The nature of inquiry!

A researcher's dilemma: Philosophy in crafting dissertations and theses.

By

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Dilemma

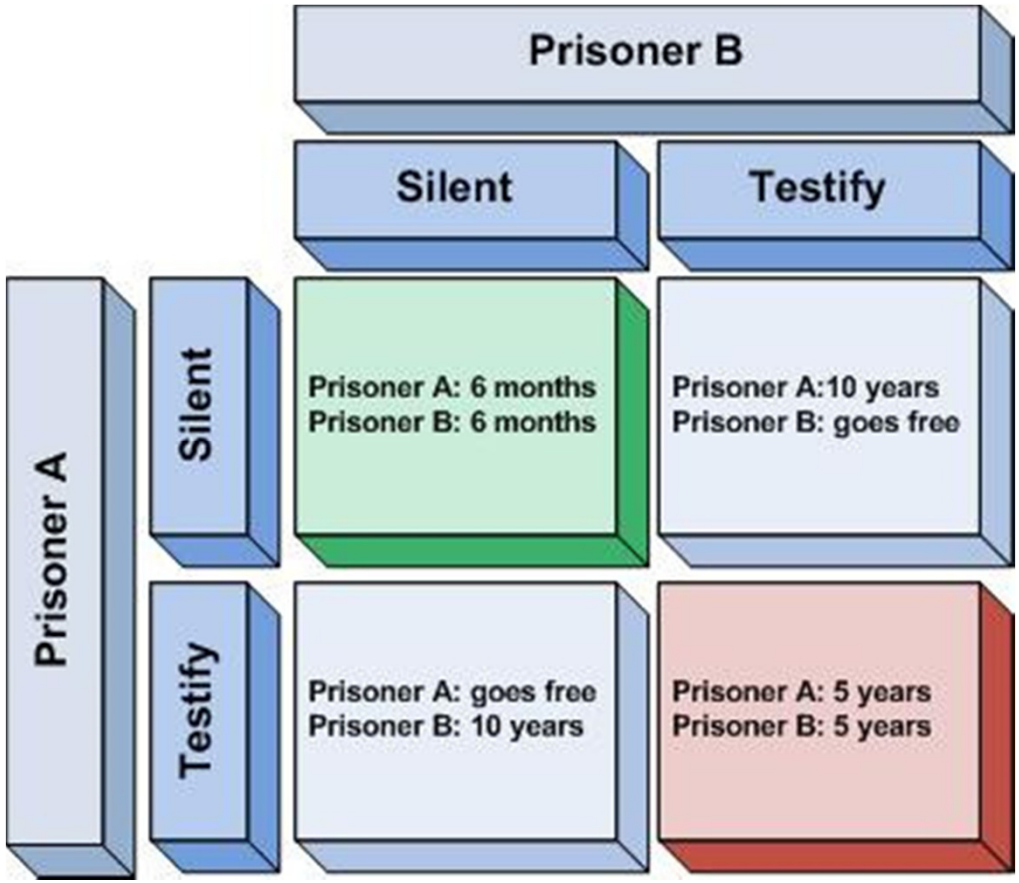
A situation in which a difficult choice has to be made between two or more alternatives, especially ones that are equally undesirable.

The dilemma begins

- **undergraduate** – using research methods or approaches and focusing the generation and analysis of evidence;
- **post graduate** – an introduction to research philosophies and their relationship to research methods and approaches; and
- **doctoral level -** a critical analysis of these philosophies in line with the research being undertaken

Knox (2004)

Prisoner's dilemma



truebra.in

The research process presents us with **dilemmas** all the way from the topic to the conclusions. But we have to make choices!

Worrying (O'gorman, 2015)

"Complicating apparent simplicity"

"Demystifying Philosophy of Research"

Russian Doll

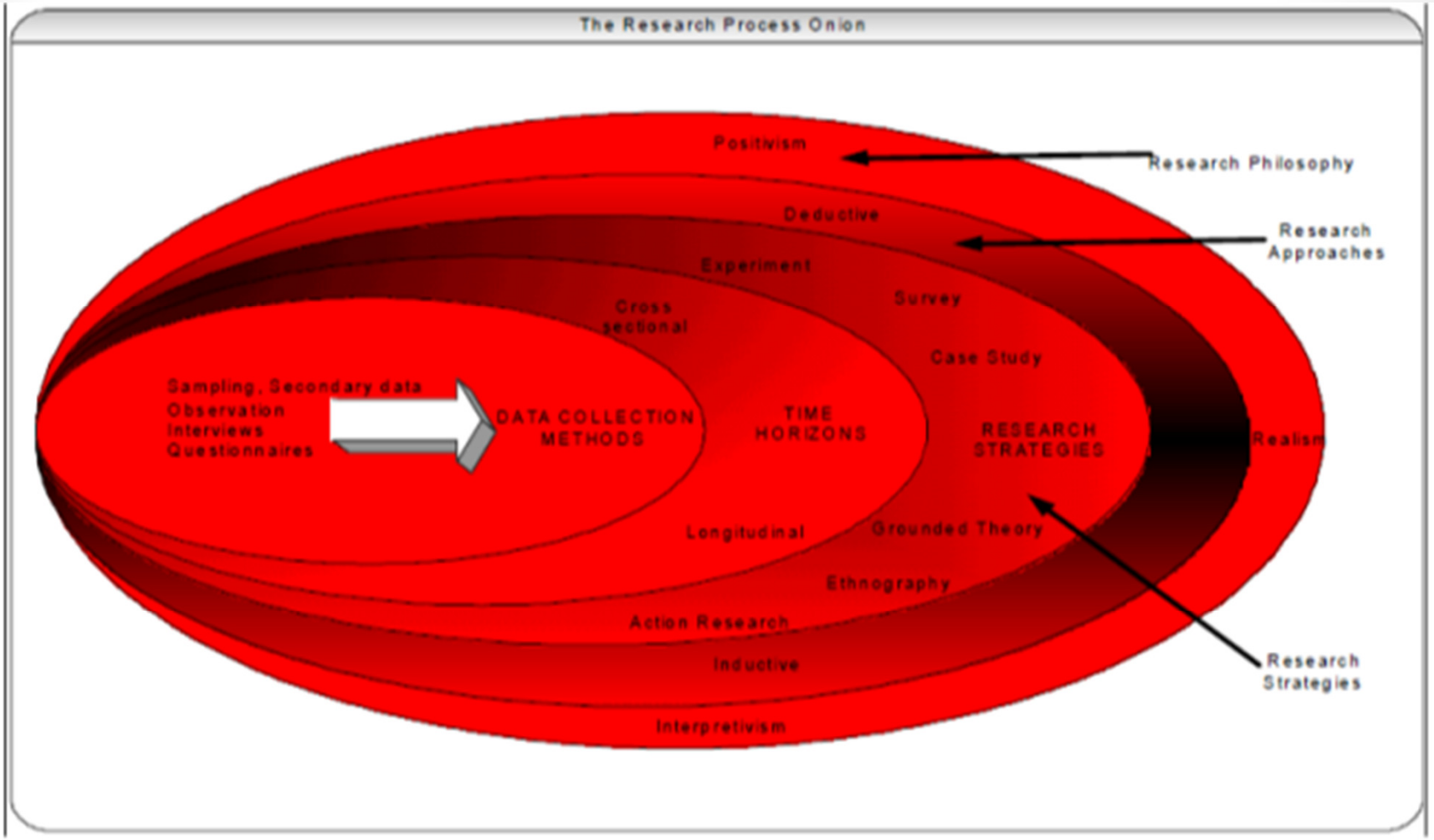


Figure 2: The research onion – Saunders, Lewis, Thornhill (2003, p83)

The Research Onion diagram that this model has been based upon excludes the three philosophies of Ontology, Epistemology and Axiology. Understanding and choosing a philosophy is an important step in planning and carrying out research, so we have included these as three additional elements outside of the main onion.

https://showcase.derby.ac.uk/showcase/projects/researchonion.php

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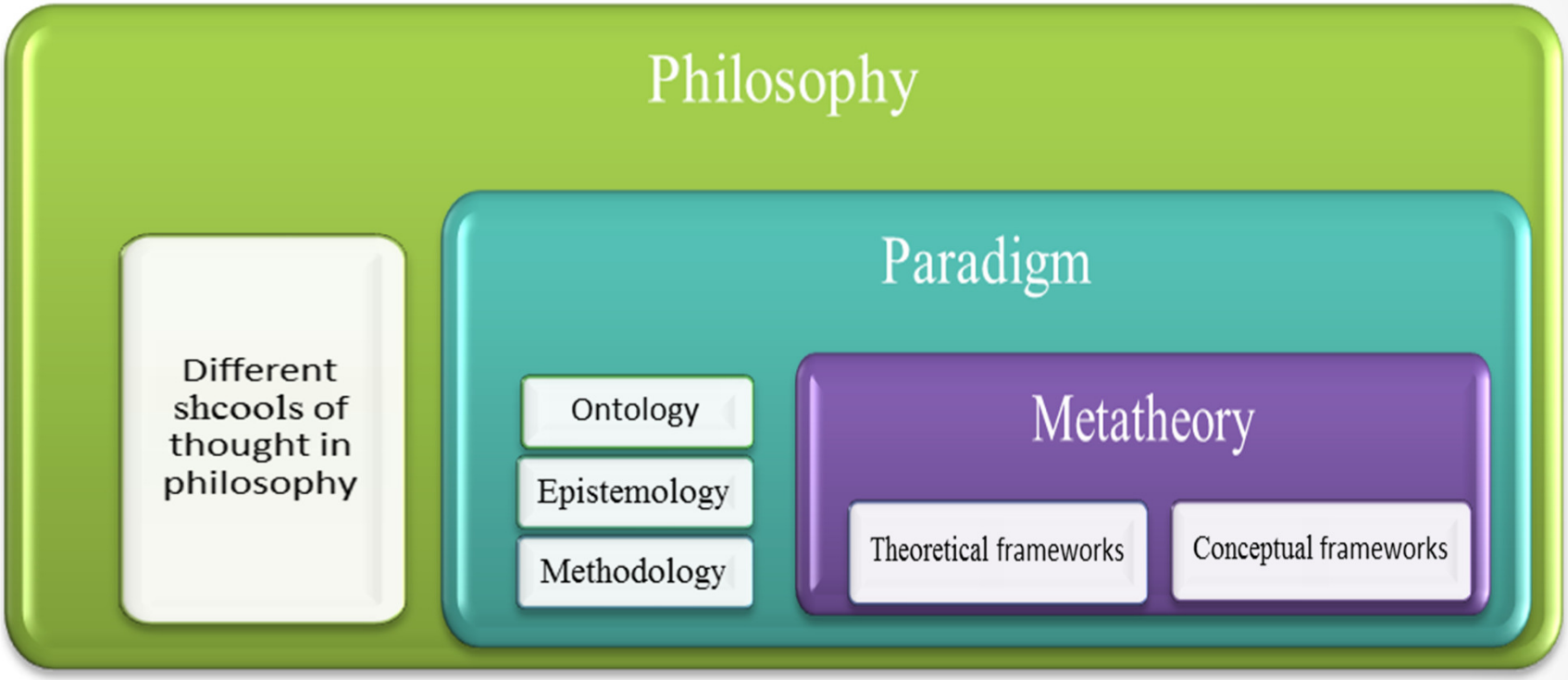


The relationship of philosophy, paradigm and meta-theory (PPM)

MEANING OF PHILOSOPHY

Pythagoras (about 570 BCE), coined the word philosophy.

Philosophy is the rational attempt to formulate, understand, and answer fundamental questions.

Schools of thought

A school of thought (or **intellectual tradition**) is *a collection or group of people who share common characteristics* of *opinion or outlook.*

http://en.wikipedia.org/wiki/School_of_thought

The Traditional Schools of Philosophy

	Idealism	Realism	Pragmatism	Existentialism
Metaphysics	Reality is the world of unchanging ideas.	Reality is the physical world.	Reality is the interaction of the individual and the environment.	Reality is the subjective interpretation of the physical world.
Epistemology	Knowing is the personal rethinking of universal ideas.	Knowing is observing and understanding natural laws.	Knowing is the result of experience based on the scientific method.	Knowing is making personal choice.
Axiology	Values are absolute based on enduring ideas.	Values are absolute based on natural law.	Values are relative.	Values are chosen by the individual.
Educational Implications	Curricula focus on content that emphasizes time-honored ideas.	Curricula focus on content that emphasizes natural laws.	Curricula and instruction focus on problem solving and the scientific method.	Instruction emphasizes discussion designed to increase individual self-awareness.

What could be the relationship between philosophy and research?

The main driver is the philosophy of science!

Philosophy of science refers to

"The conceptual roots undergirding the quest for knowledge. Incorporated within philosophy of science are **beliefs** or **assumptions** regarding **ontology** (the nature of reality and being), **epistemology** (the study of knowledge, the acquisition of knowledge, and the relationship between the knower [research participant] and would-be knower [the researcher]), **axiology** (the role and place of values in the research process), rhetorical structure (the language and presentation of the research), and **methodology** (the process and procedures of research" (Ponterotto, 2005).

The relationship between science and philosophy

Philosophy *frames the questions and sets the rules of debate.* It does this by exploring the landscape of *what might be true and figuring out how different approaches to truth interrelate.* The dialog of philosophy focuses on logic, rules of argumentation, and the definition of abstract concepts. The approach and practice of science, including the "scientific method" arose out of philosophy.

Science is *a strategy for arriving at consensus answers to questions about the natural world*. It focuses on *discovering "facts", "laws", and "mechanisms"*. Often what are discovered are new objects that were previously unseen and unknown to exist.

http://www.quora.com/What-is-the-relationship-between-science-and-philosophy

In developing research proposals, we are required to include paradigm perspectives and meta-theory

‘…all research takes place within a paradigm, whether it is explicitly stated or not’ (Grix, 2004. p. 171).

A paradigm is propelled
by and
emerges from a philosophy!

Paradigm

Paradigm is "a philosophical and theoretical framework of a scientific school or discipline within which theories, laws, and generalizations and the experiments performed in support of them are formulated" Merriam Webster Dictionary, 2007) it is also "the set of common beliefs and agreements shared between scientists about how problems should be understood and addressed" (Kuhn, 1962)

http://www.slideshare.net/eLearnCenter/research-methods-uoc-2013

The term paradigm

Willis (2007) explains that: "A paradigm is thus a comprehensive **belief system**, **world view**, or **framework** that *guides research and practice in a field*" (p.8). From a philosophical perspective, a paradigm comprises a view of the **nature of reality** (i.e., ontology) – whether it is external or internal to the knower; a related view of the **type of knowledge** that can be generated and standards for justifying it (i.e., epistemology); and **a disciplined approach** to generating that knowledge (i.e., methodology).

Paradigm

A paradigm is a "worldview" or a set of assumptions about how things work.

Researchers talk about different approaches to research as "paradigms."

Philosophy

DETERMINISTIC PHILOSOPHY

1. **Things are caused – predetermined.**
2. **THE POSITIVIST PARADIGM**
3. **POST POSITIVIST**

INDETERMINISTIC PHILOSOPHY

1. **The outcome of anything is probability.**
2. **THE INTERPRETIVIST PARADIGM**
3. **THE CRITICAL PARADIGM**

Synonyms for paradigm

- Archetype
- Chart
- Criterion
- Exemplar
- Ideal
- Mirror
- Model
- Original
- Pattern
- Prototype
- Sample
- Standard

PHILOSOPHICAL GROUNDING OF PARADIGMS IN RESEARCH

(A "Paradigm" is defined as and ideal or model (Webster's 21'st Century Dictionary)

	Positivism/Post-Positivism	Constructivism	Emancipatory
Ontology (Nature of Reality)	• One reality • Reality knowable within probability	• Multiple constructed realities	• Multiple realities which include the social, political, cultural, class, economical, gender, etc.
Epistemology (Nature of knowledge, relationship between knower and what can be known)	• One "body of knowledge" • Objective is important • Researcher controls and observes in an objective dispassionate manner	• Knowledge individually or socially constructed • Framework/values of researcher acknowledged/made viable/explicit • Interactive link between researcher and participants	• Knowledge is socially, historically, politically, culturally situated • Interactive/activist link between researcher and participants/context
Methodology (Purpose)	• Predict • Test • Measure • Prove • Disprove	• Understand • Describe • Construct Meaning • Understand from participants' perspectives	• Promote social change • Liberate • Emancipate • Critique • Take Political Action
Methodology (Approach or methods)	• Quantitative • Interventionist • Deductive • Design-Single Group, Experimental, Quasi-Experimental, etc.	• Qualitative • Inductive (Discovery of patterns) • Hermeneutical (Interpretive) • Dialectical • Contextual features important	• Qualitative (Primarily) • Quantitative (Can be used) • Contextual/historical features important as they relate to oppression
Axiology (Value and Judgment)	• Value free/theoretically influenced • Suspend judgment until statistical tests prove/disprove	• Judgment is based upon consensus of participants and researcher • Varies upon theoretical framework/values held by researcher	• Judgment is based on experienced oppression by participants • Framed by beliefs/values of all participants • Can be theory driven

Adapted "freely" from Mortens (1998), Kmitta (2000), & Guifoyle (2005)

Table 1. Paradigms Versus Practices

Groups	Types of Accounts	Criteria for Establishing Truth	Advantages	Disadvantages
Scientists	Explainers	Empirical Evidence	Develop reliable and valid explanations	Provide great deal of detail that is irrelevant to task at hand
Practitioners	Understanders	Practical Value	Develop practical understanding for developing optimal practices	Provide accounts that are episodically coherent but not empirically valid

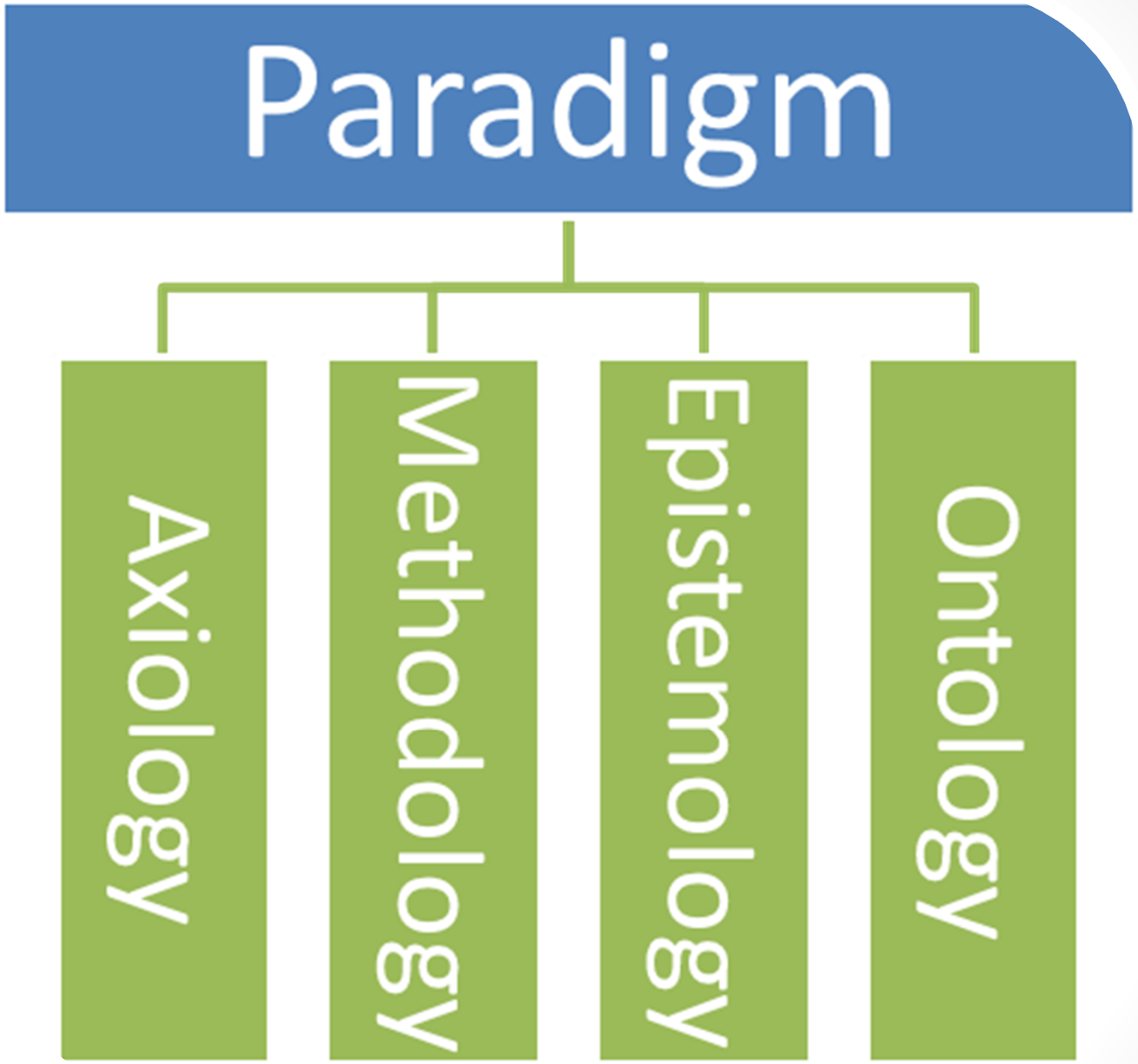
Huitt (2011)

Three Components of Research Paradigm (Source: Easter-by-Smith et al 2006).

Ontology » Common assumptions that are created to understand the real nature of the society

Epistemology » Common parameters and assumptions those are associated with the excellent way to investigate the nature of the real world.

Methodology » Combination of different techniques that are used by the researcher to investigate different situations.


Paradigm
Axiology
Methodology
Epistemology
Ontology

Ontology

Ontology is the philosophical study of the nature of **being**, **becoming**, **existence**, or **reality**, as well as the basic categories of being and their relations. Wikipedia

Ontology in research is about what constitutes **REALITY** and how we can understand **EXISTENCE**.

Ontology is ‘the science or study of **being**.’

Ontology is **our view** about **what is 'real**‘.

What exists and **What is not 'real'**.

Ontology

“ontology describes the researcher’s view (whether claims or assumptions) of the nature of reality” (Goduka, 2012).

Epistemology

Epistemology is knowledge about knowledge – how we come to know what we know.

- **Epistemological assumptions specify what is scientifically permissible.**

Ones epistemological **position/stance** reflects the "view of what we can know about the world and how we can know it."

Methodological Philosophies

Methodological philosophies follow **positivist/post-positivist**, **interpretivist/hermeneutic**, '**critical**', and **constructionist** ORIENTATIONS. There are many more depending on a philosophy or a paradigm that drives your study.

What is required is to **consciously align your methodology** to the **philosophy** you subscribe to as well as the **paradigm** you follow!

Hammersley (2012)

Methodology

Methodology is intertwined with or an **aspect of a paradigm**, as mentioned above. In this sense, methodology can also be defined as **a conceptual framework** (Gale, 1998) but **specific to how research is approached and guided**, that is, it provides the rationale for the research (Gough, 2000). **It is the aspect of a paradigm that emphasises the question of how the research should proceed**, not the theory of knowledge or existence, and is **influenced by the researcher's worldview** (Gale, 1998; Gough, 2000). Methodologies or approaches include **case study**, **ethnography**, **action research** and **discourse analysis**.

http://rubyvine.blogspot.com/2009/10/paradigms-methodologies-and-methods-in.html

Methodology

"Methodology is the philosophical evaluation that uses investigative techniques within a discipline. Sarantakos is of the view that it is a research strategy that translates ontological, epistemological axiological and rhetorical principles into guidelines that show how research is to be conducted" (Goduka, 2012).

Solving the researcher's dilemma: rationale for research methodology.

Research methodology is a way to systematically solve the research problem.

It is a science of studying how research is done scientifically, involving various steps that are generally adopted by a researcher.

Steps in general

- **Step One:** Define research problem
- **Step Two:** Review of literature
- Step Three: Preparing the research design
- **Step Four:** Data collection
- **Step Five:** Data analysis
- **Step Six:** Data analysis
- **Step Seven:** Interpretation and report writing

Methodology and Design (confusion point)

Methodology is the systematic, theoretical analysis of the methods applied to a field of study.

Typically, **methodology encompasses** concepts such as **paradigm**, **design**, **methods**, and/or quantitative or qualitative **techniques**.

https://en.wikipedia.org/wiki/Methodology

Methodology and Design (confusion point)

The methodology is the general research strategy that outlines the way in which research is to be undertaken and, among other things, **identifies the methods** to be used in it.

The methods, described in the methodology, define *the means* or *modes of data collection*.

https://en.wikipedia.org/wiki/Methodology

Methodology and Design (confusion point)

Methodology and ***method*** are not interchangeable!

It is thus important to avoid using *methodology* as a synonym for *method* or *body of methods*.

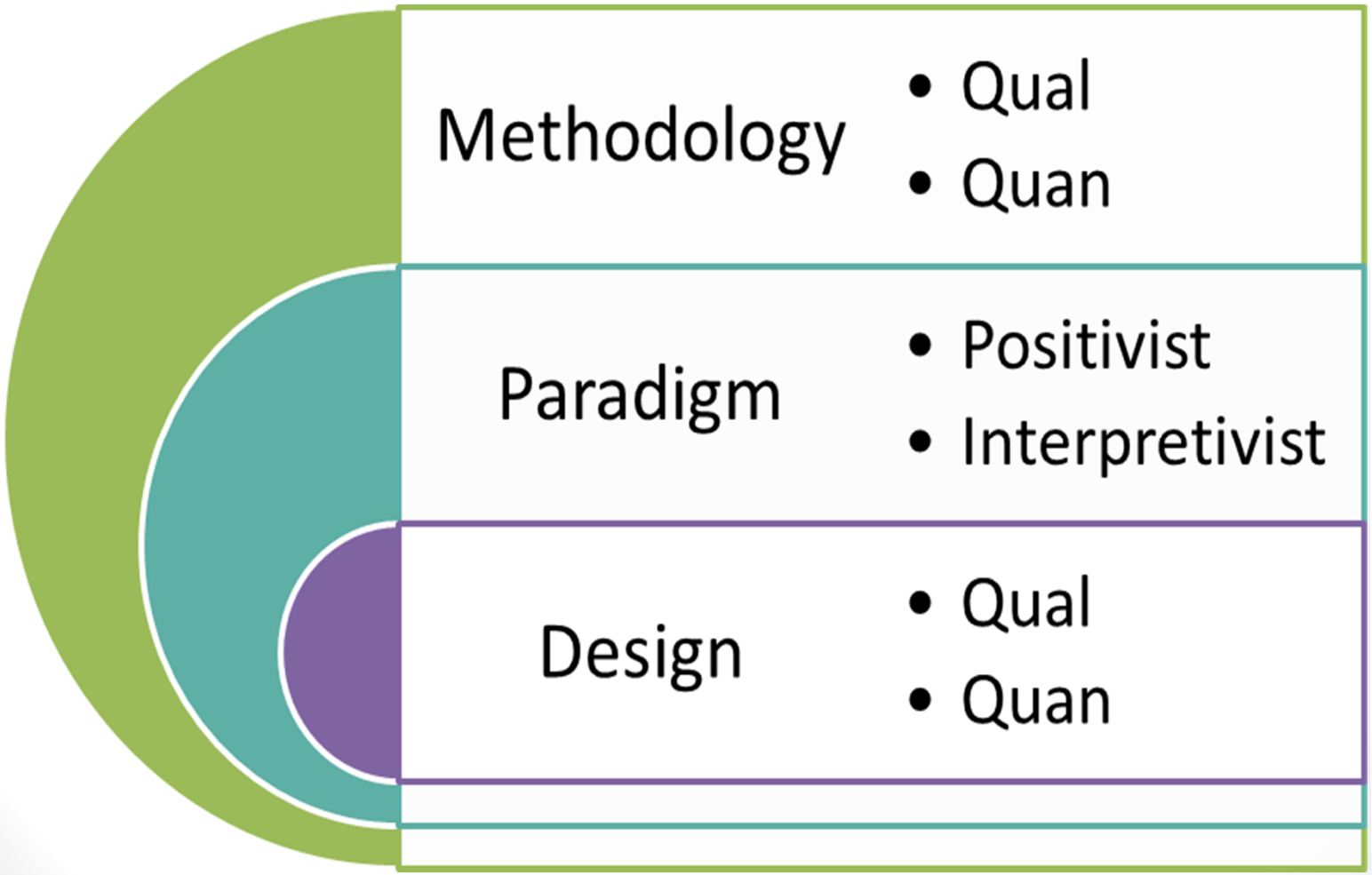
Using *methodology* as a synonym for *method* or *set of methods* leads to **confusion and misinterpretation**.

https://en.wikipedia.org/wiki/Methodology

PARADIGMS	Application according to: ONTOLOGY, EPISTEMOLOGY AND METHODS
Positivism (Very rare in qualitative research)	**Ontology:** *Realism*. There is a "real," objective reality that is knowable **Epistemology:** *Objectivist*. The researcher can, and should, avoid any bias or influence on the outcome. Results, if done well, are *true*. **Methods:** Tends toward *quantification* and controlled experiments.
Post-positivism	**Ontology:** *Critical Realism*. There is a "real," *objective reality*, but humans cannot know it for sure. **Epistemology:** *Modified Objectivist*. The goal is objectivity, but pure objectivity is impossible. Results are *"probably" true*. **Methods:** Includes both **qualitative and quantitative** methods. *Seeks reduction of bias* through qualitative validity techniques (e.g. triangulation)
Critical Theory	**Ontology:** *Historical Realism*. ***Reality can be understood, but only as constructed historically*** and connected to power. **Epistemology:** Knowledge is mediated reflectively through the perspective of the researcher. **Methods:** Focused on *investigator/participant dialogue*, uncovering subjugated knowledge and linking it to social critique
Constructivism	**Ontology:** *Relativist*. ***All truth is "constructed"*** by humans and situated within a historical moment and ***social context***. Multiple meanings exist of perhaps the same data. **Epistemology:** *Researcher and participants are linked*, **constructing knowledge together**. **Methods:** *Generally qualitative*, **research through dialogue**.
Advocacy/Participatory	**Ontology:** *Varied* **Epistemology:** The *distinction between researcher and researched breaks down*. Insider knowledge highly valued. **Methods:** Works with individuals on **empowerment** and issues that matter to them. ***Tends toward social, cultural or political change***, using any appropriate method.
Pragmatism	**Ontology:** Varied. Pragmatists may be less interested in what "truth" is and more *interested in "what works"* .**Epistemology:** Accepts **many different viewpoints** and works to reconcile those perspectives through pluralistic means. **Methods:** *Focuses on a real world problems*, by whatever methods are most appropriate, and **tends toward changes in practice**.

Flipping the coin!

Chapter after literature review



Major types of qualitative research methodologies:

1. Phenomenology.
2. Ethnography.
3. Grounded theory.
4. Case study.
5. Narrative study.

Major types of quantitative research methodologies:

1. **Descriptive (What is the current situation?)**

2. **Experimental (What is the cause?)**

3. **Ex post facto/Causal comparative (What was the possible cause?)**

RESEARCH DESIGNS

"A research design is the framework or guide used for the planning, implementation, and analysis of a study(1-2). It is the plan for answering the research question or hypothesis. *Different types of questions or hypotheses demand different types of research designs*, so it is important to have a broad preparation and understanding of the different types of research designs available. Research designs are most often classified as either quantitative or qualitative. However, it is becoming more common for investigators to combine, or mix, multiple quantitative and/or qualitative designs in the same study". (Sousa, Driessnack & Mendes, 2007, p. 503).

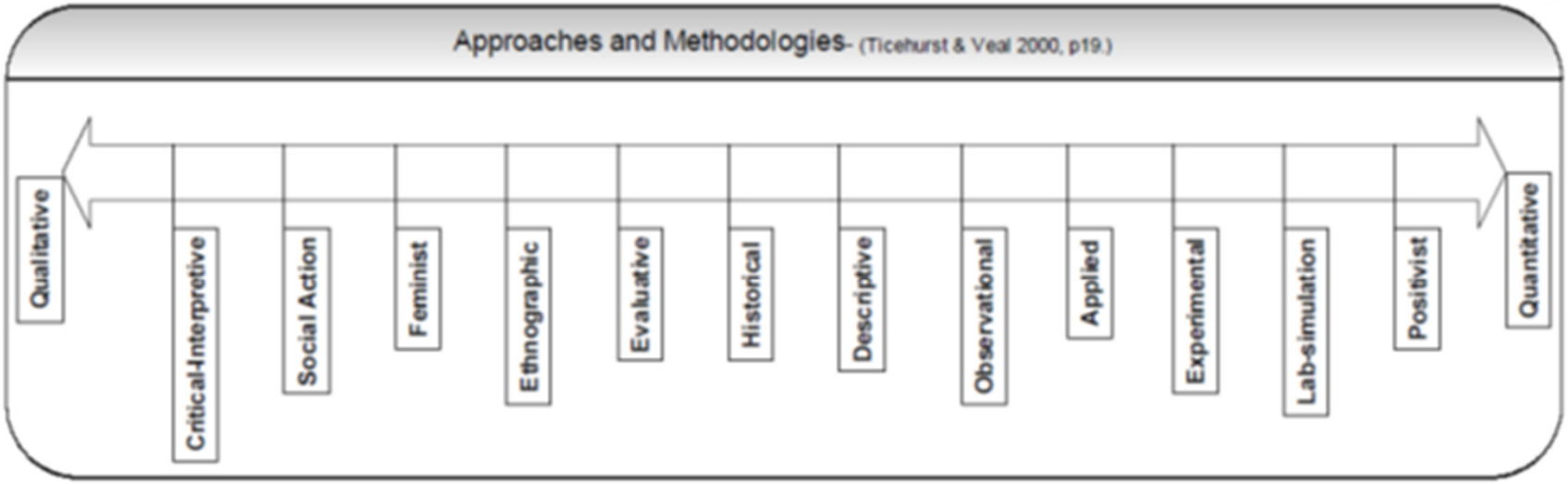
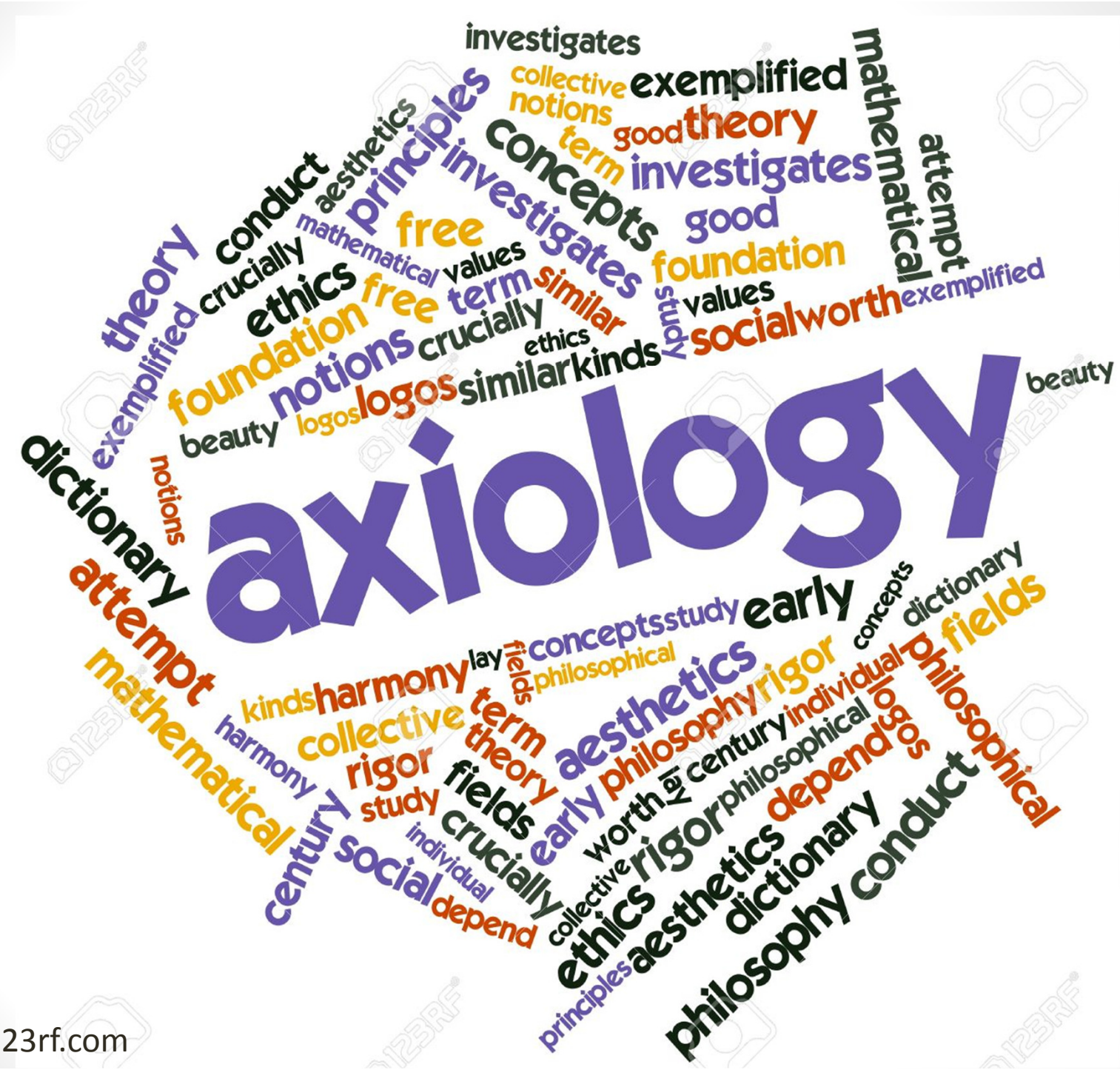


Figure 1: Approaches and methodologies – Ticehurst and Veal (2000, p19)

RESEARCH DESIGNS

“The selection of a research design is based on the research question or hypothesis and the phenomena being studied”. (Sousa, Driessnack & Mendes, 2007, p. 506).



AXIOLOGY

Axiology (from Greek ἀξίᾱ, axiā, "value, worth"; and -λόγος, -logos) is **the philosophical study of value**. It is either the **collective term for ethics and aesthetics**—philosophical fields that depend crucially on notions of worth—or the foundation for these fields, and thus similar to **value theory** and **meta-ethics**.

Axiology has relevance to the field of qualitative research inasmuch as it has a direct bearing on the **ethical context of research**, offers an important basis for **making explicit the assumptions of different paradigms of research**, and provides the **foundation for understanding** the process of the addition to knowledge involved in **scientific inquiry**.

Metatheory

A metatheory or meta-theory is a theory whose subject matter is some theory.

"Metatheory can be seen as the philosophy behind the theory, the fundamental set of ideas about how phenomena of interest in a particular field should be thought about and researched.

Meta-theory offers a systematic means of understanding and evaluating the theory that drives and arises from qualitative research.

Metatheory vs paradigm

Paradigm would have a broader meaning than metatheory because it encompasses not only theories, but also methods.

At the same time, metatheory is absolutely core to any paradigm.

In a proposal, a metatheory could be related to literature review as it studies theories.

Use metatheory to focus on theoretical frameworks and conceptual frameworks.

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Good luck in your studies!