PRAGMATISM AS PHILOSOPHY
OF SCIENCE:
A TOOL FOR PUBLIC ADMINISTRATION

Patricia M. Shields

ABSTRACT

This chapter demonstrates how pragmatism as a philosophy of science is used in a Public Administration Research Methods Class. This class is designed to get students ready to write an empirical capstone project. Three elements of the course are developed—finding a topic, developing a research question, and choosing a conceptual framework. The notebook method, a tool to find a topic and develop the research question, is presented. Conceptual frameworks are classified into five types and linked with the research purpose, question, modes of research, and statistics. Both the notebook method and the classification of conceptual frameworks are discussed in light of their pragmatic roots. Specifically, they are linked to the ideas of Charles Sanders Peirce and John Dewey.
This chapter has multiple agendas and rhythms. First and foremost, it demonstrates the relevancy of Pragmatism as a philosophy of science to Public Administration theory and practice. As the reader will soon learn, pragmatism makes little sense outside the context of a "problematic situation." Hence, on a second level, this chapter examines the "problem" of a Masters of Public Administration Program with its written, empirical, case-based project. A new formal research methods course was designed to address the practical and theoretical problems students had with empirical research. The pragmatic philosophy of science has been instrumental in the evolution of this unique approach to research methods. The course has also been successful. For example, over the last five years, over 95 percent of the students' papers have had clear conceptual frameworks which explicitly link to empirical data (Almagrit 1997).

According to Abraham Kaplan (1964, p.24), the "most important contribution that methodology can make to science is to help unblock the roads to inquiry." Through the discussion of two key elements in the research methods course, this chapter addresses the techniques, tools, and rationales for unblocking PA inquiry. My goal is that because pragmatism speaks to the world of practice, it has the potential to unblock many more roads to PA inquiry.

PRAGMATISM AS PHILOSOPHY OF SCIENCE

When I began studying pragmatism, I was attracted to it because it incorporated elements of the PA experience missing from the larger PA literature (Shields 1996). First, it resonates with practitioners; capturing their voice and experience. Secondly, it is a living philosophy with a deep intellectual heritage also known as American Philosophy (Seigel 1996).

At first, there appeared to be no link between my teaching and scholarship. I teach a course on research methods sequence. The first course focuses on getting the students ready to write their capstone research project known as the Applied Research Project (ARP). In the second course, the students are not taught as a class per se; rather, in their teacher, I supervise them individually. Gradually, I recognized the applicability of my formal scholarship to the research methods sequence. When I consciously began using the ideas of pragmatism, the quality of the papers improved as well as the ease of supervision.

The connection between my scholarship and teaching was solidified when I found that Abram Kaplan, (1964, p. xvi) in the preface of The Conduct of Inquiry, acknowledges his debt to the pragmatists. "In particular, those who are acquainted with pragmatism will be aware of how much greater my indebtedness is to Peirce, James, and Dewey than is made explicit by citations." Kaplan also maintains that the traditional "hypothesis-deductive" method of inquiry associated with behavioral science methodology is problematic, because "most of the important incidents in the drama of science are enacted behind the scenes."
What is Pragmatism?

Pragmatism is the philosophy of common sense. It uses purposeful human inquiry as a focal point. Inquiry is viewed as a continuing process which acknowledges the qualitative nature of human experience as problematic situations emerge and are recognized. Recognition involves the doubt associated with questioning existing belief systems. Doubt is resolved through critical reasoning and ultimately tested in action. It is the philosophy of common sense because actions are assessed in light of practical consequences. Finally, inquiry is not necessarily limited to individual effort, rather it often incorporates a "community of inquiries." The applicability of pragmatism to Public Administration Inquiry flows from the above definition.

Although four individuals are often named as the founders of pragmatism, for purposes of this study, the closely related ideas of Peirce and Dewey are most relevant. Both explicitly dealt with inquiry. The ground work was laid by Peirce and was later used and expanded by Dewey in Logic: The Theory of Inquiry (1910). John Dewey (1938, p. 104) defines inquiry as "the controlled or directed transformation of an indeterminate situation into one that is so determinate in its constituent distinctions and relations as to convert the elements of the original situation into a unified whole." He goes on to say that the transformation "is achieved by means of operations of two kinds: One kind of operations deals with intellectual or conceptual subject-matters... The other is made up of activities involving the techniques and organs of observation." (Dewey 1918, p. 117). This chapter deals with ways to enable the "transformations" of inquiry using both conceptual subject matter and activities/techniques.

Charles Sanders Peirce introduced the concepts of pragmatism in the early 1870s. Peirce, the scientist, originally conceived pragmatism as a philosophy of science with a logic of inquiry at its center. From a public administration perspective.
This is the most interesting about Peirce, is his thirty year employment with the U.S. government as a physicist, astronomer, inventor, and occasionally, an administrator. Pragmatism for Peirce began during his tenure as employee of the United States Coast and Geodetic Survey (currently the National Geodetic Survey). The nature of this agency and its scientific mission provide insight into both Peirce's pragmatism and links between pragmatism and public administration.

Ironically, at the time of our founding fathers, there were many links between politics, philosophy, and science. Thomas Jefferson, for example, was a scientist, inventor, and politician. During his tenure as the President of the United States and President of the Philadelphia Philosophical Society (1807), Jefferson established America's first scientific agency, the Survey of the Coast. Through the Survey of the Coast, the leading scientists of the time were called together to solve practical problems in order to facilitate commerce. The current science of Geodesy grew out of this effort. Peirce joined the agency around the time of the Civil War. He is credited with significant original contributions to the emerging science of Geodesy. Thus, he developed pragmatism while working at the edge of scientific inquiry as an employee of the United States government.

Many ways the science of geodesy is a good metaphor for pragmatism. Geodesy, which is the science of measuring and mapping the earth's surface, is continually involved with solving practical problems. It verifies its work empirically. It concentrates on empirical measurements that have practical application. The scientists of geodesy develop tools to enhance their ability to measure. Geodetic findings are exposed to continual empirical verification and are assessed (at least in part) by their usefulness. In his world, incorrect measurements could potentially play out as shipwrecks or lost cargos. In addition, geodesy is highly interdisciplinary; borrowing what is useful, including theories, from other sciences (astronomy, physics, geometry, engineering). Few sciences could be more instrumental or practical than geodesy.

Theory-Practice-Product

There is one final link before the mechanics of the course are discussed, in Logic. The Theory of Inquiry, Dewey (1916) contrasts his view of science and inquiry with the ancient Greek tradition. This discussion is important because it lays bare the origin of the theory-practice dichotomy. The theory-decision-activity link is derived from the Greek word theoria or God. Theory dealt with the divine and the fixed essence of nature. For Plato, aesthetic contemplation precluded or rendered inferior any active interest in instrumentation” (Hickman 1999, p. 83). Praxis (or practice) indicated the “concrete performance of some activity based on the determinate choice of a free citizen” (Hickman 1990, p. 197). Polexis (or product) is associated with productive activities.
In Greek culture “way of knowing was identified with ways of life” (Hickman 1990, p. 109), and Greek social organization reflected this making. The philosopher engaged in contemplation, the artisan (cabinet, ship designer) engaged in making, the craftsman (carpenter, shipbuilder) tended the society’s production of goods and services. This philosophic formulation, reinforced by a social structure, created a “division between practice and theory, experience and reason” (Dewey 1938, p. 73).

According to Dewey, the progress of the Greek way of knowing was that it demeaned and discouraged experimentation. Both the craftsmen and the artisans were actively discouraged from trying new ways of making or doing. This in turn inhibited the advance of science. Classical Greek thought discouraged “contact and interaction with the things of ordinary experience and the instruments of use in practical arts” because it was “supposed to contaminate the purity of science” (Dewey 1938, p. 74).

Dewey argued that in the actual productive activities of modern science, the classical Greek hierarchy was inverted. For modern science, “theory became a tool of practice and practice a means to the production of new effects. Theory no longer had to deal with final certainty but instead with working hypotheses with the tentative and the unsolved.” (Hickman 1990, p. 99). In other words, according to Dewey, scientific progress occurred in the interaction between practice and production. Theory became a tool that mediated scientific progress.11

It should be noted that both John Addams and John Dewey place democracy at the heart of their philosophy. Addams’s work and philosophy grew out of her “pursuit devotion to the ideals of democracy” (Addams 1930, p. 79). For Dewey, democracy “is nothing less than a community of inquirers, a continual process of criticism, cultivation and growth” (Rochberg-Halton 1986, p. 19).

From the above discussion of pragmatism, a statement about the scope of Public Administration emerges. Public Administration deals with the stewardship and implementation of the products of a living democracy. The key elements are products and democracy. The term product is used as developed by Dewey. It is those items that are con-structed or pre-designed such as bridges, space ships, laws, health care, and recreation. As implementers, public managers engage the products. They are involved in making and doing—the instrumentalities of democracy. Public administrators operate within a living democracy. This is an environment that is changing, organic and learning with values. Public administrators are stewards in that they are concerned with accountability, and effective use of scarce resources and ultimately making the connections between the doing, the making and democratic values. 12 Pragmatic inquiry is well suited to facilitate this vision of public administration.

The next section describes the problem Southwest Texas MPA program facility, faced with their students’ final capstone project. Each capstone project is an example of Public Administration inquiry. Often, these projects were examples of unsatisfactory inquiry.
Defining the Problem

Every Southwest Texas MPA student is required to complete an Applied Research Project (ARP). In 1988, a NASPA site visit team identified several problems with the ARPs. The quality of the ARPs was mixed. The literature reviews were unfocused and seldom analytical. Conceptual frameworks of any kind were missing. Data analysis sections were poorly written and disorganized. Perhaps most importantly, the ARP was identified as an obstacle to graduation because, on average, students took two in three semesters to complete the three-credit requirement.

Two key reasons for the problems with the ARPs were identified. First, development of the student's research question was hampered by poor mastery of background literature. Second, the students needed a clearer understanding of conceptualization and operationalization.

A two course sequence was instituted to address the problems. The first course would get the student ready to write their ARP. As an assignment, the students would be required to write a first draft of their ARP Literature Review chapter and develop a research prospectus. The course would discuss conceptual frameworks and operationalization. Since quantitative methods and survey research were covered in earlier courses, the new course would discuss qualitative methods such as field research and focus groups.

I was assigned responsibility for the new course (POSI 5304b). Little did I expect that the "problems" identified within the ARPs would be the very topics developed by the Pragmatists—a group of men and women that I would come to know in my role as teacher. Slowly, I began to realize that Pragmatism was a legitimate philosophy of science. As I consciously began to apply the ideals of Dewey, James, and Piaget to assignments and class discussion the ARPs improved. And, the students began to struggle with higher order issues. In the next section, two elements of POSI 5304b are described. Both draw from the principles of pragmatism.

One element, the Notebook Method, is a concrete instrument of inquiry. The other element, classifies conceptual frameworks and is an abstract tool.

Finding the Topic: The Notebook Method

A key assignment of POSI 5304b is a rough draft of the literature review chapter. In the process of doing the draft, students are expected to narrow their topic and find a research question. In order to ensure that the draft literature review was productive, I assigned, with the encouragement of colleagues, what is now known as "The Notebook Method." This is a technique I developed and used for years in my own scholarship. I required the method become "fit working" for me and colleagues with whom I shared it. Also, over the course of the semester, as the students absorb the related literature, the Notebook provides a concrete point of departure for discussion. Finally, I believe that the students should get
experiential exposure to writing using an outline. (See Appendix A for a complete description of The Notebook Method).

On the surface the notebook serves five practical objectives. First, the nature of the assignment increases the likelihood that the student will start the review of the literature early in the semester. Second, the notebook facilitates the organization of relevant materials. Everything the student collects need to write the paper is organized and located in one place. Third, the detailed, project-oriented, things-to-do list is a time management tool. Fourth, the integrated outline requirement increases the likelihood that the papers will be analytic. Finally, the method reduces the probability of plagiarism since the students are required to hand in their notes.

Interest and experience are usually the source of the research topic. Since most ARP students have full-time jobs in the public sector, their research question often emerges from a work-related issue. The student uses the notebook method as they gather literature related to the topic. The Notebook Method is introduced with a lecture about the importance of Read-Write-Think-Connect to Experience in inquiry. As the Notebook builds, students are encouraged to read widely, take extensive notes and apply the readings to their workplace experience. The first 15-20 minutes of each class is devoted to discussion on the progress and purposes of their notebook. The first four to six weeks of the semester are filled with high tension. Panic, confusion, resignation, and anger are common. As the students construct their notebook and (in some content) they learn that confusion and doubt are essential elements of the early stages of inquiry. The enormous ARP boom in the future. The problem of finding a topic and a research question often seem daunting. As the semester progresses a change begins to occur. A focus emerges, and the disparate literature falls into place.

After reviewing over 150 notebooks and ARPs, I have noticed a relationship between the quality of the notebook and the quality of the ARP. Students with sloppy, disorganized notebooks are more likely to produce unacceptably or marginally papers. Conversely, the most thorough and well-organized notebooks support the best ARPs.

I have been amazed at the variety of ways students have applied the principles of the notebook method to their jobs and personal life. The most common use is project management. I have also seen it used to organize itineraries before legislative, solve crimes, write reports, organize employee recruiting, buy houses and plan weddings. Two job related benefits of using the notebook method at work are (1) greater organization and (2) the ability to answer the questions of superior quickly and correctly.

As the semester unfolds, the students are charged with finding a conceptual framework. In my experience, the abstract nature of conceptual frameworks is another roadblock to inquiry. The notebook facilitates the search because it helps students to cope with the abstract. They learn that these methods to find theories and invent theories.
Clarifying Conceptual Frameworks

It is difficult to answer the question, "what is a conceptual framework?" given after elaborate explanations, conceptual frameworks generally remain, using Kaplan's words, in the "twilight region" of inquiry (Kaplan 1964, p. 260). The veil of mystery surrounding conceptual frameworks in empirical research can be partially lifted by classifying conceptual frameworks using research purpose and clustering them with particular research questions, methods/techniques, and statistics.

Within a lecture on the topic of the research process, different types of research purposes and conceptual frameworks are introduced. Later in the same lecture, research purposes and frameworks are integrated. This method of presentation begins to make conceptual frameworks concrete by giving them specific names and purposes. Perhaps most importantly, conceptual frameworks are contextualized within larger, more understandable research processes. The specifics of the linkages are shown in Figure 1.

Five types of research purposes and conceptual frameworks are identified. The research purposes include exploration, description, understanding, explanation, and prediction. The conceptual frameworks are identified as working hypotheses, categories, practical ideal type, formal hypotheses and models.

The explanatory research purpose is paired with working hypotheses. Working hypotheses enable and focus evidence collection. They are particularly useful in qualitative research. Descriptive research is paired with categories. The research purpose "understanding" is linked with a practical ideal type. This framework was drawn from Max Weber and is applicable to formative evaluation. Explanatory research is paired with formal, causal hypotheses. Most quantitative social science research is explanatory. Impact evaluation is an example. Finally, the predictive research purpose is paired with models. In many ways, predictive research is the mirror image of evaluation. For purposes of this course, however, models are viewed as more complex than formal hypotheses. In addition, techniques such as cost benefit analysis are considered models.

Sense of Community

One of the overriding goals of the COST 530th is to create a sense of community within the class. Discussion (30% of grade), the sharing of telephone numbers, and the looming ARP create a sense of connection. I try and broaden the community to include graduates of the program and students who are currently writing their ARP. In their first class assignment, the students are expected to find three ARPs in the library and answer a series of questions about organization and content. Touching and reading the bound ARP give the student a concrete goal. Their job is to produce a document which will join the others on the library shelves. The sense of community is further strengthened through in-class panels of former and current ARP students. Members of the panel discuss their experiences. When the
1. Exploratory Research
- Types of Questions: Anytime you ask what, when, where, why, who, how or any combination of the above.
- Types of Conceptual Frameworks: Most of the time working hypotheses and/or loosely defined descriptive categories.
- Types of Methods/Techniques: Field research, case studies, focus groups, structured interviews, document analysis (usually qualitative).
- Statistics Used: Usually none—but anything goes.

2. Descriptive Research
- Types of Questions: What, you are describing something—what are its characteristics—What are the attitudes of administrattors about policy...?
- Types of Conceptual Frameworks: Descriptive categories
- Types of Methods/Techniques: Survey, content analysis
- Statistics Used: Simple descriptive statistics mean, median, mode, percentage, t statistic

3. Understanding Research
- Types of Questions: How close is situation x to the ideal situation? How can x be improved?
- Types of Conceptual Frameworks: PracticalIdeal type (usually organized by categories)
- Types of Methods/Techniques: Case study, survey, document analysis, structured interviews
- Statistics Used: Often... descriptive statistics mean, median, mode, percent distributions, simple t statistic

4. Explanatory Research
- Types of Research Questions: Why do what is (notice causality) the basic format is "If A then B" or is there a relationship between A and B. It is also possible to have several causal factors
- Types of Conceptual Frameworks: Formul Hypothesis, (generally between at least two concept(s): Here, when the hypothesis is put in operational form our source speaks of the relationship between the independent and dependent variable.
- Types of Methods/Techniques: Experimental, quasi-experimental design, archival records, aggregated time series, data analysis, survey
- Statistics Used: t-statistics (comparision of means), correlation, Chi-square, analysis of variance, simple regression, multiple regression

5. Predictive Research
- Types of Research Questions: What can one expect in the future? If the answer to the "why" question is known then the answer to question about the future are clear.
- Types of Conceptual Frameworks: Models including cost benefit analysis, cost effectiveness analysis, economic loss studies, shift and shlock analysis and formal hypothesis.
- Types of Methods/Techniques: Experimental, quasi-experimental design, Cost Benefit Analysis, Cost Effectiveness analysis, survey
- Statistics Used: Analysis of Variance, simple regression, multiple regression, usually the most sophisticated of techniques.

Figure 1. Clustering Theory and Methods
PRAGMATIC PRINCIPLES FOUND IN THE COURSE

The remainder of the paper examines elements of the pragmatic philosophy of science found in the formal research methods course. It should be noted from the outset that using the ideas of Dewey and Peirce one must consider the ARP as an example of controlled inquiry. As such, it involves activities of "doing and making." Dewey (1938, p. 160) maintains that "all controlled inquiry ... necessarily contains a practical factor; an activity of doing and making which escapes antecedent existential materials which set the problem of inquiry." In other words, from the pragmatic perspective, the conduct of scientific inquiry "...is a mode of practice; the working scientist is a practitioner above all else, and is constantly engaged in making practical judgments" (Dewey 1938, p. 161) (italic added).

According to Flowers and Murphy (1977, p. 855), Dewey saw learning as "the development of procedures and gaining that can make significant sources of experience" (ways of making and doing). For him, "learning is trial and error: either a redesign of trials and re-insight into new modes of testing. Dewey actually includes the administrator or manager in his discussion of the practical elements of inquiry. For Dewey the administrator or manager has curiosity in inquiry when it is better to do now. Unless the decision maker is involved in all activities and is obtained by gathering and reviewing evidence; applied to his weight and relevancy; and by honing and testing plans of action in their capacity as hypotheses (Dewey 1938, p. 161).

Both scientist and administrator engage in inquiry. What separates them is the tools and the subject matter. The basic processes of inquiry are identical. Dewey (1938, p. 48) notes that "the ultimate end and test of all inquiry is the transformation of a problematic situation into a unified one. Inquiry is the tension between the relatively static (or habitual) and the strongly variable" (Flowers and Murphy 1977, p. 840). Many of the assignments in 5304b are designed to create problematic situations which facilitate the transformation. Situations (e.g., requirements to do or make) are created which evoke real doubt and thus disequilibrium. As students try to figure out "what the heck is going on?" Methods such as the note-taking are employed (more doing and making) which facilitates the movement toward the unified, more complex equilibrium (it came together in the end).
The Notebook Method

At its best, the notebook method controls inquiry as it intensifies the student's doubt stage, clarifies the problematic situation, and enables the transformations which are essential to pragmatic inquiry. Fawcett and Murphy (1977, p. 851) note that the first stage of inquiry occurs when "there is the indeterminate or problematic situation which is non-reflective but which triggers the process of reflection." The first stage of inquiry is the most important because recognition of the indeterminate and the willingness to feel real doubt are major stumbling blocks to inquiry.

As the students construct their notebook, the first stage issues are reinforced through Read-Write-Think-Connect to Experience. Reading and taking notes (writing) on the scholarly literature is important, because the students are usually insulated with new ideas and conflicting points of view. The process of taking detailed notes helps the ideas and content to sink in. My sense is that note taking ups into visual and kinesthetic intelligence (Gardner 1983). Ideally, the reading and writing initiate Peirce's doubt stage.

Charles Sanders Peirce emphasizes that inquiry begins with doubt. For Peirce (1958a, p. 93), inquiry is a movement from something already known to "something else which we do not know." He describes a cycle which begins with belief then moves to doubt and returns to belief.

Belief is a temporary mode of consciousness; it is a habit of mind essentially enduring for some time, mostly uncontrollable; and like other habits, it is (until it meets with some surprise that begins to undermine) perfectly and satisfactorily (Peirce 1958a, p. 93).

Thus, inquiry cannot occur when habits of mind are "fixed" in belief—a state of mind where people are "irreceptive to fresh evidence" (Weiner 1958, p. 91). Doubt is the "unrest and dissatisfied state from which we struggle to free ourselves and pass onto the state of belief" (Peirce 1958a, p. 99). Doubt is associated with Dewey's indeterminate situation. Dewey uses terms like "panic," "test our hearts," "confused," "distracted," and "troubled" to describe the "personal side" of the doubt stage (Dewey 1938, p. 105). For Peirce (1958a, p. 101) doubt must be "real and living" for inquiry to happen. "Genuine doubt always has an external origin usually from surprise" (Peirce 1958a, p. 207). Peirce goes on to say that people, who employ the pragmatic philosophy of science invent "a plan for attaining doubt, and put it into practice although this may involve a solid month of hard work" (Peirce 1958a, p. 214). The activities involved in making the notebook are part of Peirce's "plan for attaining doubt."

One might note, that Peirce and Dewey's emphasis on the role of doubt is unusual in social science scholarship. Social scientists are rewarded when they find a widely applicable explanatory theory. Successful theories become beliefs and using Kuhn's (1962) insights—paradigms. The application of paradigms is associated with certainty and confidence, Milton Friedman's Capitalism and
Freedom (1962), is an extreme example of an applied belief system/paradigm. Using "belief" as a frame of reference, one would expect the doubt stage to be viewed as a stumbling block to truth and, or a trivial, occasional, element of inquiry. The room of certainty (belief) is reinforced in the traditional lecture classroom. In using, students are generally introduced to a topic at the confident "belief" state. The doubt stage that led to the material in the textbook is unacknowledged (in the shadows). When students begin empirical inquiry, they may interpret the doubt stage as a signal that their efforts are misplaced. Rather, doubt should be embraced as a sign that they are moving in the right direction.

Clearly the reading and writing components of the notebook method entail doubt. The real Lynch pins of doubt, however, are Connecting (the readings) to Experience through reflective thought (Thought). Most DWT MPA students were full-time and were encouraged to find their own questions or problem through work-related experience. They use their work environments/experiences as the source of both "problem" and "data." According to Dewey (1938, p. 490) "any problem of scientific inquiry that does not grow out of actual [or "practical"] social conditions is fictitious"—Connect to Experience.

Kaplan rates that "nothing can be problematic at once, nowhere in science-do we start from scratch. There is only one place from which we can start [inquire, Peter] and that is from where we are" (Kaplan 1964, p. 89). Connecting to experience represents the starting point. The frame of reference to place the whole story literature.

Students stimulate "real", "felt" doubt by applying the readings to their experiences. My hope is that the juxtaposition of experience and the literature will stimulate critical thinking or reflective thought. In How We Think, John Dewey (1910) examined the role of thought in inquiry. He wrote "In 1910 (p. 80) "to that means...to bridge a gap in experience, to bring together facts or thoughts otherwise isolated..."

"The essence of critical thinking is suspended judgment: and the essence of this experience is inquiry to determine the nature of the problem before proceeding or accepting it at its solution" (Dewey 1910, p. 74). Peirce was referring to this process as reflective thought. A person who is reflective in naturally open to consider facts that don't correspond to their belief system (Peirce 1938, p. 121).

Another way of describing suspended judgment is in Peirce's words the "experimenter or laboratory mind" (Peirce 1938c, p. 180). The cardinal rule of experimentation is that "we must accept the outcome whether or not it is to our liking." When we submit to the judgment of experiment we correct the assumption of the demand that we form to our expectations" (Kaplan 1964, p. 165).

Dewey (1938, p. 107) notes that the indeterminate situation itself has rhythms or stages. First, there is the search for the problematic situation. This is really the point of the notebook method. The indeterminate situation becomes problematic in the very process of being subjected to inquiry..."To see that a situation requires inquiry is the initial step of inquiry." Reflective thought which
connects to experience should enable an individual to focus and see that a "situation requires inquiry."

The size and scope of the SWF Applied Research Project makes it much different from a typical "term paper." When a student is required to write a traditional term paper there is seldom the need to define a problematic situation in the context of their experience/work environment. The student's inquiry scope is as unified situation when the paper is complete. The two-course sequence of the ARP, on the other hand, requires that the student study the environment for a research question. The need to connect the literature with the work environment allows for a deeper kind of inquiry. This indeed is the first step in defining their research question and the nature and scope of their empirical inquiry.

Reflective thought combines what Dewey describes as concrete and abstract thinking.

When thinking is used as a means to some end, good or evil beyond itself, it is concrete; when it is employed simply as a means to some end, thinking, it is abstract (Dewey 1938, p. 138).

In a discussion that mirrors the theory-practice debate in PA, Dewey says that the "truly practical man" uses both types of thinking; it is important to give the mind "free play about a subject matter without asking too closely ... for the advantage to be gained." If concrete thinking is used exclusively the horizon becomes too narrow and in the long run is self-defeating "it does not pay to let one's thoughts to the post of use with too short a rope" (Dewey 1910, p. 139). The purpose of the notebook method is to lengthen the horizon, and, in so doing, encourage the student to suspend their judgment and "escape the limits of the routine and custom" (Dewey 1910, p. 139).

Clearly, reflective thought is a critical ingredient for "felt" or "real" doubts to emerge. When students suspend judgment, preconceived beliefs about the nature of their job's25 seldom fit perfectly with the literature. After about a month, I begin to observe manifestations of the "real," "felt" doubts among the students. They express their confusion and panic in the first 15 minutes of each class. To the surprise of the class, I am generally pleased about the general state of confusion because I know that real inquiry is progressing. We discuss the role of doubt in inquiry via-a-via Dewey and Peirce. I ask them to imagine the confusion from anxiety. Finally, I stress it should all come together in a thread if they give the notebook a good faith trial.

Using Hickman's insights, one could also call the notebook method a tool of reflective inquiry. Reflection involves going outside the immediate situation to find a level for understanding.

There is a search for a tool with which to operate on the unsaturated situation. The tool becomes part of the inquiry production still brought to bear on the situation. The purpose of the tool is to integrate the experience in some way that will overcome its disparity, its incompleteness, or its contingency (Hickman 1990, p. 21).
This is the very purpose of the Notebook Method. Hirstman (1990, p. 8) notes that traditionally, philosophy had been concerned with human doing and had paid little attention to human making. Dewey, on the other hand, always sought the "connection and continuities between humble and quotidien technological practice and their refined, enriched manifestations."

The point of the above discussion is to highlight first-stage of inquiry issues. The Notebook Method is one of many possible tools to facilitate inquiry during the early stages. This method helps the student to focus the topic as well as to find and refine the research question/problem. The Notebook Method is tandem with class discussion obviously works for most MPA students. How a particular scholar copes or recognizes their first stage issues probably depends on a host of factors such as, the maturity of the scholar, learning style, and personality type. I use the notebook method for every article I write. My sense is that many Ph.D. students (in and outside the field of PA) would benefit from using this tool.

Conceptual Frameworks

Ideally, when the student has completed the notebook and the first-draft of their literature review, they have their topic and have begun to define the problematic situation. Even before the research question becomes concrete, the students generally know the mode (survey, document analysis, structured interview) of research they intend to use. The big cloud that hangs over their head is the conceptual framework. Just what is this mysterious, abstract, conceptual framework? Why is it needed?

The students' misgivings are well founded. Conceptual frameworks are amorphous. Multidisciplinary settings add to the problem because there are so many partial frameworks. Further, the conceptual frameworks easily to recognize are associated with traditional explanatory research. This kind of empirical research poses problem because, in practice, the framework is often implicit and obscured by complex statistical analysis.

Conceptual frameworks rely operate on two levels. One operates at a macro level. Examples might include, public choice theory, systems theory or bureaucratic politics.26 The second is a more narrowly defined abstract framework that usually flux within meta frameworks. Micro conceptual frameworks connect to the specificity of case study inquiry. These are the detailed frameworks that are associated with the concrete problems of management and policy. These frameworks are summarized in Figure 1. In the test of all possible worlds, the concrete micro conceptual framework is nested within a larger frameworks which the student find as they build their notebook and/or which are pre-existing to the student during their course work. My sense is that fail to distinguish between meta and micro conceptual frameworks is a major source of confusion for all.27

Over the last few years, I have concentrated effort on addressing the question "what the heck is a conceptual framework anyway?" When I began to see
conceptual structures through the lenses of pragmatism the answers started to fall
into place. The journey began with William James's Hotel Conundrum metaphor. "Pragmatism lies in the midst of theories like a hotel corridor. All the rooms open out to it and all the rooms can be entered. Pragmatism owns the corridor and the right to move freely from room to room" (James 1907, p. 54). Thus, there are many potential theories. And, the purpose of theory is linked to the problematic situation. Ownership of the corridor and the freedom to walk from room to room joins theory and practice.

James (1959, p. 4) has another practical justification for theory. People who use theory work smarter because it takes "the less mental effort to understand the com-
plexity of the world. It is a "time-saving convenience." Like any good organizing
device, theory makes life easier. This is a point I emphasize throughout the course.

Since theory or conceptual structures are used to solve problems they can be viewed as instruments or problem solving tools (Hickman 1999, p. 102). This con-
ception of theory fits well with the insights of Dewey discussed earlier. Instead of the traditional classical Greek hierarchy (Theory, Practice, Production) theory is viewed as an instrument that links practice and product. If one returns to the prag-
matistic vision of PA, theory clearly is a useful tool for administrators responsible for the "products" of a living democracy. Practitioners are generally intrigued with the notion of theory as tool. This notion moves theory out of library books and class discussion and into their exponential world.

One key point is that the conceptual framework emerges from the problem.

The impermanence of hypothesis is first suggested by the original problem and is data caused and driven on the ground of its consequences. The guiding element is the search of these conse-
quences to promote solution of the problem in hand (Dewey 1938, p. 34) (italic added).

One of the most practical purposes of theory, from my perspective, is that it or-
organizes the results chapter of the ARS. Kaplan (1964, p. 268) points out that
every theory serves, in part, as a research direction. Theory is useful because it guides the col-
clection of data and their subsequent analysis, by drawing conclusions where the data are to be
fixed, and when we are to make use of them when we get them... Without a clearly, clearly,
provided or loosely furnished, there is only a minimum of observations, having no sig-
ificance.

When theory is ill-defined, its relationship to the data becomes vague and uncer-
tain. The five concrete conceptual frameworks developed in this class can be ob-
erved in different forms in at least three chapters of the ARS. When data is orga-
nized using the conceptual framework as a guide the final paper is more

analytical.

It is clear that the choice of a conceptual framework (which tool) is directed by the nature of the problem. But how do conceptual frameworks help organize the observed world and connect it to the research problem?
Dewey (1938, p. 463) compares conceptual frameworks to maps. Maps are used to solve the problem of getting from one place to another. They also represent and abstract from reality. If correct, maps enable navigation within reality.

Given the map as a pattern of relations, the "relation" of the pattern to that of the country mapped is functional. It is constituted through the internalization of the further operations it demands—which consequences, moreover, provide the means by which the validity of the map is tested. The map is conceptual to such operations as traveling, laying one route for jour- neys, following movements of goods and persons.

Like maps, the theory in empirical inquiry must have a directive function. "When the directive function of the map is left out of consideration it must be said that no map is "true"" (Dewey 1938, p. 462). True maps produce "consequences that are intended to be served by the map" (Dewey 1938, p. 403).

From Dewey's perspective, "problems are constantly changing and therefore require conceptual tools which must be constantly re-fashioned to meet the new demands" (Flowers and Murphy 1977, p. 812). Hence, there are two kinds of tools, ones that can be pulled out of the tool box (ready made) and those that must be created. Indeed, Dewey maintains that there is the same sort of advantage in having conceptual frameworks manufactured and on hand in advance of actual occasions for their use, as there is in having tools ready instead of improvising them when need arises (Dewey 1934, p. 156).

Thus, as a problematic situation becomes identified, the student must search for a theory or tools to help connect the problem to observed data. The theory can already exist (pick a tool from the tool box) or it must be improvising (make the tool). The development of theory is called theorizing (Wamsley 1996).

For many years, I have used the traditional research purposes (exploration, description, explanation) to help students narrow their topics. These research purposes are described in popular research methods texts like Earl Babe's (1991) The Practice of Social Research. Somehow, it dawned on me that the key to addressing, "What the heck is a conceptual framework anyway?" was to acknowledge that there were lots of different types of conceptual frameworks. It then became clear that there was a natural grouping of research purpose and conceptual frameworks (See Figure 1). The sorting was helpful because almost every concrete "problematic situation" can be categorized into one of Babe's traditional research purposes. The classification of conceptual frameworks transformed the function of the "research purpose." The research purpose now mediated between the "problematic situation" and the "conceptual framework."

I now answer the question "What the heck is a conceptual framework anyway?" by using Figure 1 and saying, "it depends." For example, if a student wants to learn about the attitudes of employers about "School to Work Programs," the purpose is...
Working hypotheses

The working hypothesis was one of my first applications of pragmatism. The term began to creep into class discussion and in one-on-one meetings. In 1915, I got some critical evidence that working hypotheses were extremely compatible with research in public administration. In the summer of 1915, six of my students presented their ARP at the American Society for Public Administration National Conference. That fall, PA Time (Nov. 1915, p. 9) identified two of the students' papers among 25 "Cutting Edge Research" conference papers.

Both projects used working hypotheses as their conceptual framework (Kaufmann 1993, McFarland 1990).

The exploratory research purpose is linked with the conceptual framework working hypothesis. Exploratory research is associated with problems that are in their early stages. It is used when the topic or issue is new (Babbie 1989, p. 80). Working hypotheses signal that conceptualization is in its early stages. Dewey employed the term "working hypothesis" frequently. Hypotheses are often useful, not because they are true or false, "but because, when they are taken to be provisional, working means of advancing investigation, they lead to discovery of other critical facts." (Dewey 1938, p. 142).

According to Kaplan (1964, p. 88) working hypotheses serve as guides to organize the investigation. They provide something to go on. "The working hypothesis is not a guess at the riddle, a hunch as to what the answer might be. It is an idea about the next steps that may be worthy of taking." The working hypothesis formulates a belief about the direction of inquiry but is necessarily an alternative delusion.

One of the keys to the success of working hypotheses directing inquiry in formal empirical research is to establish the connection between the research question, the working hypothesis and the types of evidence used to test the hypothesis. At the proposal stage, I insist that the student be able to identify the sources of evidence used for each hypothesis. Most of the time the sources of evidence are archival records, documents, interviews, focus groups, direct observation, or questionnaires. In the case of interviews, questionnaires, and focus groups the students are expected to link the specific questions or topic areas to each working hypothesis. Finally the working hypotheses are used to organize the evidence in the results chapter.

The students find the working hypotheses using Reed-Write-Think-Connect to Experience. This process begins with the notebook, continues through the formal
paper (literature review) and the formal proposal. The working hypotheses need to incorporate information from the literature and experience. In practice, most students use broad categories to classify working hypotheses (the categories are usually drawn from the literature and a meta-framework) and then a series of subhypotheses within the broad category are used to connect to the data or evidence (the link to experience).

For example, Laura Sheridan (1990) examined a partnership (The Alliance Schools Project) between two local elementary schools and a private non-profit advocacy group. She used local control, local autonomy and student achievement as her broad categories. The working hypothesis associated with local control was “The Alliance Schools Project promotes processes of local control (democratization).” One of four subhypotheses included “Input from the community/patients is encouraged at Alliance Schools.” Evidence was collected through interviews with parents, teachers and administration as well as documents such as school newsletters, posters, and PTA meeting minutes.

Returning to the tool metaphor, conceptual frameworks can either be “found” or “invented.” In other words, existing theory is used or the theorizing process is employed. Laura “found” the categories (broad working hypotheses) in the literature. She “invented” (used the theorizing process) the subhypotheses which incorporated both the literature and her knowledge of the experiential context. Her results chapter was organized using the broad categories local control, local autonomy, and student achievement. In this case, it is possible to see the instrumental role of theory as an organizing device.

It should be noted, that while pragmatism is well suited as a philosophy of science, its founders did not intend pragmatic insights to be limited to formal empirical research. Pragmatism is a philosophy with wide applications. The working hypothesis is one of those organizing devices that easily cross the boundary into the everyday world and particularly into the day-to-day activities of management. In some sense, working hypotheses are diagnostic tools. When a medical doctor is confronted with a sick patient, working hypotheses and evidence (fever, blood count, etc.) are used to make a diagnosis. Detectives use working hypotheses as a guide to solve crimes.

My sense is that managers use crude forms of working hypotheses all the time in the course of their jobs. Working hypotheses would be useful for any problem that falls outside standard operating procedures (in Prince’s terms, outside effective organizational habits). In the fast paced world of public management, working hypotheses are similar to the small questions that direct an investigation (making it controlled inquiry). A manager would benefit from the knowledge of working hypotheses because the theorizing process necessary in controlled inquiry would be more conscious—less in Kaplan’s “twilight region.”
Categories

In many ways, categories are the easiest and most basic conceptual framework for thought. Categories are linked to the descriptive purpose. Kaplan (1964, p. 50) discusses the process of conceptualizing the subject matter.

In this process, the things studied are classified and analyzed. Some things are grouped together and particular things assigned to the several classes to which they belong. Things are grouped together because they resemble one another.

Hickman (1990, p. 127) discusses the "conceptualization" way of grouping. Conceptualist argues that "singular things may be grouped together into classes on the basis of certain of their natural properties." The classes themselves are conceptual, "formed when the mind puts together things that naturally go together, these mentally constructed classes then serve as sorting bins for single things." Conceptualists usually view conceptual classes or kinds as "things in their own right, capable of having certain properties of their own." Dewey's view of categorization is similar to the conceptualist, however, he "located generality in the activity of producing inquiry," in operations performed with a view toward particular inquiries. "Sorting is done on the basis of need to draw certain inferences to solve certain problems to construct or produce instructions that will be effective in the solution of experienced difficulties" (Hickman 1990, p. 129) (italics added). In other words, classification exists to serve a purpose.

Duey (1938, p. 61), the distinctions needed to place "single things" in a sorting bin is common sense. The power to discriminate the factors that are relevant and important in given situations, is the power of discrimination, in a proverbial phrase, it is the "ability to tell a hawk from a handsaw," chalk from cheese, and to bring the discriminations made to bear upon what is to be done and what is to be abstained from, in the ordinary affairs of life.

Kaplan (1964, p. 50) makes a distinction between artificial and natural classification. "Artificial grouping is one which allows the discovery of many more, and more important resemblance's than those originally recognized" (inflections). Kaplan notes that classification by size and weight is "artificial," while classification based on content is "natural." Artificial classification schemes often serve only purposes. The printer and the freight agent have claims as legitimate as the librarian's. The weight of artificial classification schemes, however, limit the uses. The freight agent and printer "stand nearly alone in their interests; the librarian is joined by every reader" (Kaplan 1964, p. 51). Natural classifications have the greatest potential for inference, however, many intelligent, artificial classification schemes such as those used by the printer and freight agent are applicable to day-to-day management activities in the public sector.

Classification is a powerful conceptual tool which is often not seen by practitioners. Raising the student's consciousness about classification as an organizing tool is a major benefit of this approach. Categories are intuitively appealing because
they are easily linked to the familiar "Survey Research." My sense is that a typical practitioner is oblivious to the connection between theory and a questionnaire. Hence, surveys used by governments are often unfocused. Categories as an explicit conceptual tool have considerable applicability because they give questionnaires a conceptual framework, and as a result, coherence.

Many students do at least some survey research. Often the best or only literature available on these topics consists of "expert-opinion." The student's challenge is to take the vast array of opinion and organize it into categories (find and label the bins), through Read-Write-Think-Connect to Experience the purposiveful categories begin to emerge. The more detailed information fits in the categories (items fit in the bins). Often the student can develop questionnaires from the categories, the literature and experience (when they can argue that the literature left something important out). If they can, I prefer they cite a reference for each item in the questionnaire. It is common for the student to submit their questionnaire for agency approval. Interestingly, a questionnaire drafted this way has never been rejected. Students have even been asked to join agency questionnaire review committees.

The results of survey research are often incomparable and thus frustrating to read. This occurs most often when the author discusses the findings item by item. The little picture overshadows the big picture: the trees are in focus, but not the forest. The explicit use of categories to organize the items overcomes this problem. The categories become the subheadings in the results chapter.

It should be noted that categorization is flexible. If it becomes clear that a given "categorical scheme" is incomplete, or incompatible with the research question, the categories should be revised. The sorting bins are given new labels and the materials inside resorted. Categories are a way to organize the "stuff of experience" in order to resolve a problem or answer a "what" question. The categories (labels) do not represent truth.23

The power of this approach is illustrated through Ralph Revelle's (1995) experience. He wanted to describe the state of computer security in Texas county government. He explored the mostly expert-opinion literature and developed a set of categories dealing with computer security issues. The categories were (1) Hardware Security, (2) Software Security, (3) Data Security, (4) Personnel Security, (5) Security Evaluation and Auditing. Each category had 8 to 16 items within it. Unfortunately, he received an extremely disappointing response rate. At first it seemed that his paper was marginal at best. This was until County Commissioners began to read the paper. The coherent organization and nontechnical language made the ARP easy for the elected officials to grasp computer security issues. Ralph's questionnaire was transformed into an assessment tool. Counties could use it as a checklist to evaluate their computer security needs.24 Ralph had transformed his conceptual framework from categories to a practical ideal type.
Practical Ideal Type

I have recently coined the practical ideal type as a conceptual framework. The
four traditional research purposes did not justify to same extent as PA research
problems. Descriptive research is applied easily to coincide, exploratory research
incorporated aspect evaluation, explanatory research was a grab bag which facili-
tated analysis of problems in their early stages. A conceptual framework
expected to address many of the issues raised by formative program evaluation
was missing. When I discovered Peter Municin (1987, p. 131) discussion of Max
Weber and ideal types, things began to fall into place. Weber's ideal type was con-
strued not as truth, but as a way to understand reality. I then added
Understanding the Practical Ideal Type to my list in Figure 1.

Dewey (1938, p. 305) stresses that "ideas...are not intended to be themselves
realized but are means to direct our course toward realization of potentials" as expe-
rienced. Kippan (1964, p. 83) refers to Weber and describes an ideal type as a con-
struct. It "specifies something with which, the real situation of action is compared
and surveyed for the explicitation of certain of its significant components." Penn as
PA perspective, ideals are useful because they provide a point of departure for
policy recommendations.

To oversimplify the ideal, and to disparage the usual because it never copies the
ideal, misses the point.

A value is not a scene but it can enable us to construct scenes which would not exist without it...To ignore or disregard ideal because it cannot be literally translated into reference is to
abnegate one vital role of ideas."As they are," relates Kippan, who seeks to find things"as they
are not" because "all things that are have potential" (Dewey 1938, p. 304).

Practical ideal types can be viewed as standards or points of reference. It should
be noted that this conceptual framework is generally organized by category. Any,
the elements of the idealtype are not rigidly fixed. There is more than one useful
way to revise the "ideal."

In public administration, outcomes can be difficult to measure. As a result,
standards associated with service delivery are often developed as assumptions
mechanicals. Practical ideal types provide benchmarks with which to under-
stand (and improve) reality. For example, accreditation bodies such as
NASPAA use standards to assess master's degree programs. These standards
(aims, regulations) can be viewed as readily made conceptual frameworks (exist-
ing tools). On the other hand, when Ralph Noyelle developed his categories,
he inadvertently constructed a practical ideal type that could be used by indi-
vidual counties to address their specific computer security needs: the
improvised the tools,
The Formal Hypothesis

Explanatory research and the formal hypothesis are the mainstay of social and policy science. The philosophies of science most often associated with empirical, explanatory research are logical empiricism and logical positivism.20 Both incorporate the hypothetico-deductive model. It should be noted that within the scope of explanatory research, there are great overlaps between pragmatism and logical empiricism and logical positivism. Explanatory research addresses the "why" question and uses the formal hypothesis as a conceptual framework. At its most basic, the formal hypothesis takes the form "If X then Y." Dewey (1938, p. 381) maintains that a hypothesis is concerned with what is possible. "A proposition regarding possible is indispensable a inquiry that has scientific standing. The hypothesis is formulated in an abstract if-then proposition." The primary meaning of a hypothesis is derived from its "position and force in common sense situations of use-equality." (Dewey 1938, p. 425). The emphasis on use-enjoyment and common sense are factors that distinguish pragmatism as a philosophy of science.

Although explanation and causation are clearly different, for purposes of management and policy research, explanation approaches causation (it answers the "why" question). One might rewrite the above hypothesis as "X causes Y." Instead of viewing a means-end continuum commonly associated with causation, Dewey (1938, p. 460) envisions a means-consequence continuum. "Propositions that deal explicitly with subject-matters that are connected with one another as means to consequences have a claim to be called causal propositions in a distinctive sense (italic added)."

Students are often confused about hypotheses because they lack academic experience with hypothesis is in a statistics class when they learn about the conventional null hypothesis. As a result, the importance of the research-hypothesis and role of the conceptual framework as a method of organizing data to address a "problematic situation" is obscured.

Although relatively few of my students use an explanatory framework in their AHP, I discuss formal hypotheses extensively in the course. The major points of the lecture are reviewed through class activities which require the dissection of journal articles that use formal hypotheses. My teaching objective is to get students to see formal hypotheses as the organizing engine that drives explanatory research. To do this, the students must see two hypotheses. One is associated with the abstract theory, the other is operationalized or interpreted. "An adequate empirical interpretation turns a theoretical system into a testable theory. The hypothesis whose constituent terms have been interpreted becomes capable of test by reference to observable phenomena." (Temple 1952, p. 35). Students have trouble distinguishing between the theoretical hypothesis and the interpreted hypothesis. This is a problem
A floating system, anchored by “interpreted” strings. No wonder the typical, concrete MPA student has trouble making these distinctions. Once the student can define these distinctions, the mediating role of the hypothesis (between the abstract and the observable) becomes clearer. According to Dewey (1958, p. 381), “An hypothesis concerns what is possible, and it thus formulates a role and method of experimental observation.” Dewey's rule and method of experimental observation are equivalent to the ship’s “sailing anchors.” Using more familiar language, the interpreted (vs operationalized) hypothesis includes independent and dependent variables. Generally independent and dependent variables are measured quantitatively. Hence, quantitative measures are collected as evidence to test the interpreted hypothesis. Issues of sampling, probability and generalizability arise. Inferential statistics become the quantitative method most often used to test the hypothesis. The null hypothesis is placed in proper perspective.

All effective conceptual frameworks perform this mediating role. I use existing explanatory research to illustrate this point. Later I extend the insights from explanation to research which use different purposes.

From a PA perspective, explanatory research is important because all impact oriented program evaluation is explanatory. All impact program evaluations use formal hypotheses. In its most general form the underlying hypothesis for all outcome oriented program evaluation is, “If program X then outcome Y.” In this causal (vs explanatory) risk were not anticipated then what is the justification for the program in the first place? Clearly, experimental and quasi-experimental design are just different ways of testing the formal hypothesis, “If X then Y.” The context and availability of data dictate, for example, whether a “pre-test, post-test control group” or a “post-test only comparison group” design is used. The dependent variable is always an outcome measure. The threats to internal validity commonly associated with impact evaluation research are more easily understood when the underlying hypothesis is seen.

Models

Since the use of models is extremely rare among my students, I spend very little class time on this conceptual framework. I view models in more complex formal hypotheses. For example, a problem which would require multiple hypotheses and use an extensive multivariate framework would be classified here as a model. The principles of formal hypotheses all apply. The hypotheses and corresponding
methodology, however, are vastly more complex. My sense is that when models are used as conceptual frameworks, there is often a blending of the micro and macro conceptual framework. If POSI 5304b were taught at the Ph.D. level, models would appear more prominently in the discussion. I also include analytic techniques such as cost-benefit analysis and cost-effectiveness analysis in models. These complex techniques are predictive by nature. They predict the most efficient alternative. In addition, they have their roots in highly developed "mess" conceptual frameworks.

It should be noted that in practice, Applied Research Projects often have more than one purpose. Almost half of the APAP incorporate exploration or description along with another purpose, most commonly description (Almgren 1997, p. 43). Hence, the papers themselves are not rigidly bound by a single purpose or conceptual framework.

CONCLUSION

This chapter uses pragmatism as a philosophy of science to address current issues in public administration research. Two tools of inquiry are introduced. One tool, "The Notebook Method," is designed to enhance the first stages of inquiry. Ideally, the class, (Read-Write-Think-Connect to Experience) in conjunction with the notebook stimulates the transformations needed for pragmatic inquiry. The second tool, a "conceptual/abstract," five different conceptual frameworks are developed as instruments to organize empirical inquiry.

My sense is that conceptual frameworks, like working hypotheses, categories, and the potential ideal have great applicability to the day-to-day management problems of practitioners. They are also well suited to a three-credit senior's level capstone project. Most formal research, methods courses implicitly assume "explanatory" research as they develop topics such as sampling, survey design, content analysis, experimental design, multivariate statistics. By ignoring exploration, description and understanding as well as the conceptual frameworks that support them, these texts leave out important connections to day-to-day management. Managers are not given a chance to see how theory can help them to get organized to address a "problematic situation."

Practitioners must learn through their experience. Probably, few practitioners consciously use the approach to inquiry that matches the pragmatic philosophy of science. By raising practitioner-consciousness research in PA may have its most profound influence on the way practitioners newly "learn" within their experience. The philosophy of pragmatism enables practitioners to employ some of the tools (making and doing) of inquiry, as they sort out experience and act.
APPENDIX A
The Notebook Method of Writing Papers
Paul 5304b
Patricia M. Shields

The notebook method is a method to write papers. With it, you can organize information and see short periods of time effectively. It facilitates analysis and integration of the readings. Students who use this method swear by it. Also, the method is an excellent organizing tool and can be adapted to work or job related projects.

Use of this method is a requirement. Bring the notebook to each class. Ten to 15 minutes of each class will be spent discussing your progress.

1. Buy a three ring notebook. Pockets at the sides are helpful. In this notebook, you will keep most information relevant to your paper. For example, keep this handout in the notebook. There are a few essential items which must be included in the notebook when you hand it in. These items are starred (*).

2. In the front, keep a "things to do" list. Include all tasks you need to complete. Try and make that the items on the list take different amounts of time. For example, one task, such as reading a short article might take 15 minutes. Another task, such as finding 5 articles, might take an hour and a half. The list should include the articles to read and write up. Date the item when the item is completed.

3. Keep a list of the articles you wish to read. Many of the articles will be located throughout standard bibliographical tools in the library and from footnotes in other references.

4. Keep any relevant phone numbers, e-mail addresses, addresses or dates (personal timelines). Keep items referred to often.

5. Keep a running bibliography. If you are using a computer, keep it on disk. If you do not have access to a computer, put the references on index cards. Use the Thesaurus. The cards are easily alphabetized later.

6. Keep your notes on the articles in another section of the notebook. These notes can be written by hand or on the computer. In either case, use the format attached. Key information on the notes include the authors last name, the year, the page and when quoted indicate through quotation marks. The notes must be placed in your notebook in alphabetical order by author's last name.

7. Make at least two outlines of your paper. Begin the outline with a brainstorming list. What ideas, facts, critical points, concepts, hypotheses, do you want to include in the paper? Let your mind be free. Be creative. Then,
review the list. Write a sentence or two which indicates the purpose of the paper. Review the list in light of the purpose. Adjust the list to take into account your purpose. You are now ready to begin the first draft of your outline (major headings). A pattern should emerge from the list. There will be natural groupings of topics. The first and last major headings are obvious; Introduction which includes the paper’s question or purpose and Conclusion or Summary. The other major headings will be developed from the groupings in your brainstorming list. Try and come up with a broad category that will describe the groupings. You now have the first draft of your outline. The second draft is more detailed. Leave plenty of room between items on the outline. You are getting ready for the next step in the process.

Now a review of the major steps in the outlining process.

a. Brainstorm list (You may keep a list as you go along.)
b. Statement of purpose. I want to see this in the paper.
c. Find the natural groupings in the list. What fits together, what is the level of detail.
d. Start your outline, include only the major headings. A 20 to 25 page paper should include no more that five to eight major headings including the introduction and conclusion.
e. Second draft of outline. Lots more detail. Take items from the brainstorm list to form subheadings within the larger groupings.
f. Leave lots of space between sections in the outline.

Go to the beginning of the alphabetized references that are in another section of the notebook. Start with the first article, review the notes and place the relevant information from the reference in the outline in the space provided. The relevant information might be a key word or a phrase but always includes the author’s name and page. Proceed to the next article until all reference material is incorporated into the outline. This stage is critical. It is important to be flexible. Going through the references you may discover that a topic has been omitted from the outline. Here you are free to amend the outline to accommodate any new insights. Also many of the references will be useful in more than one section of the outline. This helps to create a well integrated paper. You are now ready to write. The outline headings can be used for headings in the paper.

Don’t forget your paper must have a purpose. The paper will evaluated in light of the purpose.

Example of how to write up an article
CHARLES LEVINE PAR 1986
"THE FEDERAL GOVERNMENT IN THE YEAR 2000: ADMINISTRATIVE LEGACIES OF THE REAGAN YEARS"

Three aspects of the Reagan legacy on the Admin state (1) the role and reach of Gov in Am's mixed econ (2) the organization and inner apparatus that is used to carry out gov's role (3) the role of gov employees—career civil servants and political appointees—in the policy process

3 dimensions of admin state (1) what gov shd do? (2) How shd it shd do it? (3) Who shd do it? There have been few major policy changes over the Reagan Admin yrs because our system is cumbersome and complicated

although the actual policies have changed only marginally the huge deficit and Reagan conservative philosophy result in the second leg- acy of the Reagan yrs: dictates through the deficit, it has changed the dialogue surrounding gov from one of debating additions to the scope of gov activities to a focus on how to maintain the functions and find the programs that gov has already assumed. See the arms control as a long shot way to take pressure off the fed budget and hence the overall budget

A.A. 3rd legacy of the Reagan yrs perhaps the one that will have the most lasting effect has been to legitimize debate over the tools and techniques of policy implementation, dependence on third-party providers... By insisting on greater reliance on contracting-out gov responsibility to private sector service provider, the use of user fees for gov ser, and other alternative delivery mechanisms, the Reagan admin has accustomed the public to the fed gov direct provision of services.

Levine, Charles. "The Federal Government in the Year 2000: Administrative Legacies of the Reagan Years." Public Administration Review 46 (May/Jun 1986): 195-206. (This is the source—it is NOT necessary to include for your assignment.)

ACKNOWLEDGMENTS

I would like to acknowledge the encouragement and insights of current and former students such as Ann Al быrgard, Kevin Baum, Jane McPeeland, Steve Fink, Rebecca Sher, and Lane Haffry. I was lucky enough to have many useful comments from colleagues the late Tom Parlow, Hal Rainey, John Sampet, Reagan Leslie, Jr., and Hassan Tajirli. Phil- osophers such as Vince Blugis, Audrey McKirnay and Larry Hinich also read and commented on earlier drafts. Finally, I want to thank my husband, George Gloor, and my Administrative Assistant, Nancy Warren for their help and lots of assistance with technical details.
NOTES

1. For more information on the course see Shields, (1995a).

2. This class is also taught by other instructors.

3. For obvious reasons, there generally used a variation on the question such as, "What is he/she going to here anyway?"

4. Theorists of these philosophies often use as well as derive from one another. Overall, Poine is characterized as an evolutionary reval; James as a natural scientist; Dewey as a progressive historian; and Johnson as an experimental scientist.

5. Poine is described as an evolutionary reval because he maintained that both continuity and evolutionary change are necessary to his democratic experiment. The commitment to continuously undermine his reality. As the semester, he is the goal of change and spontaneity in experience. James's very different perspective, known as radical empiricism, focused on immediate experience. Dewey is described as a progressive internationalist because while Dewey did not view progress as inevitable, he did believe that responsible men and women could work together to create productive problem situations in ways that would lead them to wisdom (Dewey 1930). Jane Addams contributed to pragmatism through her writing and work in the Settlement Movement. She is characterized as an experimental progressive because, at Hull House, she worked for progressive reform using an experimental method. "The Settlement was an experimental effort to aid in the solution of the social and individ- ual problems which are engendered by the modern conditions of life in a great city." (Addams 1913, p. 125). Adams in particularly good in her Social Administration because she was a practical administrator who subjected a social problem to the test of a planned experience.

6. This is not obvious when examining their role of work (psychology). In a footnote to the Theory of Inquiry (1934, p. 342) Dewey says that in his opinion Poine's difficulties latter cited in the "true definition of minds". Such a role ultimate such as fixed. However, he arrived at even more time through continuous inquiry. It is the question which he is to be ultimately aligned to by all who irrelevantly with what they were by itself. (Dewey 1934, p. 28). Hence, in any one time, truth could be precognitive. Yet, it is not sufficed another time as a communal continuous inquiry.

7. Poine's epistemology referred from his view that such would be based from time to continuous inquiry. "Science, everything "which will be thought to exist in its final opinion in reality" (Dewey 1934, p. 825). Dewey incorporated continuous inquiry into his definition of metaphysics. He also included a necessary for nature's "generic walk" which are grounded in the "principle of continuity and oped intelligences" (Dewey 1910, p. 213).

8. The study group included William James, Charles Wright, Oliver Wendell Holmes, among others. It is known as Poine's study, (Fehrenbacher 1956).

9. In addition, Benjamin Poine (father of Charles) was the Superintendent of the United States Census Survey.

10. The global positioning satellites of today help emergency vehicles during disasters much the same way could maps helped nineteenth century ship captains find their way.

11. First, a community depends heavily on agreement to do their work; second, the results of their efforts are instrumental to other objectives (e.g., ensuring that ships were not damaged during dangerous storms).

12. It also may explain some of the goodwill that are inherent in academic departments—particularly political science departments and social science in general.

13. Dewey's most major innovation of new inquiry as an element of scientific progress.

14. As sciences, public atmospheres are often involved in agenda setting. At the minimum distances between agenda holders and legislators will shape the agenda. Thaddeus Kenneth H. Alworth for this insight.

15. The National Association of Schools of Public Affairs and Administration (NASPA) via the accrediting body for the leading institutions for the training of professionals in Public administration (1986). program, it should be noted that NASPA differs from these standards. From the excellence ASPA, however, generally holds more time that one particular to complete.
14. For a comprehensive analysis of the SNT, Applied Research Project between 1982 and 1985 and Ahmed (1993). The second reader for Amo's paper was the Dean of the SNT's Graduate School. The paper and final defense, regarding Dean Whipple's Final Report. That paper was also an outcome of an administrative issue.

15. Many thanks to Kay Hopkins; the late Frank Picchi and Cynthia O'Shaughnessy for their encouragement.

16. The class meets weekly in 15-20 hour blocks.

17. Students with higher grades also receive the most helpful notebooks. It is possible that notebook quality may affect student ability and willingness to work. It should be noted, however, that student ratings of the best papers mostly tally with the evaluations of the notebooks.

18. A classical dating the ideas in the expert system research is used.

19. Another issue that is discussed when the student is defining their topic is the nature of the assignment. The AP is a three-credit course. Thus, the students are asked to tackle serious problems that cannot be addressed within a semester. This constraint often makes the research question.

20. This is the number of proposed themes. These ideas are introduced in this 1987 theoretical article, "The Fixation Of Beliefs" (Foucault 1978).

21. Notice some of the critical Common-sense.

22. Both Dewey and James spent much of their career's trying to make sense of EXPERIENCE. James' Psycholgy (1890) is considered such a contribution because of the way in the experience. For example, consider the end of his career (James 1912) and the Meaning of Religious Experience. Dewey never wrote a book with the term "experience" in the title, Experience and Nature (1929), uses Experience (1958), and Experience and Education (1938).

23. In Experience and Nature, Dewey (1932, p. 421) defines experience by pointing out that it is involved in the understandings of nature. "It reflects the truth of nature; it gives unmistakable evidence that in nature itself qualities and relations, individuality and uniformity, faculties and efficiencies, capacities and necessities are instinctively bound together. The hard necessities and the happy coincidences of this cooperation make experience what it essentially is, the man's acquaintance with divine, fierce, heroic, elusive, exacting, and imposing, liability for the cause which is made. When those complete harmony in nature, life would be spontaneous effectiveness. If disunity were not in both man and nature, if it were not between them, man would be the endless work of nature, or in the question opposed subject. It is precisely the peculiarity of human reason that men have the cooperation of the many in nature which constitutes experience."


25. Before Karl Popper's 1934 "Logic" I avoided the term "experiment" with "experimental design." Karl Popper's discussion illustrated my vision to include the "experimental method.

26. I am referring to "logic" broadly. It also includes the political arena that correspond to their agencies.

27. Other meta theories common in Public Administration include: decision making theories, rationalization, normative, comprehensive, multiple activities, bureaucraticorganization theory, various federal theories, various legal theories, and representational theories, for example: see, Altheide (1993), Lomax (1972), and Horner (1983)

28. From a personal perspective, I have spent so much effort in the last few years trying to clarify the document's defined conceptual framework that I have often ignored the connections in the happy notes.

29. A well-defined conceptual framework makes my job easier. It takes less "mental energy" to be constant or I suppose in many as 1-4 APs is a constant.

30. In military context, APs are one of my favorites. It is also what I was called at her computer in May 1966. The computer came from the sixties.