Outside of the Onion

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.

Please click on the terms for more information.

Ontology

What is Ontology?
Ontological philosophy is concerned with the nature of reality. It requires researchers to ask themselves how they think the world operates, how society is constructed and how this influences everything around us.

Ontology talks about the difference between reality, our perception of reality and how this influences people’s behaviour.
There are three philosophical positions commonly agreed to work under an ontological worldview. These are objectivism, constructivism and pragmatism.

**Links**

Webpage about Ontology [http://www.ontology.co/ontology-definitions-one.htm](http://www.ontology.co/ontology-definitions-one.htm)


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**Epistemology**

**What is Epistemology?**

Epistemology is concerned with addressing the facts by asking what the acceptable knowledge is. It asks you to define what is acceptable knowledge about your field of research and what information is known to be true due to rigorous testing and treated as fact. This philosophy is most commonly used in scientific research as it searches for facts and information that can be proved without doubt rather than changeable situations and opinions.

To explain this philosophy further you should look at the philosophical positions associated with it. These are positivism, critical realism and interpretivism.

**Links**


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**Axiology**

**What is Axiology?**

Axiology allows the researcher to understand and recognise the role their values and opinion play in the collection and analysis of the research as opposed to eliminating or trying to balance the influence of it.

For example, if the researcher is a vegetarian and they are researching the availability and range of vegetarian food in hotels this must be declared in their research. How this shapes
your investigation of the issue and how you analyse the results will need to be detailed and analysed in different ways according to the approach you choose.

Links

Wiki about axiology http://en.wiktionary.org/wiki/axiology

Layer 1 of the Onion

This layer contains the philosophical stances associated with the philosophies. Each of the possible choices at this level require careful thought as they provide structure, guidance and possible limitations to following decisions and ultimately the way a researcher can collect and analyse data to create valid findings.

Please click on the terms for more information.

Objectivism

What is Objectivism?
Objectivism recognises that social phenomena and their meanings exist separately to social actors. An example of social phenomena could be heavy rain and social actors are people wanting to have a picnic outside. The rain exists, it is real and would be acknowledged by everyone to exist and is therefore independent to the people who have had their day out ruined by it.
In your research this may be how a law (the social phenomenon) impacts on a group of people (social actors).

Links
Please see general resources

Constructivism

What is Constructivism?
Constructivism argues the opposite to objectivism. It is a standpoint that believes social phenomena are actually constructed by social actors. So, if you had a constructive ontological worldview you would believe that, for example, a new law is the product of the behaviour of the group of people it now has an impact on.

Links
Please see general resources

Positivism
**What is Positivism?**
Positivism generates hypotheses (or research questions) that can be tested and allows explanations that are measured against accepted knowledge of the world we live in. These could be the laws of gravity applied to an apple falling from a tree.

This position creates a body of research that can be replicated by other researchers to generate the same results. The emphasis is on quantifiable results that lend themselves to statistical analysis.

**Links**

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**Realism**

**What is Realism?**
Realism is similar to positivism in its processes and belief that social reality and the researcher are independent of each other and so will not create biased results. However, where they differ is that realism thinks that scientific methods are not perfect. It believes that all theory can be revised and that our ability to know for certain what reality is may not exist without continually researching and leaving our minds open to using new methods of research.

Realism may therefore use several types of research methods to triangulate results in their search for a more reliable outcome.

**Links**

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**Interpretivism**

**What is Interpretivism?**
Interpretativism refers to approaches emphasizing the meaningful nature of people’s participation in social and cultural life. Researchers working within this tradition analyse the meanings people confer upon their own and others’ actions and take the view that cultural existence and change can be understood by studying what people think about, their ideas, and the meanings that are important to them.

**Links**

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**Pragmatism**
**What is pragmatism?**
Pragmatism argues that both constructivism and objectivism are valid ways to approach research. Pragmatism allows a researcher to view the topic from either or both points-of-view regarding the influence or role of social actors and uses these to create a practical approach to research. This may be used to find solutions to problems.

**Links**

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**Layer 2 of the Onion**

Layer 2 contains the terms deductive and inductive. A decision on this level may be strongly indicated by the decisions made at the previous level, or you may need to assess your research aim, your limitations and personal opinions to decide which method will work best for your work.

Please click on the terms for more information.

**Deductive**

**What is it?**
Deductive means that you start with a statement or question and your research sets out to answer it. The aim would be to conclude with a yes or no response to the question.

Questions may be statements or informed speculation about the topic that the researcher believes can be answered.

The thought process of deduction moves from theory to the research question, to data collection, findings to a rejection or confirmation of the research question. This should lead onto a revision of the theory and often starts the process over again.

**Links**
Please see general resources

**Inductive**

**What is it?**
Inductive means that you are researching to create theory. The process moves in the opposite direction to the deductive approach taking its focus from the working title of the researcher not the existing theory. This means the research goes from research question to
observation and description to analysis and finally theory. Therefore if little research exists on a topic then an inductive approach may be the best way to proceed.

Links
Please see general resources

Layer 3 of the Onion

Choices refer to the research style that you will use to collect and analyse data such as Grounded Theory. Each one has its benefits and limitations. This needs to be thought through and explained and balanced throughout your work.

Choices may be more commonly associated with different philosophies and philosophical standpoints.

You can choose more than one of these choices to design and collect data as long as this is a decision that can be justified in your written work.

Please click on the terms for more information.

Experiment

What is it?
Experimental designs are more rigid and scientific in their structure to enable the research to be replicated. These designs test the causal effects of phenomena on a group compared to a control group who are not subjected to any phenomena. The causal effect is the independent variable on the dependent variable.

Experimental strategies generate data that can be statistically analysed.

Links
Youtube video about the Experiment method http://youtu.be/4NK_jGgELI

Survey

What is it?
A survey strategy is often associated with a deductive approach. It offers the researcher a highly economical way of collecting large amounts of data to address the who, what, where, when and how of any given topic or issue.

This strategy can generate both rich and statistical data.

Links
Case Study

What is it?

Case study design involves extensive study of one or more individuals or cases in a real life context. To draw clear conclusions about data it is advised that the number of cases are restricted.

The data that is collected may include: watching aspects of their behaviour or of the setting, interviews with participants and record searching.

Links

Youtube video of Alan Bryman discussing Case Study Part 1 http://youtu.be/ja3nlZ6vHog

Youtube video of Alan Bryman discussing Case Study Part 2 http://youtu.be/3lcWn596kXI

Action Research

What is it?

This strategy is concerned with addressing issues to find and implement solutions.

As part of this search for a solution the strategy allows the researcher to be part of the organisation or case study that requires the solution. It allows for collaboration between the topic organisation and the researcher.

The process of Action Research moves from a clear objective to diagnosis of the problem and generation of a list of actions to solve the problem.

Links

Youtube video about Action Research http://youtu.be/8jENIA-V4Q
Grounded Theory

What is it?
Grounded Theory uses inductive methods to predict and explain behaviour to build theory. This starts with data being collected from observation, theory and predictions being generated from that data and then those predictions being tested.

This strategy, although generating new theory, is still grounded by existing theory and literature on the topic.

Links
Youtube video about Grounded Theory http://youtu.be/6wmed9UPnWw


Ethnography

What is it?
Ethnography is rooted in anthropology, which is the study of others from a detached point-of-view. However, ethnography requires the researcher to be a part of the community or situation they are researching. This may be time consuming for the researcher to achieve full integration into a social scene to experience and document long-term changes in actions and opinions.

Links
Youtube video about Ethnography by Manchester University, UK
http://youtu.be/PTyBowGKb0Q

Youtube video about Ethnography http://youtu.be/GixtqVINKVw
Archival Research

What is it?
This strategy centres its data collection on existing data sets or archive documents. This allows for exploratory, explanatory or descriptive analysis of changes tracked over a long period of time. However, the accuracy and breadth of information available may be an issue for a researcher relying solely on this type of secondary data.

Links
Presentation slides by Manchester University, UK
http://www.methods.manchester.ac.uk/events/whatis/archival.pdf

Layer 4 of the Onion

Layer 4 in the diagram is where you are asked to define how you wish to use quantitative and qualitative methods in your research. This is the stage where you decide whether you use one or both methods and if you will use them equally or with one more dominant than the other. Quantitative and qualitative research methods do not have a layer of their own in the research onion diagram, as they should be continually considered as you travel through to the centre.

Quantitative research involves numbers. It is concerned with quantity and measurements.

Qualitative research is concerned with rich data such as personal accounts, opinions and description.

Methods are the ways in which you will actually design and collect data. Each choice at this stage has a framework of methods and tools.

Please click on the terms for more information.

Mono-methods

What is it?
Mono-method research is when either quantitative or qualitative data is collected rather than a combination of both. This may be due to the demands of the philosophy, philosophical choices and strategies employed. It could also be used to research an opposing view to existing mono-method research.

Links
Please see general resources
Mixed-methods

What is it?
Mixed-methods research is when the researcher uses quantitative and qualitative research methods in the process of their study, data collection and analysis. It can be argued that by combining both types of research, the limitations of each individual method can be offset and gaps of data can be filled or predicted.

Links
Mixed Method video lecture by Alan Bryman Part 1
http://youtu.be/0lZ3w8pKyJl

Mixed Method video lecture by Alan Bryman Part 2

Mixed Method video lecture by Alan Bryman Part 3
http://youtu.be/ftOfIzYES08

Mixed Method video lecture by Alan Bryman Part 4
http://youtu.be/fyZ9th5Nxl4

Mixed Method video lecture by Alan Bryman Part 5
http://youtu.be/IuUT_UFlgFk

Youtube video animation about Mixed Methods
http://youtu.be/vmulkCJHqqw


Multi-methods

What is it?
This is where the researcher uses both quantitative and qualitative data but the researcher’s outlook is rooted in only one of them. So both types of data are analysed from only one point-of-view.

**Links**
Article about Multi-methods by Alan Bryman

**Layer 5 of the Onion**

There are only two time horizon choices. These are cross–sectional, which is a short-term study, and longitudinal which is research carried out over a longer period of time.

Please click on the terms for more information

**Cross-sectional**

**What is it?**
Cross-sectional designs can use qualitative and quantitative research and they measure an aspect or behaviour of many groups or individuals and at a single point in time.

**Links**
Sage Encyclopedia about Cross-sectional time horizons
http://srmo.sagepub.com/view/encyclopedia-of-survey-research-methods/n120.xml

Web page information about Cross-sectional time horizons
http://psychology.about.com/od/cindex/g/cross-sectional.htm

**Longitudinal**

**What is it?**
Longitudinal designs can also use qualitative and quantitative research but they study events and behaviours using concentrated samples over a longer period.

**Links**
Web page information about longitudinal time horizons
http://psychology.about.com/od/lindex/g/longitudinal.htm

Sage Encyclopedia about longitudinal time horizons
http://srmo.sagepub.com/view/the-sage-encyclopedia-of-social-science-research-methods/n516.xml
Layer 6 of the Onion

The final layer of the onion moves the research design further into the practicalities of data collection and analysis. This is where you as the researcher need to decide from all the previous decisions you have made what data collection methods will work best and what type of analysis you employ to create the results to answer your research question.

Data Collection & analysis

What is it?
This layer includes decisions on sample groups, questionnaire content, and questions to be asked in interviews and so on. All of the decisions and tools employed at this final stage must fit in with the philosophies, philosophical stances, strategies, choices and time-horizons already fixed upon if valid results are to be created and withstand criticism.

Links


General resources:


Sage research resource
http://www.methodspace.com/

Journal of Business Research Methods
http://www.ejbrm.com/main.html