

# Theoretical and philosophical considerations in the realm of the Social Sciences for Public Administration and Management emerging researchers

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First received 29/07/14

Accepted for publication 16/10/14

## **ABSTRACT**

This article aims to provide a conceptual and theoretical analysis of the main theoretical and philosophical perspectives in social science research for researchers doing research in the disciplinary fields of public administration, management and governance. The purpose is to provide clarity for researchers' own beliefs of how social reality should be viewed to gain the most truthful results and thus, to develop their own ontology. This will enable researchers to have a clear understanding of which research perspective would be appropriate when designing their research in order to develop their own epistemology.

The article attempts to clarify what research is and more specifically the relationship between research theories and the empirical world. The conditions necessary for scientific research and the most important concepts (building blocks) of social science research are explained. The difference between ordinary everyday knowledge and information, social science theory, scientific knowledge and the use of the scientific method receive attention. The dimensions of social science research are distinguished in terms of the sociological, teleological, ontological,

methodological and axiological dimensions as well as on the disciplinary, practical and project levels. The importance of systematic data gathering by meeting specific criteria of the scientific method is emphasised. The keys necessary to unlock the scientific world and to gain an understanding of the importance of scientific knowledge and reasoning as opposed to how knowledge and information are commonly used, is presented.

## INTRODUCTION

The notion of ‘the social world’ is not unproblematic and many twentieth century debates in social science philosophy were devoted to discussions between various schools of thought (positivism, phenomenology, hermeneutics, critical theory and post-modernism) about their interpretations of this term (Auriacombe 2008). Many of these debates arose because of the recognition that ‘the social world’ – the world of human beings and their actions – is fundamentally different from the natural and material world. The social world is a world constituted through human meanings and signification, is inherently context-specific, historical, and comprises various open social systems that are complex and indeterminate. All of these dimensions of the social world pose great challenges to the social researcher, not the least in terms of methodological considerations (Auriacombe 2007 and Auriacombe 2008).

For the purpose of this article ‘research’ will refer to the process in which scientific methods are applied in order to discover and increase scientific knowledge in public administration (Auriacombe 2007 and Auriacombe 2008). The scientific nature of research in the public sector derives from the fact that to improve public administration or management a public official must be knowledgeable about research theories. He/she should be proficient in research methodology, analysing and implementing research findings in practice and be able to provide an adequate report of his/her research (Auriacombe 2005 and Auriacombe 2008). The public official should be sufficiently skilled and well acquainted with the methods and techniques of both quantitative and qualitative research. He/she should be able to follow a chosen philosophical perspective and apply appropriate data collection and analysis methods and techniques rigorously (Auriacombe 2013).

To achieve all this it is important to lay a **firm foundation for understanding the nature of social science research** and to gain knowledge of the **key concepts** of social research, to understand the relationship between theory and research, to be able to apply the scientific method of systematic observation

and logical thinking and to learn about the dimensions of social research and the different types of research (Auriacombe 2005).

This article is designed to enhance the researcher's analytical abilities, critical focus and independent insight into social science research in the field of public administration. Secondly in order to provide an understanding of the philosophy of social research this article particularly looked into the different dimensions of social research. It is clear from the above that there are different ways of thinking about social science research which involves different research dimensions. Researchers must realise that by becoming part of the scientific community they should adhere to specific ethical standards reflecting the goals and values of that community (Auriacombe 2007 and Auriacombe 2013).

## **UNDERSTANDING KEY CONCEPTS OF SOCIAL SCIENCE RESEARCH**

Before explaining the nature of social science research, we need to have a broader understanding of the difference between information and knowledge and scientific knowledge (Auriacombe 2008:67).

Information may be defined as accessible facts/data (Auriacombe 2008) and "knowledge derives from the coherent organisation and interpretation of information within a system of ideas (explanatory/theoretical frameworks)" (Auriacombe 2008:67). Non-scientific knowledge can be described as the knowledge of lay-people or knowledge that is accepted without much question of authority, the opinions of peers or tradition of debate. According to Auriacombe (2007) the following are possible sources of non-scientific knowledge:

- Often something is accepted because it derives from some authoritative person regardless of their scientific credibility. The scientific approach assumes that knowledge is accepted, not merely on the basis of it being espoused or propounded by some so-called expert, but rather on the basis that its evidence has been examined (Auriacombe 2007).
- Often the opinions of peers rather than proven expertise are sought. Consider for example, the public official who prefers to support statements and behaviour patterns of a colleague on the basis that they belong to the same political party, social club or religious organisation, rather than that of an established specialist in the field (Auriacombe 2007).
- Objective scientific knowledge balks at knowledge accepted on the basis of traditions which people hold. Such traditions often stand in the way of objectivity and are prone to endorse unfounded stereotypes. For example, anecdotal evidence has it that many employees at a particular South African

university would rather take orders from a junior worker than the rector of the institution simply because this junior employee was a chief in their village (Auriacombe 2007 and 2013).

- Often attempts are made to acquire or disseminate knowledge and insight on the basis of argument. The more convincing the debater, the more logical the argument, the more readily acceptable the presentation of knowledge tends to be. The latter method appeals to the intellect and/or emotions and is not necessarily based on experience and fact. Evidence of this kind of knowledge is often found in political discourse in which frequently diametrically opposed stances are assumed and defended by opposing parties simply based on intellectual and emotional affiliation (Auriacombe 2007 and 2013).

## **Scientific knowledge**

Auriacombe states (2009) that one way of improving our understanding of scientific knowledge is to list some of its key features:

- Science is based on the collective, validated experiences of the members of the scientific community rather than on the individual experiences and observations of any single person (Auriacombe 2008 and Auriacombe 2009).
- Scientific knowledge is the outcome of rigorous, methodical and systematic inquiry, as opposed to the haphazard way in which ordinary knowledge is acquired (Auriacombe 2009).
- Science rejects the value and importance of any personal authority; the only 'authority' that is accepted is the authority of the evidence (Auriacombe 2009).
- Science is not based on taking second-hand sources at face value but is inherently skeptical. It questions all claims, irrespective of the authority and origin, until they have been tested and, furthermore, stood the test of time! (Auriacombe 2008).

These four statements emphasise that scientific knowledge is inherently collaborative in nature; is based on rigorous and methodical inquiry; is evidence based (not authority-based) and inherently sceptical because it treats all knowledge claims to be 'provisional' (as opposed to absolute) (Auriacombe 2013).

Social scientists, as opposed to natural and health scientists, conduct research in order to seek answers and understand (aspects of) the social world. The social world comprises social (in its broadest sense) beings (humans); institutions and organisations; actions and events; interventions (such as policies and programmes) as well as all cultural products of human endeavour (Auriacombe 2013).

Scientific knowledge seeks to be critical, considering any and every piece of “evidence” with circumspection before accepting it as knowledge. At least three character traits are evident in scientific knowledge, namely, systematic observation, control and replication (Auriacombe 2013).

Scientific knowledge is obtained by **systematic** rather than selective observation. The latter type of observation tends to collect only evidence that supports predetermined conclusions, ignoring conflicting evidence. Consider, for example, solutions to social problems that might be ignored by the powers-that-be on the basis that they were proposed by opposition parties (*cf.* Mouton, Auriacombe and Lutabingwa 2006).

Scientific knowledge must be obtained in a **controlled** manner, i.e., by systematic consideration and the careful elimination of alternative explanations. The manner and processes by which knowledge is obtained must be **replicable**. This simply means that, should other researchers utilise the same methods and procedures under other, but similar, circumstances and independently of the original researchers, the same results should be obtained. Scientific knowledge, hence, should be open to scrutiny and critical evaluation (*cf.* Mouton, Auriacombe and Lutabingwa 2006).

## Scientific method

Scientific method is a term that refers to the procedures followed by researchers in arriving at conclusions. The mental processes through which decisions are reached determine to a large extent the accuracy of the conclusions made. Facts are essential materials in thinking but must be handled scientifically so as to reach accurate conclusions. The scientific method therefore has to follow a logical process of reasoning (Auriacombe 2009).

To obtain knowledge of the scientific method, the following aspects of this reasoning process could be identified: Logic, deductive, inductive and abductive logic and cause and effect (Auriacombe 2008).

## Logic

Logic is the process of using an argument to arrive at a conclusion. In academic research it is frequently used to demonstrate cause and effect (if x...then y). “Logical argumentation or reasoning comprises a number of assertions (untested statements) leading to a conclusion” (Auriacombe 2008). If the assertions/propositions can be proved to be true, they are sound statements, and the argument is said to be valid (true) and the information credible. If the assertions are not sound, then the argument is said to be false (invalid). For an argument to be valid: each piece of evidence in each statement should be correct; the

statements should relate to each other; and the conclusion should flow from the statements (Auriacombe 2008).

## **Deductive logic**

Logical reasoning is mostly used in quantitative research and takes place by means of a process of deduction proceeding from the general to the particular. A broad general statement or hypothesis is made at the start of the research process. The researcher then sets out to find supporting evidence (information) that will prove the statement true (valid). The conclusion is based on describing or explaining a relationship between independent and dependent variables (Creswell 2009:57). It is logically impossible for the conclusion to be false if the premise is true. "Additional evidence will not strengthen the argument, it is complete thus given the evidence, the conclusion is certain" (Auriacombe 2008:102).

## **Inductive logic**

Inductive reasoning is used in qualitative research and "attempts to proceed from the particular to the general. It is more speculative and may be more creative, than deduction" (Auriacombe 2008). One or more related research questions are formulated, followed by data gathering, analysis and interpretation leading to the development of models or theories explaining the phenomenon under study. This type of logic "may support, falsify or expand existing theory, or even establish a new theory" (Creswell 2009:63). Additional supporting evidence may strengthen the conclusion (but will still not necessarily prove it beyond doubt). According to Auriacombe (2009) conclusions must be confined to statements that are fully substantiated by a rigorous research process and the findings.

Four conditions are needed for research using inductive logic:

- Observation must be rigorously performed and recorded.
- Data studied must be accurate and must be collected from the universe in which the researcher is interested.
- Observations must cover representative cases.
- Observations must cover a sufficient number of cases (Auriacombe 2008:112).

## **Abductive logic**

Abductive reasoning uses both deductive and inductive logic. Deductive reasoning is used to describe or explain how and why independent and dependent variables are related. Inductive reasoning is used to test, expand or

develop new theories. This type of logic is used in theory development and studies following a mixed method design (Auriacombe 2013).

## Cause and effect

It is almost impossible to understand logical thinking without using the concept causal thinking and relationships. Causal thinking comes naturally to the scientific method used in research. A basis for reasoning in social science research using deductive logic is setting a hypothesis. "Hypotheses represent informed 'suppositions' made relating to the topic, which are still to be verified or proved wrong by means of logical testing as well as analyses of data and information" (Auriacombe 2001:48). Hypotheses are thus tentative answers to research questions (problems).

"Personal experience leads one to believe that all events are the products or results of other events, which are referred to as their causes" (Auriacombe 2001:48). "The danger is that true cause and effect relationship may be completely reversed in the thinking of a researcher" (Auriacombe 2001:50–51). Therefore it is important to recognise the differences between basic and secondary causes:

- Basic causes: These are the deeper, more fundamental reasons for a condition. They are the 'original' causes of a condition.
- Secondary causes: These are causes resulting from basic causes.

The following conditions are seen as necessary for establishing correct cause and effect relationships:

- Be certain that the assumed cause and effect actually exist. Much wasted time and effort can be saved if this rule is applied.
- Consider carefully whether one known condition is a cause or an effect of a second known condition. Do not move too quickly from the hypothesis, or by stating an opening premise to the conclusion.
- Consider carefully whether one known condition is a cause or an effect of some unknown condition.
- Distinguish correctly between basic and secondary causes (Auriacombe 2001:51)

According to Travers (1967:41–44) "Some scientists prefer to state that they are seeking to establish systems of functional relationships rather than causal relationships. Hence the reader will see that the term functional relationship refers to a situation in which is described a relationship that is not directly causal but is based on a complex system of interactions".

The next step to understand the theory of research with ease is to move deeper into explaining what lies behind scientific reasoning. Why some researchers believe

that human behaviour should be explained from the outside (etic) by means of objective observation through the use of general scientific laws (“erklaren”) and others that human behaviour should be understood from an insider’s point of view (emic) by gaining insight into the meaning (“verstehen”) that the subject gives to his/her life world (Weber in Auriacombe 2014 and Schurink 2009).

## **SOCIAL SCIENCE RESEARCH AND THEORY**

To enhance our understanding of the concept “social science research” it is necessary that we firstly consider the relationship between theory and the empirical world.

### **The relationship between theory and research**

The term theory could be defined as “... an explanation of observed regularities” (Bryman and Bell 2003:7). “A theory explains how and why the variables are related, acting as a bridge between or among the variables. Theory may be broad or narrow in scope, and researchers state their theories in several ways such as a series of hypotheses, if-then logic statements or visual models” (Creswell 2009:51).

More specifically a theory is an interrelated set of definitions/concepts/constructs/propositions/hypotheses presenting a systematic analysis of a phenomenon (e.g. unemployment, democracy) by exploring, describing, explaining or predicting it.

Popper (1972) developed a useful framework, namely the Three Worlds Framework, to explain the concepts of non-scientific and scientific knowledge as well as theory and research. For Mouton (2004:138) also, the logic of research is based in three realms, namely the world of everyday life and lay knowledge or World 1, the world of science and scientific research or World 2 and the realm of meta-science or World 3 (Mouton 2004:138).

**World 1** is the world of social and physical reality made up of social problems such as poor services, crime, unemployment, etc. Using the logic of World 1 (Mouton in Auriacombe 2011:46) researchers are required to focus on applied research. Applied research is problem-oriented. It aims to understand, explore, describe and explain real life problems in order to address these problems. The “...type of research that one will be doing from a World 1 perspective will mostly inform, among other things, programme development, policy-making, policy execution and decision-making”(Donaldson, Christie and Mark 2009:3).

In **World 2** the researcher brings in existing knowledge of the world of science and writings of other scholars. The emphasis is “... on basic research that is not necessarily problem-oriented but seeks an extension of scientific knowledge” (Mouton in Auriacombe 2011:46). In such research the emphasis is on the literature,



existing concepts and theories. Researchers focusing on constructing theories and models, analysing concepts or reviewing the body of scientific knowledge are doing basic research in the realm of World 2 (Mouton in Auriacombe 2011:46).

**World 3** is the realm of meta-science where through a process of cognitive logical scientific reasoning; concepts, typologies, models or theories are developed. The representations of the reality of World 1 and the existing knowledge of World 2 are thus conceptualised and critically analysed to transform the data gathered into knowledge that could contribute to scientific knowledge and the solving of everyday problems (Rossman and Rallis 2012:6-7).

**Table 1: Non-scientific and scientific knowledge**

WORLD 1 OBJECTS	WORLD 2 OBJECTS
Physical objects (matter)	Scientific concepts or notions
Biological organisms (living organisms) and processes	Scientific theories and models
Human beings (individuals or groups)	Scientific methods and techniques
Human actions and historical events	The body of scientific knowledge or literature
Social interventions (programmes or systems)	Scientific data
Cultural objects (art or literature) and technology	Schools of thought, philosophies or world-views
Social organisations (political parties or clubs) and institutions (schools, banks or companies)	Scientific theories
Collectives (countries, nations or cities)	Indicators

Source: (Adapted from Popper 1972 and Auriacombe 2008:80).

Listing the most typical entities or units of analysis in World 1 (the non-scientific world) and World 2 (the world presenting scientific knowledge) could further help researchers to understand the logic of research. In its broadest terms social science research can be defined as a systematic process of inquiry aimed at obtaining accurate answers to significant and pertinent questions in order to increase the sum of human knowledge (*cf.* Mouton in Auriacombe 2009).

## THE DIMENSIONS OF SOCIAL SCIENCE RESEARCH

The following dimensions of social science research can be distinguished.

## The sociological dimension

The sociological dimension where the emphasis is on the fact that researchers operate within a scientific community which adheres to specific mechanisms of control, such as ethical standards, reflecting the goals and values of research communities.

## The teleological dimension

The **teleological dimension** of social research refers to the goal driven nature of social science (Auriacombe 2011).

## The ontological dimension

"Ontology implies the study of being or reality" (Mouton 1996:11). The ontological dimension of social research therefore refers to the researcher's view regarding the nature of reality (Mouton 1996:11). From the ontological dimension arises the following questions: "to what extent do people have a say in their social world"? (Mouton 1996:11). And should the researcher take an objective or subjective position?

The answer lies in the three basic ontological/theoretical perceptions namely that of the objectivist, nominalist or interpretivist and the pragmatist or realist. The **objectivist** sees the social world in an objective manner, believing that "...the researcher should maintain a detached, objective position" (Mouton 1996:11). **Nominalists** view reality subjectively as "...social constructions built up from the perceptions and actions of social actors" (Mouton 1996:11) and therefore believe that reality can only be constructed. **Pragmatists** are "...not committed to any one system of philosophy" (Mouton 1996:11) (realist or nominalist). They hold an advocacy and participatory world view and have a perspective of historical realism believing that social reality is real but is shaped by social political and cultural factors. Reality is interpreted, and negotiated and is based on an, abductive logic using both a deductive and inductive form of reasoning (Creswell 2009:6).

## Epistemology

"Epistemology refers to the nature of knowing and construction of knowledge and is divided into positivist, anti-positivist and realist stances (Schwandt 2007:87).

**Positivists** study the parts to understand the whole; look for regularities and causal relationships to understand and predict the social world (Bryman

1984 and Schurink and Schurink Internet Source); believe that only phenomena or knowledge confirmed by people's senses can be regarded as knowledge (Bryman 1984 and Schurink and Schurink Internet Source); and believe that science needs to be conducted value-free, i.e. objectively (Bryman 1984 and Schurink and Schurink Internet Source).

**Anti-positivists/interpretivists** emphasise the fact that social reality is viewed and interpreted by the individual according to his/her ideological position; believe that knowledge is personally experienced rather than acquired from or imposed from outside; believe that the knower and known are interdependent and social science is essentially subjective; see reality as multi-layered and complex (Creswell 2009:5) and believe that a single phenomenon has multiple interpretations.

**Realists** hold both objective and subjective points of view; focus on the problem and accept the need for both qualitative and quantitative research to understand it; believe that the research question is more important than both the method and paradigm underlying the method; regard the role of ideology as critical and place the emphasis on change and empowerment of marginalised individuals (Auriacombe 2009).

There exists alternative answers to each foundational question. Different beliefs of ontology, meaning how a researcher sees reality, and epistemology, that is, how a researcher thinks social phenomena could be studied; will influence the way that a researcher will go about doing the research (Creswell 2009:5). The same phenomenon could thus be investigated, analysed and interpreted differently depending on the researcher's belief of what social reality is (ontology) and how social phenomena can be known (epistemology) (Punch 2006:31).

## The methodological dimension

These are assumptions about the **process of research**. There are three basic methodological dimensions (Mouton in Auriacombe 2009) namely:

- Nomothetic where "methodology focuses on an examination of regularities and relationships to universal laws as in Positivism and a quantitative research approach" (Mouton 1996:12).
- "Ideographic approaches that center on reasons why individuals create and interpret their world in a particular way. The social world can only be understood by obtaining first-hand knowledge of the subject and understanding his/her innermost experiences as in Interpretivism and a qualitative research approach" (Mouton 1996:12).
- Pragmatic, using both nomothetic and ideographic assumptions (mixed methods) as in realism and a mixed-method approach (Mouton 1996:12).

## The axiological dimension

Axiology refers to the researcher's beliefs regarding the role of values, ethics and power in generating knowledge. Positivists argue for a science that is value free, is objective and adhering to systematic observation and upholding scientific norms and values. For anti-positivists/interpretivists inquiry is value-bound and researchers reflect on and analyse values as part of the research process (Auriacombe 2009).

For realists values play a major role in interpreting results and values and human action and interaction precede the search for description, theory, explanation, and narrative. They intentionally try to address ideology, values and issues of power (Mouton 1996).

Table 2 is presented to provide a better understanding of the three broad research approaches namely positivism, interpretivism and realism.

**Table 2: Different dimensions of research from a philosophical point of view**

	<b>Logical Positivism (Objectivism; Empiricism)</b>	<b>Pragmatism, Realism</b>	<b>Constructivism (Interpretive; Naturalism)</b>
<b>Logic</b>	Deductive (arguing from the general to the particular; emphasis on a priori hypothesis (or theory).	Deductive and Inductive	Inductive (arguing from the particular to the general)
<b>Ontology</b> (nature of reality)	Naive realism—objective, external reality.  There is a single reality.  Things in the world can be known directly.	Choose explanations that best produce desired outcomes. Accept external reality independent of the human mind.  Reality is interpreted, and negotiated, consensual.	Subjective point of view.  Ontological relativism—multiple social realities, products of human intellects, exist and may change as those who constructed them change.  There are only multiple constructed realities.  The real world could be discovered by means of a systematic, interactive methodological approach.  Reality is internal; truth depends on the knower's frame of reference.

	<b>Logical Positivism (Objectivism; Empiricism)</b>	<b>Pragmatism, Realism</b>	<b>Constructivism (Interpretive; Naturalism)</b>
<b>Epistemology</b> (relationship of the knower to the known)	Objective point of view. Knower and known are dualism, or independent. Learning is transferring what exists in reality to what is known by the learner.	Both objective and subjective points of view.	Subjective point of view. Knower and known are inseparable.
<b>Axiology</b> (role of values in inquiry)	Inquiry is value-free.	Values play a major role in interpreting results. Values and human action and interaction precede the search for description, theory, explanation, and narrative.	Inquiry is value-bound.
Methodology	Quantitative. Experimental research design. Focus on controlled settings and internal validity.	Quantitative and Qualitative (mixed methods or mixed methodology). Quantitative and qualitative methods are compatible. The research question is more important than both the method and paradigm underlying the method.	Qualitative. Naturalistic, emergent research. Focus on natural settings and external validity. The researcher provides insights into the behaviour expressed and the meanings and interpretations that participants give to their life worlds. Use of first-person accounts, documents, and auto ethnographies

The suggested typology makes extensive use of the building blocks identified by Gubba and Lincoln. Available at: [www.evaluate-europe.net/projects/eval3/.../Gubba-Lincoln.doc](http://www.evaluate-europe.net/projects/eval3/.../Gubba-Lincoln.doc) (Accessed on 19/06/2014).

On the **disciplinary level** there are theoretical goals including theory building, understanding of human behaviour, “explanation and prediction of human behaviour, and gaining insight in social reality” (Auriacombe 2011); and practical goals: “... development of programmes or models aimed at improving the quality of life of people and empowering the oppressed or exploited members of society such as women and children” (Auriacombe 2011).

On a **project level** there are theoretical goals including exploratory, descriptive and explanatory and evaluation and prediction research (Auriacombe 2013).

## **TYPES OF RESEARCH**

Different types of research are required during the different stages of the research process. These stages are functionally and causally interconnected. Each stage is linked to another stage on a continuum of research types (Auriacombe 2008).

### **Exploratory research**

Exploratory research is initial research (e.g. pilot studies) conducted to clarify and define the nature of the research problem or opportunity by giving ideas or insights as to how the research problem or opportunity can be addressed (Cant, Gerber-Nel, Nel and Kotze 2003:28). The purpose of this type of research is to progressively narrow the scope of the research topic and, consequently, paraphrase the research problem clearly. According to Cant, Gerber-Nel, Nel and Kotze (2003:28) exploratory research studies are used for many purposes:

- to formulate the research problem or opportunity for more precise investigation in order to formulate a hypothesis;
- to establish priorities for further research;
- to gather information about practical problems of carrying out the research on particular conjectural statements;
- to increase the researcher's familiarity with the problem or opportunity; and
- to clarify some key concepts connected with the research problem or opportunity (Auriacombe 2008).

### **Descriptive research**

Another major purpose of social science research is to describe situations and events. This type of research describes aspects that answer the questions: who, what, when, where and how? Often the researcher will have no formal hypothesis. Implicit in descriptive research is that researchers already know or understand the underlying relationships of the problem or opportunity (Auriacombe 2008). Researchers may have a general understanding of the research problem or opportunity, but conclusive evidence that provides answers to the questions should still be collected to determine a course of action. Cant, Gerber-Nel, Nel and Kotze (2003:28) argue that the purpose of descriptive research is to provide an accurate picture of some aspects of the specific environment, including:

- **Demographic information:** Descriptive research may help researchers to describe the characteristics of certain groups in a target population (Auriacombe 2013).
- **Behavioural information:** Here, estimating the number of people in a specific population who behave in a certain way can be described (Auriacombe 2013).
- **Specific predictions and clear specifications:** Descriptive research can, for example, give information on more detailed aspects by answering the questions: who, what, why, when, where and how? (Auriacombe 2013).

Descriptive research studies can be conducted in two ways: longitudinal, involving a fixed sample of elements (a panel) which are measured repeatedly; and cross-sectional, involving the collection of information from any given sample of population elements only once (Cant, Gerber-Nel, Nel and Kotze 2003:31).

## Explanatory research

Explanatory research aims to explain causal relationships. These studies attempt to provide answers to the ‘why’ and ‘how’ questions. The purpose of these studies could be to generate hypotheses, as well as test and validate theories (Mouton 1996:104; Babbie 1992:91–92). Through pursuing explanatory studies, not only do we understand society better, but we are sometimes able to predict the consequences of certain actions (Bailey 1978:38–39).

Exploratory, descriptive and causal research have different uses and it is important for researchers to have knowledge of the different types of research, as the stages in the research process overlap chronologically (Auriacombe 2008).

## CONCLUSION

As a first step, to gain an understanding of the theory of research the article focused on the nature of social science. Scientific knowledge, social science research theory, the scientific method and different ways of scientific reasoning were explained.

The three basic methodological dimensions namely the **nomothetic** approach used by **positivists** in quantitative research; **ideographic** approaches used by **interpretivists** in qualitative research and the **pragmatic** approach using both **nomothetic** and **ideographic** assumptions (mixed methods) were attended to and the beliefs of the researchers adhering to the different paradigms in social research regarding the role of values, were discussed.

The importance of the world view of researchers and their knowledge of how the research could best be done was highlighted. It is noteworthy that the relationship between theory and research involves more than a movement between World 1 and World 2 or the cognitive reasoning process in the realm of World 3. Different ways of thinking about the research process involve different research paradigms. Traditional social research draws on the model of a natural scientist conducting research in a laboratory. Positivism has been the dominant paradigm since World War II, but this has since been challenged on many grounds. Social constructionist, interpretative, feminist and other critical approaches have gained popularity in recent years.

Attention was given to the fact that research is goal driven. Research objectives within the different research approaches were discussed, namely exploratory research, descriptive research and explanatory research.

This article was designed to enhance the researcher's analytical abilities, critical focus and independent insight into social science research in the field of public administration. Secondly in order to provide an understanding of the philosophy of social research this article particularly looked into the different dimensions of social research. It is clear from the above that there are different ways of thinking about social science research which involve different research dimensions. Researchers must realise that by becoming part of the scientific community they should adhere to specific ethical standards reflecting the goals and values of that community.

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