A CONTENT ANALYSIS OF APPLIED RESEARCH PROJECTS COMPLETED 1987-1991 IN THE MASTER OF PUBLIC ADMINISTRATION PROGRAM AT SOUTHWEST TEXAS STATE UNIVERSITY

By

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CHAPTER I
INTRODUCTION

The purpose of this research is to conduct a descriptive study of Applied Research Projects (ARPs) completed in conjunction with the Master of Public Administration Program at Southwest Texas State University. An exploration of the concepts and theories that have shaped the field of public administration will provide a framework for this analysis. The development of public administration education and research methodology is also examined. Lack of consensus on issues such as proper research techniques among those in the field has resulted in a number of studies which examine existing public administration literature. Researchers have developed criteria to code and analyze work published in journals and dissertation abstracts. An overview of these studies provides a list of variables that are adapted for use in the present research.
CHAPTER II
REVIEW OF THE LITERATURE

Many volumes may be found that dedicate themselves to the cataloging of the history of public administration. Dwight Waldo, prominent writer and educator in the field, asserts that the important elements of public administration existed long before they were formally codified.\(^1\) Administrative techniques formed an integral part of daily social and political arrangements, as well as in culture. Waldo sites Woodrow Wilson's "The Study of Administration" as representative of the advent of the "self-aware" public administration. Publication of this seminal essay in 1887 provided the basis for discussion and convergence of ideas.\(^2\) The development of a separate academic discipline and science of public administration added further to the process of self-awareness. Waldo warns that it is important to understand Public Administration in its historical context:

"So viewed, it is not something altogether new and different, but another chapter in a millennia-length story. The most advanced electronic data processing is in an evolutionary line extending back to the scribe pressing a stylus into wet clay."\(^3\)
This metaphor provides a key to understanding the development of academic theories in public administration.

Identification of an explicit definition or a distinct theoretical framework is problematic. The very nature of administration necessitates the operation within varied environments such as politics, law, and economics. Administrators may be legitimately concerned with a range of activities which may be categorized as science, art, processes, or skills. Multiple combinations of activities and contexts are thus possible within the realm of public administration. Waldo asserts that the field must allow for flexibility and heterogeneity. Further, "given this situation no single, agreed, and authoritative definition of public administration is possible. Nor would it be desirable. Clearly the proper response to the situation is experimentation, complementarity, competition, fluidity." Evidence of each of these is found in an examination of the evolution of public administration theories.

**Evolution of Theories in Public Administration**

Examination of the development of theoretical orientations in public administration is not easily separated from issues owing to the heterogeneity and history of the field. Public administration has had a long-standing association with the academic discipline of political science. Charlsworth suggests that much of the
theoretical debate represents a struggle to find a separate identity for public administration.\textsuperscript{5} An old pun puts forth that sociology is a "...discipline in search of a subject matter...and that...public administration is a subject matter in search of a discipline."\textsuperscript{6} It is additionally asserted that scholars fully agree that public administration exists, yet further consensus has not yet been achieved.\textsuperscript{7} Dominant trends in the history of public administration have been well documented by authors such as Gulik, Simon, and Waldo. During the early Reform Era, rational, scientific analysis was embraced. The advent of the Depression led to a subsequent reevaluation of this approach and a questioning of the value of certain theories to the practice of administration. Trends favoring realism opened the way for the political principles approach. Subsequent theorists have called for greater attention to values. Since the 1940’s, public administration has pursued many courses of action and has been characterized by a distinctive disarray. "No single person or group has been able to assimilate everything that has happened, let alone code, classify, and arrange in a coherent unifying framework."\textsuperscript{8} What has clearly emerged, however, is a strong dichotomy between theory and practice in research.

**Theory Versus Practice**

Dissagreement exists between those who are troubled by the lack of a clear theoretical framework and those who feel that the field needs a more applicable knowledge base. The latter
practitioner orientation questions the relevance of purely scientific studies to the day to day realities of administration. For these practitioners, "An important test of the value of theory is its ability to help in both understanding and shaping real-world action." Complex equations may not support practitioners because they are not easily translated into immediate solutions. "Theory is often found to be unrelated to practice... because it is written in language that serves as a code of communication for academicians." This frustration by practicing administrators has led some to defend a pragmatic approach to information gathering and research. Recent research has examined alternate methods such as interpersonal communication and story telling. Managers use these tools to construct a framework which supports their daily realities. This process is likened to putting together a puzzle. Components of the solution may be derived from technical, cultural, ideological, and philosophical sources. A Secretary of State (anonymous) has described the administrative process in realistic terms. "When asked about whether science can drive policy: 'thats' not how we operate in a cabinet meeting. Sure we hand the (scientific) reports around, but then we have to see if they fit with what we can do." Thus, the practitioner orientation seeks theoretical development which is above all relevant and applicable.

Others insist that an over emphasis on practice and applications is hurtful to the strength of public administration as an academic field. Vincent Ostrom describes the current state of affairs as no less than an "intellectual crisis." A study by David Houston and Sybil Delevan concludes that appropriate research will
be conducted upon verifiable, factual subject matter. Adherence to proper information gathering techniques will thus ensure the growth of a body of knowledge for public administration. Lack of rigorous, scholarly research has led some to conclude that the field essentially lacks "...a broad theoretical framework or paradigm to guide or inspire scholars."14 Without a developed theoretical base of knowledge, public administrators lack reference points necessary to organize further research. Some assert that: "a field based upon practical problems resulting from firsthand experience would continually reinvent the proverbial wheel."15 These studies are deemed problematic because they are often concerned with specialized, unique problems or situations. Thus, many conclude that centralized or core theoretical development has received insufficient attention in research efforts.

In addition to possibly misdirected research efforts, the expansion of public administration into multiple subfields adds to the hampered growth of a unified theoretical framework. In references to the diversity found within the rubric of public administration some have used terms such as "grab-bag"16, and even "blob"17. The National Association of Schools of Public Affairs and Administration (NASPAA) has attempted to provide coherence through development of a "matrix of professional competencies."18 NASPAA guidelines create common courses of study, while allowing for a myriad of legitimate specializations. Some say that the unhappy consequence of "trying to be everything to everyone has unquestioningly brought weakness and discredit to the field of public administration."19 Lack of consensus on appropriate
definitions and theoretical development have led some to call for a balanced approach, and a rejection of the persistent dichotomies. The integration of both theoretical and practitioner orientations has been proposed as a solution to this dilemma. The term "praxis" has been used to denote this balanced approach. Concepts such as matrix and praxis are clear indicators of an attempt to unify the field. Further understanding of the development of public administration theory necessitates an examination of the subject of methodologies and information gathering techniques in public administration.

Methodologies of Public Administration

Since its beginnings as a recognized field of study, public administration has been associated with academic areas such as law, political science, and sociology. Strong identification with the social sciences is found throughout public administration theory and research. Methodologies commonly used to guide inquiry are aptly covered in texts such as those by Earl Babbie. These volumes outline the proper techniques and methods which are to be used in scholarly research. "Methodology organizes assumptions, concepts, definitions that underlie any systematic inquiry." In addition to guiding research, it is thought that methods are in fact reflected through research. Overly structured methods of inquiry are limited in their exploration of well-defined topics. It is argued that some important topics may not be adequately addressed through strict positivist methods, but are nonetheless worth examination.
Alternative methodologies place an emphasis on gaining a better understanding of a particular topic. Jay White outlines three types of social science research: 1. positive or mainstream social science research, 2. interpretive, and, 3. critical. White defends interpretive and critical techniques for analysis of systems such as organizations. Use of methods such as focus groups may allow acquisition of knowledge through communication and action. Researchers are asked to employ reason to dictate which methods will be applied to a particular project. Practical rationality is concerned with "knowing when and how to put rules and principles to work and when not to." Those who believe public administration research lacks rigor warn of the dangers of straying from scientific methods. Descriptive studies serve an important function in the development of theory, in that they uncover areas of possible further study and measurement. However, researchers have described the problem as cyclical in nature.

"Few projects went beyond this conceptual purpose to engage in empirical theory testing. As a consequence...articles...do not systematically use social scientific methodologies or their alternatives...the result is a body of literature that is primarily applied and noncumulative, and that limits the development and testing of empirical theory." The tension that has emerged in this debate is divided between two motives: 1. The creation of a verifiable knowledge base through use of rigorous methods. 2. The development of practical, usable knowledge. These debates are tested and debated in numerous studies discussed in the following section.
Previous Studies

Many studies have examined the nature of public administration research. Similar content analysis studies have appeared in *Public Administration Review* (PAR) that have provided a basis for the on-going debate over research in the field. Howard McCurdy and Robert Cleary conducted a content analysis of public administration dissertations which were completed in 1981. The authors chose to focus their inquiry on issues of research quality and methodological rigor. In establishing criteria to be used for the study they state: "Public Administration does not appear to possess widely agreed upon research criteria against which to measure the quality of these doctoral research projects"\(^28\) In light of this lack of a consensual framework, the researchers identified six problem areas of scholarly research. The criteria used to evaluate the dissertations were:

1. the existence of a research purpose
2. valid design
3. theory testing
4. causal relationships
5. important topic
6. cutting edge topic.

Each of these elements is thought to indicate or contribute to the quality of the dissertation. Of the 142 dissertations examined, 18 percent were found lacking in every quality criteria. Seventy
percent of the dissertations met no more than two of the quality criteria.  

The six quality criteria are further combined to measure three main aspects of research. Overall validity is measured with the existence of a research purpose and an acceptable research design. Studies which used social science techniques such as statistics and experiments are said to have usually passed, while case study methods did not. Just 21 percent of the projects met the validity criteria. The relative impact of the dissertation was judged by the testing of a theory and causal relationships. Passing projects on this criteria numbered 42 percent. The importance of the research was examined as a function of the two criteria of importance and cutting edge topical areas explored. Important topics were those which would be expected to be found in public administration texts. 45 percent of the dissertations possessed this criteria. Cutting edge topics are defined as those which create new experiences or explore new topical territory. Just 17 percent of the projects satisfied this criteria. The overall measure of importance resulted in the failure of 51 percent of the research.

Analysis of these results leads the authors to conclude that a significant amount of doctoral research fails to meet basic standards put forth by NASPAA. Absence of quality criteria thus indicates that "...dissertations are not set up in such a way that they can make much of a contribution to the development of our conceptual base or even our base of information." Additionally, the authors discover a relationship between the use of scientific methodologies and the exploration of major issues in the field. A
few dissertations contained cutting edge topics and rigorous research designs. However, findings indicate that there appears to be a trade-off between theory testing, validity, and the importance of the topic. Exploration of new issues may necessitate the use of less rigorous research methods. The authors conclude that:

"Unresolveable issues may be important, but if they cannot be resolved their debate is unlikely to contribute much to the development of the field at this time." This comment highlights an important aspect of the debate which has been continually been explored by others.

The issue of quality is often accompanied by issues of the scope or subject matter of the research. Robert Cleary replicated the 1984 study on a group of dissertations completed in 1990. The author seeks to compare the two groups of dissertations according to the six criteria used in the previous study. It is expected that the latter group of research will prove to be superior to that which was completed in 1981. Examination of the results for the criteria of research purpose reveals a substantial improvement with 80 percent qualifying in 1990, compared to 64 percent in 1981. The aspect of research design shows a slight improvement of 8 percent for the latter group. Changes were also slight on the criteria of theory testing. In the 1990 group, 21.8 percent met this criteria up slightly from 17.6 percent in 1981. Significant improvement is found in the area of showing causal relationships. Here 51.5 percent of the dissertations of 1990 pass this quality criteria, while just 26.1 percent of the previous group had passed. The largest improvement was seen in the area of cutting edge topic, where the
improvement represented a 55.8 percent change. Lastly, the only area which declined was important topic where 1990 dissertations numbered 32.1 percent and 1981 projects totaled 38.7 percent. The overall trends uncovered by this replication show improvement in the research techniques and designs used by doctoral candidates. The authors additionally discuss the issue of practitioner projects, defined those "..that involved applied research on management problems with little attempt to employ a rigorous research design or methodology." This type of project was shown to have increased slightly from 14.8 percent to 18.2 percent in 1990. This increase, according to Cleary, is evidence that "agency narratives" continue to threaten the credibility of doctoral projects.

Cleary also points to the evident topical weakness of the projects. The latter study draws upon findings of a NASPAA task force completed in 1987. This study identifies two key issues in need of research attention: 1. the distinction between public and private administration and, 2. the interface between politics and administration. Cleary uses these issues to analyze the two groups of dissertations. Slightly fewer projects dealt with issues relating to the first topic in 1990 compared with 1981. Examination of politics-administration issues went from a frequency of 56.3 percent in 1981 to just 30.3 percent in 1991. These results support the earlier findings of a decrease in the important topic criteria. The author concludes his study with the acknowledgment of the improved methodological quality of dissertations and also challenges administrators to address topical concerns.
A study completed in 1986 by Jay White supports the general findings of McCurdy and Cleary's initial research. White reevaluates dissertations examined in 1981 and an additional group not previously examined according to similar criteria. White categorizes dissertations as having a purpose through an examination of the title and statements within the abstracts. White finds that 90 percent appear to have a purpose. This finding is about 20 percent higher than that of the McCurdy and Cleary study. The criteria of validity was inferred from the research design and methods used. White finds 29 percent which pass on these elements, closely matching previous findings. Theory testing dissertations numbered 39 percent, up approximately 12 percent from the McCurdy and Cleary research. White additionally investigates dissertations for the existence of any hypothesis testing. Here 38 percent of the projects were found to contain evidence of this criteria. The last criteria examined by White is causality. The author uses key words to discern that 30 percent attempt to examine causal relationships. Again, White's findings closely resemble those of McCurdy and Cleary. White chooses to eliminate the criteria of topical importance and cutting edge criteria from this study. The author explains that the nature of public administration allows a broad scope of research and exploration. White further reveals that the lack of consensus and vague terms such as "cutting edge" may make coding decisions unnecessarily difficult. White states that his repetition "...points out how difficult it is to arrive at a common definition of criteria and a common interpretation of a cultural artifact like an abstract."36
Researchers have also applied concepts related to scope and methodology to examine work done in Public Administration Review. James Perry and Kenneth Kraemer (1986), produced a content analysis of PAR articles published between 1975 and 1984. The criteria used follow the basic concepts found in previous studies. The Perry and Kraemer criteria of research stage is based on the research purpose. The six stages of research are identified as:

1. problem deliniation
2. variable identification
3. determination of a relationship among variables
4. establishment of causality
5. manipulation of causal variables for policy formation
6. evaluation of alternative policies and programs.\(^3\)\(^7\)

The second category used by Perry and Kraemer is research methodology. Specifically, the groupings included: historical, descriptive, mathematical, logical argument, legal brief, empirical analysis, heuristic analogy, literature review, and other. Approximately 90 percent of the PAR articles were found to contain empirical analysis. About 30 percent were described as either logical argument or legal brief. Very small numbers were categorized as using an alternate approach.\(^3\)\(^8\)

Where the article used empirical observation, the authors further categorized by type of techniques used. Of the 140 articles examined, 138 were coded as non-empirical analysis. Cross sectional and correlational analysis were the next most prevalent with 78. Case study accounted for a total of 56.\(^3\)\(^9\)

An additional category used in this research is that of focus. Here articles were attributed as primarily theory building or
problem oriented. These findings lead Perry and Kraemer to call for a greater attention to the core issues of the field. The authors recall two issues mentioned previously by McCurdy and Cleary uncovered by a NASPAA task force. Once again researchers call for the examination of the differences between public and private administration and the issues surrounding the politics-administration interface.\textsuperscript{40}

The work of Robert Stallings and James Ferris (1988) further extends the work of Perry and Kraemer. A content analysis of PAR articles for the period between 1940 and 1984 is undertaken to explore principles of methods and topical scope similar to those done by previous researchers. The first category used is devoted to research approach or purpose. Three headings are used under this variable: conceptual, relational, and evaluational. Research methods are also included in this main grouping and are divided as into case study or multivariate categories. PAR articles are found to be primarily conceptual (70 percent), as was the case in the Perry and Kraemer research. Case studies have appeared to have declined since 1949 from 100 percent to 23 percent in 1984. Multivariate techniques have steadily increased from 9 percent in 1959 to 28.6 percent in 1984.\textsuperscript{41}

Stallings and Ferris are also concerned with topical categorizations of PAR articles. Main areas are subdivided as primarily policy or management oriented. Management articles are indicated by topics such as planning, personnel, and administrative theory. Policy topics are those which deal with public policy, citizen participation, and accountability. Over the period examined,
management articles have dropped from 79 percent in 1944 to 41 percent in 1984. Policy articles have maintained an average frequency of 44 percent over this time period.  

Topics are further described by the level of government explored. The most prevalent level of government is federal, while local government is the least frequently explored. Findings indicate that interest in state government has dropped steadily from a peak of 22.7 in the 1950's to a 1984 level of about 2 percent.  

Stallings and Ferris similarly conclude their analysis with a call for more effective research strategies. Many methodologies are available to public administration researchers. Additionally, numerous topics may be explored. A key issue, according to these researchers is the establishment of a strategy "for the coupling of important questions with the techniques for answering them."  

Another content analysis done by David Houston and Sybil Delevan (1990), closely follows the analysis of Stallings and Ferris. Here researchers seek to expand previous work through an examination of six scholarly journals. Use of this multiple database of public administration material is thought to lend greater generalizability to the analysis. The criteria of research purpose is broken down into the previously used categories of conceptual, relational, and evaluational research. Conceptual articles dominate for all of the journals with the exception of one. The next criteria used in this study is the familiar variable of research design. Houston and Delevan subdivide this category into: nonempirical, preexperimental, case study, correlational, quasi-experimental, and experimental. Where articles explored a relationship between
variables, 84 percent employed correlational research design. The remainder of the articles are approximately equally divided among the alternative designs. Where statistics are used, articles were further coded by level (univariate, bivariate, and multivariate) and type of statistical tests used. About 60 percent employed univariate statistics, while approximately 30 percent used bivariate correlations or crosstabs. The most popular other technique used (41 percent) was multivariate regression.46

Additional results are provided through the categorization of the type of data collected. Cross-sectional data was used most frequently (74 percent). The primary unit of analysis is also examined. Here 54 percent of the articles examined individuals. Groups and organizations, as well as States, each appeared 15 percent of the time. The authors conclude this study with a confirmation of previous findings. Research appears to be overly conceptual, nonempirical, and less rigorous than is to be desired.47

The next research in this stream of content analysis work is that of Douglas Watson and Robert Montjoy (1991). These researchers chose 249 PAR articles dealing with primarily local government topics. Unlike previous studies, the present researchers focus their analysis exclusively on matters of topical categorization. Topical headings used include:

1. Management
2. Intergovernmental
3. Social
4. Legal and Political Institutions
5. Infrastructure
6. Economic Development
The leading topical area, representing 59 percent, is management. Some specific titles found here are finance, budgeting, computers, and planning. The next most common category are intergovernmental topics. Twenty percent of the articles described relationships between and among governmental entities. The last group, accounting for more than 10 percent, is the category of legal and political institutions (13 percent). Topics used here were related to citizen participation, political power, and court rulings. These results lead researchers to conclude that more technical issues are explored. Applied or practical problems may be seen to overshadow broader social issues. This technical approach is referred to as the "nuts and bolts" of administration. The authors suggest that more attention should be given to topics such as race, gender, and inner city problems.

The work of Richard Box (1992) represents an alternate viewpoint to the previous research. Box surveyed 230 PAR articles according to three main groupings. Categorizations included articles which are primarily theoretical, issue-oriented, or practical. Results are found to be in accordance with those of Perry and Kraemer as the majority of articles (67 percent) are coded as applied or practice oriented. Box's interpretation of the results represents the actual departure. Previous researchers may have made erroneous assumptions, according to Box. The needs of practitioners, as well as researchers must be addressed.
CHAPTER III
SETTING

Research for this project has been undertaken on the campus of Southwest Texas State University located in San Marcos, Texas. Specifically, content analysis has been conducted upon a group of documents known as Applied Research Projects (ARPs) completed in the Master of Public Administration program. This program is contained within the Department of Political Science and is celebrating its 20th anniversary this year. The ARP was introduced as an alternative to the thesis in May of 1976.

The program currently consists of 30 hours of core coursework and 9 hours of career support courses. Among the required courses are 5304a and 5304b. These courses provide students with an overview of research methodologies and techniques. During the second semester of 5304 students are assisted in preparing a formal literature review and prospectus for their ARPs. Upon successful completion of the prerequisite courses and documentation, students are permitted to enroll in the capstone course of 5397. This capstone course is an arrangement between students, their assisting professor, and second readers. Completion an approved ARP and passing of an oral exam over the coursework and research project are final steps in the attainment of the Master of Public Administration.

Students involved in this program include police officers, firemen, social workers, newspaper reporters, professional
administrators, doctors, lawyers, housewives, and recent graduates. This diverse group may been seen in seminar courses exchanging ideas and working together to complete assignments. These students do not easily fit into a single, homogeneous profile. Much like the field of public administration itself, individuals are characterized above all by their diversity. These qualities may appropriately be described as the true strength of the Masters of Public Administration program.
CHAPTER IV
METHODOLOGY

Content Analysis

The methodology to be used for this research will be content analysis. According to Earl Babbie, content analysis is a highly appropriate method with which to examine social artifacts such as written documents. Researchers have often used content analysis to answer what is called the classic questions of communications research: "Who says what to whom, why, how, and with what effect?" This methodology then provides a description of documents under analysis. Documents are read and coded according to previously developed criteria. Results are then placed into tally sheets, where findings and trends may be analyzed and reported.

The process of coding for content analysis involves the specification and definition of the concepts to be examined. Ideas found in the conceptual framework must be clearly operationalized. The rationale for coding an article as "liberal" or "conservative," for instance, must have been previously determined by the researchers. Where coding for manifest, or surface content, researchers are able to achieve a high degree of reliability. Objective criteria of readily apparent content ensures that results obtained may be repeated by subsequent observers.

Where researchers examine underlying meanings, or latent content, reliability is reduced. Alternate observers may or may not
agree as to the coding choices and categorizations made. Latent content often involves the richer characteristics of communications. Greater depth of analysis may tend to increase the validity because the inclusion of the subtle content often aids in the better understanding of the total meaning of the document. Latent content analysis provides this additional depth at a significant cost to reliability. Thus, Babbie suggests that a blending of the two techniques be used.\textsuperscript{52}

The combination of quantitative and qualitative techniques is thought to be a significant strength of content analysis.\textsuperscript{53} Documents examined using both techniques take advantage of the strengths of each type of research. As a form of unobtrusive analysis, this method has advantages over interactive techniques. Survey methods, for example, may interfere with the process of data collection. Where interaction between the observer and the observed exists, the possibility exists that the data collected may be influenced. Document analysis clearly avoids this possible pitfall of outside influences.

There are many advantages to the use of content analysis in the present study. The purpose of this research is descriptive. Specifically, this study seeks to describe an existing series of Applied Research Projects (ARPs). Other data collection methods which may be used would include interviews or surveys. Asking authors of ARPs or their faculty advisors to respond to questions would not generate the type of data which is sought. An accurate description of the ARPs is best found through the direct examination of the documents themselves. Analysis and coding of the actual text
of the projects will therefore provide the most direct and accurate data.

Data Source

The data source for this research is the ARPs completed in conjunction with the Master of Public Administration Program at Southwest Texas State University. The population of projects available for examination at the University Learning Resources Center numbers approximately 260. Due to the limitations of this project, a sample of the ARPs has been made. All projects available from the years 1987-1991 have been read and coded.

Coding Categories

Some of the overview data which has been collected include the year in which the project was completed, the total number of pages, and the gender of the author. Additional descriptive information has been coded for the level of government examined, i.e., local, state, federal, or international. The ARPs were also categorized among a listing of topical areas. These categories will be further broken down into the subdivisions described on the topical coding table (Appendix B). Projects may be appropriately described with one or more of these categories.

The methodology used in the ARP is an additional coding area for this project. The methodology chapter has been specifically examined for the presence of a stated purpose and for a discussion
of the methodological techniques used. Where statistics are reported, projects have been further coded for the specific statistical methods used. Lastly, coding of the stated unit of analysis has been made.

The attached coding sheet (Appendix A), will provide a framework for reporting the results of this project. Several tables and charts have been developed using headings found in coding categories. Descriptive statistics such as percentages are used in the analysis. The results of the project may then be compared or contrasted with the results reported in earlier studies.
CHAPTER V
RESULTS

Overview Data

The population of Applied Research Projects were those available for the years of 1987 through 1991. The entire group falling within this time period was examined. The total number of projects completed and available for examination was 110. The average number of projects completed each year was 22. Each ARP project was examined for name of the author. From this information decisions were made as to the gender of the writer. Overall 40 percent of the projects were completed by women, roughly 53 percent completed by men, and the remainder of the authors fell into the "unknown" category (Illustration A, below). The number of women completing ARPs remained fairly constant throughout this 5 year period. The lowest participation rate of women may be found in 1989 where just 6 were represented. In 1991, the last year examined in this study, men completing projects fell to just 7 (down from a high of 18 in 1988).
Another coding criteria used to provide overview data was the length of the ARP. A decision was made before the onset of coding to tally the entire length of the project, including appendices, bibliographies, and any attachments. This provision was designed to eliminate the need for any subjective decisions at the time of coding. The downfall of this coding methodology involved those projects which failed to have complete pagination. Thus, for some projects it was necessary to tally a total page count. These same projects most likely distort the averages obtained from this information. Overall, the highest count was 289 pages from a project completed in 1991. The lowest page count occurred in 1987, with a project containing 35 pages. Looking at yearly averages (Illustration B, below), it is evident that average project length has increased over this five year period.
The next category of coding was for the level(s) of government explored in each project. Overall percentages for the five year period (Illustration C, below), show that projects looking at local government concerns were the most prevalent (39 percent). The next most popular area of focus was on state level governmental entities (22 percent). Not all projects could be described according to these criteria. The "Other" category contains roughly the same percentage of ARPs as those which examined state issues. The least common level was international with just 2 projects in this five year period. Where studies focused on multiple levels of government, they were coded as "Intergovernmental". This area accounted for 9 percent of the projects for this time period.
These results may be contrasted with those of Stallings and Ferris where a sharp decline in interest in state level concerns and an increase in federally focused research is reported. Projects for this time period reflect a steady interest in state concerns and a fairly constant showing of federally based ARPs.

**Topical Areas**

Coding the projects according to their topical focus was the most cumbersome portion of this analysis. Very few projects could be coded in a single topical area. Several subdivisions were developed from main headings such as "Management," "Social," and "Legal/Political" (Illustration D, p.30). Projects were evaluated using key words used in the title and throughout the text. Where
projects devoted a significant amount of discussion to a particular topic, appropriate areas were credited on the coding sheet. Given the amount of pages encompassed by this project (over 10,000), a comprehensive analysis of the appropriate topical areas was impossible. Thus, coding for the latent content of project focus was somewhat subjective and may or may not be similarly replicated.

However, key words provide a fairly reliable indication of the matters under discussion. The most frequently referenced area was management issues. This area has been noted as the so-called "nuts and bolts" of public administration. Most common subheadings were those of Finance/Budget, General/Organizational Issues, Service Delivery/Evaluation, and Personnel/Labor/Training. As was found in the Watson and Montjoy research of Public Administration Review articles, these concerns are most frequently explored. Broader issues, reflected in topical headings such as Social and Legal/Political were far less frequently mentioned by ARP authors. Race, gender, electoral issues, political power, and citizen participation were underrepresented according to the present analysis. Watson and Montjoy conclude their research with a call for more attention in these important research areas.
Trends in the area of specific topics chosen by MPA students are difficult to discern from these results. During the period examined, there appears to be a steady representation for each of the topical areas listed in the coding sheet (Appendix B). A slight increase in projects devoted to personnel matters may be seen. Interest in service delivery appears to be declining along with projects devoted to analysis and decision making.

Perhaps the most reliable information to be produced from this coding area would be the absence or underrepresentation of certain areas. All sub-topics found under the heading of "Social" have received very little attention in the projects covered by this study. Perhaps this finding would support the belief that public administration research is overly applied and practitioner oriented.
Purpose

Coding for the area of purpose was accomplished by an examination of specific statements such as "the purpose of this research is..." and from an examination of the methodology chapters of the projects. Here results were similar to most of the previous studies reviewed in the literature. The majority (61 percent) of the ARPs were descriptive research. Approximately 7 percent of the projects stated an explanatory purpose. Evaluation research represented nearly 22 percent of the total projects, while roughly 10 percent stated an exploratory purpose.

![Research Purpose Pie Chart](image)

Illustration E

Previous research has referenced the lack of causal, theory-building projects. The earlier studies were conducted on the content
of dissertational efforts or professionally published articles. Yet trends from these multiple analysis indicate an overall emphasis upon descriptive work. Thus, in this area there appears to be agreement among the ARPs at Southwest Texas State University.

However, comparisons between dissertations and the master level ARP should be cautiously made. The ARP is generally a student's first formal research study effort. Lack of experience in projects of this kind is evidenced by the existence of the prerequisite courses of 5304A and 5304B as part of the mandatory degree plan for MPA students. Thus, 6 semester hours is devoted to an overview of research techniques and methodologies. Support is given for the development of a viable topic, literature review, and prospectus. This initiation into the art of scholarly research may cause students to approach their ARPs prudently.

Many wish to apply their present knowledge and/or work environments to the project. While official data was not collected to measure the numbers of "career" or "pre-career" MPA students, informal observation indicates that a majority of candidates are currently involved in careers in public administration. Perhaps the desire to better understand practical issues having a direct impact on career development underlies these trends.
The coding area of methodologies used was operationalized through an examination of the methods chapters of the ARPs. Many projects utilized more than one technique. Where this was the case, projects were credited in multiple categories. Results of this process reveal a preponderance of survey research (Illustration F). Case study methods, followed by content analysis were the next most popular methods used. Analysis of existing data and evaluation research were also frequently seen.

Analysis of these results, much like those found in the area of topical focus, is difficult. The ARP's appear to maintain interest in these 5 main research techniques listed on Chart F (Appendix B).
Again, the most reliable information indicated here would be those techniques which were found less frequently. Historical analysis and experiments were two methods infrequently seen in the sample of projects examined.

**Units of Analysis**

Coding for the unit of analysis was accomplished through an examination of methodology chapters of the ARP's. Overall trends (Illustration G, below), show that social artifacts are the most common units of analysis, accounting for 49 percent of the sample. These results fit nicely with the frequency in which content analysis methods were shown to have been employed. Organizations (26 percent), individuals (19 percent), and groups (6 percent), followed in popularity.

![Illustration G](image)
Research by Houston and Delevan revealed a higher frequency for the examination of individuals, with a lesser showing for analysis of groups and organizations. These researchers use their findings in support of the belief that research may be too applied and non-emperical. If the study of groups and organizations implies a broader importance of research findings, the ARP's for this study may be judged a source of data having larger implications than those examined in the Houston and Delevan study.

Examination of social artifacts was often used to better describe a particular population associated with the documents analyzed. An attempt was made throughout this coding process to discover the unit of analysis that could be appropriately described (explained, explored, etc.) by the research design. Not all projects clearly stated their units of analysis. Thus, it was necessary to read entire chapters in order to sort through these issues. Where there appeared to be a lack of agreement between methodology and the later discussion, coding was based on the most reasonable selection possible.

Errors such as reductionism and the ecological fallacy may occur where conclusions are drawn about the units of analysis inappropriately. It is likely that any confusion during the coding process was the result of the legitimate appearance of a general discussion of results and implications which expanded on the findings without proposing causal relationships. The large amount of projects involved in the present study prevented detailed analysis of these issues for each project. Therefore, it is possible that results in this coding area may be subject to reevaluation.
The coding area of statistical analysis, as in the areas of topical focus and methods used, resulted in some projects being credited for more than one coding area. The largest category of ARP's were coded as having no statistical analysis. Only projects which generated statistical data were credited in a statistical category. Those which reported previous statistical information as a descriptive tool were coded in the "none" area.

The presence (or absence) of statistical analysis has been used as a focus for many debates over public administration research. A review of the literature reveals that a lack of statistical analysis is
often thought to be an indication of "weak" research. This debate has been sufficiently countered by researchers holding an opposite view.

A separate area of the coding sheet was devoted for noting the usage of special tests such as those mentioned in methodologies texts. Difficulty was encountered in finding this information easily. The results indicate only one project in the sample utilized special tests. The possible error in coding may have been due to failure to adequately describe the techniques to be used in the methodology chapter. Perhaps this information appeared in small annotations to charts and was missed during the coding process. However, these findings would seem to be somewhat smaller than expected, given the number of projects which were reported as using some form of multivariate analysis.
CHAPTER VI
CONCLUSION

The results and analysis presented in the previous section reveal the presence of some overall trends in the ARP's examined. The results from this content analysis reveal that members of the sample are approximately equal according to gender of the author. The projects also appear to have increased in overall length for the period of time examined. Also, ARP's appear to have been largely focused on local and state concerns, rather than focused on issues involving the federal government. A project examining international issues was a rarity for this population of projects. An exploration of the number of students choosing international career support areas might reveal a similar lack of interest.

Conclusions drawn from the results obtained in the topical coding area are somewhat tentative. The topics found under the management heading have made an appearance in the majority of the projects. Social issues such as race and gender are explored infrequently in this research sample. Earlier research has used similar results to point to shortcomings often found in public administration research. Specifically, narrowly focused projects have been touted as insignificant contributions to the field. The impact of a mere narrative of the problems facing a particular
agency does in fact suffer from a lack of generalizability. Studies which may not be applicable to broader issues or that cannot establish causal relationships have been blamed for the lack of a stronger theoretical base for the field of public administration. The present study seeks to describe the population of projects analyzed and therefore does not produce data necessary for a testing of this debate. These results could provide some support to the future selection of topics for MPA students. Perhaps an exploration of social and political issues should be tackled more frequently. Suggestions discussed in earlier research point to a need for examination of the differences between public and private administration. Thus, this coding area may be seen as useful for the possible guidance it may provide future candidates.

Most of the projects coded in the present research were descriptive in nature. These results fit nicely with those found in a review of the literature. Additionally, as these research efforts may be viewed as initial attempts in the formal research process. Explanatory research is considered a more demanding research design. There appears to be a genuine concern that candidates are allowed to acquire skills necessary to pursue projects having advanced causal relationships and hypothesis. However, as a final requirement towards the successful attainment of an MPA, the ARP requires that students utilize techniques of sound research design and methodology. The successful project must have these elements irregardless of the stated purpose. While descriptive projects may tend to be a better choice for the novice researcher, claims as to their lack of rigor may be viewed as value judgments.
Other results describing overall methodology include the techniques used, units of analysis, and methodological design. Findings indicate that ARP’s tend to lack statistical analysis. Similar results have led previous researchers to conclude that research quality may be suffering. Across the 5 year period examined the category coded with showing no statistical analysis has declined. If this may be considered an indicator of methodological rigor, the strength of the projects may be improving overall. Explorations of possible reasons for this improvement could include examination of the increased quality of MPA students, improved preparation for the ARP, and possibly the availability of technical aids used to facilitate statistical analysis. These issues would provide a rich area for future research.

The present content analysis has provided a cursory description of a sample of the population of ARPs completed during the 20 years of the MPA program. As such, it may provide a starting point for further, perhaps more conclusive research. Suggested approaches are evident to this researcher. Future researchers may wish to analyze a smaller sample of projects. Grouped samples, with greater distance between completion dates may reveal more dramatic trends than were found in the present five year sample. Perhaps a limited coding area may be employed. Content coding for criteria raised by topical focus alone would allow for more exploration of the relationship between the theory versus practice debate. Concentration on methodological issues could similarly allow for more in-depth results. Building on these ideas, it would ultimately be desirable to attempt to find linkages which may exist.
between the types of topics explored and the methodological designs utilized. Input obtained from the 20th anniversary MPA survey could also be used to expand possibilities for future efforts.
APPENDIX A:
CODE SHEET
APPENDIX B:

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Percent:
- Male: 53%
- Female: 40%
- Unknown: 7%

Sub-total: 100%
### CHART B

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NOTES


2 Ibid., p. 11.

3 Ibid., p. 10.

4 Ibid., p. 58.


6 Ibid., p. 2.

7 Ibid.


10 Ibid.


12 Ibid.


14 Ibid.


18 Ibid., p. 90.

19 Ibid., p. 95

20 Vocino and Heimovics, p. 74.


25 Ibid., p. 22.

26 Houston and Delevan, p. 675.


28 McCurdy and Cleary, p 50.

30Ibid.

31Ibid., p. 54.

32Ibid., p. 50.


34Ibid., p. 60.

35Ibid.

36White, p. 234.

37Perry and Kraemer, p. 216.

38Ibid., p. 219.

39Ibid., p. 221.

40Ibid., pp. 221-2.


42Ibid., 583.

43Ibid.

44Ibid., p. 585.

45Houston and Delevan, p. 675.

46Ibid., 678.


49 Ibid., p. 170.


51 Babie, p. 294.

52 Ibid., pp. 298-9.


54 Watson and Montjoy, p. 168.

55 Ibid.

56 Dr. Patricia Shields, 5304b course materials.
BIBLIOGRAPHY


