YOUR GUIDE TO THE RESEARCH PROCESS

Understanding the philosophy underlying research designs and methods is a crucial part of any research project. Chapter 3 of this book, ‘The Philosophy of Management and Business Research’, outlines how a tree can be used as a metaphor representing the research process. The tree metaphor is designed to help you understand the importance of research traditions and key concepts such as ontology, epistemology, methodology and methods. It will help you to better understand how these concepts are related and how they are meant to inform your research project.

This pull-out provides a useful and memorable visual representation of the tree metaphor and its key components.

On this side you will find:
- A useful overview of the tree metaphor explaining what the roots, trunk, leaves and fruit of the tree represent.

Turn over to delve deeper into the metaphor with:
- A cross-section of the tree trunk demonstrating the relationship between ontology, epistemology, methodology, and the methods and techniques that underpin research.
- The different research traditions represented by the tree roots: this helpfully illustrates how your views and values influence how you frame and design your research and collect and analyse your data.
- The distinction between the three main kinds of data based on the underlying epistemology represented by different coloured leaves.

Watch book author Richard Thorpe explaining the tree metaphor online at the book’s website https://edge.sagepub.com/easterbysmith6e

THE TREE AS A METAPHOR FOR THE RESEARCH PROCESS

Chapter 3 outlines how a tree can represent how the research process unfolds. The key elements of the tree are the roots, the trunk and branches, the leaves, and the fruit, and each of these plays a vital role in the growth of the tree and parallels an important aspect of conducting research.

1. The roots of the tree symbolize the research traditions within particular disciplines as well as the experiences of past researchers from particular fields. See overleaf for more of this.

2. The trunk transports the nutrients from the roots through the branches to the leaves and fruit; it also provides strength and shape to the tree. The colour-coded cross-section of the tree trunk symbolizes the four main features of a research design: ontology, epistemology, methodology, and methods and techniques. See the diagram on the other side of this pull-out.

3. Moving up and along the branches, the leaves of a tree collect energy from sunlight, and so represent the collection and analysis of data within a research project. It is the collection of what is already known about the subject, together with new empirical research data collected from your original research study, which stimulates new ideas and enables the evaluation of existing theories.

4. The fruit of the tree represents the writing up and dissemination of the research. The form that this output takes depends on the purpose of the research, the assumptions made, the decisions about how it is disseminated and the plans for the impact it is intended to have.
The inner ring of the trunk (or heartwood) is the densest part of the trunk, and represents the ontology, the basic assumptions which the researcher makes about the nature of reality. The second ring of the trunk represents the epistemology, the assumptions about the best ways of inquiring into the nature of the world.

The third ring from the centre represents the methodology, the way research techniques and methods are grouped together to provide a coherent picture. The outer fourth ring of the trunk or bark represents the individual methods and techniques that are used for data collection and analysis, such as interviews and questionnaires. The bark is the only aspect of the research that is visible to others but behind it lie many assumptions and decisions about methodology, epistemology and ontology. Chapters 6 to 11 of this book cover the collection and analysis of qualitative data; Chapters 9 to 11 cover quantitative data.

CROSS-SECTION OF TREE TRUNK

In the same way that roots draw nutrition from the soil, research traditions are drawn up and form the basis of the research design, methods and forms of analysis. There are three different possible ontological research traditions (inner ring in the trunk cross-section) explained in Chapter 3 – a realist perspective, a nominalist perspective and what we term various third ways (invariably a mixture of the realist and nominalist traditions).

The leaves represent the collection and analysis of data. We distinguish between three main kinds of data based on the underlying epistemology (second ring in the trunk cross-section), according to whether they are essentially positivist, constructionist or hybrid (mixed methods) approaches.

For example: A realist ontology is usually linked to a positivist epistemology, producing a quantitative study design (methodology) and numerical data collection analysis (methods and techniques).

A nominalist ontology connects with a constructionist epistemology and suggests a qualitative approach to data collection and analysis.

One of the ‘third way’ positions (e.g., critical realist) might result in a hybrid mixed methods design using both qualitative and quantitative methods for data collection and analysis.

These epistemological approaches are discussed in detail in Chapter 3.