which called for a fourth crusade against the Infidels. Another great army was gathered, but instead of moving directly to the Holy Lands, politics and personal ambition combined to bring the army under the walls of Christian Constantinople. The avowed reason was to restore the deposed Byzantine emperor, Isaac II Angelus,
to the throne. After that restoration was accomplished (in August, 1203), the crusade would direct itself against the Moslems in the Holy Lands. After some time, the emperor was restored, but politics again intervened and when Isaac II was unable to pay the agreed-upon monies for his restoration, the Crusaders sacked Constantinople. For three days, beginning on April 13, 1204, the arts and treasures of Constantinople were gathered as spoils and were carried off by the Crusaders.21

One of the knights participating in the Fourth Crusade was Robert de Clari, a French knight from Picardy. Between 1203 and 1204 de Clari wrote about the weekly exposition of the Shroud:

...there was another of the churches, which they called My Lady St. Mary of Blachernae, where was kept the Sydoine (Shroud) up straight every Friday so that the figure of Our Lord could be plainly seen there and neither Greek nor Frenchman knew what happened to that shroud after the town (Constantinople) was taken.22

The Shroud probably was part of the booty of the 1204 siege of Constantinople.

It is not too difficult to reconstruct a reasonable sequence of events if one examines the history and tactics of the battle at Constantinople. The Church of St. Mary of Blachernae was located within the wall where the principal force of attack was made. Once the armies, which were fighting savagely, had breached the exterior fortifications, the Church was directly in the path of
fighting. Looting took place while the fighting raged.\textsuperscript{23} In the confusion, the soldiers gathered up many of the Church's treasures without anyone knowing precisely who had taken what items.\textsuperscript{24} No one can say for sure who took the Shroud in its golden container, but it is reasonable to assume that it was part of the spoils carried away by one of the crusaders who took it to the Holy Lands.\textsuperscript{25} Documents fail to indicate anything about the Shroud until it appears again in France in 1357 in the small town of Lirey. It is the missing years of the Shroud's history that now must be addressed and its relationship to the crusades and the crusaders known as the Knights Templar.
4. An icon, the "ARCHEIROPOIETOS"
("not made by hands")
SECTION III
NOTES

1 Various sources state that Abgar's incurable illness was rheumatoid arthritis, leprosy or cancer. See Frank Tribbe, Portrait of Jesus? (New York: Stein and Day, 1983), p. 42.


3 See Matthew 10:3 and Mark 3:18.

4 If the Shroud were to be folded so that only the head were visible, approximately twenty-one inches would be seen vertically, with the width of the Shroud being approximately forty-two inches.


6 Aggai was to become a martyr for his faith when he refused an order issued by Abgar's second son, Ma'nu VI. The ruler had ordered Aggai to produce a royal headdress and Aggai refused because pagan symbols were to be placed on the gold headdress. Ma'nu VI then ordered Aggai's death. See Alexander Roberts and James Donaldson, eds. and trans., "The Teaching of Addaeur the Apostle," The Anti-Nicene Fathers (Grand Rapids, Michigan: Eerdmans, 1951), vol. III, p. 665.

7 In his description of the aftermath of that flood, which occurred sometime between 520 and 524, the historian Procopius of Caeserea, a contemporary of the Emperor Justinian, stated that "...it happened that the main walls of Edessa and its outworks had suffered from the passage of time no less than they had from the flood, and for the most part were fit only to be called ruins. Therefore the Emperor rebuilt both of them and made them new and much stronger than they had been formerly...." Taken from Procopius of Caeserea, Buildings II, chapter 7, translation from Loeb edition (London, England: Heinemann, 1940), p. 145 in Wilson, The Shroud of Turin, p. 139.

8 Tribbe, Portrait of Jesus?, p. 46.

Ibid.

Ibid., p. 4.


The Feast of the Assumption of Mary was promulgated formally by Pope Pius XII on November 1, 1950. The tradition honoring Mary's Assumption has its origins, however, in earlier centuries. The Byzantine Emperor, Mauritius (r. 582-602) introduced a feast day known as the Koimesis (Falling Asleep) of the Virgin. It is this feast day upon which the Shroud triumphantly was received in Constantinople.


Robert Payne, *The Dream and the Tomb: A History of the Crusades* (Briarcliff Manor, New York: Stein and Day, 1984), p. 269 stated that the Crusaders "were on their way [to Constantinople] to commit one of the greatest crimes in history." For a brief overview of the Crusades, see Section VIII below.

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mention both sindon and sudarium (terms usually accepted as being synonymous for shroud) may indicate the presence of two artifacts, the Shroud and a mandylion. Crispino charges that sindonologists who view 1204 as the crucible around which the missing years of the Shroud hinge, have ignored later references to the Shroud's presence in Constantinople. However, it should be noted that Crispino acknowledges that the evidence supporting her contention that the Shroud remained in Constantinople after 1204 is "scarce" (p. 27).
OBJECTIVES FOR SECTION THREE: The Historical Sequence of the Holy Shroud of Turin: 1st Century Palestine to 1204

The student will be able to perform the following tasks after introduction of material concerning the historical sequence of the Shroud from the first century to 1204:

A. Define or identify the following terms or people by passing a teacher-prepared quiz:

1. Abgar V
2. Basilica of St. Mary of the Blachernae
3. Constantinople
4. Edessa
5. Innocent III
6. Isaac II
7. John Curcuas
8. Justinian
9. Ma'nu V
10. Ma'nu VI
11. Robert de Clari
12. Thaddeus
13. Toparch

B.

1. Construct a model of the Cathedral Hagia Sophia using materials such as wood, papier-mâché, matches, and other substances available to students.
2. Indicate an understanding of John Curcuas' acquisition of the Shroud through the factually correct role-playing of the siege and the transferring of the Shroud to his control.

3. Sketch a map of Constantinople at the time of the 1204 siege.

4. Demonstrate an understanding of Thaddeus' presentation of the Shroud to Abgar by role-playing a television reporter giving an account of the exchange.

5. Identify the early references to the Shroud through the presentation of a "Meeting of the Minds" format involving Nicephorus Callistus, St. Braulio and Arculphus.

6. Prepare a "Face the Nation" interview with William of Tyre in order to identify William's contribution to Shroudal history and literature.
SECTION IV

THE MISSING YEARS OF THE HOLY SHROUD OF TURIN:
1204-1353

Sindonologists have offered various theories concerning the history of the Shroud prior to its disappearance at the close of the Fourth Crusade. The interregnum of 1204 and 1353, however, poses problems for sindonologists. Thomas Humber refers to the history of the Shroud as containing a "lost millennium" characterized by an "astonishing historical silence" when he refers to the missing years of the Shroud. However, Humber offers no evidence or theory which would account for the Shroud's hidden years and he states emphatically that no reliable documents exist to substantiate the Shroud's existence prior to 1353.

Despite Humber's opinion, Robert Wilcox covers the Shroud's history prior to 1353 by presenting his position that the Shroud and the Image of Edessa (sometimes referred to as the "mandylion") are the same object. Following the public display of the Image of Edessa it became known as the "true likeness" of Jesus and it was venerated throughout Byzantium. Ian Wilson concurs with Wilcox's opinion concerning the Shroud and the Image of Edessa. Wilson adds, however, that the location of the Shroud prior
to the fourteenth century poses a "dilemma." Wilson's answer to this "dilemma" is to hypothesize that the Shroud became a part of the booty following the end of the Fourth Crusade in 1204. Wilson further theorizes that the crusaders who removed the relic were members of the military Order of the Knights Templar.

Wilson's Templar connection to the Shroud, particularly the Templars' relationship to the hidden years of the Shroud is based on four main hypotheses. Those four hypotheses, plus a commentary by this writer concerning each hypothesis, follows:

**Hypothesis One:**

The Shroud of Turin passed from control of the Byzantines to the European crusaders in 1204. The Shroud was in the possession of the Knights Templar, who chose not to exploit their ownership of the relic.

**Hypothesis Two:**

At the time of the Templars' arrest by order of Philip the Fair and the Templars' subsequent trial for treason, the Shroud was not openly known to have been in the control of the Knights. The vigorous resistance which the Templars had displayed at the time of their arrest enabled the Shroud to be whisked away secretly. The fact that the Shroud surfaced at a later date in the possession of the de Charny family was due to the family's connection with the Temple through Geoffroy de Charney, the Preceptor of Normandy.

**Hypothesis Three:**

The Templars were accused of worshipping the head of an idol during their chapter meetings. The "idol" was the Shroud's head which was all that was seen of the Shroud because of the manner in which the Shroud was folded. The Shroud, or "head," served as the focal point of the Templar organization.
Hypothesis Four: 10

The de Charny family was hesitant to acknowledge the origins of the Shroud, even though the Shroud was considered to be fraudulent by some of the de Charny's contemporaries.

Evidence supports Wilson's first hypothesis concerning the Shroud and its connection with the Knights Templar, as it is known that by 1204, the Templars had distinguished themselves as fearless crusaders. It also is known that members of the Knights Templar were at the forefront of the 1204 assault on Constantinople and thus it is more than possible that one of the Templars took the Holy Shroud. 11

It appears that from the fall of Constantinople in 1204, to the capture of Acre in 1291, the Holy Shroud resided in the hands of the Templars' Grand Master, residing in Palestine. It was during this specific interval (1204-1291) that the Templars had become the most powerfully organized military organization of the time. 12 However, in 1291, the Templars' military prowess came to an end in the Holy Land, for in 1291, Jerusalem was destroyed and the Christians were expelled from the Holy Land. The Templars held out at Acre until the last moment. The heroism of the remaining Templar garrison is a story from which great novels are made. The Citadel at Acre juts out into the sea and it provided the last route of withdrawal by the Templar garrison. All of the treasures accumulated by the Templars had been gathered at the sally port and the watergate at
Acre. As the Moslems advanced, the Knights fought until the treasures were loaded and the ship sailed for Cyprus. A great number of the Templars died at the watergate in order that a few of their brethren could escape with their treasures which possibly included the Holy Shroud.¹³

Prior to their abandonment of their fortress at Acre, it had been the Templars' intention to headquarter the Order permanently in Jerusalem. That plan could not be fulfilled following their expulsion from Acre. Consequently, the Knights planned to settle on Cyprus because of the island's proximity to the Holy Land. The Templars' desire to remain close to the Holy Land was predicated on the hope that Christians would arise once again and drive the pagans from the Holy Land. However, the Knights, who were practical as well as courageous, recognized that a return to the Holy Land would not be possible for many years. Therefore, since Cyprus was within the sphere of the Moslem advance, the Templars reasonably decided to transfer their headquarters to Europe.¹⁴

Once the Templars reached Europe, new headquarters consisting of a gigantic fortification located near the Louvre, in Paris, were established at Villeneuve de Temple. The Templars' treasures had been taken to the port of Marseilles and then carried north by a large pack train to Paris where the Shroud resided in the Temple until the last
days of the Order. The Shroud apparently was copied and those copies were dispersed to the various Templar houses throughout Europe. What is perhaps the only surviving representative of those copies was discovered in 1951 in the village of Templecombe Somerset, England. The accidental collapse of a plaster ceiling in a very old house revealed a painting on a plaque of wood. The painting depicted a life-sized, disembodied, bearded male head. The similarity of the painted head to the features imprinted on the Shroud is remarkable.

In reference to Wilson's second hypothesis, it should be noted that it has been chronicled that King Philip IV (1268-1314) of France, sometimes referred to as Philip the Fair, was the catalyst for the destruction of the Templar Order. The hint of heresy surrounding the Templars due to their rumored secret ceremonies and their worship of a "head" (the Shroud), were in direct conflict with Philip's inherent political ideal which included the development of a modern, narrow concept of nationality. Furthermore, Philip's political ideal required the suppression of any system which challenged the supremacy of the Crown.

Thus, the Templars were a danger to both elements of the Royal policy and were a constant threat to the consolidation of the French monarchy. The King rightfully feared the Knights Templar, an international, independent, financially and militarily powerful organization.
Likewise, the Templars had every right to fear Philip's potential seizure of the Templar treasures, among which was the Shroud of Turin.

The arrest without warning, on Friday, the thirteenth of October, 1307, of every Templar within French boundaries was the outgrowth of Philip's plan to acquire the Templars' wealth by means of confiscation. To achieve that end, the King accused the Order of corruption and the Templars were charged with being heretics, traitors, blasphemers, sodomites, idolaters, and usurers. The arrested Templars immediately were interrogated by the King's officers who, in the course of grilling the prisoners, physically tortured them. The questioning, torturing and trials were to continue until March 19, 1314, when the Templar leaders were executed on the public scaffold near the Cathedral of Notre Dame. The few Templars who had successfully resisted arrest on that fateful Friday the thirteenth in 1307, were, according to Wilson's second hypothesis, able to secrete the Shroud until it reappeared in 1353 in the possession of the de Charny family.

Although the acquisition of the Holy Shroud was perhaps the most valuable asset of the Templar organization, according to Wilson's third hypothesis, the sacred relic ultimately led the Templars to be charged with heretical practices. It appears that the Shroud became part of the rituals of the Templars and later evidence
taken at their trials offers support for this. After being tortured, individuals under questioning, made surprising statements regarding the use of a "head" during their ceremonies, and this was translated quickly by the superstitious inquisitors as some form of devil worship or blasphemy. In addition, it was politically expedient to maintain as many charges of this type as possible against the Templars in order that they be found guilty so that they could be removed by Philip IV as a dangerous military force. Moreover, if the Templars were declared to be guilty of the various charges, the treasures of the Order could be confiscated by the Crown.

Although the de Charny family was hesitant to reveal the origins of the Shroud, one man, Geoffrey de Charney, Preceptor of Normandy, rose to a position of power and authority in the Templar Order that was sufficient to substantiate the theory that he had access to control of the Shroud. The Preceptor de Charney was from Anjou, in France, and upon entering the Knights Templar at the age of eighteen, in 1266, he took the Order's strict monastic vows of poverty, obedience and chastity. The latter vow makes it doubtful that the Preceptor ever married or had children to whom he could have bequeathed the Shroud. In his Templar role, de Charney served the Order on Cyprus and he had risen within the ranks of the powerful Templars, thus enabling him to be privy to the innermost secrets of the
Order and to have knowledge of, and access to, the Order's treasures. It is conceivable that the Templar de Charney and the de Charny family of Lirey who publicly displayed the Shroud in 1353 were related. The surname is unusual and in fourteenth century France spelling was not standardized and for that reason, minor variations in spelling were common. Geoffrey de Charney, the Preceptor of Normandy, and Geoffrey de Charny, the 1353 owner of the Shroud, may have been uncle and nephew, or perhaps great-uncle and great-nephew. Geoffrey de Charny of Lirey never revealed the time nor the manner by which he came to possess the Shroud. Geoffrey de Charny's wife, Jeanne de Vergy, inherited the Shroud upon Geoffrey's 1356 death, but neither Jeanne nor her son Geoffrey II indicated the manner in which Geoffrey received the Shroud. Geoffrey II's daughter, Margaret, alluded to the family's initial ownership as one which her grandfather received as a "conquered" item. Geoffrey II stated that the Shroud had been given to his father as a gift. Neither Geoffrey II nor his daughter, Margaret, stated who gave the family the Shroud, when it was received, or under what circumstances. This much is known about the de Charny ownership: "The Shroud was personal property, legitimately acquired, and legitimately held by Geoffrey's heirs."

Concerning the mystery that surrounds the origins of the Shroudal ownership by the de Charny family, Gary R.
Habermas and Kenneth E. Stevenson acknowledge that the history of the Shroud is "complex" and "poses a problem for historians" because of the lack of historical records concerning the Shroud prior to the fourteenth century. Like Wilson and Wilcox, Stevenson and Habermas give credibility to the Shroud-Image of Edessa identity. Additionally, the two men support Wilson's Knights Templar theory, although they offer no new historical evidence concerning the Templar connection. Robert Drews also believes that the Shroud-Image of Edessa parallel is valid. He passes over the hidden years of 1204 to 1353 by presenting Wilson's Templar theory, yet Drews does not indicate his support or denial of the Templar connection.

Wilson's premise concerning the Templar connection to the Shroud is supported by Frank C. Tribbe, who calls the Templar relationship to the Shroud's missing years "the most logical explanation" and Tribbe adds that it "seems certain [that] the Templars were the ultimate recipients" of the Shroud. While Tribbe refers to Wilson's theory of the Templar connection as one which "provides the best fit for the facts and circumstances," Malcom Barber believes that Wilson's premises of the Templar connection is based fragilly on "brittle" links. While Barber attacks Wilson's theory at great length, Barber does not present an alternative hypothesis for the hidden years of the Shroud.

Frank O. Adams, a sindonologist, believes that the
Templars, who helped to finance the Fourth Crusade, could have obtained the Shroud during the 1204 looting of Constantinople. Adams, however, postulates another theory concerning the Shroud's missing years and he is skeptical about the Templar connection. Adams believes that the Shroud was hidden in Jerusalem, possibly in a monastery, until approximately 700 A.D. when the relic was removed to Edessa for safekeeping. Adams then hypothesizes that the Shroud was folded in four sections so that only the face was evident and that the Shroud then became known as the mandylion.32

Adams then addresses the issue of the Shroud's arrival in France by hypothesizing that the Shroud was taken on a "covert mission"33 by French knights whose task was to deliver the Shroud to Rome. Adams furthers his theory by stating that the French knights could have been stopped from delivering the Shroud to Rome because of an outbreak of the Black Death (bubonic plague). Adams states that the French knights, deterred from entering Rome, then proceeded to France, where the French knights decided to deliver the Shroud to their liege lord, King Philip VI. The king decided that he would give the Shroud to a trusted abbot for safekeeping.34

Another theory concerning the missing years of the Shroud's history is presented by Sanna Gammoria Solaro, an Italian priest. Solaro believed that the Shroud remained
in Constantinople under the protection of the Bishop of Troyes, Garnier de Trainel, who had accompanied the crusaders of the Fourth Crusade to the Holy Land. When Constantinople was sacked in 1204, the Bishop was given custody of the relics in the Imperial Chapel. Solaro believed that the Bishop sent some of the relics to Europe and kept the Shroud for himself. Bishop Trainel died in Constantinople in 1205, however, and Solaro maintained that one of the Bishop's subordinates, one of whom was related to the Count de Charney, took the Shroud and returned to Europe with the relic. The Shroud was kept in the de Charney family and was passed into the control of Geoffrey de Charny.35

A 1974 theory concerning the Shroud's 1204-1353 location was presented by Fathers Patrick O'Connell and Charles Carty. The two clerics postulated that the military commander of the district in Constantinople which encompassed the Church of St. Mary of Blachernae, received the Shroud as booty. The commander, a Frenchman, Otho de la Roche, sent the relic to his father, Ponce, in France. The elder de la Roche, the clerics postulate, presented the Shroud to the local Archbishop of Besançon, Amadeus de Tramelai, who placed the Shroud in the Besançon Cathedral, where it remained until a 1349 fire damaged the Cathedral. In the confusion caused by the fire, the Shroud was stolen and then presented to the French king, Philip. The monarch
then gave the Shroud to Geoffrey de Charny of Lirey.36

Thus, although some sindonologists believe that the Shroud and the Image of Edessa are the same object and that there may be a Templar connection which explains the hidden years of the Shroud, definite differences of opinion exist among sindonologists concerning the Shroud's history from 1204 to 1353. As sindonologists pursue the illusive past of the Shroud, it can be hoped that the missing years of the Shroud's history will be identified. This knowledge, once gained, could prove to be the keystone of the Shroud's historicity.
5. The full length image present on the Shroud containing both the front and back images
Photograph after the Holy Shroud Guild
SECTION IV
NOTES


6. Ibid., p. 172. For an overview of the Templars and their founder, St. Bernard of Clairvaux, see Section IX below.


8. Ibid., pp. 179-181.


10. Ibid., p. 191.


14 Ibid., p. 397.


19 Three French Cardinals, acting at the behest of Pope Clement V, were to hear the confessions of guilt from the highest ranking members of the Templars. The Cardinals, Arnold Novelli, Nicholas de Freanville and Arnold de Farges, processed to the area near the Cathedral of Notre Dame, where they and the amassed public were to hear the confessions of the Templar leaders. The four Templars, bound by chains and suffering the effects of seven years of imprisonment and torture, were led to the scaffold by numerous sentries. The Knights were Hugh de Pairaud, the Treasurer of the Temple and Visitor of the Priory of France; Geoffrey de Gonville, the Preceptor of Aquitaine; Geoffrey de Charney, the Preceptor of Normandy; the Grand Master of the Temple, seventy year old Jacques de Molay.

The four Knights were given two options: They could confirm their previous confessions which had labelled them as heretics and through the mercy of the Pope, be received back into the Church. However, they would remain imprisoned for life under Philip's control. The second option was to recant their confessions, but if they did recant, they would be burned at the stake. The prisoners were summoned to respond to the charges and to choose between the two options. De Pairaud and de Gonville reaffirmed their confessions, were declared heretics by the Cardinals and were removed from the area. Jacques de Molay, who "flashed a glance of contempt at the Cardinals and their spokesman" (Stephan Howarth, *The Knights Templar*,
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23 Crispino, "Why Did Geoffroy de Charny Change His Mind?": 29.

24 Ibid.


29 Ibid., p. 64.

30 Ibid., p. 67.


33 Ibid., p. 42.

34 Ibid., pp. 42-43.

35 Sanna Gammaria Solaro, La S. Sindone (Turin, Italy: Vincenzo Bona, 1901).

OBJECTIVES FOR SECTION FOUR: The Missing Years of the Holy Shroud of Turin: 1204-1353

The students will be able to perform the following tasks after the introduction of material concerning the missing years of the Shroud:

A. Define or identify the following terms or people by passing a teacher-prepared quiz:

1. Acre
2. de Charny family
3. Geoffrey de Charney
4. Geoffrey de Charny
5. Geoffrey de Charny II
6. Image of Edessa
7. Jacques de Molay
8. Jeanne de Vergy
9. Knights Templar
10. Lirey
11. Margaret de Charny
12. mandylion
13. Philip IV

B.

1. Construct a chart which compares the various theories surrounding the origin of the Shroud's presence in France.

2. Utilize primary sources of the Templars' trial in order to demonstrate in an essay of 250-
500 words, an understanding of the role which the Shroud may have had in Templar initiation rites.

3. Analyze in an essay of 500-750 words the political philosophy of Philip the Fair and deduce the reasons for his opposition to the Templars.
SECTION V
THE KNOWN HISTORY OF THE HOLY SHROUD OF TURIN: 1353-1460

The Battle of Poitiers (1356) between the English and French armies superficially appears to be an odd starting point from which to begin tracing the known history of the Shroud of Turin. Yet, that pivotal battle of the Hundred Years' War is a significant factor in the history of the Shroud.¹ The French knight who owned the Shroud, Geoffrey de Charny, was the Porte-oriflamme,² the flag-bearer of the battle standard of France. In such a capacity, Geoffrey's duty was to remain close to the French sovereign, Jean le Bon (John the Good) so that the French army would know where its leaders fought. It was because of his position as the Porte-oriflamme that Geoffrey lost his life on September 19, 1356 in the Battle of Poitiers. Jean le Bon was engaged in hand-to-hand combat with his English foes and Geoffrey thrust himself between an English lance and the French monarch.³ The action saved Jean le Bon's life while simultaneously costing Geoffrey his. Geoffrey's death meant that no further evidence would be given by him concerning his attainment of the Shroud. His widow, Jeanne de Vergy, shed no light on her husband's procurement of the Shroud and their son Geoffrey II never elucidated upon the

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family's initial ownership, either. However, de Charny's widow who had little income or land, was responsible for the Lirey Chapel, St. Mary of the Annunciation, which her husband had founded in 1353. The Chapel housed the family's prized heirloom, the Shroud of Turin.  

When Geoffrey de Charny died at the Battle of Poitiers so did the likelihood of obtaining further information on his acquisition of the Shroud. His widow decided to sell the Shroud, in order to support herself and her son. The public display of the Shroud, not done during Geoffrey's life, caused the local bishop, Henry of Poitiers, to denounce the Shroud as a forgery, as did Henry's successor in the bishopric, Pierre d'Arcis. The furor raised by Henry, coupled with her son's 1358 reception of land grants from the Crown, convinced de Charny's widow to withdraw the Shroud from public display and from the buyer's market. After Jeanne's marriage to Aymon of Geneva, the Shroud was hidden again, this time, probably at the de Charny castle at Montfort-en-Auxois.

The Shroud remained hidden until 1389 when Geoffrey II, then a well-respected knight who served his monarch, Charles V (and later Charles VI), as well and capably as his father Geoffrey had served Jean le Bon, made an appeal concerning the Shroud. Geoffrey II had served as a diplomat and warrior for his sovereign and in 1375, Geoffrey II was rewarded with a royal appointment to the
position of balli in Caux. The balli was a combination of judge, mayor, army officer, tax collector, and police chief. In 1388, he was named to a similar position in Mantes. It was while he was serving as the balli in Mantes, in 1389, that Geoffrey II received permission from the papal legate and nuncio, Cardinal de Thury, to display publicly the Shroud, referring to it as the likeness and image of Christ. The Shroud was displayed first in April, 1389 and subsequently, on feast days and holidays. It was reverenced and venerated with great pomp.

Geoffrey II lived nine years after he had received permission to have the Shroud publicly displayed and following his May 22, 1398 death, ownership of the Shroud became the responsibility of Geoffrey II's daughter, Margaret de Charny. Her patrimony included not only the Shroud, but the seigneuries of Lirey, Montfort and Savoisy. Two years after her father's death, in 1400, Margaret married Jean de Baufremont, a knight who died in 1415 at the Battle of Agincourt. Margaret subsequently married Humbert de Villersehel, the Count of La Roche. Margaret and her new husband decided that the Shroud was not safe in the Chapel in Lirey because of the political unrest rampant throughout the country. They moved the relic to the de Charny castle of Montfort in 1418. Shortly after its placement in the Montfort castle, the Shroud was taken to Humbert's land at St. Hippolyte sur Doubs and placed in the
Chapel des Buessarts, where it was exhibited yearly in a near-by meadow called Pre du Seigneur.\textsuperscript{10}

Upon Humbert's death in 1438, Margaret realized that the issue of who would inherit the Shroud needed to be addressed. She had no children from either of her marriages, and she chose not to pass on the heirloom to her nephew, half-brother or cousin. Margaret chose instead, to find a buyer for the Shroud. With that intention in mind, Margaret traveled to Belgium in 1449 to see if the Hapsburg dynasty wanted to purchase the Shroud. The Hapsburgs were not interested and in 1452, Margaret next attempted to sell the relic at Gemolles, near Macon. That attempted transaction also proved fruitless. Her third attempt, however, was successful.\textsuperscript{11}

Margaret approached the Duke of Savoy, Louis, (1402-1465) in 1453 to see if he was interested in obtaining the Shroud. Louis and Margaret had known each other and Margaret had admired the Savoy piety. Louis was a direct descendent of St. Louis (1214-1270), who had headed the Second Crusade. Additionally, it was St. Louis (Louis IX) to whom Baldwin II had sold a strip of the Shroud in exchange for financial remuneration designed to lessen Baldwin's indebtedness.\textsuperscript{12} Additionally, Amadeus VIII, Louis of Savoy's father, had been Felix V (r. 1440-1449), the last of the anti-popes.\textsuperscript{13} Further, Margaret knew that Louis' wife, Anne de Lusigan, was a princess of the royal
family of Cypress. Those factors, coupled with Margaret's father and second husband having been created knights of the Order of the Collar of Savoy led Margaret to believe that the Savoys would be ideal candidates for ownership of the Shroud.\textsuperscript{14}

On March 23, 1453, Margaret and Louis of Savoy successfully concluded an agreement. Louis ceded his castle at Varambon and the income of his estate, Miribel, near Lyon, in exchange for "valuable services" rendered by Margaret. The septuagenarian woman could not be expected to render "valuable service" and it is known that the gift of the Shroud was the "valuable service" which Margaret provided. Thus, when Margaret died on October 7, 1460, the Shroud's safety had been assured and the Savoy family had become the custodians of the relic.\textsuperscript{15}
SECTION V
NOTES


3 For information concerning the Battle of Poiters, see Hoyt and Chodorow, Europe in the Middle Ages, pp. 577-578 and Frances Gies, The Knight in History (New York, Harper and Row, Publishers, 1984).

4 Crispino, "Why Did Geoffroy de Charny Change His Mind?": 28-32.


8 Fossati, "The Lirey Controversy,": 24.

9 Crispino, "The Castle of Montfort,": 37, 40.

10 Crispino, "Doubts Along the Doubs,": 19. See also Wilson, The Shroud of Turin, p. 212.

11 Ibid., pp. 213-214.


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OBJECTIVES FOR SECTION FIVE: The Known History of the Holy Shroud of Turin: 1353-1460

The student will be able to perform the following tasks after the introduction of material concerning the known history of the Shroud from 1353 to 1460:

A. Define or identify the following terms or people by passing a teacher-prepared quiz:
   1. balli
   2. Battle of Poitiers
   3. Geoffrey de Charny
   4. Geoffrey de Charny II
   5. Jean le Bon
   6. Jeanne de Vergy
   7. Lirey
   8. Louis of Savoy
   9. Margaret de Charny

B. 
   1. Identify the members of the de Charny family by preparing a genealogy chart.
   2. Using pins to indicate the specific locations on a map, identify the geographic areas to which Margaret de Charny travelled in her attempts to sell the Shroud.
   3. Describe the controversy over the Shroud’s authenticity by staging a debate between
Jeanne de Vergy and Henry, the Bishop of Poitiers.

4. Indicate the purpose of the balli by preparing a fictional résumé written by an applicant for the balli position.

5. Describe the Battle of Poiters by writing fictional diary accounts of the events as recalled by a French knight and an English knight.

6. Reconstruct, by role-playing, the purchase of the Shroud by Louis of Savoy.
The Savoy owners did much to enhance the belief surrounding the Shroud that it was the burial cloth of Jesus. The Savoy had a retinue of Franciscan friars, one of whom was Francesco della Rovere whose Order elected him as Minorite General in 1464, the first step in his brilliant ecclesiastical career. In 1469, he became Pope Sixtus IV (1414-1484), and his work, *The Blood of Christ*, gave the Shroud its first formal recognition. Francesco della Rovere referred to the relics as

...the Shroud in which the body of Christ was wrapped when He was taken down from the Cross. This is now preserved [1464] with great devotion by the Dukes of Savoy, and it is colored with the blood of Christ.¹

Sixtus IV was to lend his support to the son of Louis of Savoy, Amadeus IX (1443-1472), when Amadeus began refurbishing the ducal Chapel at Chambéry to provide a suitable setting for the worship of the Shroud. While the reconstruction of the Chapel was underway, Sixtus IV issued four papal Bulls, issued between 1472 and 1480, which granted numerous clerical privileges to those clerics affiliated with the Chapel.² In 1502, the completion of the Chapel was under the auspices of Amadeus' successor and
son, Philibert I (1465-1482) and on June 11, 1502, the Shroud was ensconced in a silver casket which was placed in a specifically built repository in the wall behind the altar of the Chapel of Chambery. To ensure the safety of the Shroud, the repository was enclosed by iron doors that were locked by four keys.³

In 1506, Sixtus IV's nephew, Pope Julius II (1443-1513), gave the local Chamberian bishop, Louis de Gorrevod, permission to call the Chapel in which the Shroud was housed, the Sainte Chapelle of the Holy Shroud. In April, 1506, Julius issued a Bull Romanus Pontifex designating May 4 of each year as the Feast of the Holy Shroud, complete with its own Mass and Divine Office.⁴ The Bull for the May 4 Mass was granted only to the clerics who celebrated Mass within the Sainte Chapelle at Chambery. However, Leo X extended the privilege of celebrating the Shroudal Mass to all of the inhabitants of Savoy.⁵ Moreover, it was not until 1765 that the Feast was extended to different territories of Italy.⁶

The institution of the Feast of the Holy Shroud gave the Shroud a respectability that had hitherto been lacking and with that respectability, gifts such as jewel encrusted reliquaries, stained glass and Flemish sculpture came flowing into the Sainte Chapelle of the Holy Shroud.⁷ That period of prosperity and religious fervor turned to disaster when the sacristy of the Chambery Chapel caught
fire on December 4, 1532, and the Shroud was damaged before the silver casket in which the Shroud was encased could be plunged into the snow.8 Rumors were rampant that the Shroud had been destroyed in the fateful fire and Charles III (1486-1553), Duke of Savoy, requested that a commission of three bishops and a cardinal come to Chambery to examine the Shroud and confirm its authenticity. The Commission was appointed by Clement VII and it was headed by Cardinal Louis de Gorrevod, the Bishop of Maurienne. In 1533, the Commission examined the Shroud and declared that no copy had been placed in the Chapel. However, it was not until 1534 when tailoring repairs on the Shroud undertaken by the Poor Clare nuns of the Chapel were completed and the Shroud was displayed again, that the rumors subsided and yearly expositions of the Shroud again were held on May 4.9

Following the fire and repair work, the Shroud was endangered again, this time by French soldiers who were marauding the countryside of the Savoy territories.10 In 1537, the Shroud was moved from Chambery to Vercelli, then to Nice, back to Vercelli in 1549, and in 1553, it was in Vercelli when the French army sacked the city. Because the Shroud had been hidden by the town's canon, Antoine Claude Costa, the relic was spared.11 Moreover, the Peace agreement in 1559, between the Savoy and the French government, the Peace of Cateau Cambresis, enabled Duke Emmanuel Philibert (1528-1586) to regain control of his
lands, thus ensuring the safety of the Shroud. On June 4, 1561, the Shroud was returned to the Chambery Sainte Chapelle and on August 15, the Shroud was displayed publicly for the first time in twenty-five years.12

The Shroud's stay in Chambery was short-lived, however. Duke Emmanuel Philibert moved his ducal capital from Chambery to Turin. He moved the Shroud in 1578 when the Archbishop of Milan, Charles Borromeo (later canonized by the Roman Catholic Church), chose to fulfill a vow which he had made to revere the Shroud if a plague which had afflicted Milan would lessen.13 Because of the arduous rigors of going on foot from Milan to Chambery, Duke Emmanuel Philibert had the Shroud brought to his capital, Turin. The Shroud was venerated by Charles Borromeo in Turin after his completion of the four-day walk from Milan to Turin. The archbishop spent forty hours in private adoration of the Shroud before participating in a public display of the Shroud.14 The relic was held up three times for the crowd to venerate before being returned to the Cathedral for further veneration. Charles Borromeo was asked to lead the assemblage in prayer, yet overcome by emotion, he could not speak, but wept.15 The same emotion was to overcome Bishop Francis de Sales (later canonized by the Roman Catholic Church) in 1615 when he first viewed the Shroud.16 The Shroud was to remain in the Turin Chapel until 1694 when the Chapel was deemed to be inadequate. At
that time, a new chapel, designed by Guareno Guarini, was completed. In a solemn procession on June 1, 1694, the Shroud was moved to the new chapel and locked behind a grille above the high altar of the church.\textsuperscript{17} Shortly after the Shroud had been placed in the reliquary of the new chapel the yearly expositions of the holy relic were to cease, except on special occasions, such as the 1750 wedding of Duke Victor Amadeus III (1726-1796). Seemingly, there was apprehension that the Shroud would suffer damage unduly if it were exposed frequently.\textsuperscript{18}

Due to fear of overexposureing the Shroud, there were only five expositions during the nineteenth century: In 1805, when Pope Pius VII visited; in 1815 when Pius VII returned to Rome after being held prisoner by Napoleon; in 1842; in 1868 when one of the Savoy princesses, Clotilde (1843-1911), made minor repairs on the Shroud, doing all of her sewing while on her knees.\textsuperscript{19} It was the fifth exposition of the century which had the most impact on the history of the Shroud. In 1898, the Shroud was exhibited to commemorate the fiftieth anniversary of Italian unity, the 300th anniversary of the founding of the Confraternity of the Holy Shroud and the 400th anniversary of the building of the Cathedral of Turin. It was during that 1898 exposition that Secondo Pia was given permission to photograph the Shroud.\textsuperscript{20}
SECTION VI
NOTES


3 Wilson, The Shroud of Turin, p. 218.


5 Wuenschel, Self-Portrait of Christ, p. 88.

6 Ibid., pp. 88-89.

7 Wilson, The Shroud of Turin, p. 219.


10 It should be remembered that small-scale wars were prevalent in sixteenth century Europe, particularly religious wars caused by Martin Luther's break with the Roman Catholic Church in 1517 and his 1521 excommunication from the Catholic Church. For additional information, see Sebastian Jorn, O.P., "The Fifth Gospel," Dominicana XXIV (September, 1939): 171.

12 Ibid.


14 Wilson, *The Shroud of Turin*, p. 221.

15 Ibid.

16 Ibid., p. 222.


20 For information concerning Secondo Pia, see Anton Koch, S.J., "Zum Prozess um das Turiner Grabtuch," *Stimmen der Zeit* 149 (March 8, 1952): 401-408 and Adam J. Otterbein, C.SS.R., "Is This the Photograph of Christ?", *Liguorian* 66 (March, 1978): 2-7. See also section ten below of this research for information concerning the 1898 exposition and Secondo Pia.
OBJECTIVES FOR SECTION SIX: The House of Savoy: 1460-1898

The student will be able to perform the following tasks after the introduction of material concerning Savoy ownership of the Shroud:

A. Define or identify the following terms or people by passing a teacher-prepared quiz:

1. Amadeus IX
2. Chambery
3. Charles Borromeo
4. Francis de Sales
5. Julius II
6. Savoy
7. Sixtus IV
8. Turin

B.

1. Construct a map which indicates the various locations where the Shroud was housed throughout the duration of the French Wars.

2. Read the papal bull, Romanus Pontifex and summarize its contents for oral presentation in order to indicate an understanding of the bull's significance in relationship to the Shroud.
SECTION VII
THE HISTORY OF THE HOLY SHROUD OF TURIN:
THE TWENTIETH CENTURY

The twentieth century saga of the Holy Shroud of Turin is well documented. Sindonologists of this century mainly have been concerned with conducting scientific examinations of the Shroud in an effort to obtain empirical results in order to ascertain the origins of the Shroud and the manner in which the image on the Shroud was formed.

In the early 1900s, a French doctor, Paul Vignon (1865-1943), conducted research on the Shroud based on a study of Secondo Pia's photographs. Vignon, then a biologist at the Sorbonne, was supported in his scientific study by the Sorbonne's professor of comparative anatomy, Yves Delage (1854-1920). Known for his agnostic attitude, Delage stunned the audience of the Paris Academy of Sciences when he delivered a lecture on April 21, 1902, in which he maintained that anatomically and medically the Shroud could not have been an artist's forgery. By the lecture's end, Delage had stated his belief that the Shroudal image had been caused by Jesus' presence while he lay in the tomb following his crucifixion.

Delage's endorsement of the Shroud as Jesus' burial cloth led other scientists to conduct research on the
Shroud. In the 1900s, Delage's fellow countryman and physician, Pierre Barbet, of St. Joseph's Hospital in Paris, studied the Shroud from the viewpoint of a physician. Barbet's research included tests on cadavers to see if the medical evidence of crucifixion present on the Shroud could be verified. Following the tests, Barbet determined that such a feat could be replicated based on a knowledge of Roman crucifixion techniques. Other physicians built upon Barbet's evidence. On the European continent, the German radiologist, Professor Hermann Moedder, conducted experiments on his students to determine if living subjects suspended by their arms would duplicate physical symptoms present on the crucified Shroudal image. Following Moedder's study was one conducted by the Milanese doctor, Giovanni Judica-Cordiglia, Professor of forensic medicine. Judica-Cordiglia's efforts focused on how the body and bloodstains evident on the Shroud could have been transferred from the body to the burial cloth. Judica-Cordiglia has espoused the theory that lightning caused the transfer of the man's image onto the cloth. The medical evidence gathered by those Europeans served as an impetus for other scientists to conduct research on the Shroud.

In Great Britain, the English physician David Willis conducted medical evaluations of the Shroud. By the early 1960s, Willis had collated and evaluated all materials related to Shroudal medical research which had been...
obtained to that period. Meanwhile, on the North American continent, the American surgeon, Anthony Sava, of New York, extensively studied the wound seen in the side of the Shroudal image. Additionally, the Californian, Doctor Robert Bucklin, conducted extensive pathological research on the Shroudal image. This accumulative medical research has given sindonologists more information with which to ascertain the identity and origin of the Shroudal image and cloth.

Although the accumulative findings of individual sindonologists had contributed immeasurably to the understanding of the Shroudal image and linen, the first comprehensive attempt to test the Shroud in the twentieth century was begun in 1969 when a commission was appointed by the Archbishop of Turin, Cardinal Michele Pellegrino. The formation of the commission was approved by Pope Paul VI and by Umberto II. The commission consisted of four clerics, seven technical experts, one photographer, and representatives of the Italian government from the ministries of Education and Finance. The commission met from June 16-17, 1969, and secretly conducted scientific tests which involved the use not only of normal light, but also ultraviolet light and infrared light. Additionally, both black and white photographs and colored photographs of the Shroud were taken. At the conclusion of their tests and an analyzation of their findings, the commission
recommended that additional examinations and testing be conducted.

Four years were to intervene before the commission reconvened. On November 24, 1973, the day after the first televised exhibit of the Shroud had been broadcast throughout Europe, the commission, including four additional members, Dr. Gilbert Raes, Dr. Max Frei and two French scholars, met. The Shroud was examined, with Dr. Raes and Dr. Frei conducting textile tests which previously had not been performed. At the conclusion of the testing, reports were issued by various members of the commission. The commission recommended that additional tests be conducted, but that no carbon-14 dating be conducted because of the large amount of the linen which would be required to run the test.

A symposium was held in Albuquerque, New Mexico on March 23-24, 1977, to present ideas on the historical, theological and scientific nature of the Shroud. The two-day conference had forty participants who delivered a combined total of nine papers on the historical and theological aspects of the Shroud and fifteen papers of a scientific nature. At the conclusion of the Albuquerque Conference, seven members of the Conference, along with the President and Vice-President of the Holy Shroud Guild, Father Adam J. Otterbein, C.SS.R. and Father Peter M. Rinaldi, S.D.B, went to Turin to request permission to
conduct scientific testing on the Shroud. The purpose of the testing was to study the image formation on the cloth.\textsuperscript{15} The two main questions which the scientists hoped to solve were how the image got onto the cloth and what would have formed an image which possessed such unusual properties.\textsuperscript{16} Permission was gained from the Turin Archbishop, Cardinal Anastasio Ballestrero, for the testing and October, 1978, was chosen for that testing.\textsuperscript{17}

The October 8-13, 1978, testing dates came at the conclusion of the August 26-October 8 exposition of the Shroud, which was held to celebrate the 400th anniversary of the Shroud's transfer from Chambery to Turin. Over three and one half million people saw the Shroud before the five-day long testing period began.\textsuperscript{18} Scientific tests which had been perfected in a dry-run in Connecticut in September, 1978, were conducted constantly for twenty-four hours each day of the five day examination period.\textsuperscript{19} The tests were conducted in a large room in the Royal Palace adjacent to the Cathedral. The forty team members, twenty-seven of whom were Americans, conducted numerous scientific testing using over 8,000 pounds of highly sophisticated equipment. Over 30,000 photographs were taken, including some which photographed the back of the Shroud for the first time. The scientists concluded their round-the-clock examinations on Saturday, October 8, 1978.\textsuperscript{20}

The team returned to their respective countries and
from 1978 to 1982, data was evaluated and reports were issued by various members of the Shroud of Turin Research Projects (STURP).\textsuperscript{21} The work of STURP is not finished, however, for the data gathered is being interpreted constantly in the light of evidence presented by other sindonologists. The multi-disciplinary efforts of scientists continue to add information to the body of known Shroud information. The American public has been given opportunities to view Shroudal exhibits based on the 1978 testing. From April to September, 1981, the Brooks Photographic Institute in Santa Barbara, California displayed over 100 photographs related to the 1978 testing conference. The photographs were the handiwork of the official STURP photographers, Vernon Miller, Ernest H. Brooks II and Barrie M. Schwortz.\textsuperscript{22} Additionally, in 1984, a photographic exhibit based on the works of sindonologist Monsignor Giulio Ricci, of Rome, was held in San Diego County for three days.\textsuperscript{23} Further, both the Brooks and Ricci exhibits have been shown in various American cities. In addition to the traveling exhibits is a permanent exhibit which has been established in Atlanta, Georgia.\textsuperscript{24}

The twentieth century history of the Shroud has encompassed more than traveling exhibits and scientific tests. In 1931, nearly two million persons saw the Shroud from May 4 to May 24, when the Shroud was displayed publicly to celebrate the impending marriage of the Savoy
Crown Prince, Umberto, to Princess Maria Jose of Belgium.\textsuperscript{25} It also was in 1931 that the first photographs taken since Pio's 1898 photographs were obtained. The photographer was Giuseppe Enrie who was the editor of \textit{Vita Fotografica Italiana}. Enrie took twelve photographs on May 3, 14 and 15 with the intention of using the photographs for scientific study. Enrie's photographs were of better quality than Pio's 1898 photographs and they were used to study the intricacies of the Shroud until the 1970s.\textsuperscript{26} Some sindonologists maintain that Enrie's 1931 photographs are of better quality than numerous photographs taken since then and subsequently, those sindonologists would prefer to use the 1931 set of photographs rather than photographs taken under supposedly better circumstances with more sophisticated equipment.\textsuperscript{27}

The 1931 exhibit of the Shroud was followed by a 1933 exhibit, an exhibit which was requested of the Italian King, Vittorio Emmanuele III (1869-1947), by Pope Pius XI (1857-1939).\textsuperscript{28} The Pope requested the exhibit to commemorate the nineteenth centenary of the crucifixion of Christ, a centenary which the Pope announced on January 1, 1933, in his encyclical \textit{Quod Nuper}.\textsuperscript{29} Vittorio Emmanuele III granted the Pope's request and during the 1933 exhibit the Shroud was photographed outside the Cathedral during a procession in which the Shroud was held aloft on the Cathedral steps.\textsuperscript{30}
Five years after the 1933 exposition, Dr. Paul Vignon, Professor of Biology at the Institute Catholique in Paris, published his studies of the Shroud which covered thirty-six years of his research. The following year, 1939, a convention was held in Turin by the Italian Commission, at which time attendees presented ideas for scientific tests to be conducted on the Shroud. However, the intrusion of World War II brought to a halt the possibility of conducting tests on the Shroud. In 1939, the Shroud secretly was taken to the Abbey of Montevergine, in Avellino, in southern Italy, and it was not returned to Turin until 1946 after the conclusion of the war. It was four years after the Shroud's return to Turin, in 1950, that the first international conclave of sindonologists met in Rome. It was at that conclave the participants determined that additional scientific tests were needed in order to determine the origins of the Shroud.

In all twentieth century meetings of sindonologists, one common refrain is articulated: More scientific tests and examinations are needed to evaluate the Shroud in order to illuminate the Shroud's origins and its journey of 2,000 years to the present decade. The conclusion of the 1978 multi-disciplinary team members' report summarized well the enigmatic riddle of the Shroud.
In the end, the question of the authenticity of the Shroud as the burial cloth of Jesus remains open. One should keep in mind that science is really not in a position to ever categorically prove that the Shroud is authentic. We have, however, given it a good try to prove it a fake, but we did not succeed. The question remains unanswered which means that those who wish to believe it authentic will not meet with any scientific objection.
6. Sindonologist Dr. Paul Vignon (1865–1943)
Photograph after Shroud Spectrum International
SECTION VII

NOTES


2Yves Delage, "The Image of Christ Visible on the Holy Shroud of Turin," a lecture given on April 21, 1902 to the Paris Academy of Science, Paris, France.


On February 20, 1986, this investigator contacted Dr. Robert Bucklin at the San Diego Coroner's Office, where he is a medical pathologist. Dr. Bucklin became interested in the Shroud in approximately 1945 when he attended a lecture concerning the Holy Shroud. His interest initially was in studying the Shroud from a medical doctor's perspective. In 1977, Dr. Bucklin became involved in STURP's research concerning the Shroud, and in 1978, he participated in the scientific testing conducted on the Shroud.

Dr. Bucklin believes that the image on the Shroud was caused by blood from the crucified man being transferred directly onto the linen. He believes that there may be many possible reasons for the transference. Dr. Bucklin stated that he "very positively" believes that the Shroud is the cloth in which Jesus was buried. He cited evidence of medical, artistic and legal authenticity to support his belief.

Dr. Bucklin is looking forward to returning to Turin to conduct additional research on the Shroud. Additional testing on the Shroud may include carbon-14 testing, for Dr. Bucklin stated that the incumbent Archbishop of Turin, Anastasio Ballestrero, has requested of Vatican officials permission to perform the carbon-14 testing.

11 Ibid. See also Paul Gilles, "Un Mistero Chiamato Sindone," II Nostro Tempo, February 15, 1970, for comments made by Cardinal Pellegrino concerning the Shroud.
12 Tribbe, Portrait of Jesus?, p. 112. The television broadcast was presented in color by RAI-TV, the Italian State TV Service. For comments made by Cardinal Pellegrino preceding the broadcast, see David Willis, "The Holy Shroud on TV," The Tablet, December 8, 1973, p. 1172-1173. Following the 1973 television program on the Shroud, the incumbent Pope, Paul VI, spoke about the Shroud recalling the first time that he had seen the Shroud, in May, 1931. Pope Paul referred to that time as "a moment of extraordinary delight." See Wilson, The Shroud of Turin, p. 223.


16 Tribbe, Portrait of Jesus?, p. 125.


18 Rinaldi, When Millions Saw The Shroud, p. VII. See also Rinaldi, I Saw The Holy Shroud, p. 4.

19 Ibid.

20 Ibid, p. 54.


28 Wuenschel, Self-Portrait of Christ, p. 97. See also "With Scrip and Staff," America, April 8, 1933, pp. 16-17 and "The Holy Shroud," America, October 7, 1933, p. 4.

29 Wuenschel, Self-Portrait of Christ, p. 97.

30 Rinaldi, It Is The Lord, p. 34.

31 Wuenschel, Self-Portrait of Christ, p. 30. See also "The Holy Shroud of Turin," The Tablet, July 2, 1932, p. 29 for an account of a lecture presented by Dr. Vignon.


33 Rinaldi, It Is The Lord, p. 54.

OBJECTIVES FOR SECTION SEVEN: The History of the Holy Shroud: The Twentieth Century

The student will be able to perform the following tasks after the introduction of material concerning the twentieth century history of the Shroud:

A. Define or identify the following terms or people by passing a teacher-prepared quiz:

1. Pierre Barbet
2. Yves Delage
3. Giuseppe Enrie
4. Secondo Pia
5. Paul Vignon

B.

1. Describe the public response to Yves Delage's 1902 speech through the writing of a simulated report of approximately 300-500 words.

2. Write an essay of approximately 500 words which incorporates a minimum of three examples to distinguish and compare twentieth century medical experiments conducted concerning the Shroud.

3. Read four of the 1977 Shroudal conference papers and present an oral summary of each paper.
4. Structure at least five questions to ask in an interview of Dr. Robert Bucklin, who is affiliated with the San Diego County Coroner's Office.

5. Indicate how the findings of the 1969 Commission were presented to Cardinal Pellegrino by role-playing the presentation.

6. Describe the public response to the 1973 television program on the Shroud by assuming the role of a newspaper's television critic and commenting on the program in a 200-300 word essay.

7. Indicate an understanding of the significance of the 1978 testing of the Shroud by writing an essay of approximately 500-750 words which includes at least three aspects of the testing.

8. Utilize a mock interview technique to question a monk who cared for the Shroud during World War II to ascertain how the Shroud was protected at that time.
SECTION VIII
THE FIRST CRUSADE AND THE ESTABLISHMENT
OF THE LATIN KINGDOMS: 1096-1150

On the outskirts of Clermont, France, on November 27, 1095, following the close of the Council of Clermont, the Vicar of Christ, Urban II, addressed a multitude of the faithful. Urban called on the persons gathered to liberate the Holy Lands from the control of the Infidels. The plea was met with emotional cries of "Deus lo volt" (God wills it) and the faithful were instructed to sew a cruce signate (cross) on one shoulder of their apparel as a sign of their vow to go to the Holy Lands.

The cruce signate was seen by the faithful respondents as their personal response to the words of Christ: "If anyone wishes to come after Me, let him deny himself, take up his cross, and follow Me." The enthusiastic respondents were dismissed with a papal blessing, while the Pope left the vast details of planning the monumental Crusade to the Church ecclesiastics.

It was in 1096 when the first of the Crusaders began their pilgrimage toward Jerusalem. The Crusaders who vowed to free Jerusalem from Moslem control also vowed to pray at the Holy Sepulcher upon their arrival at the Holy City. In return for making the pilgrimage, religious privileges,
such as indulgences for the remission of sins were offered to the Crusaders by the Roman Catholic Church. Additionally, secular rewards, which included the Church's protection of families and properties left in Europe (the so-called Truce of God), also were offered. Fortified with spiritual as well as secular promises, men flocked to join the Crusades to the Holy Lands.  

The military success of the First Crusade is well documented. The spiritual success of the First Crusade is not as clear-cut. The Crusaders, military men in the art of war and filled with the spiritual promises of the Church clerics, proved worthy of the military obstacles which faced them. By the end of the First Crusade, four European (sometimes called Latin) states existed in the Holy Lands: Antioch, Tripoli, Edessa, and Jerusalem. Under the control of the European Crusaders, the four Latin states flourished.  

In 1099, following a bloody siege, Jerusalem was in Christian control and the following fifty years were relatively calm. The Europeans and Moslems comingled and social, philosophical and intellectual exchanges occurred. During the peaceful interlude, a French knight who had fought bravely in the First Crusade organized a brotherhood called the Knights Templar. The Templars' presence would have ramifications affecting succeeding military crusades organized by the Europeans. Moreover, the Templars were
destined to assume a prominent role in succeeding Crusades and in the acquisition of the Holy Shroud of Turin.
SECTION VIII

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1 Also given as "Dieu le veult." This exclamation by the crowd gathered to hear Urban II likely is apocryphal, according to Joshua Prawer in The World of the Crusaders (New York: Quadrangle Press, 1972), p. 17. Robert Payne in The Dream and the Tomb: A History of the Crusades (New York: Stein and Day, 1984), p. 35 states that the Pope's speech, given in his native tongue, was met with cries of "Dieu li volt" from the northern Frenchmen and "Dieux le volt" from the southern Frenchmen.

2 Payne, The Dream and the Tomb, p. 36.


OBJECTIVES FOR SECTION EIGHT: The Crusades (1095-1150)

The student will be able to perform the following tasks after the introduction of material concerning the Crusades:

A. Define or identify the following terms or people by passing a teacher-prepared quiz:
   1. Clermont
   2. First Crusade
   3. Holy Lands
   4. Infidels
   5. Jerusalem
   6. Latin States
   7. pilgrimage
   8. Urban II

B.

1. Use the primary source of Urban II's call to form a Crusade, in order to generalize verbally, Urban's purpose.

2. Formulate an understanding of a Crusader's life through the preparation of a fictional letter to his family.

3. Evaluate the impact of the Crusades on the Holy Lands by writing an essay of approximately 500-750 words which relates the exchange of culture between the Christians
and the Moslems.

4. Deduce the reasons why people went on a Crusade by listing at least four benefits which Crusaders received.

5. Demonstrate an understanding of the reasons why people went on a Crusade by drawing a recruitment poster for the First Crusade.

6. Demonstrate an understanding of the papal desire for a Crusade by preparing an editorial of approximately 250 words supporting Urban II's call for a Crusade.
SECTION IX

SAINT BERNARD AND THE KNIGHTS TEMPLAR

In 1095, one of the knights who had responded eagerly to Pope Urban II's exhortation to check the Infidels, was Hugh de Payens. Hugh, as he was referred to by historians and chroniclers, initially was joined in a Military-Religious Order by eight fellow knights, who, in 1118, took vows of chastity, poverty and obedience in the presence of Gormond, the Patriarch of Jerusalem. At that time, the knights also selected the Virgin Mary as their Patroness and elected Hugh as the Master of the Order. Additionally, the Order assumed the name Knights Templar since their living quarters on the land granted to them by the King of Jerusalem, Baldwin II, were situated near what Christians believed to be the Temple of Solomon. Thus, properly organized, the Knights Templar accepted as their primary duty the protection of pilgrims from marauders as the pilgrims trekked from Jaffa to Jerusalem. In carrying out their duty, the Templars were described as being "armed monks, priestly swordbearers, chivalrous only on behalf of God, shock troops to be thrown into every righteous battle."

From the time of their formation until 1128, the
Knights Templar had lived according to a Rule of St. Benedict that had been approved by the Church of Jerusalem. However, because of their military prowess, the Templars were being inundated with gifts and property and they felt the need for authoritative guidance. To that end, Hugh de Payens sought and received an audience with Pope Honorius II. At the Pope's suggestion, the Templars presented a petition to the Council of Troyes in Champagne on January 13, 1128. After the Council had debated the issue of increasing the size and power of the Templars and their need to have a Rule to serve as a guide for their daily living, the Council granted the petition.

Following the granting of the petition, it became incumbent upon the Council of Troyes to draft the Rule of the Templars. To accomplish that goal, the Council commissioned Bernard (1090-1153), the Abbot of Clairvaux, who was said to be "the most famous churchman in Christendom." Although others contributed to the compilation of the Templar Rule, St. Bernard, who possessed such eloquence that he earned the sobriquet of the Mellifluous Doctor, edited, revised and amplified the Templars' original Rule. St. Bernard, who was a relative of Hugh, has been credited with being the force behind the formulation of the 1138 Rule of the Temple, which Innocent II approved on March 29, 1139, at which time he assumed papal protection of the Order.
St. Bernard's Rule was contained in the treatise, *Libes ad Milites Templi: de Laude novae Militiae ad Milites Templi* (*In Praise of the New Knighthood*). The treatise was addressed to Hugh, the Master of the Templars (a position which he held from 1118 until his death in 1136). In the Rule, St. Bernard addressed the need for a new knighthood, one in which consecrated religious men bore arms for the purpose of repelling the enemies of Christ. St. Bernard visualized the arms-bearing knight as one whose "soul is protected by the armor of faith, just as his body is protected by the armor of steel." Thus, doubly fortified, the Templars were exhorted to "fight the battles of their Lord, fearing neither sin if they smite the enemy, nor danger at their own death, since to inflict death or to die for Christ is no sin, but rather, an abundant claim to glory."

The Rule of the Temple consisted of seventy-two articles which regulated all aspects of the Templars' lives: The precepts of the Rule included religious duties, daily regimens, obedience to the Master of the Order, care of the elderly and sick knights, and miscellaneous matters. Primarily, the Rule called for obedience to the Superior, poverty and chastity and it stated that the Templars' sole business was "prayer, drill and fighting."

In addition to the previously stated precepts, the Templar Rule admonished the knights to foreswear gambling,
chess, hunting, falconry, and to avoid jesters, troubadours, magicians, and jousters. Their hair was to be shorn short and they were to bathe sparingly. Furthermore, no women were to enter the Temple of Solomon and no Templar was to embrace a woman, even his mother or sister, nor could a Templar stand as a godfather for any child or enter the house where a woman was in the throes of childbirth. Moreover, privacy was not permitted, yet no Templar was to see another Templar naked. Further, a Templar should "welcome vermin as penance" and should wear "his garments till they fall off him." The Templar Rule also stated that lamps should burn all night in the dormitory and that letters received by a Templar were to be read aloud in the presence of the Master of the Order or a chaplain.

Further tenets of the Rule of the Temple stipulated that the Knights Templar would wear a robe similar in style to the Cistercian robe of St. Bernard. The robe would be white in color, representative of purity and chastity. In addition, the Templar received two shirts, two pairs of pants, two pairs of breeches, a tunic, jacket and cape, chain mail, iron shoes, shoulder pieces, and a hat. According to the Rule, weapons received by the Templars included a sword, shield, dagger, lance, and a mace. Other personal effects were provided to each Templar and included such necessities as a knife, cooking pot, a tent, a
hatchet, and a saddle.¹⁷

Perhaps the most recognizable sign of the Templar Order is the distinctive red cross which the knight affixed to his surcoate. The Templar cross is composed of four notched triangles which are formed from the base of an equal-sided square. The other easily recognized sign of the Order brought fear to the Templars' enemies: It was Beauséant the Piebald, the battle gonfalon (standard) of the Order.¹⁸ "Baucent!" was the knights' battle cry, thus the standard referred to that war cry. The gonfalon, carried by a sergeant, was "black and white; in heraldic terms, it was argent [white, representing the color silver] with a chief [upper portion] of sable."¹⁹ Unfurled, Beauséant the Piebald, stimulated fear in the Moslems who knew that they were about to engage in battle with the most proficient and ruthless of the Military-Religious Orders of the Christians. The white portion of Beauséant the Piebald symbolized Christian gentleness and the black symbolized ferocity in war. Those colors also were described as white "because they [the Templars] are friendly and good to the friends of Christ"²⁰ and black, "because they are 'black and terrible to His enemies.'"²¹ Written on the gonfalon were the words "Non nobis, Domine, non nobis, sed nomine tuo, da gloriam (Not unto us, O Lord, not unto us, but unto Thy name give the Glory).²²
7. A member of the Religious Military Order of Knights Templar
SECTION IX NOTES


8 Werblowsky, The Works of St. Bernard of Clairvaux, p. 130.

9 Ibid., p. 134.


12 Payne, *The Dream and the Tomb*, p. 126. Women, however, were known to have been allowed an affiliation with the Order. See Campbell, *The Knights Templar: Their Rise and Fall*, p. 55. See also Peter Partner, *The Murdered Magicians: The Templars and Their Myth* (New York: Oxford University Press, 1981), pp. 11-12 and Simon, *The Piebald Standard*, pp. 46-47.

13 The rationale for forbidding the Templar from contact with women and children was an attempt to see that the desire for a family and home was not fostered within the knight. See Campbell, *The Knights Templar: Their Rise and Fall*, p. 67.


15 Ibid.


17 Campbell, *The Knights Templar: Their Rise and Fall*, p. 178. The Drapier, an officer of the Order, was charged with distributing supplies needed by each Templar. All old garments were returned to the Drapier before new ones were issued. The Drapier then was responsible for disposing of the old clothes. See Campbell, pp. 60-61. For the authority of the Drapier, see also Howarth, *The Knights Templar: Christian Chivalry and the Crusades: 1095-1314*, pp. 58-59.


20 Campbell, *The Knights Templar: Their Rise and Fall*, p. 45.

21 Ibid.

22 Ibid.
OBJECTIVES FOR SECTION NINE: St. Bernard and the Knights Templar

The student will be able to perform the following tasks after the introduction of material concerning St. Bernard and the Knights Templar:

A. Define or identify the following terms or people by passing a teacher-prepared quiz:

1. argent
2. beauséant
3. Cistercian
4. Drapier
5. gonfalon
6. heraldry
7. Honorius III
8. Hugh de Payens
9. Innocent III
10. mace
11. piebald
12. Rule
13. St. Bernard
14. surcoate
15. Templars

B.

1. Read the Templar Rule and orally summarize three specific areas covered by the Rule.

2. Verbally explain the symbolism of the
Templar colors.

3. Present in a brief essay of approximately 150-250 words the mathematical symbolism of the Templar cross.

4. Sketch a re-creation of the Templar gonfalon.

5. Construct a chart which indicates the students' understanding of the heraldic significance of the gonfalon.

6. Distinguish among the main offices of the Order by correctly defining in writing the responsibilities of the officers.

7. Indicate an understanding of the Templars' lifestyle by writing a fictional diary of a Templar, covering at least two weeks of his life.
The year 1898 found Italy awash in the excitement of three commemorative anniversaries of historical significance: The 400th anniversary of the construction of the Cathedral of Turin; the 300th anniversary of the founding of the Confraternity of the Holy Shroud; the 50th anniversary of the signing of the Statuto, which was the constitution of Sardinia and was later to serve as the fundamental law of the United Kingdom of Italy. It was during that event-filled year that Secondo Pia was to set the scientific world agog.

Since industrial, artistic and religious events in Turin were commemorating the three anniversaries, it seemed fitting that the Holy Shroud of Turin be placed on public display. However, King Umberto I (1844-1900), of the House of Savoy, not only owned the holy relic, he was reluctant to allow the highly venerated object to be exhibited and photographed. Primarily, Umberto felt that photographing the sacred relic would diminish the extreme religious veneration it deserved. Additionally, since the use of photography at that time was relatively new and not clearly understood, Umberto's reluctance was not unreasonable.
It fell to Baron Antonio Manno, chairman of the Committee of Sacred Art for Turin's celebration festival, to convince the monarch of the value of photographing the Holy Shroud. Manno reasoned that the photographs would serve as a permanent record of the holy relic in case it should ever be destroyed; it also would promulgate information concerning the miraculous finding. Although Umberto remained reluctant, he did give his approval, albeit conditionally. At Umberto's insistence, specific ground rules were to be followed in regard to the photographing of the Holy Shroud. It was also the King's decree that a non-professional photographer be selected to take the pictures. Thus, it was the fortune of Secondo Pia to become the first person to photograph the Holy Shroud.2

The forty-three year old Pia was a self-taught photographer who was born in 1855 in Asti, located in the Piedmont region of northern Italy. The inhabitants of the Piedmont were known for their self-control, patience and orderliness, traits which would serve Pia well in his photographing of the Holy Shroud. Secondo, who was named for St. Secondo, the patron saint of Asti, was admitted to the bar at Turin in 1878. In 1880, however, he became a politician and in succession, he served as the municipal councillor, assessor and the mayor of Asti.3

In addition to his interest in law and politics, in the 1870s when photography was in its primitive state,
Secondo Pia became enchanted with the awesome wonders of photography. He diligently sought out the few manuals available and taught himself, even making his own glass plates. By 1876, Secondo Pia was an excellent photographer.

Although photography was Pia's avocation, he became so skilled that in a quarter of a century, he had compiled a large volume of outstanding photographic works. Pia participated in art exhibitions and in 1890, at the first Italian Architectural Exposition, Secondo Pia received the Grand Gold Medal. In the ensuing years, Pia reaped many similar awards for his photographic skills.

His awards attest to Pia's adroitness at improvisation in using the unsophisticated equipment and techniques of the era. His cleverness helped him to overcome the handicap of the restrictions which King Umberto had placed in regard to photographing the Shroud: Pia could not interfere with the regular schedule of the Exposition; Pia was restricted in the number of photographic attempts he could make; he could not have a preview of the relic.

Since Secondo Pia was not permitted to view the holy relic prior to photographing it, he could not gain advance planning knowledge. He realized that very little light entered the Cathedral of St. John the Baptist, which was built in the 1400s. For that reason, Pia would have to work by electric lights which would be an unfamiliar
technique for Pia to utilize. Furthermore, electricity, which was new to Turin, fluctuated and, being generated by rustic machinery, was not dependable. In addition to those problems, the Shroud hung above the altar of the Cathedral.  

To gain a proper elevation from which to photograph the Shroud, Pia was forced to design a collapsible scaffold from which to work, as under Umberto's restrictions, the scaffold could not be left in place. However, the problem with the scaffolding was surmountable, but the use of the electricity was more formidable: The floodlights, although unreliable in 1898, generated enough heat to make them crack. Pia's first attempt on May 25, 1898, was a failure. Three days later, his efforts were successful despite the fact that Princess Clotilde (1843-1911), the sister of Umberto, demanded that a special protective glass plate cover be placed over the Shroud so that the relic would not be exposed to contamination.  

After taking two exposures, one of fourteen minutes duration and the other of twenty minutes, Secondo Pia hastened to the darkroom of his home, located a few minutes distance from the Cathedral. Development of the first negative filled Pia with a sense of awe, and of uncertainty: He saw a face appear on the plate and "Pia felt a numbing certitude that he was looking at the face of Jesus," and in Pia's own words, "I was dumbfounded by
Secondo Pia knew that his discovery was extraordinary as he realized that the wet plate which he held in his hands violated the fundamental laws of photography. Instead of the light and dark shadings and shadows being reversed, as is normal on a photographic negative, the Shroudal image stood out like a picture of a body. Pia's negative was actually a positive, as the qualities present on the Holy Shroud seemingly encompassed an inverse when photographed: "The simple fact was that Pia had obtained a positive image on his negative plate because the double image on the Shroud is already a negative."

It should be noted that in the aftermath of Pia's discovery and the ensuing publicity that it generated, scientists and scholars began intensive work to probe into the mysteries of the Holy Shroud. Inevitably, there were those who doubted the authenticity of Pia's discovery. He was scorned and accused of tampering with the negative. To Pia's credit, in the past and also following his May 28, 1898 discovery, "the one thing he never did, he often declared, was to retouch a negative." Secondo Pia's vilification eventually would turn into respect and acclaim.
8. The facial image present on the Shroud Photograph after the Holy Shroud Guild
SECTION X
NOTES


4 Ibid., p. 16.


7 Walsh, The Shroud, pp. 22-23. See also Wilson, The Shroud of Turin, p. 27 and Humber, The Sacred Shroud, p. 29.

8 Humber, The Sacred Shroud, p. 32.

9 Ibid.

10 Wuenschel, Self-Portrait of Christ, p. 16.

OBJECTIVES FOR SECTION TEN: Secondo Pia (1855-1941)

The student will be able to perform the following tasks after the introduction of material concerning Secondo Pia:

A. Define or identify the following terms or people by passing a teacher-prepared quiz:
   1. Baron Antonio Manno
   2. Cathedral of St. John the Baptist
   3. House of Savoy
   4. Princess Clotilde
   5. Statuto
   6. Umberto I

B.
   1. Define the significance of 1898 in Italian history by writing an essay of approximately 300-400 words which contains the three important milestones.
   2. Prepare a brief oral report explaining how Secondo Pia was chosen to photograph the Shroud.
   3. Identify the difficulties which Pia had to overcome before photographing the Shroud by listing at least two of the three obstacles.
   4. In a written essay of approximately 250 words,
demonstrate an ability to explain the significance of the photographic reversal present in the photographs of the Shroud.
TEXTILE AND POLLEN ANALYSIS
OF THE HOLY SHROUD OF TURIN

Textile and pollen analysis of the Holy Shroud has added valuable information concerning the Shroud's origin. The linen material of the Shroud has an overall three-to-one herringbone twill weave. That type weave can be recognized by the direction in which the threads run: The horizontal thread, the weft, passes alternately under three of the vertical, or warp, threads and then over one of the warp, thus producing diagonal lines. The lines reverse at established intervals, thereby creating the herringbone pattern.\(^1\)

In the first century Palestine, the herringbone pattern was normally used on silk, rather than linen. That is not to say, however, that the material of the Shroud could not have been woven in Palestine during the first century; it merely would have been more expensive to have produced a herringbone weave on linen than on silk.\(^2\) According to Father Peter M. Rinaldi, "textile experts have satisfactorily shown that the Relic is identical in material and weave pattern to numerous fabrics from the Near East, dated reliably from the first century."\(^3\) Rinaldi is quick to note, however, that the foregoing information

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does not satisfy all sindonologists.\textsuperscript{4}

The late Swiss criminologist, Max Frei (1913-1983), spent two years (1976-1978) testing pollen samples from the Shroud. Frei believed that his testing revealed the authenticity of the Shroud as the burial cloth of Jesus. Frei's conclusion was stated in a report presented by the scientist on April 1, 1981, to Cardinal Anastasio Ballestrero of Turin.\textsuperscript{5}

In his report, Frei revealed that he had identified on the Shroud, fifty-six types of pollen, of which only seventeen were indigenous to Europe. Additionally, some of the pollens could be found only in the southeastern Mediterranean area. Since the pollen was over 500 years old, Frei concluded that the pollen had been imbedded in the Shroud prior to being brought to Europe by the Crusaders. Additionally, Frei's findings showed that the pollen deposits on the Shroud correlated to types of pollens that could be found in Palestine, Anatolia, Constantinople, France, and Italy. Moreover, in his analysis, Frei found traces of a specie of aloe plant which grows only on Socotra, an island off the coast of South Yemen. According to biblical texts, corpses were anointed with an ointment made from Socotran aloe plants.\textsuperscript{6} Frei hypothesized that those findings thus provide the itinerary of the Shroud's travels from the Holy Lands to Europe.\textsuperscript{7}

In earlier tests conducted by Frei which involved
pollens taken from the Shroud, he had concluded that the Shroud was approximately 2,000 years old and had come from the proximity of Palestine. Furthermore, Frei's earlier testing revealed that the Shroud contained pollens from now extinct desert plants. According to Frei, the plants had grown in Palestine and Turkey during the first century. Following the presentation of his report to Cardinal Ballestrero, Max Frei commented that "I have full confidence in the [pollen] tests performed [by me] several years ago."
9. The hypothesized Journeys of the Holy Shroud of Turin
(39 A.D. - 1578)
Map after Francis L. Filas, S.J.
SECTION XI
NOTES


4 Ibid.


8 "Scientist Says Shroud Authentic."
OBJECTIVES FOR SECTION ELEVEN: Textiles and Pollen Analysis

The student will be able to perform the following tasks after the introduction of material concerning the textile and pollen analysis of the Shroud:

A. Define or identify the following terms or people by passing a teacher-prepared quiz:
   1. Max Frei
   2. warp
   3. weft

B.
   1. Attend a presentation on textile manufacturing presented by a guest speaker from the textile industry and demonstrate an understanding of the steps used to make a garment by listing the pertinent steps in chronological order.

   2. Visit the University of California at San Diego laboratory where carbon dating and palynology are conducted and indicate rudimentary understanding of the tests by paraphrasing the presentation given by the laboratory technicians.
SECTION XII
NUMISMATIC IMAGES ON THE EYES OF THE SHROUDAL IMAGE

In first century Palestine, the placing of small objects on the eyelids of a deceased Jew was a Jewish burial custom. Normally, small potsherds were used, but wealthy Jews often substituted coins for the pottery potsherd. As early as 1977, sindonologists such as John P. Jackson, Eric J. Jumper and R. W. Mottern suggested that relief enhancement of the face imprinted on the Shroud indicated the presence of two "button" projections, one on each eyelid.

In that regard, Ian Wilson elaborated upon the findings of Jackson, Jumper and Mottern by hypothesizing that coins had rested on the eyelids of the Shroudal image, causing the "button" projections. Jesuit priest, Francis L. Filas (1915-1985) who was a leading sindonologist, believed that coin images could be discerned and dated and he also believed that the coins in question could be dated from images present on the Shroud. Filas, who had conducted research on the Shroud since 1947, discovered the coin imprints in 1979, when he was studying highly enlarged photographs taken in 1931 of the eyes of the man buried in the Shroud. Filas' findings revealed that the coins bear
two distinct images: An astrologer's staff and four Greek letters. The lettering, part of the normal inscription on the coin, refers to the emperorship "of Tiberius Caesar" of the royal house of Augustus. Tiberius reigned from 14 A.D. to 37 A.D. as the second emperor of Rome. The coins were issued by Pontius Pilate who was the Roman procurator of Judea from 26 A.D. to 36 A.D.

In addition to images of the staff and the lettering, the coins in question bear several specific characteristics which Filas used to narrow the historical gap concerning the Shroud's first century origins. The coins, called leptons, have been studied by numismatists, scientists, photographers, and archaeologists. The coin image over the right eye is the more complete of the two images, and thus, it has been exposed to more rigorous examination than the coin fragment image over the left eye. The findings of the studies revealed the following data:

1. Four letters (UCAI) of the eleven letters on the coin may be seen. The letters form part of the word IOUKAICAROC, meaning Caesar in the Greek version, KAISAROS.4

2. A lituus, or astrologer's staff, is present on the coin image. The lituus was present on coins minted for Pilate's reign, beginning with coins minted in 29 A.D. The lituus measures eleven to twelve millimeters
3. The spelling of IOUKAICAROC is incorrect. A letter C is present where a letter K should be present. This corresponds to mispellings found on other Pilate leptons.  

4. The coin is twelve millimeters in horizontal length and fourteen millimeters in vertical length.  

5. The coin weighs .7972 grams.  

6. The coin is 96.5% copper, 3% tin, with small traces of other metals.  

Using that data, Filas' two-fold conclusion was that the Shroud could not be a mediaeval forgery and that the cloth was used in first century Palestine, specifically during the procuratorship of Pontius Pilate. Filas' conclusions were strengthened by the findings of Dr. Robert M. Haralick, Director of the Spatial Data Analysis Laboratory in Blacksburg, Virginia. Dr. Haralick's analyzation of the coin image indicated that the right eye area contained a coin image such as those of a 29 A.D. Pilate coin.
10. Roman Lepton
Photograph after Francis L. Filas, S.J.
SECTION XII
NOTES


5Filas, The Dating of the Shroud of Turin From Coins of Pontius Pilate, p. 5.

6Ibid., pp. 5, 15, 16.

7Ibid., p. 24.

8Ibid.

9Ibid.


OBJECTIVES FOR SECTION TWELVE: Numismatic Images on the Eyes of the Shroudal Image

The student will be able to perform the following tasks after the introduction of material concerning the numismatic images on the eyes of the Shroudal image:

A. Define or identify the following terms or people by passing a teacher-prepared quiz:

1. Francis L. Filas, S.J.
2. leptons
3. Pontius Pilate
4. potsherds
5. Procurator
6. Tiberius Caesar

B.

1. Compare the manner of coin minting of ancient coins and contemporary coins and present diagrams presenting both techniques after conducting research using at least three secondary sources.

2. Write a brief explanation defining the role of the Procurator in the governmental system of the Roman Empire.

3. Using at least four secondary sources, write a 750-1000 word essay, which evaluates the rule of Tiberius Caesar.
SECTION XIII

SUGGESTED CONCLUDING ACTIVITIES RELATED TO THE SHROUDAL UNIT

Social Studies teachers who choose to present the interdisciplinary unit on the Shroud in its entirety may wish to conclude the unit by allowing students to synthesize information concerning the Shroud. The integration of information from numerous areas could be accomplished through individual or group activities. Additionally, the synthesis could be evaluated formally, informally or not at all. Therefore, the following activities are offered for either individual or group deliberation, with or without evaluatory procedures:

1. Encourage students to "elect" a "Hall of Fame" for individuals who have been involved with the Shroud. Have the students verbally justify their choices.

2. Encourage students to produce a newspaper containing significant interdisciplinary aspects of the Shroud.

3. Encourage the students to produce a radio or television program for presentation to other students concerning the multidisciplinary aspects
of the Shroud.

4. Encourage students to prepare a time-line, beginning with the earliest references to the Shroud to the present year. Include on the time-line significant events occurring in European history simultaneously with important Shroud milestones.

5. Encourage students to prepare a mobile which reflects various stages in the Shroud's history.

6. Encourage students to make a flag which contains symbols of the Shroud.

7. Encourage students to become pen pals with students in Turin. Contact, for example, Student Letter Exchange, 910 4th Street, S.E., Austin, Minnesota 55912.
SECTION XIV

SHROUD-RELATED SOURCES

The following organizations and persons have Shroud-related literature and audio-visual materials available:

ACTA Foundation
Cogan Productions
11173 Alabama
Youngtown, Arizona
85363

Action Video Productions
1828 State Street
East Petersburg, Pennsylvania
17520

Albany Center Turin Shroud (ACTUS)
Box 102C, RD 1
Baker Road - Pittsdown
Valley Falls, New York
12185

Ancient Near Eastern Research
Box 334
Quakertown, Pennsylvania
18951

Association of Scientists and Scholars International for the Shroud of Turin, Ltd. (ASSIST)
Box 334
Quakertown, Pennsylvania
18951

British Society for the Turin Shroud
21 Stanley Gardens
Willesden Green
London NW2 4QH
England

Brother Joseph Marino, O.S.B.
500 South Mason
St. Louis, Missouri
63141
Centre Canadien de Sindonologie  
131, 58 E Avenue  
Laval  
Quebec H7V 2A5  
Canada

Centre de Renaissance Catholique Maison Sainte Therese  
1911  
Chemin Principal Saint-Gerard des Laurentides  
Quebec  
G9N 6T6 Canada

Centro Internazionale Di Sindonologia  
Via San Domenico 28  
Turin, Italy

Centro Mexicano de Sindonologia  
Pbro. Faustino Cervantes Ibarrola  
Parroquia Votiva de Ntra. Senora del Sgdo., Corazon  
Paseo de la Reforma  
290-Altos  
Mexico, D. F.

Centro Romano di Sindonologia  
Borgo Angelico 14-00192  
Roma

Clueb  
Marsala 24  
40126 Bologna  
Italy

Collagamento Pro Sindone  
Largo Cesidio de Fossa 18  
00126 Roma-Acilia  
Italy

Companions of Jesus and Mary  
P. O. Box 84  
Opelousas, Louisiana  
70570

Corpus Christi Holy Shroud Memorial  
535 Chamberlain Street  
Corpus Christi, Texas  
78404
Dr. Robert M. Haralick
Machine Vision International
Burlington Center
325 East Eisenhower
Ann Arbor, Michigan
48104

Educational Resources
2239 Vista Del Mar Place
Hollywood, California
90028

Environmental Study of the Shroud in Jerusalem (ESSJ)
5714 Holladay Blvd.
Salt Lake City, Utah
84121

Exposition Press
P. O. Box 130063
Sunrise, Florida
33313

Hermenia
Krähenbruck 10
D-4600 Dortmund 50
West Germany

Holy Face Association
P. O. Box 1, St. Henri Station
Montreal, Canada H4C 3J7

Holy Shroud Guild
P. O. Box 155
Esopus, New York
12429

Holy Shroud Library of Boston
114 The Fenway
Apartment 15
Boston, Massachusetts
02115

Holy Shroud Shrine
Corpus Christi Church
136 South Regent Street
Port Chester, New York
10573
J and R Recordings
84, Herbert Gardens
Willesden, London
England Nw10 3BU

Kingdom Books
79 The Rise
Mount Merrion
Co., Dublin
Ireland

Klub Syndonologiczny
ul. Wspolna 63 B
00-687 Warszawa
Poland

Les Compagnons de Jesus et de Marie
2399, rue Iberville
Montreal, Quebec, H2K 3C8

Montre-Nous Ton Visage
Procure M. N. T. V.
B. P. 69
71600, Paray le Monial
France

Passionist Missionaries
Monastery Place
Union City, New York
07087

Passionist Series
1089 Elm Street
West Springfield, Massachusetts
01089

Patrick Walsh Press
2206 South Priest
Suite 105
Tempe, Arizona
85282

Professor Emanuela Marinelli Paolicchi
Via Mar Arabico, 41
00122 Roma Lido
Italy

Pyramid Film and Video
Box 1048
Santa Monica, California
90406
Quamran Desert Center  
P. O. Box 41985  
Tucson, Arizona  
85717

Richard Orareo  
101 Bradford Street  
Provincetown, Massachusetts  
02657

Rodney Hoare  
23 Elm Grove  
Salisbury, SPI IJW  
England

Royal Confraternity of the Holy Shroud  
Turin, Italy

Runciman Press  
% Rex Morgan  
Box 244 P. O.  
Manly 2095  
New South Wales  
Australia

Salesian Mission  
Box 30  
New Rochelle, New York  
10802

David E. Schultz  
425 North Story Parkway  
Milwaukee, Wisconsin  
53208

Shroud Project  
Box 19  
Erieville, New York  
13061

Shroud Spectrum International  
Indiana Center for Shroud Studies  
Route 3  
Box 557  
Nashville, Indian  
47448
Sindonia Research, Inc.
73 Pleasant Avenue
Montclair, New Jersey
07042

St. Joseph's Shrine
544 West Cliff Drive
Santa Cruz, California
95060

The Atlanta International Center for Continuing Study and
Exhibit of the Holy Shroud of Turin, Inc.
323 Omni International-North Tower
Atlanta, Georgia
30335

The Consortium of Shroud Centers
% Environmental Study of the Shroud in Jerusalem
5714 Holladay Boulevard
Salt Lake City, Utah
84121

The Holy Shroud Center
7700 West Blue Mound Road
Milwaukee, Wisconsin
53213

The Holy Shroud Information Centre
Nottingham, England

The Shroud of Turin Research Project, Inc.
P. O. Box 7
Amston, Connecticut
06231

True Image
P. O. Box 4763
Denver, Colorado
80204

Victor King Video
P. O. Box 708
Northbrook, Illinois
60065
SECTION XV

CONCLUSION TO THE CURRICULUM UNIT

The interdisciplinary unit concerning the Holy Shroud of Turin was designed to demonstrate through the presentation of original historical research how one specific topic involving various perspectives can be introduced into the classroom. The unit was designed to indicate to Social Studies educators how the integration of material which shows the development of patterns and their relationships can be implemented. Further, the unit indicated how disciplines can be viewed interrelationaly through transdisciplinarity. Moreover, to facilitate the teacher's usage of the unit, general goals and objectives were presented for consideration. Those goals and objectives can serve as catalysts for further activities applicable to the class in which the Shroudal unit is being studied. Sources from which Shroud-related materials can be obtained were included in the unit. Furthermore, additional research topics related to the interdisciplinary Shroud unit are located in Appendix D, as well as a section which parallels the Shroudal wounds to the gospel accounts of Christ's Passion.
SELECTED BIBLIOGRAPHY
PERTAINING TO THE CURRICULUM UNIT


Blackburn, Thomas E. "Why are Non-Believers Excited About the Shroud? National Catholic Reporter, June 1, 1979, p. 2, c. 1.


Cook, Chester O. "Coin of the Shroud of Turin." Coinage, December, 1981.


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"Have We A 'Photograph' of Jesus?" Columbia 35 (April, 1935): 5-7.


Kenyon, Sir Frederick. The Bible and Archaeology. New York: Harper and Brothers, 1940.


Phillips, G. and Wright. The Doctrine of Addai the Apostle. N.P., 1876.


Schürer, G. **Die Ursprungsliche Templeregel**. Freiburg-In-Breisgau, Germany: N.P., 1903.


"Scientist Doubts Famed Shroud of Turin a Hoax." **San Diego Tribune**, April 17, 1979, N.P.


Salaro, Sanna Gammaria. *La S. Sindone.* Turin, Italy: Vincenzo Bona, 1901.


"Turin Shroud Shows Blood Traces." *Southern Cross*, March 5, 1981, p. 6, c. 3.


Weaver, Kenneth F. "Science Seeks to Solve The Mystery of the Shroud." National Geographic 163 (June, 1980): 730-753.


"With Scrip and Staff." America, April 8, 1933.


CHAPTER VI
CONCLUSION

The evidence presented in the previous chapters revealed that during the past decade a variety of problems has plagued the American educational system, leading to concerns which have been addressed by numerous educators. The complexities of illiteracy, lower educational standards, declining standardized test scores, slumping mathematics and science achievements, and inequality in the educational opportunities available to children in America's schools, are but a few of the concerns shared by educators.

In addition to those concerns, evidence has shown that criticism has been expressed by educators in regard to curriculum content, lack of continuity in curriculum, an inadequacy in sequential study, and a minimal amount of active participation by students in the learning process. In an effort to alleviate those deficiencies, leading educators such as John Goodlad, Ernest Boyer, Mortimer Adler, as well as Social Studies experts such as William Dobkin, Dale L. Brubaker, Richard Gross and others in the Social Studies field, have offered their suggestions for relating the value and importance of interdisciplinary research as a means of improving the American educational
In addition to individual educator's suggestions, various commissions have issued reports containing their assessments of the American educational system. A common theme throughout the individual and the commission written reports has been the necessity to improve, strengthen and reform the curriculum offered to American students and to relate the value of interdisciplinary research and methodology as a means of improving the curriculum presented to students.

The vision and dynamism of educational leaders, particularly those leaders who develop curriculum of value which teachers may present to their students, is seen as being the key to continued improvement in the educational quality of the American school system. Curriculum leaders, especially those in the Social Studies field, have the opportunity to be on the "cutting edge" of educational reform by providing curriculum which integrates material in an articulate manner, thus allowing students to perceive relationships and interconnections among subjects. Various educators believe that it will be innovative curriculum such as interdisciplinarity which will pique students' desire to learn and will make learning a positive experience.

In designing curriculum that will continue to foster improvement in the educational process, curriculum leaders,
particularly those in the Social Studies field, should consider curriculum that anticipates the twenty-first century, therefore being pro-active, rather than reactive. In 1983, in California, political and educational leaders demonstrated their foresight in a joint effort that ultimately led to the passage of Senate Bill 813 in the California State Legislature. The bill was the outgrowth of an effort to standardize the California school system's curriculum and to stress the importance of interdisciplinarity. Included in Senate Bill 813 were secondary level graduation requirements, which, among other specific requisites, required three years of history and social science. The law further required each discipline to adopt model curriculum standards and each school district to evaluate every three years its standards in comparison to the state standards.\(^1\)

The Social Studies model as defined in Senate Bill 813 consists of three required courses: United States History and Geography; World History, Geography and Culture; American Government; Civics and Economics. The authors of the model curriculum stated their belief that the structure of each course required, is designed "to promote an understanding of the interdisciplinary nature and the forces that have influenced human development."\(^2\) To reinforce interdisciplinarity in the curriculum design contained in Senate Bill 813, the authors of the model
included the "perspectives of historians, geographers, political scientists, economists, sociologists, psychologists, and anthropologists."³

In addition to the educational reforms required by California's State Legislature, by May, 1984, a total of thirty-five states had enacted specific secondary level graduation requirements and thirteen states were considering the enactment of specific graduation requirements.⁴ Furthermore, by May, 1984, twenty-two states had initiated some aspect of curriculum reform while twenty-three states were considering curriculum reform. It would appear that educational reform has fostered improvement in America's schools, as test scores, such as those of SAT, are slowly rising.⁵

To insure a continued rise in test scores and to continue the reform of American education, it is incumbent upon curriculum leaders to persist in providing cogent curriculum, some of which could be interdisciplinary in nature. Prior to introducing interdisciplinary methodology into the classroom, the value of interdisciplinarity should be evaluated by the teacher. Interdisciplinary practitioners have provided information which has shown the value of integrated studies as well as the challenge interdisciplinary learning affords students in the educational arena. Interdisciplinary learning also offers students the opportunity to become aware of global issues.
and aids them in their acceptance of responsibility within society.

The utilization of interdisciplinary curriculum methodology in the Social Studies classroom would enable curriculum designers to indicate their foresight by providing pragmatic curriculum which could be the impetus for students to engage actively in the learning process. The preparation of interdisciplinary curriculum could allow curriculum leaders to submit a curricular vehicle which would empower teachers and students to achieve higher levels of accomplishment and excellence. Moreover, continued use of interdisciplinary learning could lead to students' heightened awareness of the relationship that exists between seemingly disparate academic subjects.

As a result of this research, the following recommendations concerning interdisciplinary studies are presented for consideration by fellow educators.

1. Interdisciplinary curriculum should be developed for use on the secondary level.

2. Knowledge currently available concerning interdisciplinary learning should be reinforced and increased.

3. Interdisciplinary teaching methodology should be utilized by educators.
4. Curriculum designers should foster global awareness through interdisciplinary curriculum which places emphasis on the interdependence of countries.

5. Formation training for future teachers should include interdisciplinary teaching techniques.

Further studies concerning interdisciplinarity by students of education could provide additional data to the body of existing knowledge. Additional studies, whether undertaken at the undergraduate, graduate, doctoral, or post-doctoral level, could contribute to the return to excellence of the American educational system.

To achieve that return to excellence will require energetic and vibrant leaders who combine reason with intuition, idealism with pragmatism, objectivity with subjectivity, and sagacity with old-fashioned luck. As Gabriel Marcel stated, "the true function of the sage is surely the function of linking together, of bringing into harmony." The "linking together and bringing into harmony" of diverse disciplines, could be the capstone of reform in the American educational system.
CONCLUSION NOTES


3 Ibid.


APPENDIX A

THE CONTINUUM OF INTERDISCIPLINARITY

THE SCOPE OF SOCIAL STUDIES

THE INTERDISCIPLINARY NATURE OF SOCIAL STUDIES
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11. The Continuum of Interdisciplinarity
12. The Scope of Social Studies
13. The Interdisciplinary Nature of Social Studies
APPENDIX B

UTILIZING PRIMARY SOURCES

UTILIZING SECONDARY SOURCES

UTILIZING WRITTEN SECONDARY SOURCES
### TEACHER CHECK LIST OF PRIMARY SOURCES

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14. Teacher Check List of Primary Sources
UTILIZING PRIMARY SOURCES

Primary sources are an invaluable tool which the educator interested in interdisciplinary research may use to achieve more effective research. In order to demonstrate the diversity of primary sources, a brief description is provided of primary sources which readily are available to the educator/researcher.

ANNALS AND CHRONICLES:

Records which log historical events in a chronological fashion can aid the researcher in determining the order of events and can aid in seeing if any cause and effect can be ascertained. Chronicles such as the Anglo-Saxon Chronicles, begun in England during the reign of Alfred the Great, were continued for over 200 years after Alfred's death. That record provides the researcher with a contemporary and chronological look at eighth, ninth and tenth century England. The researcher should ascertain if annals are available for the time period and topic which is being studied and if such sources are available, they should be included in the researcher's sources.

ARTIFACTS AND REMAINS:

An artifact is an object which was made or was used by
man. An archaeologist studies artifacts of a culture in order to ascertain information about the society and its lifestyle. The artifacts of a primitive society might include stones used for cooking, shells used for food, beads used for jewelry, or stones used for weapons. The archaeologist of the twenty-third century might discover twentieth century American artifacts such as microchips, computer discs and digital watches. The researcher who wished to study artifacts in order to shed light on his or her research topic must realize the limitations and capabilities of the society whose artifacts are being studied so that the researcher does not commit an anachronistic error.

**AUTOBIOGRAPHIES:**

An autobiography, while possibly slanted in favor of the author whether the distortion is deliberate or subconscious, can provide valuable insight into the personality of the author. The researcher may wish to use the autobiography in conjunction with other authors' interpretations of the same time period. Autobiographies relate the subjects which the author felt were important and can shed excellent clarity on historical events in which the author played a significant role.
BAPTISMAL RECORDS:

Baptismal records will give the researcher information concerning the person being baptized, his/her parents and the baptized person's godparents. The date of the baptism plus the name of the officiating minister will be given. Such information may allow the researcher to complete genealogical studies, or if the person is a contemporary, provide information which might allow for contacting the person or persons in question.

BIRTH CERTIFICATES:

A birth certificate, in addition to providing the full name and birth date of a person, also will provide information about the newborn's parents, their address and ages, the name of the attending physician, the hospital where the child was delivered, and whether the birth was single or multiple. Additionally, the certificate will indicate whether a still-birth or live birth occurred. In case of a multiple birth, the certificate will denote how many of the infants were live and/or were still-born.

CEMETERIES AND TOMBSTONES:

Cemeteries and tombstones are a frequently neglected primary source, yet they can provide the researcher with a vast amount of knowledge. Tangible evidence is present in the form of names, birth dates and death dates, and
frequently, sources of familial relations. Additionally, cemeteries and tombstones can provide information on culture, ethnic and religious mores, life expectancy patterns, as well as architectural design. Further, the tombstone may depict symbolism relating to fraternal/social organization affiliations of the deceased.

**CENSUS RECORDS:**

Census records provide good information concerning population shifts within a specific geographic area. Such demographic studies provide facts on social trends and cultural changes. Also useful from census records are a breakdown of population by gender, age and ethnicity. However, in using information gleaned from census records, the researcher should bear in mind that the person who supplied the information may have skewed the data for reasons known only to the informant.

**CHURCH RECORDS:**

Records kept at churches can be a good source of information for the researcher because of their statistical and biographical value. Baptismal records, confirmation records, marriage records, and death records are valuable, as are as tithing records and membership rolls. Additionally, information on the different organizations within the church will be valuable as well as the names of
the persons responsible for each organization. Copies of weekly bulletins and letters from pastors may be used to track changes within the structure of the church.

COINS AND CURRENCY:

Monetary units used by a society are of value to the researcher. The society, whether primitive or advanced, will indicate objects or persons of importance by placing their images on coins or currency. The Lincoln penny, the Kennedy half-dollar and the Susan B. Anthony dollar are American examples of the value of coins to a researcher. American currency containing the images of Washington, Hamilton and Grant indicate to the researcher the prominence which those men must have held within American society. European societies, likewise, indicate persons of importance by placing the persons' images on coins or currency. Elizabeth II of Great Britain, frequently has her image on coins and currency of her realm. Ancient civilizations also honored their rulers by placing their images on coins. The emperors of Rome were immortalized on the coins of the Roman empire and those coins provide valuable information to the numismatic-oriented researcher.

COURT RECORDS AND RULINGS:

Legal records can provide information about judicial issues of significance within specific time periods.
Shifts in judicial rulings may indicate conservative or liberal views which exist within a culture at the time of the ruling. For example, the 1896 ruling of the Supreme Court of the United States in Plessey v. Ferguson ruled that segregation of citizens by race was legal. American cultural views changed significantly so that by 1954 in Brown v. The Board of Education, Topeka, Kansas, segregation was ruled to be unconstitutional.

DEATH RECORDS:

Death certificates provide biographic information, as well as a record of the cause of death. The cause of death might indicate patterns the researcher could use to study epidemics or an ebb of some disease. The cause of death also could be used to determine if there is a pattern of disease within a family, ethnic group or religious group.

DIARIES:

A person's reflections contained within a diary can provide a myriad of information for the researcher. The personal feelings and emotions expressed within a diary may be sources of information concerning events of significance within the writer's society, ranging from the local arena to the more vast international level. While the information may be biased or inaccurate, that does not negate the importance of the information which can be
distilled.

**DOCUMENTS:**

Documents may take a variety of forms. Famous American documents which could be utilized effectively by a teacher include the Declaration of Independence, the Constitution, the Emancipation Proclamation, the Treaty of Versailles, and the Paris Peace Accords of 1973 which ended the Vietnam conflict. Other documents which can be used in various disciplines include by-laws of such organizations as the American Medical Association, the American Bar Association, the National Organization of Women, and the American Federation of Teachers. Documents of other civilizations which would provide illumination of a culture include the Code of Hammurabi, the Domesday Book, the Magna Carta, and the Ninety-Five Theses of Martin Luther. Most researchers who desire to use documents as their source of information should realize that numerous volumes of books contain collections of documents which are available at libraries.

**FAMILY HEIRLOOMS:**

Artifacts which have been passed from one generation to succeeding generations indicate to the researcher the value which has been bestowed upon specific items by family members. Cradles, Bibles and christening clothes
frequently are artifacts which a family might choose to perpetuate from generation to generation. The family heirloom's history frequently is passed on to succeeding generations and the researcher may utilize that information to add to previously known knowledge.

**GENEALOGIES:**

A genealogy chart is an excellent source of information for the researcher. Names, surnames, maiden names, birth and death dates can be obtained, as well as marriage dates and information on offspring.

A family Bible might be one place to locate a genealogy. Local museums also may have genealogies available for the researcher's use. In that vein, the Church of the Latter Day Saints (Mormons) keeps one of the most extensive genealogy libraries in the world. In the United States, information of a genealogical chart may be obtained from the Mormon Church by contacting their headquarters in Salt Lake City.

**GOVERNMENT DOCUMENTS:**

Documents issued through governmental agencies and sources indicate to the researcher the official policy statements and positions assumed by a government. The researcher might choose to compare governmental positions on an issue as it evolves through successive governments,
cabinets and administrators. For the researcher, government-issued papers can explicate details concerning mundane governmental minutiae as well as the intricacies of top-level intelligence papers. Government documents may be obtained by contacting the agency responsible for the document or from a clearinghouse established for the distribution of such documents.

INTERVIEWS:
The use of interviews, also known as oral history, has become a prominent source of information within the past decade. History associations, such as the San Diego Historical Society, have established a section of their Society specifically for oral history. Certainly, the oral tradition has a long past dating back centuries when all traditions, legends, values, and customs were passed on orally from the older generation to the younger generation. Oral history involves the interviewing of persons whose knowledge can provide valuable insight into the past.

LETTERS OF CORRESPONDENCE:
Letters of correspondence may be publicly available, such as those of a famous person, or they may be of a private nature where the author never intended that the letter be read by anyone other than the recipient to whom the letter was sent. Either form can provide insight into
the attitudes and beliefs present in the time period during which the letter was penned. Researchers may use the letters as a comparison to facts already known, or as additional information.

MARRIAGE LICENSES:

Marriage licenses provide the researcher with statistical and biographic information. Marriage licenses are on file with the County Recorder's Office and can be assessed for last names, addresses, ages, and for the date of the marriage. All such information can provide the researcher with clues concerning persons' backgrounds and personal biographical information. Additionally, the researcher may gather statistics which indicate the average age of grooms and brides within a specific locale, the number of marriages which occurred within a specific religious denomination and other demographic information.

MEMOIRS:

Valuable material of a first-hand account of events of significance may be located in the memoirs of persons who not only caused history to occur, but who also participated in a significant manner. Researchers utilizing memoirs must be alert to the "shading" of events by the writer in order to appear in a more favorable light. Memoirs may be available in public libraries as well as in private
MILITARY SERVICE RECORDS:

Military service records contain a plethora of potentially useful information for the researcher. In general, a military service record contains the individual's name, rank/rate, branch of service, biographical data, and the member's Social Security number which currently is the sole identifying number for military personnel. The service history (i.e., duty station, battle engagements, advancements in rank/rate, commendations or reprimands, if any, and security clearances, such as secret, top secret, etc. which are held by the member) is contained in the service record. In addition, the military service record discloses the person's religious preference, marital status, number of children, if any, and physical descriptions of the military member, the member's spouse and children, and the vital statistics of the member's dependents.

MONUMENTS:

Monuments are an excellent representation of what the people of a society deemed as important and valuable to them. Monuments usually have some documentation concerning their significance. This documentation may take the form of an inscribed plaque at the site of the monument or it.
may be a more elaborate written record of the monument's importance. Other sources of information concerning the monument may be found in the form of dedicatory speeches, programs or records of celebration which occurred at the time of the monument's dedication.

Monuments of significance in the United States would include the Washington, Lincoln and Jefferson monuments, the Eternal Flame at the grave of John F. Kennedy, the Iwo Jima monument, and the Vietnam War Memorial. Monuments such as Mount Rushmore serve to memorialize four American presidents, while the sites of such famous battles as Gettysburg, Wounded Knee and Little-Big Horn commemorate the importance of specific events in our country's history.

Among internationally significant monuments are the Eiffel Tower in Paris, the London Tower in London, the Daibutsu, or Great Buddha in Kamakura, Japan, and the statue of Otto von Bismarck located in Hamburg, Germany. Each of those monuments has importance to the citizens of the respected countries in which the monuments are located.

PHONE BOOKS:

A frequently overlooked, yet valuable primary source, is the telephone book. Besides providing names, addresses and phone numbers, a phone book also provides an overview of governmental agencies, ranging from the national level to the local level, types of businesses within the county.
and geographic proximity of cities and counties. Maps generally are included at the front of the phone book, as are instructions on how to use a phone. By obtaining a phone book from different time periods but from the same geographic area, a researcher could determine valuable demographic, geographic and technological changes.

PHOTOGRAPHS:

Photographs provide several areas of information for the researcher. The fashion styles of an era can be observed and the social and cultural mores also might be determined by studying a photograph and its background. For example, analysis of the surrounding circumstances of why, where and when the photograph was taken can be useful: Was the photograph formal, informal or candid? Was the photograph taken in an indoor or outdoor setting? Is the photograph in black and white or in color? Who developed the photograph? Why might the photograph have been taken? Who might have taken it? All information which can be gathered will provide clues for the researcher.

RECORDER AND TAX ASSESSOR RECORDS:

The Recorder's Office has available information concerning the location, size and ownership of real property. Current, as well as past owners of a specific property are maintained from the time a piece of property
initially was recorded, thus the researcher has access to valuable information. Likewise, the Assessor's Office maintains records concerning the value of the land and improvements (i.e. house and garage) on the land. The records of the Recorder or the Assessor would be valuable primary sources from which to gather information of an economic nature concerning property.

SCHOOL RECORDS:

When a child enters into the American school system, various forms are required. Information concerning the child's background, his or her health and family data can be acquired from school records. Types of tests administered to the child will be recorded and the test results will be available, also. A primary source such as a student's transcript can be used by the researcher for longitudinal study and for relational information concerning the student's peers.
<table>
<thead>
<tr>
<th>Architecture</th>
<th>Archives</th>
<th>Art</th>
<th>Galleries</th>
<th>Exhibits</th>
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15. Teacher Check List of Secondary Sources
UTILIZING SECONDARY SOURCES

Secondary sources of information provide the educator/researcher with a foundation from which to obtain additional information regarding areas of their research interest. Moreover, secondary sources may relate information concerning primary sources which will allow the educator to locate further valuable sources. A short description of secondary sources available to educators/researchers will be given in order to demonstrate the wealth of materials available with which to pursue interdisciplinary research.

ARCHITECTURE:

Evolutionary stages of society may be seen through architectural changes. For example, the move from Romanesque to Gothic architecture during the Middle Ages indicated a shift in religious beliefs, philosophy and the humanities. Teachers who encourage the study of architecture among their students allow for an avenue of learning normally not utilized by educators. Studies of architecture allow an interdisciplinary approach to evolve as students learn to see connections between the society's values and mores as those are reflected in architectural design.
ARCHIVES

Archives contain a plethora of material for the secondary sources of materials. Normally, archives are located in libraries, museums, galleries, universities, and government buildings. Educators who wish to use archives to obtain materials that are frequently overlooked, should contact local institutions to determine if archives are housed in their facilities.

ART GALLERIES:

Most art galleries provide docent tours which can provide both teacher and students with a deeper appreciation of the artists' works and the significance of the artists' style of painting. Art galleries may be divided into eras, such as Medieval, Renaissance, Nineteenth Century, etc., or they may be divided into sections such as American, European, Oriental, etc. The teacher who desires to utilize local art galleries should contact the gallery to make arrangements for tours so that optimal benefit may be obtained from a gallery visit.

EXHIBITS:

Museums, art galleries and libraries may permit special exhibits to travel to different geographic areas in order to facilitate larger audience appreciation of the display. For example, the government of Egypt lent the
United States artifacts found in the boy-pharaoh Tutankhamen's tomb. Likewise, in 1983-1984, various art objects from the Vatican art collections were displayed in several American cities. Additionally, the French government allowed the Mona Lisa to be displayed in the United States and the British government allowed one of the four original copies of the Magna Carta to tour the United States. Further, temporary exhibits of the Holy Shroud of Turin have been displayed in San Jose and Santa Barbara, California, among other cities. A permanent exhibit featuring the Shroud is located in Atlanta, Georgia. Exhibits such as those receive much publicity and educators/researchers should check with local museums to see if any exhibits are being planned for their locale. The educator/researcher also should realize that exhibits such as those described frequently have available for purchase catalogs which contain an explanation of the exhibit as well as listings of secondary sources.

LIBRARIES:

Books, magazines, newspapers, journals, and periodicals are only a few of the research tools available to the educator who uses the library to enhance his or her research. Libraries frequently have areas devoted to a specific area of research, such as a room reserved for local or state history, areas reserved for private
collections donated by patrons of the library, or reserved for collections of primary sources. Libraries also may have exhibits on display which have been loaned to the library for a designated time period. Other sources of information available through a library may include collections of phone books or record albums and in the instance of some children's libraries, an animal check-out system where small animals such as hamsters, fish, turtles, and rabbits may be checked out for brief periods of time. Researchers using libraries should check on library policy concerning inter-library loans in the event that research materials might be obtained from other libraries.

MICROFILM:

With the advent of new technology, many materials are being placed on microfilm or on microfiche. Researchers should inquire at libraries about materials available in those two mediums. Frequently, the library personnel may be able to obtain microfilm or microfiche from other libraries if the initial library does not have the desired materials.

MUSEUMS:

Most museums have personnel who can provide tours of the museum. Museums may have both permanent and temporary exhibits, so researchers should check frequently to see if
exhibits have arrived which will enhance the knowledge of their students and add to the researcher's collection of information. Museums also may have exhibits which can be brought by museum personnel to the school site for temporary display. Slide presentations of museum exhibits may be available either for purchase or for rental and teachers should inquire about that option of material presentation. Most museums make available a brochure which states the numerous programs available to the public and the name of the person who can be contacted for additional information.

PHOTOGRAPHS:

The photographer's craft can add significant details for the researcher who properly utilizes photographs in his or her research. Photographs may be either primary or secondary sources of information for the researcher and additional information about photographs is found in the primary source check list of this document.

RADIO PROGRAMS:

Radio stations provide several avenues through which researchers may obtain materials for research topics. Radio stations may have recordings of past historical events which will be of benefit to the researcher, as well as collections of music from different time periods. Those
recordings may allow the researcher the opportunity to compare music from different time periods so that the evolutionary stages of music may be traced.

RECORDINGS:

In addition to musical and other types of recordings, the spoken word has been captured for posterity for many decades. Recordings of significant events, such as declarations of war, inaugural addresses of American presidents, the coronation of monarchs, and the holiday celebrations of countries can be obtained by the researcher who wishes to expand the knowledge of his or her research. Libraries, museums, radio stations, and television stations are examples of locales where recordings may be obtained.

TELEVISION:

Educators/researchers must not underestimate the powerful impact on students and society as a whole that the medium of television has had since its inception. Television is a powerful medium which should be considered as a resource to foster learning. Many television programs are frivolous, yet others are educationally beneficial and can serve as valuable sources within the classroom. For instance, events occurring in distant foreign countries can be broadcast "live," via satellite, into homes thousands of miles from the origin of the event. Likewise, local or
national television programs of an educational nature should be utilized to encourage student learning. The advent of VCRs allows for the reproduction of educational programs, which at a later date, can be viewed in the classroom. Further, television stations, upon request, will send copies of scripts of aired programs to individuals. Such scripts can be useful tools for the educator/researcher.

THEATER:

Effective use of the theater will allow teachers to utilize a medium through which various advantages may be gained. Foremost of those advantages is that the theater brings alive the literary and historical figures about whom students read in class, thus enabling students to comprehend the in-class learning in a more effective manner.

Since the nuances of acting and theater must be understood if maximum learning impact is to be achieved through theater performance, teachers utilizing the theater as a means of interdisciplinary learning must prepare students carefully for the theater performance. In that regard, workshops on the use of theater in learning may be available in some communities, thus allowing the researcher to gain an awareness of the value of the theater within the classroom.
### Teacher Check List of Written Secondary Sources

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<td>Yearbooks</td>
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16. Teacher Check List of Written Secondary Sources
UTILIZING WRITTEN SECONDARY SOURCES

Written secondary sources provide the researcher with numerous opportunities to compare secondary references to primary sources describing the same event. Unfortunately, for the researcher, primary sources may not be available for use. Therefore, research frequently must be based on secondary sources of information. The researcher should view secondary sources as imaginatively as possible. No written record is without some value to the researcher. A list of possible secondary sources follows, with a brief description of the source's value.

ABSTRACTS:

An abstract is a brief statement which outlines a broader work of research. The researcher may use the abstract in order to find additional works of topics in which he or she has an interest. Abstracts usually are available for scholarly works such as theses and dissertations.

BIBLIOGRAPHIES:

The researcher who experiences difficulty in locating appropriate sources should utilize bibliography compilations. Those books are available through libraries.
and frequently from the private collections of persons who have an avid interest in the topic about which the researcher is seeking data.

**BIOGRAPHIES:**

The presentation of a person's life through a biography will provide the researcher with a factual, and usually a chronological study, of a person's role and importance in society. A biography may cover only a specific time period of the person's life, such as the public years, yet, the early years of the person also may be covered briefly. A bibliography may be included, which will allow the researcher to consult other secondary sources and primary sources which also may be listed.

**BOOKS:**

Public libraries, as well as private libraries or private collections can provide the researcher with an abundance of sources with which to conduct research efforts. The researcher should consider also bookstores and should not overlook bookstores which carry only used books. Frequently, "gems" which are not in libraries or are no longer in print may be located in a used book seller's inventory.
BULLETINS:

Most organizations issue bulletins. Some may be issued daily, weekly, monthly, or at some other designated time interval. Researchers using bulletins may be able to discern patterns which exist within bulletins by studying them for a predetermined period of time. For example, if bulletins are issued daily, a one month collection may be an appropriate number to study. If bulletins are issued monthly, it might prove worthwhile for the researcher to pick a specific month to study and follow through that month for several consecutive years. Likewise, bulletins issued on a quarterly basis might be studied for several years by using one specific quarter per year.

CONFERENCES:

Researchers attending conferences may be able to link into networks of persons with similar research interests. Additionally, the researcher may be able to meet authorities within the researcher's area of interest. For the researcher unable to attend a conference of interest, a program may be obtained and the researcher might be able to contact persons who could further the researcher's efforts.

CORRESPONDENCE:

Letters, whether private or public, can be of value to the researcher not only for their content, but also because
of their writing style, grammar, spelling and other literary qualities. The researcher should consider private correspondence as both a primary and a secondary source. Frequently, the private correspondence of famous figures may become available after the person's death. Letters of a private nature may be displayed in museums, libraries or as part of a private collector's compilation. Public correspondence, such as that of political leaders or letters to the editor of a magazine or newspaper, may allow the researcher to interpret public opinion or public policy. Each type of correspondence, private or public, provides a different emphasis on events, both of which are of value to a researcher.

DIRECTORIES:

A directory will provide the researcher with data such as names, addresses and phone numbers of persons belonging to a specific organization, or to a variety of organizations. The researcher is provided with data which may be compared to older directories and may use that information to see if patterns of change are evident, or the researcher may use the information in order to contact persons who might have information which would be of value to the researcher.
Dissertations:

The doctoral student's final research efforts result in a scholarly work known as the dissertation. This research effort is to provide a new perspective on a specific topic of research. The researcher who wishes to use a dissertation as a part of his or her research or as a teaching tool will find dissertations in college and university libraries, as well as through the University of Michigan. The University of Michigan houses dissertations on microfilm and researchers may obtain catalogs from the University which list topics and titles of dissertations available in their collection. Researchers should consider also the possibility that the dissertation, in a modified or expanded version, may appear as a book or as articles within journals.

Journals:

Journals usually are related to a specific area, such as a medical journal, a history journal or an art journal. The researcher will find articles of a scholarly nature devoted to research on a specialized aspect of a topic. Journals usually are issued quarterly and the researcher may find useful not only the article information, but also bibliographic sources which will conclude the article.
LAWS AND STATUTES:

Laws and statutes provide information on how the people of a society are governed and what values the people of the society hold as being important. Laws are passed at various governmental levels, such as the local, state and national levels, and they provide the researcher with information about societal mores at various levels of the society. Local, state and national issues of importance may be ascertained by an analysis of laws which have been passed by governmental bodies. Collections of laws may be obtained through law libraries affiliated with law schools or through the agency which promulgated the law. Explanations of the law and its date of effect also may be obtained by the researcher who desires to use laws or statutes in his or her studies.

MAGAZINES:

The vast array of magazines being published provide the researcher with an ample source of written materials. Publications such as magazines provide in-depth articles as well as short articles or features which may be of value to the researcher. Additionally, magazines may end articles with additional sources of information available on the topic of the article, thus providing the researcher with supplementary sources to locate and use.
MAPS:

Using maps can provide the researcher with more than geographic information. Maps also may indicate population, boundaries, natural resources, products, rainfall, economics, and political structure. The researcher may wish to compare maps of the same location to achieve comparison data or to use a map from the specific time period being researched. Maps may be located in museums, archives where maps are preserved, in books, from surveyor's notes, or from map shops.

MONOGRAPHS

Scholarly works covering specific areas of research, such as a monograph, may allow the researcher to compare different researchers theories concerning the researched topic. Although monographs are secondary sources, they may include a bibliography containing additional secondary sources and primary sources of which the researcher is unaware.

NEWSPAPERS:

The value of a newspaper frequently is overlooked by the researcher who may be suspect of articles which seem to contradict one another. However, newspapers, when used by the researcher, will allow the researcher to read history as it unfolds and as journalists present it to the reading
public. Newspapers often will have coverage of items in which the researcher is interested. Newspapers allow for continual dialog concerning critical topics and the researcher should utilize newspapers in the research being conducted. The researcher should realize though, that newspaper reporters face constant deadlines, and as such, errors in factual information may occur which cannot be corrected until the next issue of the newspaper.

PERIODICALS:

Some research may be published in periodicals. A periodical may not be published at regular intervals, thus, the researcher should utilize sources which will allow for the easy location of such works. The Reader's Guide to Periodical Literature is an excellent source of information and may prove to be valuable to the researcher who wishes to use periodicals to further research efforts.

REPORTS:

Companies and organizations frequently issue reports which the researcher can use to gain further knowledge about his or her research topic. Reports may contain useful statistical information as well as statements issued by significant members of the institution issuing the report. The researcher should not overlook the use of unpublished reports, too. Those reports may be obtained
from individuals involved in research of interest to the researcher.

SURVEYS:

An appropriate measure of public opinion is the survey. The researcher who chooses to use surveys as a means of compiling data will be provided with statistical information concerning public responses to various issues. Surveys asking similar questions in different years may be used to ascertain longitudinal information. The researcher who chooses to use survey information should do so with an awareness of the pros and cons of survey studies. Consultation of a research methodology text will apprise the researcher of possible drawbacks of relying heavily on survey results.

THESSES:

The culmination of a graduate student's studies frequently ends with the presentation of the thesis. A thesis is to present the scholarly efforts of the graduate student in an area in which research is needed in order to illuminate some specific aspect of a subject. Theses collections may be found in college and university libraries. Additionally, the researcher may locate theses through the University of Michigan archives where theses have been placed on microfilm and can be obtained by the
researcher.

YEARBOOKS:

An annual update of specific topics and statistics such as a yearbook can be utilized effectively by the researcher who is seeking current information. Yearbooks may be compared to past yearbooks in order to see if pattern shifts have occurred.

The yearbook, or annual, of a school or institution may be a valuable tool for the researcher. Trends in fashion, cosmetics, hair styles, and fads may be discerned through the use of yearbooks, such as those published by schools. If the researcher is seeking information about a specific person, information on that person's youth may be obtained through the school yearbook. Activities, clubs and sports offerings may be traced through the use of successive years of yearbooks.
APPENDIX C

ALTERNATIVE SOCIAL STUDIES METHODOLOGY
ALTERNATIVE SOCIAL STUDIES METHODOLOGY

The educational reform movement of the past several decades in the United States has brought changes in history curriculum and teaching methods which reflect the fact that history is not static but is constantly changing. In an effort to keep abreast of the changing affairs of the modern world, teachers have broadened the traditional approach to history. Teachers are de-emphasizing dry facts and dates and unrelated masses of information. As a substitute for the rote memory and regurgitation of facts methodology in history, students are being taught the skills of thinking and inquiring.¹ The following information is presented as background and a point of reference so that Social Studies teachers and curriculum leaders may be apprised of alternative teaching methods to the staid and unproductive "rote memory and regurgitation of facts" methodology.

INQUIRY

The inquiry approach is the process of formulating and testing ideas. Inquiry implies a climate of openness in the classroom that encourages wide student participation and the expression of a wide variety of viewpoints. In developing the learning process, students use the concepts
and skills of both the arts and the sciences. They also draw upon personal experiences as they attempt to analyze the social, economic and cultural events of history.²

Byron G. Massialas believes that the teacher plays six different and important roles in the inquiry-type class. The teacher serves as the planner, introducer, manager, rewarer, questioner and sustainer of inquiry, and the value investigator. In a break-down of those specific roles, the teacher would perform the following functions:³

Planner:
The planner carefully plans a specific time period (i.e., one week, one unit, one semester) of learning materials.
The planner collects and prepares materials.
The planner organizes time, spacing and sequence of the materials.
If materials are unavailable, the planner uses imaginative ideas or constructs his or her own materials.

Introducer:
The introducer introduces a new learning experience with material that generates inquiry from students.
The introducer introduces material at a time when pupil interest is high and enthusiasm is spirited.
The introducer uses introductory material as the
"discovery episode" that creates the problem to be discussed, or the situation to be enacted.

**Manager:**
The manager makes announcements.
The manager maintains order.
The manager keeps records.
The manager uses data, resources and techniques to engage students in planning and executing inquiries of their own.

**Rewarder:**
The rewarder suggests, encourages and praises students' efforts.
   A. In creativity
   B. In participation
   C. For imaginative ideas

The rewarder never commands, criticizes or punishes.

**Questioner and Sustainer:**
The questioner and sustainer has no final or absolute answers to the problem or situation being discussed. The questioner and sustainer emphasizes that all statements are to be examined prior to acceptance or rejection in the open forum of ideas.
The questioner and sustainer develops and reinforces the idea that teachers, textbook authors
and students are not immune from questioning and detailed probing.
The questioner and sustainer encourages explorations of various alternatives to a problem.
The questioner and sustainer uses the strategy of redirecting questions addressed to him or her.
The questioner and sustainer plays the role of devil's advocate.

A. Prods students
B. Makes students prove the defensibility of their statements

The questioner and sustainer assumes dialectical, rather than didactic posture in regard to knowledge and learning.

**Value Investigator:**
The value investigator emphasizes the process of inquiry.
The value investigator emphasizes that students' judgment must be publicly defensible.
The value investigator eventually takes a definite position on the problem or situation under discussion, but not in the introductory phase of the discussion.

Leonard S. Kenworthy is an educator who has stated that the student derives many benefits from an inquiry-type history methodology. The most important result from
learning through inquiry is that the students' attitudes change toward learning. As students participate in the dialogue of inquiry, they learn to look upon knowledge as being tentative rather than absolute. They learn that all knowledge claims must undergo constant revision and confirmation. Further, they begin to understand the complexity of verifying knowledge and the processes involved in such verification. In addition, they are afforded an opportunity to re-evaluate previously held concepts and beliefs.\textsuperscript{5}

Kenneth H. Hoover\textsuperscript{6} summarizes many of the advantages in using the inquiry technique in the classroom:

- Superior and lower-than-average students can participate successfully.
- Students learn to define a problem.
- Students learn how to hypothesize.
- Students learn to draw logical inferences.
- Students learn to gather relevant data.
- Students learn to generalize.
- Student discussions follow the introduction of an issue.
- A variety of viewpoints are expressed and attitudes and values are also exchanged.
- Students' ideas are challenged by their peers.
- Students learn that value judgments on issues must be based on the explicit grounds of supportive
Students are given more responsibility in guiding the direction which their learning takes. The teacher's role is shifted from that of dispensing answers to one of asking questions and guiding learning.

Mary Surgue and Jo A. Sweeney have compiled a blueprint for teachers who wish to evaluate their inquiry skills. The instructor should relate to the questions by asking how frequently the behavior presented is evidenced in his or her classroom activities. Surgue and Sweeney's delineation of inquiry skills includes:

As Planner:
The teacher focuses on lessons involving exploration of significant ideas, concepts or problem areas that can be investigated at many levels of sophistication. The teacher prepares for a broad range of alternative ideas and values which the students may raise related to a central topic.
The teacher selects materials and learning experiences to stimulate student curiosity and to support student investigation.
The teacher makes available a wide variety of resources and material for student use.
Skill-building exercises are tied directly to ongoing
learnings where they may be utilized and applied.

As Introducer:
The introductory lessons present some problem, question, contradiction, or unknown element that will maximize student thinking. The teacher's aim is for students to react freely to the introductory stimulus. The teacher is prepared to deal with alternative patterns of exploration.

As Questioner and Inquiry Sustainer:
The students talk more than the instructor does. Students are free to discuss and interchange their ideas.
When the instructor talks, he or she "questions," not "tells."
The instructor consciously uses the ideas which students have raised and bases statements and questions on their ideas.
The teacher redirects student questions in such a way that students are encouraged to arrive at their own answers.
The teacher encourages the students to evaluate the adequacy of grounds provided for the statements made by themselves and others.
Students gain understanding and practice in logical and scientific processes of acquiring validity of
their ideas in a broad context of experience. The teacher encourages students to move from examination of particular cases to more generalized concepts and understandings.

As Manager:
The instructor emphasizes learning and the use of ideas, rather than managerial functions, such as record-keeping. The teacher allows for flexible seating, student movements and maximum student use of materials and resources. Class dialogue is conducted in an orderly fashion which emphasizes courtesy and willingness to listen to each person's ideas. Students are actively involved in the planning and maintenance of the total classroom environment. The teacher fosters balanced participation by encouraging the more reticent students to take an active role in classroom activities.

As Rewarder:
The instructor encourages and rewards the free exchange and testing of ideas. The instructor emphasizes the internal rewards that spring from the successful pursuit of one's own ideas. The teacher avoids criticizing or judging ideas
offered by students.
Each student's contribution is considered legitimate and important.
The teacher evaluates students on growth in many aspects of the learning experience, rather than simply on the basis of facts acquired.

As Value Investigator:
The instructor emphasizes that concepts, social issues, policy decisions, attitudes, and values are legitimate areas for discussion.
All topics are critically examined, not "taught" as closed issues with a single "right" solution.
Use of unfounded, emotionally charged language is minimized in discussion attitudes and values.
The teacher encourages the students to explore the implications of holding alternative value and policy positions.
The teacher makes the students aware of personal and social bases for diversity in attitudes, values and policies.
The instructor encourages the students to arrive at value and policy positions of their own that they can understand and can defend.
ROLE-PLAYING:

Educators who are attempting to loosen the bonds of lock-step, rote learning approach, find role-playing to be an excellent technique for general classroom use. Role-playing, a unique form of drama, is a spontaneously improvised playlet in which there are no scripts, rehearsals, particular skills, or training involved. Despite the simplicity of role-playing, it is helping to promote educational objectives and it is a tool that can be used effectively within the classroom.

The purpose of role-playing is to give the students a clearer picture of a problem or situation. Role-playing is action-oriented, rather than being purely verbal or cognitive. For that reason, students react favorably to the new learning experience. To achieve success in this drama form, there are three basic prerequisites to be followed in setting up a role-playing situation: The class should have a cooperative group feeling; the participants need to have knowledge of the subject being enacted and of the persons whom they represent; the play is not an end in itself, rather, it is a supplementary technique.

When role-playing is initially being introduced as a classroom learning experience, the participants in the drama should have specific characteristics. Students who are well-informed on the issue to be presented should be selected. The students should be articulate, imaginative
and outgoing. After the class becomes more experienced in role-playing, there is no need for selectivity in the participants.\textsuperscript{10}

For maximum success, the situation being enacted should be simple. It should involve personalities, with four to eight characters being ideal. Of those characters, three roles should be identified in advance by the teacher. As the drama unfolds, the remainder of the participants will spontaneously emerge in roles to fit the circumstances. Prior to presenting their specific situation, the participants should form a group for a brief discussion of their method of presentation. The student will learn not only from his or her own role, but also from the roles which his or her classmates assume.

It is John Anthony Scott's belief that the value of role-playing lies in the fact that students "learn about something by acting,"\textsuperscript{11} rather than learning by rote. Additionally, Alvin Toffler believes that interdependent learning techniques such as role-playing, instruct "through transactional means, i.e., through negotiation,"\textsuperscript{12} which makes for a liberated form of learning. Furthermore, Clark C. Abt believes that role-playing is good preparation for the societal roles which students have in their later lives. Abt also feels that the value of role-playing stems from the union of thought and action.\textsuperscript{13}

Obviously, there are benefits to be derived when the
role-playing technique is used as a tool to enrich presentation of classroom materials. However, when role-playing is used as a tool for learning in the classroom, the teacher has specific and multiple responsibilities if the technique is to be successful: The instructor acts as a combination of director and audience; he or she assigns the situation of the drama in relation to the class' current unit of study; he or she reminds students of their role if they slip out of character; he or she encourages freedom of expression and creativity; he or she follows the presentation with a discussion of open-ended questions.  

SIMULATION GAMES

The educational reform movement of the 1960s forced the teacher to change his or her role from that of a dispenser, to that of a developer of the skills and techniques of learning. The movement, which has gathered momentum into the 1980s, has also changed the character of lessons from being teacher-dominated, to lessons of interaction between teacher and students. The use of simulation games in the classroom creates an interaction between the students and the teacher. Thus, according to Audrey H. Goodloe and Virginia N. Rogers, the teacher who uses simulation games for methodology becomes a guide, rather than a source and a conduit. By developing the students' inquiry and sociodrama skills through simulation,
the teacher frees the students to learn. The student learns to gather, process and analyze information, which is then added to previously learned data. From the accumulated data, students are able to reach a logical decision.17

Simulation games are based on a situation that is created to describe a problem as if it were real. Simulation games may be company-produced or teacher-produced.18 The teacher who produces his or her own games will be better able to tailor the game in response to the specific needs and capabilities of the individual students. Regardless of who manufactures the games, the principles remain the same. The players move through the game as if it were a real-life situation in a simulated environment. It is Goodloe and Rogers' belief that during the game, the student is motivated to experiment with the consequences of various changes in the simulated environment. The rules of the game form the framework for building the simulation game. The game partitions off a set of players, a set of allowable actions, a segment of time, and establishes a framework within which the action takes place. At various points in the game, the players receive feedback from the teacher on the consequences of their actions. The rules of the game enable the students to create the experience (social system, process, organization, etc.) from which they have a learning experience. It should be noted that
Isabel H. Beck and Bruce Monroe believe that the validity of the simulation stems from the transferability of the experience from the simulated environment to the real situation more efficiently.\textsuperscript{19}

If a good group learning experience is to be derived from a simulation game, Kenneth H. Hoover states that the game must contain the following elements:\textsuperscript{20}

**Roles for the Players:**
Define the status (i.e., economic, political, etc.) of the various simulated roles.
Decide how the players in each role are affected by the problem situation.

**Goals:**
Goals vary according to the circumstance (i.e., political, economic, etc.) of the simulated problem.
Players may re-evaluate and change goals as the game proceeds.

**Alternatives:**
Prior to the start of the game, establish alternatives for achieving goals.
Identify, analyze and evaluate alternatives.
Consider the consequence of alternatives.

"**Chance" element:"
Some chance elements can be anticipated in the game.
A chance element might give one player a high honor, or an added burden.

**Interaction:**
Students choose the forces of the interaction.

A. Person vs. Person.
B. Group vs. Group.
C. Player or group vs. the System (i.e., economic, political, etc.)

Each player may have a separate goal.

A. Players may work independently.
B. Players retain option to join a group.

**Effective use of audio-visual aids:**
Helps to create the simulated environment.
Adds to the impact of the situation.

**Debriefing:**
Students discuss what happened during the game.

A. Examine feelings.
B. Examine actions.
C. Examine reactions.

Evaluation by students.
Evaluation by teachers.
Misconceptions can be clarified.
Students must be reminded that they are only approximating a real situation.
Open-ended question and answer session.

**AUDIO-VISUAL AIDS:**

Audio-visual aids serve as a substitute for direct, first-hand learning experiences and they serve as skillful tools to assist the teacher in presenting classroom material. Such technological teaching mechanisms as films, radio, television, computers, slides, filmstrips, overhead projectors, and self-teaching machines are being used, in varying degrees in most American schools. Other visual tools of less technical means such as bulletin boards, murals, charts, posters, graphs, and time lines are also being used in classrooms to provide the concrete, illustrative material that is needed in any real teaching-learning interaction.21

Sterling G. Callahan describes the varied functions which audio-visual devices provide when used as teaching tools. Those functions include the following advantages:22

**Overcoming Inaccessibility:**
Students are not able to directly view or visit many events.
Films, tapes and television bring events into the classroom.

**Reducing or enlarging size:**
The visual aids enlarge objects which are too small to
be viewed directly.
The aids reduce the size of objects whose magnitude make them difficult to survey and study.

**Insuring the safety of students and teachers:**
Some processes or equipment needed for learning experiences are unsafe for use or for examination by unqualified persons.
Films, tapes or television are teaching tools that do not expose students and teachers to dangers.

**Capturing the infrequent occurrence:**
Tapes, films and pictures capture the event for use in the classroom.

**Extending capabilities:**
Time-lapse studies permit analysis of events that normally move too fast or too slow for classroom study.
Tapes, records and films are useful tools that extend our capabilities to learn.

**Coping with perishability:**
Some materials are too fragile to be viewed directly or to be handled for study purposes.
Films, photographs and models permit introduction of "perishable objects" for later presentation to the student.
Capsuling time:
Some events extend over too long a period of time to be studied in the classroom. Time-lapse photography permits highlights, or a complete overview of events.

Combating costs:
Some materials are too expensive for classroom use. Reproduction of specific works, color photographs or television pictures serve in lieu of the original object.

There is no specific audio-visual tool to be used for a given purpose. The teacher will be restricted by the following factors: The availability of resources; audio-visual aids which can be prepared by the teacher; the amount of time allotted for preparation and the use of the device; the type of interaction involved (i.e., small group, large group, individual study, etc.). It is the responsibility of each teacher to determine which audio-visual tools are best suited to his or her needs and the needs of the class. 23

Perhaps the most frequently used apparatus are the film, filmstrip, slides, television, tape-recorder, and video tape. The following information presents a few ideas for when those tools are used.
Television:

Television provides an unprecedented way of bringing outstanding lectures and demonstrations by the finest teachers into the classroom. History as it is being made unfolds in full view for the student whose teacher uses television as an audio-visual tool. Television provides the direct experience that is so important in the teaching-learning interaction. Consequently, some major television companies have taken steps to aid educators. The companies provide outline sheets of special programs. They also furnish educators with discussion questions concerning the topics to be viewed, or they mail out reading lists pertinent to the issues to be presented on television.

In using television, the teacher must do more than plug in and turn on the set. He or she must provide some introductory material which will give his or her students a richer, deeper experience. The educator must also plan a discussion period to follow the televised event. Such a discussion will highlight the students' skills of critical viewing and listening.

Video tapes and video cassette recorders:

The use of video tapes and video cassette recorders (VCRs) is a development which enhances secondary methodology. As classroom resources, video tapes and VCRs make it possible to film events to be used later in the
classroom. John Fallon, Joan Leonard and Harold von Arx believe that video tape systems have the following advantages: A televised program can be video-taped or reproduced on a VCR directly from a television set for replay at a later date; video-taping and video cassette recording can be accomplished in one's absence, by means of a pre-set timing mechanism; movies of lessons, field trips, etc., can be video-taped or captured on the VCR and then played back through a television set; historical events, movies, plays, etc. can be shown in the classroom by means of cartridged video tapes and video cassette recordings. Teachers should not overlook the possibility of video-taping or cassette recording various classroom activities. The students could be recorded while performing some skit, historical interview, conversation, debates, etc.

**Tape recorders:**

Oral history is a relatively recent concept in pursuing historical knowledge. When a great moment in history is captured on record or on tape, it is preserved forever, as in the case of the tape recorded interview, the backbone of oral history. However, according to Kenneth L. Woodward, the value of oral history is dependent upon the talent of the interviewer and the "candor" of the person being interviewed. Woodward further believes that the tape recorder's greatest contribution to history will be in the
field of education. Students seem to respond well, and with more interest, to the opportunity to record contemporary history through interviews with people who have made, or experienced, the history of our times. This belief is further substantiated by Dr. Knox Mellon of Immaculate Heart College who states that "Students are intrigued with the tape recorder. Even those who have never liked history before get turned on."³⁹

The use of the tape recorder as an educational instrument not only awakens students' interest in learning, it also serves as an aid to the teacher in developing curriculum. The teacher's imagination and ingenuity, combined with historically accurate information and the use of a tape recorder enable the teacher to provide a motivational element for students. For instance, an instructor could pre-tape a series of thought-provoking questions, a lecture or an explanation concerning a specific unit. The pre-recorded information also enables the teacher to critically evaluate his or her ideas prior to presenting them to his students. In addition to pre-recorded tapes, a classroom session in part, or in its entirety, can be taped. In that way, the teacher can evaluate the presentation and evaluate the students' questions, responses and summaries. In short, the tape recorder divulges the strengths and weaknesses of both the teacher and the students.³⁰
Film, filmstrip and slides:

Photographed events concerning people or places and photographs of institutes, art works, artifacts, and similar articles can be brought into the classroom by means of films, filmstrips or slides. Regardless of whether the photographs are of the homemade variety, or are commercially marketed, they provide a direct input of information, current or past. Films, filmstrips and slides, are not difficult media to use and are relatively inexpensive tools with which to enrich presentation of classroom materials.31

Since there are many audio-visual aids at the disposal of the teacher, care must be taken in evaluating the materials. Edgar Dale presents the following points which should be considered in judging the materials:32 Do the materials pertain to the current unit of study and do the materials present factual information? Is the material geared to the age, intelligence and experience of the students? Is the physical condition of the material satisfactory? Is a teacher's guide available to provide briefing for the effective use of the materials and can the material selected for use develop the students' thinking and their ability to analyze critically? Is the material worth the time, effort and expense involved in its use?

After a careful evaluation of the available equipment, the teacher must decide which of the film resources is to
be used. The films, filmstrips or slides must be appropriate to the current unit of study and fit the time allotted to the unit. Additionally, the chosen media must fit the needs of the students and the teacher. A guide sheet, or questions about the films will assist in creating meaningful discussions that make an impact on teaching-learning interactions.

**Computers:**

The 1970s and 1980s have brought the computer age into American education. Educators must learn to value the computer within the classroom and utilize it effectively in order to enhance their students' learning experiences. Computer literacy must be achieved by both teacher and students if they are to be involved actively in the "computer revolution." Microcomputers, those computers which are appropriate for classroom use, are now being used in numerous educational settings because of their small size, relative inexpensiveness and ease of operation. Presently, one major drawback to computer use in education is the lack of software. Software, the program being used which provides commands for the computer, is being produced to correspond to specific subjects within the curriculum. Currently, most software being employed is teacher-produced. As the computer is integrated more fully into the educational system, the paucity of appropriate software
undoubtedly will be rectified.\textsuperscript{33}

The preceding information concerning Social Studies methodology indicates that numerous approaches may be utilized to instruct Social Studies classes in a competent and productive manner. Social Studies teachers and curriculum designers should remember that Social Studies curriculum "continually faces the challenge of revision and renewal"\textsuperscript{34} for the "task of curriculum development [in the Social Studies] is never finished."\textsuperscript{35} In an effort to improve education, the American educational reform movement of the 1980s moves toward an emphasis on the "basics"\textsuperscript{36} or "core curriculum."\textsuperscript{37} Thus, Social Studies curriculum leaders should be at the forefront of curriculum reform providing invigorating methodology which will improve the position of Social Studies within the school curriculum.
FOOTNOTES


Gertrude A. Vasche, *Utilizing Television in the Classroom* (Menlo Park, California: Pacific Coast
Publishers, 1966), pp. 63-65 cites ways of using television in the Social Studies area which would be helpful to the history teacher.


35 Ibid.


37 Tom Mirga, "Researchers Urge E.D. Effort to Define 'Common Core,'" Education Week, April 24, 1985, p. 9, c. 1. See also James Mertling, "'Coherent Design' Missing in Curriculum Says Bennett in Call for Common Core," Education Week, March 20, 1985, p. 10, c. 1.
APPENDIX D

JOURNALS RELATED TO THE SOCIAL STUDIES,

EDUCATION AND INTERDISCIPLINARY LEARNING
JOURNALS RELATED TO THE SOCIAL STUDIES, EDUCATION
AND INTERDISCIPLINARY LEARNING

In order to obtain a broad spectrum of viewpoints concerning their specific academic fields and education, in general, teachers should read journals within their fields and related fields. Listed below are journals which would be of value to educators interested in the Social Studies, education, curriculum development, and interdisciplinary studies.

EDUCATION JOURNALS

Ace Bulletin
Action in Teacher Education
American Education
American Educational Research Journal
American Educator
American Journal of Education
American Scholar
American School Board Journal
American Secondary Education
American Teaching
Anthropology and Education Journal
Art Education
Artificial Intelligence

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Association for Supervision and Curriculum Development
Association of Teacher Educators
Audio-Visual Communication
Audio-Visual Instruction
Basic Education
British Journal of Education Studies
California Classroom Teacher
California Journal for Instruction Improvement
California Journal of Educational Research
California Journal of Teacher Education
California Social Science Review
Capstons Journal of Education
Catalyst for Change
Catholic Educational Review
Catholic School Journal
Changing Education
Changing Times
Chinese Education
Chronicle of Higher Education
Comparative Education
Comparative Education Review
Computers and Education
Computers and the Humanities
Computers and the Social Sciences
Computers in the Schools
Computing Teacher
Contemporary Education: A Journal of Reviews

Contemporary Education Review

Core Teacher

Creative Computing

Curriculum Currents

Curriculum Inquiry

Curriculum Journal

Curriculum Review

Daedalus - Journal of the American Academy of Arts and Sciences

Delta Kappa Gamma Bulletin

Directive Teacher

Editorial Research Reports

Education

Education and Urban Society

Education Digest

Education Index

Education Quarterly

Education Week

Educational Administration and Supervision

Educational and Industrial Television

Educational and Psychological Measurement

Educational Broadcasting

Educational Forum

Educational Horizons

Educational Leadership

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Educational Method
Educational Outlook
Educational Perspectives
Educational Products Report
Educational Records
Educational Research
Educational Researcher
Educational Resources and Techniques
Educational Review
Educational Studies
Educational Summary
Educational Technology
Educational Theory
Educators Guide to Free Films
Educators Guide to Free Filmstrips
Educators Guide to Free Social Studies Materials
Educators Guide to Media and Methods
Electronic Learning
Environmental Action
Ethics in Education
Experimentation and Innovation
Forum
Future Survey
Futurist
Game Design
Gifted Child Quarterly
Group and Organizational Studies

Harvard Educational Review

High School Journal

Higher Education and National Affairs

History and the Social Science Teacher

History of Education

History News

History Workshop

Human Development

Humanities Education

Ideas

Independent School

Innovative Higher Education

Instructor

Instructor and Teacher

Instructional Innovations

Integrated Education

Intelligence

Interchange

Intercom: The Journal of Classroom Interaction

Intercultural Development Research Association

International Journal of Political Education

Journal of Curriculum and Supervision

Journal of Curriculum Studies

Journal of Curriculum Theorizing

Journal of Economic Education
Journal of Economic Literature
Journal of Education
Journal of Educational Measurement
Journal of Educational Thought
Journal of Environmental Education
Journal of General Education
Journal of Human Resources
Journal of Instructional Development
Journal of Law and Education
Journal of Moral Education
Journal of Personalized Instruction
Journal of Philosophy of Education
Journal of Research and Development in Education
Journal of Secondary Education
Journal of School Psychology
Journal of Socio-Economic Planning Sciences
Journal of Teacher Education
Journal of the Association of Teachers of Japanese
Journal of the Chinese Language Teachers Association
Journal of the Society for Accelerative Teaching and Learning
Journal of World Education
Kappa Delta Pi Record
Learning
Learning Resources
Liberal Education
Media and Methods

Media Message

Media Review Digest

Mensa Research Journal

Momentum

National Education Association of the U.S.: N.E.A. Advocate

National Endowment for the Humanities: Annual Report

National Forum

N.E.A. Today

New Era

Notre Dame Journal of Education

Peabody Journal of Education

People Watching

Phi Delta Kappa Fastbacks

Phi Delta Kappan

Planning for Higher Education

Preservice Teacher Preparation

Programmed Learning and Educational Technology

Religious Education

Research in Education

Review of Educational Psychology

Review of Educational Research

Scenario: The Future Journal for Teachers

Scholastic Update

School

School Administrator
School and Community
School and Society
School Arts
School Counselor
School Review
Sight
Simulation and Games
Simulation/Gaming
Social Education
Social Science
Social Science Quarterly
Social Science Records
Social Sciences History
Social Studies
Social Studies Journal
Social Studies Review
Soviet Education
SSEC Newsletter
Synergist
Synopsis
Teacher
Teacher Education Quarterly
Teacher Educator
Teacher Magazine
Teachers Forum
Teaching History: A Journal of Methods
Teaching of Psychology
Teaching Political Science
Teaching Sociology
The Executive Educator
The History Teacher
The Social Studies
Theory and Research in Social Education
Theory into Practice
The Clearing House
The History and Social Science Teacher
The History of Education Quarterly
The Journal of Curriculum Theorizing
Today's Education
University Review
Urban Education
Video and Optical Disc
Visual Education
Western European Education
Western Journal of Education
Writing on American History
HISTORY JOURNALS

Abraxas: A Journal for the Theoretical Study of Philosophy, the Humanities, and the Social Studies

Africa Today

African Notes

Agricultural History

Agora: Journal of Humanities and Social Science

America

Americana

American Academy of Political and Social Science

American Academy of Religion

American Anthropologist

American Archivist

American Benedictine Review

American Ecclesiastical Review

American Economic Review

American Ethnologist

American Federationist

American Heritage

American Historical Review

American History Illustrated

American Humanities

American Hungarian Review

American Indian Culture and Research Journal

American Indian Quarterly

American Institute of Italian Studies
American Jewish Archives
American Jewish Historical Quarterly
American Jewish History
American Journal of Ancient History
American Journal of Archaeology
American Journal of Sociology
American Oriental Society
American Political Science Review
American Quarterly
American Scandinavian
American Scholar
American Sociological Review
American Studies
American West
Americas
Annals of the American Academy of Political and Social Sciences
Annals of the Association of American Geographers
Annuaire Mediaevale
Anthropological Quarterly
Anthropology Resource
Anthropology UCLA
Anthropos
Appalachian Journal
Archives
Arctic Anthropology
Asia Pacific Community
Asia Society
Asian Affairs
Asian Affairs: Journal of the Royal Central Asian Society
Asian American Studies
Asian Survey
Atlantic Quarterly
Australian Review
Aztlan: Chicano Journal of the Social Sciences and the Arts
Balkan Studies
Baltic Studies
Bible Review
Biblical Archaeologist
Biblical Archaeology Review
Biblical Studies
Biography
Black Law Journal
Black Scholar
Brigham Young University Studies
British History Illustrated
Business History Review
California Historian
California Historical Quarterly
California Historical Society
Cambridge Quarterly
Cambridge Review
Canadian Historical Review
Canadian Journal of History
Canadian Slavic Studies
Caribbean Quarterly
Caribbean Review
Caribbean Studies
Carte Italiane
Catholic Biblical Quarterly
Catholic Historical Review
Central Asian Review
Central European History
Chicano Law Review
Church and State
Church History
Classical Antiquity
Clio, Journal of History
Comitatus
Comparative French Civilization
Comparative Studies in Economic History
Comparative Studies in Society and History
Congressional Quarterly Weekly Report
Congressional Record
Congressional Studies
Current Anthropology
Current Documents
Current History
Current Issues
Daedalus
Dialog
Diplomatic History
Directory of Historical Societies and Agencies
East European Quarterly
Economic History Review
Economic Journal
Ecumenical Review
English Historical Review
Environmental Review
Epoche
Ethnohistory
Explorations in Economic History
Explorations in Entrepreneurial History
European Studies Newsletter
European Studies Review
Foreign Affairs
Foreign Policy
French Historical Studies
Genealogical and Local History Books in Print
Genealogical Magazine
Great Decisions
Great Plains Quarterly
German Studies Review
Greece and Rome
Gypsy Lore Society
Harvard Theological Review
Hispania
Hispanic American Historical Association
Historia
Historian
Historical Archaeology
Historical Abstracts
Historical Bulletin
Historical Journal
Historical Methods
Historical Outlook
Historical Preservation
Historical Studies
History
History and Theory
History Micro Computer Review
History News
History of Education Quarterly
History of Political Economy
History of Religions
History Teacher
History Today
Human Ecology
Human Rights
Humanities
Hungarian Review
Indian Economic and Social History Review
Indo-Asian Culture
Intellectual History Newsletter
International Affairs
International History Review
International Journal
International Journal of Law and Psychiatry
International Journal of Middle East Studies
International Journal of Oral History
International Social Science Journal
International Studies Quarterly
Irish Historical Studies
Irish Theological Quarterly
Islamic Culture
Jewish Social Studies
Journal for the Study of Judaism
Journal of African History
Journal of American Ethnic History
Journal of American History
Journal of American Studies
Journal of Anthropological Archaeology
Journal of Anthropological Research
Journal of Asian Culture
Journal of Asian History
Journal of Asian Studies
Journal of Baltic Studies
Journal of Bible and Religion
Journal of Biblical Literature
Journal of Black Studies
Journal of British Studies
Journal of Canadian Studies
Journal of Church and State
Journal of Contemporary History
Journal of Current Social Issues
Journal of East Asiatic Studies
Journal of Ecclesiastical History
Journal of Economic Education
Journal of Economic History
Journal of Economic Literature
Journal of Ecumenical Studies
Journal of European Economic History
Journal of Family History
Journal of Field Archaeology
Journal of Geography
Journal of Historic Geography
Journal of Human Relations
Journal of Inter-American Studies
Journal of Inter-American Studies and World Affairs
Journal of Interdisciplinary History
Journal of Latin American Studies
Journal of Medieval and Renaissance Studies
Journal of Medieval History
Journal of Mexican-American History
Journal of Modern African Studies
Journal of Modern Greek Studies
Journal of Modern History
Journal of Near Eastern Studies
Journal of Negro History
Journal of Oriental Studies
Journal of Pacific History
Journal of Palestine Studies
Journal of Psychoanalytic Anthropology
Journal of Psychohistory
Journal of Religion
Journal of Religious History
Journal of Social History
Journal of Social Issues
Journal of Social Science
Journal of Social Studies Research
Journal of Southeast Asian History
Journal of Southern History
Journal of Sport History
Journal of the American Academy of Religion
Journal of the History of Ideas
Journal of the History of Medicine and Allied Sciences
Journal of the Pakistan Historical Society
Journal of the Society of Archivists
Journal of Urban History
Journal of the West
Journal of World History
Judaism
Knowledge
Labor History
Latin American Research Review
Law in American Society
Local Historian
Mankind
Mediaeval Studies
Mediaevalia
Mediaevalia Et Humanistica
Mennonite Life
Mexican Studies
Mid-America
Mid-Continent American Studies Journal
Middle East Journal
Middle East Review
Middle Eastern Affairs
Middle Eastern Studies
Military Affairs
Military Review
Modern China
Museum News
Negro History
Negro History Bulletin
New Scholar
New Society
New Testament Studies
New Zealand Journal of History
Old West
Oral History Newsletter
Oral History Review
Orbis
Organization of American Historians
Oxford Journal of Archaeology
Pacific Historian
Pacific Historical Review
Pacific Northwestern Quarterly
Pacific Studies
Pan-African Journal
Past and Present
Perspectives in American History
Philippine Studies
Polish Review
Political Science Quarterly
Presidential Studies Quarterly
Psychohistory Review
Public Historian
Radical History Review
Relics
Renaissance and Reformation
Renaissance Drama
Renaissance Quarterly
Review of Politics
Review of Religious Research
Review in American History
Review in European History
Rocky Mountain Social Science Journal
Russian Review
Scottish Journal of Theology
Sight Newsletter
Signs
Sixteenth Century Journal
Slavic Review
Social Frontier
Social Science History
Society for Ancient Numismatics
South Asia Bulletin
South Atlantic Quarterly
Southern California Quarterly
Southwestern Historical Quarterly
Soviet Studies
Speculum
Studies in History and Society
Studies in the Renaissance
Studies in the 20th Century
Studies on the Soviet Union
Teaching History: A Journal of Methods
The American Cartographer
The American Review of Canadian Studies
The Californians
The English Historical Review
The Historia: A Journal of History
The Jerusalem Journal of International Relations
The Journal of the Polynesian Society
The Kiva
The Mennonite Quarterly Review
The Muslim World
The Old Northwest
The Professional Geographer
The Russian Review
The Social Studies
The South Slav Journal
The Southern Historian
The Ukrainian Quarterly
The Ukrainian Review
Theology Today
Trends in History
Theological Studies
Thought
UCLA Journal of Environmental Law and Policy
UCLA Historical Journal
Urban Anthropology
Vatican Quarterly
Viator
Vital Issues
Vital Speeches of the Day
War/Peace Report
West European Politics
Washington Quarterly
Western Historical Quarterly
Western Journal of Black Studies
William and Mary Quarterly
Wilson Quarterly
Women and History
World Politics
Yale French Review
APPENDIX E
ADDITIONAL TOPICS
OF SHROUDAL RESEARCH

THE WOUNDS ON THE SHROUDAL IMAGE PARALLELED TO CHRIST'S PASSION
ADDITIONAL TOPICS OF SHROUDAL RESEARCH

A study of the Holy Shroud of Turin clearly indicates the interdisciplinary approach which could be taken in studying the Shroud. Teachers who choose to utilize this approach of interdisciplinarity could view the Shroud from the perspective of history, archaeology, physics, chemistry, theology, and medicine. Other disciplines such as numismatics, textiles, botany, foreign languages, and photography could be utilized to insure that a full spectrum of the Shroud's interdisciplinary nature and significance are presented.

For Social Studies educators who choose to investigate the Shroud, whether for personal knowledge or for students to pursue, additional avenues of research might be desired. Accordingly, the following topics are offered as possible research areas for teachers and students who wish to acquire additional information concerning the Shroud and its related interdisciplinary fields:

A. Scientific tests conducted on the Shroud
   1. Blood images
   2. Chemical analysis
   3. Color analysis
   4. Computer-aided image enhancement and analysis
   5. Digital enhancement
6. Forensic pathology
7. Image analysis
8. Infra-red thermography
9. Molecular diffusion and radiation in relationship to image formation
10. Pollen analysis
11. Three-dimensional studies
12. X-ray fluorescence analysis
B. Relationship of the Shroudal image to iconographical images of Christ throughout art history
C. Carbon-dating technology and the Shroud
D. First Crusade
E. Knights Templar
   1. St. Bernard and the Second Crusade
   2. Robert de Clari and the Fourth Crusade
   3. Templar initiation rites
   4. Shroudal image found in Templecombe, Somerset, England and its relationship to the Shroud
   5. Geoffrey de Charney
   6. Philip the Fair (IV) of France and the Templar suppression
F. 1532 fire at Chambery and the Shroud
G. Biblical archaeology
H. Jewish burial customs
I. Josepheus Flavius
J. Jesus and the crucifixion as portrayed in art throughout history
K. Roman control of Judea during the Pax Romana
L. Early medical analysis and tests performed by Professor Paul Vignon
M. Early medical analysis and tests performed by Dr. Pierre Barbet
N. Foldmarks on the Shroud and their significance
O. Guiseppi Enri and the 1931 photography of the Shroud
P. Old Testament exegesis in relationship to the foreshadowing of Christ and His Passion
Q. New Testament exegesis of the Passion and crucifixion of Christ
R. The Roman legions
S. Pontius Pilate's procuratorship in Judea
T. The Bible as an historical source
U. Basic tenets of Judaism
V. The Mandylion
W. The Image of Edessa
X. The Veil of St. Veronica
Y. Papal statements throughout history concerning the Shroud
Z. Liturgical celebration of the Feast of the Holy Shroud, May 4
AA. Yves Delage and his relationship to the Shroud
BB. Public expositions of the Shroud prior to the 19th century

CC. 1578 Exposition

DD. 1865 exhibit of the Shroud

EE. 1898 exhibit of the Shroud

FF. 1931 exhibit of the Shroud

GG. 1933 exhibit of the Shroud

HH. 1969 Scientific Commission on the Shroud

II. 1973 scientific examination of the Shroud

JJ. 1978 exhibit of the Shroud

KK. Henry, Bishop of Poitiers and Troyes

LL. 1939 Turin Congress of Shroud Studies

MM. Shroud of Turin Research Project (STURP)

NN. Royal Confraternity of the Holy Shroud

OO. Theories concerning image transference onto the Shroud:
   1. Iron oxide
   2. Radiation (either heat or light)
   3. Vaporgraphic
   4. Latent image and Cellulose Degradation
   5. Volckringer Patterns
   6. Revised Vaporgraphic-Direct Contact

PP. The Stigmata, Stigmatics and the Shroud
THE WOUNDS ON THE SHROUDAL IMAGE
PARALLELED TO CHRIST'S PASSION

Comprehensive analysis of the Holy Shroud provides delineation of the physical abuse of the man whose body was wrapped in the Shroud. For many years, respected physicians and scientists have studied the Shroud in detail, using the May, 1931 photographs taken by Guiseppe Enrie. Enrie's photographs are of such excellent quality that they have served for the last fifty years as the primary resource material utilized by sindonologists.¹

In addition to studying the photographs, detailed tests of the Shroud were conducted in well-equipped laboratories. Although the sindonologists each researched independently, they have provided the following aggregate collection of physical injuries suffered by the person who was wrapped in the Shroud:

1. Swelling of the nose bridge and fracture of the nose cartilage.
2. Excoriations on both shoulder blades and the right shoulder.
3. Puncture wounds around the head.
4. Puncture wounds in the hands.
5. Puncture wounds in the feet.
6. A deep incision between the fifth and sixth ribs.

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7. The right eyelid is contracted and torn.
8. Swelling below the right eye.
9. Swelling of the left side of the chin.
10. Triangular wound on the right cheek.
11. Deep contusions of the left knee near the kneecap.
12. Contusions of the right knee near the kneecap.

Each aspect of physical abuse inflicted upon the man buried in the Shroud correlates to a parallel in the Gospel accounts of Jesus' Passion. The Holy Shroud of Turin bears evidence that coincides with the five wounds of Jesus: Wounds on both hands; wounds on both feet; a chest laceration. Additionally, the image on the Shroud reveals that the man underwent flagellation and there are puncture wounds encircling the cranial area. Furthermore, indications of other wounds are present on the Shroud and the wounds are detailed in Gospel accounts of the Passion and crucifixion of Jesus.

Paralleling the Shroud and the Gospels reveals the following information concerning the wounds suffered during the Passion and crucifixion of Jesus:

1. Jesus was scourged.

Matthew 27:26; Mark 15:15; John 19:1

The body image revealed in the Shroud is covered with dumbbell shaped marks indicative of those inflicted by the
Roman flagrum.

2. Jesus was buffeted about the face.

Matthew 27:30; Mark 15:19; Luke 22:63; John 19:3

The imprint on the Shroud reveals that the right eyelid is contracted and torn, while swelling below the right eye is apparent. In addition, there are superficial wounds on the face as well as a swelling of the left side of the chin and a triangular wound on the right cheek. Further, the posterior of the nose cartilage appears to have been fractured.

3. Jesus was crowned with a cap of thorns shortly prior to beginning the march to Golgotha.

Matthew 27:29; Mark 15:17; John 19:2

The image on the Shroud has puncture wounds encircling the head.

4. Jesus carried His cross.

John 19:17 reveals that as Jesus was led from the city toward Golgotha, He was carrying His cross. Matthew 27:32, Mark 15:21, and Luke 23:26 relate that at some point in the grueling march, the by-stander, Simon of Cyrene, was impressed to carry Jesus' cross.

The image on the Shroud has a large excoriated area on the right shoulder, extending into the outer area of the
collarbone and down to the shoulder blade. Likewise, a smaller excoriated area can be seen on the left side of the back, near the shoulder blade. The wounds suggest that the abrasions were caused by a weighty crossbeam or cross being borne on the shoulder of the victim.

5. Jesus fell while carrying His cross.

Matthew 27:32; Mark 15:21; Luke 23:26

The fact that Simon of Cyrene was ordered to carry Jesus' cross implied that Jesus had become weakened during the march toward Golgotha and had frequently fallen under the weight of His burden. Deep contusions near the kneecaps of both the left and right knees of the Shroudal image suggest that, indeed, the victim had fallen repeatedly.

6. Jesus was crucified by having His hands and feet nailed to the cross.

None of the Gospels defines the method [nails or rope] used for the crucifixion of Jesus. However, John 20:25-27 implies that Jesus was, in fact, nailed to the cross.

7. Jesus' legs were not broken (crurifragium).

John 19:33

The Shroudal image reveals that neither leg of the victim had been broken. Scripturally, the body of Christ
was not to have any bones broken, in order to fulfill the prophecy, "Not one of his bones shall be broken" (John 19:36. Cf. Exodus 12:46).

8. Jesus was pierced in the side by a lance.

John 19:34

On the Shroudal image can be seen an elliptical shaped wound in the right side of the body between the fifth and sixth ribs. That wound correlates to the coup de grace stage of the crucifixion and also fulfills a Scriptural prophecy, "They shall look on him whom they have pierced" (John 19:37. Cf. Zechariah 12:10).

9. Jesus' body had been wrapped in a linen shroud which had been spread with myrrh and aloes.

Matthew 15:46; Mark 16:46; Luke 24:53; John 19:39

From the time of the Herodian dynasty to the first half of the second century A.D., it was the Jewish custom to wrap a dead person in a linen shroud (sindon) prior to burial. The Shroudal victim was wrapped in a linen cloth called a "winding cloth." Moreover, Jewish custom included either spreading the burial cloth or strewing the body with spices prior to burial. Pollen studies made on the Shroud by Dr. Max Frei, a Swiss criminologist, have identified forty-nine various plant pollens. While it is natural to assume that many of them are "consistent with
the sort of microscopic debris the Shroud could have been expected to accumulate over the centuries,"\(^5\) it is possible that some of the pollens are residual spices used on the Shroud victim's body.

Although many parallels exist between the crucified victim of the Holy Shroud of Turin and the Gospel narratives, no conclusive evidence exists, at present, to prove that the Shroud is the actual burial cloth of Jesus. All Roman crucifixion victims were known to have been subjected to the following:

1. Scourging
2. Buffeting
3. Being ordered to carry their crosses
4. Being crucified using either nails or rope
5. Being pierced with a lance to inflict the final death blow

Although all Roman crucifixion victims suffered the same sequential events from conviction to death, only one victim in history had been known to have had a "crown of thorns" placed upon his head: Jesus of Nazareth.

Despite the many parallels that exist between the Holy Shroud of Turin and the Gospels, for many years now, controversy has surrounded the Holy Shroud. Is it the burial cloth of Jesus? In the words of sindonologist John Walsh:\(^6\)
Only this much is certain: The Shroud of Turin is either the most awesome and instructive relic of Jesus Christ in existence - showing us in its dark simplicity how He appeared to men - or it is one of the most ingenious, most unbelievably clever, products of the human mind and hand on record. It is one or the other; there is no middle ground.

2 All Biblical citations are taken from the Jerusalem Bible.

3 Pierre Barbet. A Doctor at Calvary, trans. The Earl of Wicklaw (New York: Doubleday and Company, Inc., 1963), p. 131. Although most people believe that the heart is located on the left side of the body, according to Pierre Barbet, M. D.:

   The heart is mesial and in front, resting on the diaphragm, between the two lungs, behind the sterno costal mass, in the anterior mediastinum. Only its point is definitely to the left, but its base extends to the right beyond the breastbone.


6 Walsh, The Shroud, p. XI.
APPENDIX F

WHERE TO LOCATE SOURCES
WHERE TO LOCATE SOURCES

Disillusionment often occurs when educators want to present interdisciplinary topics but are unable to locate avenues through which appropriate materials may be located. Listed below are associations, organizations and publishing firms which have information and publications of value to educators. Educators desiring information or publication catalogues may write to the appropriate organization requesting specific information. It should be noted that Mexican and Canadian postage rates are the same as the rates of the United States. For materials requested from foreign countries, the postal rates must be obtained from the postal service.

Aaron Burr Association
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Hightstown-Freeland Road
Hightstown, New Jersey
08520

ABA Professional Education Publications
1155 East 60th Street
Chicago, Illinois
60637

Abraham Lincoln Association
Old State Capitol
Springfield, Illinois
62706
Abt Associates
55 Wheeler Street
Boston, Massachusetts
02138

Academic Information Service
P. O. Box 6296
Washington, D.C. 20015

Academy for Educational Development
680 5th Avenue
New York, New York 10019

Academy of American Franciscan History
P. O. Box 34440
Washington, D.C. 20034

Academy of Arts and Sciences
1172 Commonwealth Avenue
Boston, Massachusetts 02134

Academy of Independent Scholars
970 Aurora Street
Boulder, Colorado 80309

Academy of Political Science
2852 Broadway
New York, New York 10023

Addison-Wesley Publishing Company
2725 Sand Hill Road
Menlo Park, California 94025

African-American Institute
School Services Division
833 United Nations Plaza
New York, New York 10017

African Studies Association
Epstein Service Building
Brandeis University
Waltham, Massachusetts 02254
African Studies Association  
255 Kensey Hall  
University of California at Los Angeles  
Los Angeles, California  
90024

Afro-Asian Center  
Box 337  
Saugerties, New York  
12477

Agency for International Development  
United States Department of State  
21st and Virginia Avenue  
Washington, D.C.  
20523

Agricultural History Society  
Periodicals Department  
University of California Press  
Berkeley, California  
94720

Aims Instructional Media Services  
622 Justin Avenue  
Glenside, California  
92101

Albert Schweitzer Fellowship  
866 United Nations Plaza  
New York, New York  
10017

Allied Educational Council  
P. O. Box 78  
Galien, Michigan  
49113

American Academic Association for Peace in the Middle East  
330 Seventh Avenue  
Suite 606  
New York, New York  
10001

American Academy in Rome  
41 East 65th Street  
New York, New York  
10021
American Academy of Political and Social Science  
3937 Chestnut Street  
Philadelphia, Pennsylvania  
19104

American Academy of Religion  
California State University at Chico  
Chico, California  
95926

American Academy of Religion  
Department of Religion  
Syracuse University  
Syracuse, New York  
13210

American Anthropological Association  
Publications Department  
1703 New Hampshire Avenue, N. W.  
Washington, D.C.  
20009

American Assembly  
Columbia University  
New York, New York  
10027

American Association for Chinese Studies  
P. O. Box 3198  
Asian Studies Program  
Ohio State University  
Columbus, Ohio  
43210

American Association for Chinese Studies  
New York University  
Department of Politics  
25 Waverly Place  
New York, New York  
10003

American Association for Gifted Children  
15 Gramercy Park  
New York, New York  
10003

American Association for Higher Education  
One Dupont Circle, N. W.  
Suite 600  
Washington, D. C.  
20036
American Civil Liberties Union  
132 West 43rd Street  
New York, New York  
10036

American Committee on Africa/Africa Fund  
198 Broadway  
Suite 401  
New York, New York  
10038

American Committee on Irish Studies  
Department of History  
Marquette University  
Milwaukee, Wisconsin  
53233

American Committee on the History of the Second World War  
Department of History  
University of Florida  
Gainesville, Florida  
32611

American Council for the Arts  
570 Seventh Avenue  
New York, New York  
10011

American Council for the Arts in Education  
1704 Bolton Street  
Baltimore, Maryland  
21217

American Council of Learned Societies  
345 East 46th Street  
New York, New York  
10016

American Council on Education  
One Dupont Circle, N. W.  
Washington, D.C.  
20036

American Economic Association  
1313 21st Avenue, South  
Nashville, Tennessee  
37212
American Guidance Service
Publishers' Building
Circle Pines, Minnesota
55014

American Hall of Aviation History
Northrup University
1155 West Arbor Vitae Street
Inglewood, California
90306

American Historical Association
400 A Street, S. E.
Washington, D. C.
20003

American History Research Associates
P. O. Box 140
Brookville, Maryland
20833

American Hungarian Educators' Association
707 Snider Lane
Silver Spring, Maryland
20904

American Indian Historical Society
1451 Masonic Avenue
San Francisco, California
94117

American Institute for Islamic Affairs
4900 Massachusetts Avenue, N. W.
Washington, D. C.
20016

American Institute for Marxist Studies
20 East 30th Street
New York, New York
10016

American Institute for Patristic and Byzantine Studies
R. R. 1
Box 353A
Minuet Lane
Kingston, New Jersey
12401
American Institute of Iranian Studies
325 University Museum
University of Pennsylvania
Philadelphia, Pennsylvania
19104

American Institute of Italian Studies
Villa Walsh
Morristown, New York
17960

American Irish Historical Society
991 Fifth Avenue
New York, New York
10028

American Issues Forum
55 East Jackson
Chicago, Illinois
60603

American Italian Historical Association, Inc.
29 Roxbury Place
Glen Rock, New Jersey
07452

American Jewish Committee
165 East 56th Street
New York, New York
10022

American Jewish Historical Society
Brandeis University
2 Thorton Road
Watham, Massachusetts
02154

American Jewish Periodical Center
3101 Clifton Avenue
Cincinnati, Ohio
45220

American Jewish World Service
110 Oxford Street
Suite One
Cambridge, Massachusetts
02138
American Legion
P. O. Box 1055
Indianapolis, Indiana
46206

American Library Association
50 East Haven Street
Chicago, Illinois
60611

American Lives Endowment
Town Center
765 Portola Road
Portola Valley, California
94025

American Luxembourg Society
15 rue Notre Dame
Luxembourg City, Luxembourg
American Map Corporation
46-35 54th Road
Maspeth, New York
11378

American Military Institute
Department of History
Kansas State University
Manhattan, Kansas
66505

American Military Institute
3309 Chestnut Street, N.W.
Washington, D.C.
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American Numismatic Association
818 North Cascade
Colorado Springs, Colorado
80903

American Numismatic Society
Broadway at 155th Street
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American Oriental Society
329 Sterling Memorial Library
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American Philosophical Society
104 South Fifth Street
Philadelphia, Pennsylvania
19106

American Political Science Association
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20009

American Portuguese Society
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New York, New York
10172

American Psychological Association
1200 17th Street, N.W.
Washington, D.C.
20036

American Research Institute in Turkey
The University Museum
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American-Scandinavian Foundation
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American Society for Eighteenth Century Studies
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Northfield, Minnesota
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Davis, California
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American Society for Ethnohistory
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Texas Tech University
Lubbock, Texas
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American Society for Ethnohistory
Department of Anthropology
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60610

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University Plaza
College of Law
Georgia State University
Atlanta, Georgia
30303

American Society for Reformation Research
6477 San Bonita
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63105

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American Sociological Associates
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American Universities Field Staff
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Anthropology Resources Center, Inc.
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Alexandria, Virginia  
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Association for the Study of Negro Life and History  
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Washington, D. C.  
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Huntington, New York  
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Geneva, Switzerland

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Villanova, Pennsylvania  
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Ave Maria Press
Notre Dame, Indiana
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800 Second Avenue
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Idyllwild, California
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Behavioral Publications, Inc.
2852 Broadway
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New York, New York
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17337 Ventura Boulevard
Encino, California
91316

Bibliographical Center
Clio Press
Rivera Campus
2040 Alameda Padre Serra
Santa Barbara, California
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Black Women in the Middle West Project
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West Lafayette, Indiana
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Booker T. Washington National Monument
Chief of Interpretation
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Box 195
Hardy, Virginia
24101

Boring Software Co.
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Boring, Oregon
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Bread for the World
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Brigham Young University Center for International And Area Studies
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Buffalo Bill Historical Center
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Cody, Wyoming
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Garden City, New York
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Public Information Office
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Washington, D. C.
20233

Cabrillo Historical Association
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San Diego, California
92106

California Association of School Councils
Alameda County Superintendent of Schools Office
313 West Winton Avenue
Hayward, California
94544-1198

California Chamber of Commerce
P. O. Box 1736
Sacramento, California
95808

California Committee for the Promotion of History
California History Center
21250 Stevens Boulevard
Cupertino, California
95014

California Council for the Social Studies
616 Juanita Way
Roseville, California
95678

California Historical Society
6300 Wilshire Boulevard
Los Angeles, California
90048

California Institute of International Studies
766 Santa Ynez
Stanford, California
94305

California PIRG
46 Shattuck Square
Room 11
Berkeley, California
94704
California State Archives
1020 "O" Street
Room 130
Sacramento, California
95814

California State Department of Education
721 Capitol Mall
Sacramento, California
95814

Calvin Coolidge Memorial Foundation
Box 97
Plymouth, Vermont
05056

Campus Studies Institute Division
11722 Sorrento Valley Road
San Diego, California
92121

Canadian Consulate General
1251 Avenue of the Americas
New York, New York
10020

Canadian Historical Association
Public Archives of Canada
395 Wellington Street
Ottawa Ontario K1A ON 3
Canada

Canadian Society for Eighteenth Century Studies
Department of English
University of Guelph
Guelph, Ontario
N1G 2W1

Capitola Book Company
1601 41st Avenue
Suite 202
Capitola, California
95010

CARE
660 First Avenue
New York, New York
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Carnegie Endowment for International Peace
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Washington, D. C.
20036

Carnegie Forum on Education and the Economy
Suite 301
1001 Connecticut Avenue, N. W.
Washington, D. C.
20036

Carnegie Foundation for the Advancement of Teaching
5 Ivy Lane
Princeton, New Jersey
08540

Catholic Relief Services
Karol Media
22 Riverview Drive
Wayne, New Jersey
07470-3191

Cebco Standard Publishing Company
9 Kulick Road
Fairfield, New Jersey
07006

Center for African Studies
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