## Chapter 2

## The Social Scientific Approach to Theory

Chapter SummaryThe social scientific paradigm is used by researchers who look at empirical data and want to confirm and test theories used to describe and/or predict human behaviors and activities. We first look at the development of this paradigm and present some of its key terms.

#### Inductive Reasoning

Social scientific reasoning developed early on in the antiquity. It is, however, from the 1700s to the 1900s that the paradigm was further developed. We review five principles to inductive reasoning outlined by John Stuart Mill (1806–1873). These principles are key to social scientific thinking.

**Direct method of agreement**: Mills argued it is good to look for a common factor when an effect occurs. For instance, you would look for a common aspect between all participants who passed an exam to explain what caused them to pass the exam (e.g. they all studied).

**Method of difference**: Mills argued one should take away a causal factor, holding all other factors constant and see whether the effect still happens. Going back to the exam experiment, you would use participants who all have the same characteristics (e.g. wearing glasses, studying the same major, having the same age) but who did not all study for the exam. Through that method you would be able to identify whether studying was indeed a causal factor to passing the exam.

**Joint method**: This method combines the direct method of agreement and difference and proves the causal relation in an indirect way. For instance, in the football (soccer) matches Messi plays in (a great Argentinian player), the team wins, and when Messi is absent the team loses. Other circumstances being the same the playing of Messi is the cause of the team winning.

**Concomitant variation**: This method suggests making a quantitative change in something is associated with quantitative changes in a given factor. For instance, putting less pressure on your brakes may lessen the squeaking sound they make.

**Method of residue**: This method uses what we already know to calculate what we do not know yet. For instance, when travelling, you can weigh yourself with your luggage to find out how much the luggage is because you know your own weight.

#### Positivism

Positivism is the scientific philosophy which asserts the only legitimate or valid kinds of information come from mathematical, statistical, or scientific explanations of reality, and that truth can be revealed only through science. Keeping many aspects of positivism, researchers nowadays acknowledge that researchers can influence the research process. This is called **post-positivism**. Two main types of positivism have emerged throughout time: **classical positivism** and **logical positivism**. Classical positivism (inherited from Auguste Comte) emphasizes the relationship between conducting scientific research and finding “true” knowledge. Logical positivism adds the component of rationalism as an essential element of human inquiry. This approach emphasizes the need to use proper language to describe what is real.

The philosophies of positivism have been criticized. For instance, Karl Popper (1902–1994) argued that knowledge cannot be proven right but can only be proven false. Hence, researchers must keep testing theories. His argument is based on the notion of **falsification**, or refutability of a statement.

#### Theoretical Foundations of the Social Scientific Paradigm

The social scientific paradigm relies on a four-folded **scientific method**. First, a theory is proposed. Second, a hypothesis (or hypotheses) is put forth that predicts expected results. Third, the hypothesis is tested using empirical, observable material, and the researcher is as objective as possible. Fourth, generalizations are made based on the findings.

#### Metatheoretical Questions for the Social Scientific Paradigm

We examine questions essential to understand philosophical underpinnings of any paradigm.

First, **what is the purpose of research?** For social scientists, research aims at discovering or testing theories that explain and predict human behaviors and activities.

Second, **what is reality?** Social scientists argue that reality is made up of physical and social objects which are observable. They have a realist ontology.

Third, **what is human nature?** Social scientists describe humans as social animals.

Fourth, **do humans have free will?** Social scientists are informed by determinism. They argue that most human actions are caused by external stimuli outside of our control.

Fifth, **what is theory?** Social scientific theories are used to provide descriptive, predictive and/or causal explanations. Generally, theories have axioms, postulates and/or theorems and are testable in various cultural situations.

Sixth, **how do social scientists determine good or bad claims?** Claims are empirically based. They cannot be entirely proven and social scientists thus keep on testing theories.

Seventh, **what is the role of values in research**? Objectivity is a strong tenet of social scientific research. Social scientists try to be as free of value in their research as possible.