

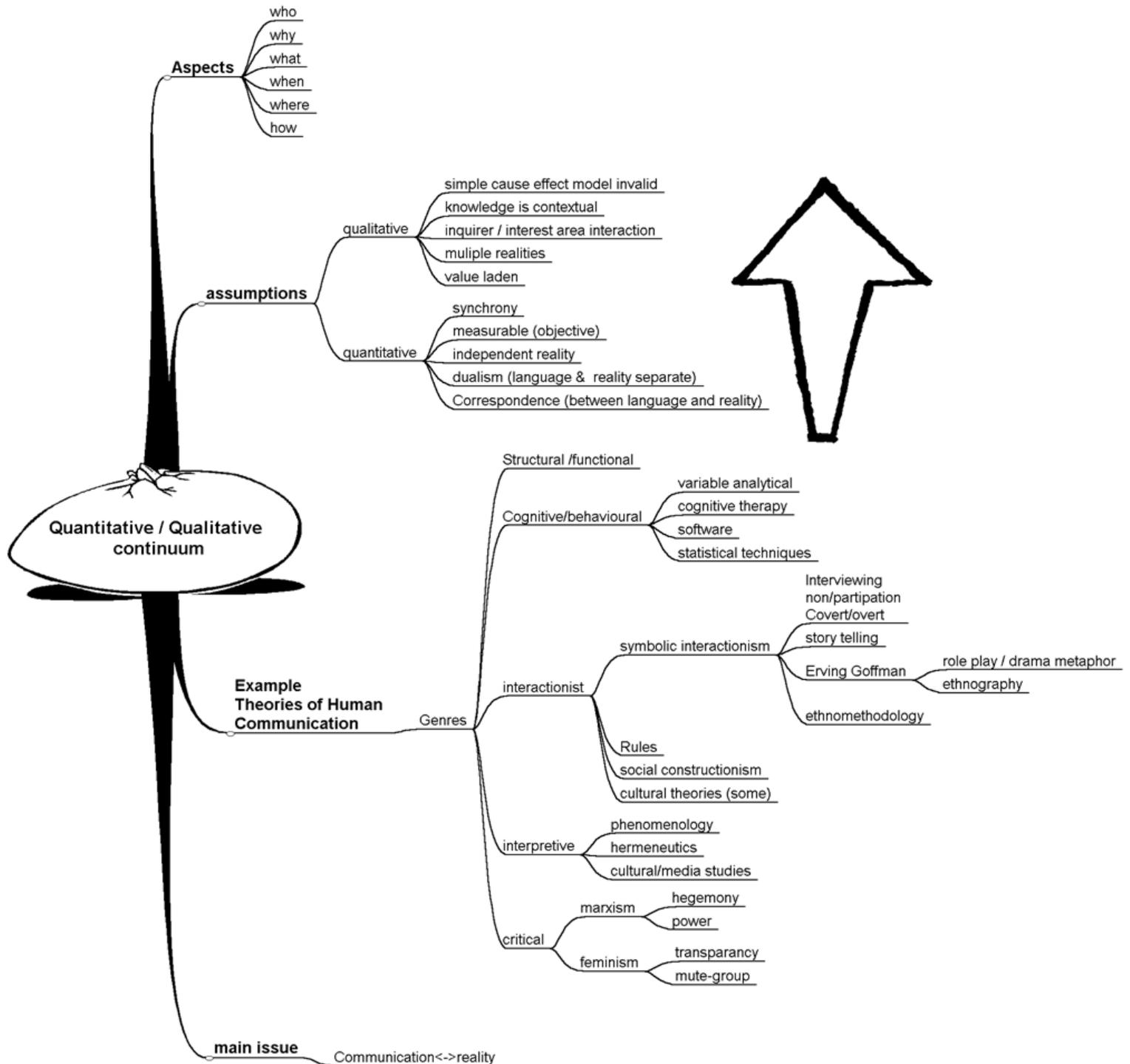
Quantitative /Qualitative research fundamental propositions

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Applied to theories of human communication

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1. Before you start

1.1 Prerequisites

This chapter is primarily concerned with the differences between qualitative and quantitative research. Many of the examples within it, as well as the exercises, assume that those reading this chapter have some knowledge of healthcare. This chapter has been written as part of several courses, some focusing on communication while others focus on Information systems. With this in mind I have tried to make this core chapter as generic as possible, however I'm sure that it fails in many places. To help me please send your comments, additions and suggests.

Other documents provide much greater detailed descriptions of various quantitative and qualitative methods and the tools used. You can find them, and others at:

<http://www.robin-beaumont.co.uk/virtualclassroom/contents.html>

1.2 Required Resources

You need the ability to be able to view this document while online so that you can check out the various web sites mentioned.

If you are studying this document as part of a course on communications theories I also recommend that you have to hand a copy of **Theories of Human communication** by **Littlejohn**.

2. Learning Outcomes

This document aims to provide you with the following skills and information. After you have completed it you should come back to these points, ticking off those with which you feel happy.

Learning Outcome	Tick Box
Be able to apply the Who, Why, What, When, Where, How criteria to topic areas	<input type="checkbox"/>
Be able to explain the Qualitative Quantitative continuum in terms of sets of opposing assumptions	<input type="checkbox"/>
Be able to recognise the particular World View a piece of research has adopted	<input type="checkbox"/>
Have an awareness of the postmodernist perspective	<input type="checkbox"/>
Be able to discuss the relationship between Theory, methods and Tools	<input type="checkbox"/>
Be able to discuss the different approaches taken to analysing human communication	<input type="checkbox"/>
Be aware of the components of a Randomised Controlled Trial (RCT)	<input type="checkbox"/>
Be able to provide a critique of social constructionism	<input type="checkbox"/>
Be able to suggest where each of the five genres of communications theory sit along a line from objective to subjective theories	<input type="checkbox"/>

3. Introduction

In this document we will be considering the basic differences between qualitative and quantitative research. We will begin by first introducing each type and then providing a number of examples of the various approaches. For the examples I have chosen to consider the area of human communications research as this encroaches on a wide range of disciplines.

I have drawn heavily upon the book by Littlejohn, *Theories of Human Communication*.

While we are investigating the difficult topic of qualitative / quantitative research I suggest that you always keep at the back of your mind the following questions:

Who, Why, What, When, Where and How

Exercise 1.

Many introductory research books state that world view 1 (quantitative) is concerned with What and How whereas world view 2 (qualitative) is concerned with why.

Do you think this is correct - give reasons for your answer.

We will revisit the above question latter but it is important to realise that this is not really the case and the above statement is basically wrong. To find out why we need to consider how the two viewpoints differ, and more importantly are they reconcilable?

4. The Qualitative Quantitative Continuum

It is important to realise that the beliefs underlying Qualitative and Quantitative research represent **opposing** views of the world, in fact Littlejohn calls them *worldview I* and *worldview II* (p27 7th ed)



Lets consider the different beliefs of each viewpoint in turn.

4.1 World view 1 (quantitative research)

Worlds view 1 asserts the belief that there exists a real objective reality. This classic quantitative paradigm goes back to Plato (truth by reflective thought) and Aristotle (knowledge through observation and classification). This is the traditional, taken-for-granted view of the world embodied in the RCT (Randomised Control Trial) design that is the bedrock of all medical research.

The following table adapted from Littlejohn (p13 5th Ed.) lists the five premises that embodies *World View 1*

Premise/assumption	Description
Synchrony	Stability over time exists in contrast to change (diachrony). It is therefore valid to develop Causal explanations etc.
Objective measures	It is possible to objectively measure an independent reality.
Independent reality	There does exist a single reality. The reality is objective and not value-laden. Our experiences are just reflections/interpretations of it. Because our perceptions are merely reflections of this reality we should mistrust concepts such as "subjectivity", "consciousness" and creative reflection in helping to understand this reality.
Dualism	Objects (i.e. the world) and symbols (i.e. language) are separate. Language is just a tool for description, and the world would exist without it.
Correspondence	Language corresponds to reality (but provides an imperfect reflection of it).

Most of you will think the above aspects represent the truth and are just common sense. The important thing to realise is that they are basically a list of

Assumptions

These assumptions which you could call beliefs imply commitment, and those of you who subscribe to the above beliefs/assumptions, will have arguments to validate them and feel threatened when these are attacked, probably psychologists would call it cognitive dissonance.

Exercise 2.

-
- a) How strong would you say your desire is to defend the above viewpoint?
 b) What type of arguments would you use to defend them?
-

I bet you had strong views and used arguments of a 'scientific' / logical nature to defend them.

What is important to realise that logical / scientific arguments depend upon the above assumptions themselves to work. Take for example the argument you may have for the above being the true state of affairs, this probably included stating that it has been proved in some way, however proof in this sense depends upon - Synchrony so your argument requires the assumptions itself!

It is not my desire to discuss the proof or repudiation of the above assumptions, doing so would distract from the important task of considering alternative views by trying to get you to accept the standpoint that you can treat these as assumptions and therefore temporarily take on alternative sets of assumptions as being equally valid.

This is a difficult task and you will find it painful.

Exercise 3.

Consider the following two viewpoints, that of a non believer and that of a religious person (Jew, catholic or muslim etc.)

- a) How do they differ in their thoughts?
 b) What do they believe about the nature of knowledge and specifically what different methods do they use to obtain and validate it?
 c) How do they differ in their actions?
-

The above exercise may appear rather strange but I have found it helps some people to think about how a set of beliefs can affect your thoughts, your values and your actions. In terms of research you can think of this as being:

- The questions you ask
- The types of knowledge you use to answer it along with the value you ascribe to them.
- The method you use to answer it

To be able to undertake the above exercise you possibly needed to suspend some of your beliefs and even possibly take on opposing ones for a minute, specifically it was not the case of extending your beliefs or simply adapting them.

Let's now consider a set of assumptions/beliefs that represent world view 2 (quantitative).

4.2 World view II (qualitative research)

Worlds view II asserts the belief that objective reality is to some degree individually constructed. This alternative paradigm rejects the assumptions listed above and replaces them with the following set of basically opposing assumptions.

Potts & Newstetter 1997 Five Axioms	Penman 1982 Five tenets (quoted in Littlejohn 7ed p24)
Simple Cause and effect is a simplistic illusion	Action is voluntary and you can not predict behaviour. There are no predictable universal laws
Knowledge is contextual and can only be described as a working framework	Theories are historical
The inquirer and the object of enquiry interact with each other so they are inseparable	Theories effect 'reality'
Reality consists of multiple constructed realities that can be understood to some extent but cannot be predicted or controlled.	Knowledge is socially created
All enquiry is value laden	Theories are value laden

This view of the world may seem rather extreme but it is said by some to present a useful stance from both a theoretical and practical research perspective.

You should notice that these are basically opposing each of the previous ones, in a slightly different order.

Let's consider the three research aspects we mentioned before:

- The questions you ask
- The types of knowledge you use to answer it along with the value you ascribe to them.
- The method you use to answer it

Because of the above assumptions the questions will not be concerned with simple cause and effect answers but rather aim to gain an 'insightful' understanding requiring an interaction between all those involved (notice I avoid the terms researcher and subject which is very much world 1 paradigm terminology). In some instances there is no question as this only becomes clear within the interaction

Knowledge this time is not from measuring object reality but from unique personal reflection and **interpretation** by those carrying out the research or those involved in it (think of the various oral history projects where you can actually hear the people) or even those who subsequently read/listen/view it. Furthermore, considering that now we are assuming there is no objective reality it could be argued that the 'interpretation' (i.e. result) will be for that particular researcher at that particular time within that particular context.

Therefore if the researcher were to repeat the same research at another time, even the same thing within the same context they would probably have a different interpretation (i.e. result). This is not considered to be a weakness in the world 2 paradigm but a strength - the opposite, as many things are, to that of the world 1 paradigm.

We will compare the differing research methods between world view 1 and 2 latter but now work through the exercise on the next page.

Exercise 4.

By considering the questions asked, knowledge aspects and the method used decide which of the following represents a researcher with *World I* or *World II* views:

Research	The questions asked	The types of knowledge used along with the values ascribed to them.	The method use
1. A researcher wants to find out about patient satisfaction at a local hospital outpatients department. She develops a questionnaire consisting of 20 questions each of which consists of a number of predefined responses. The questionnaire is given to 500 random subjects and the data analysed using a statistical programme (SPSS). The results are published along with a set of recommendations for Hospital Outpatients Departments in general.			
2. A researcher wants to find out about patient satisfaction at a local hospital outpatients department. She spends a few days in the department asking treated patients to tell her what they think of the department and their experience. She records the interviews and then quotes (sometimes at length) the parts she feels are most relevant in a document describing individual patients experiences. The document is structured into a number of themes that she feels those interviewed felt to be most important.			
3. A researcher wants to find out about patient satisfaction at a local hospital outpatients department. She sits quietly observing what is happening in the department (unknown to both staff and patients) and records the number of times patients return to reception to enquire about their waiting time and the number of patients that leave before being seen by a medical member of staff.			
4. A researcher wants to find out about patient satisfaction at a local hospital outpatients department. She develops a web blog and publicises it within the department. After 6 months, when she has over 1,000 entries, she pulls out 'themes' she has identified in the postings and produces a report.			
5. A researcher wants to learn more about patient's experiences at a local hospital outpatients department. She has a background in nursing and has arranged with a senior manager to shadow a nurse for the week on the assumption that she is interested in seeing the variety of procedures the nurse's carry out. During her time observing she makes notes about how the patients and nurses interact and how a satisfactory outcome is negotiated between them. She writes up her experience after a great deal of reflection.			

If you are working through this document as part of a web-based course discuss your answers on the electronic discussion board.

4.3 Intermediate world Views

In the above I have presented two opposing contradictory views. However there are intermediate stances, as you can reject only one, rather than all, of the assumptions made in either of the World views. For example you might accept the 'Independent reality' assumption but believe that personal experience and reflection present a valid way of discovering this. This is the stance taken with some Social Science research where collections of individual diaries and interviews are used as a basis for research to gain knowledge about groups of people. In other words they accept that it is valid to pool the experiences together to gain insight into an objective reality.

Similarly in qualitative research (world view 2) the results are often considered to be validated by the 'integrity' of those who undertook the research, including the interpretation (which is often done within a particular theoretical stance) and sharing of interpretations amongst fellow researchers. I personally feel that this is just a form of group think (Janas 1982).

4.4 Post-modernism - combining Qualitative and Quantitative Views

During the past 70 or so years 'post-modernism' has become a fashionable movement of which one characteristic is the juxtaposition of traditionally inappropriate entities. For example:

- A exhibition where the visitors take away part of the exhibit with them (i.e. something from a pile of objects) breaking the boundary between artist and viewer.
- An Iron with tacks (Man Ray Flat iron) or a Cup made of fur (Meret Oppenheim 1936, Luncheon in fur).



We have seen from the above sections that basically Qualitative and Quantitative views are based upon opposing assumptions. The problem is that by combining these views inappropriately I feel we sometimes end up with structures very similar to those presented above, flights of fancy which are of no practical value, other than that of an aesthetic toy. Unfortunately it seems to be becoming ever more popular to try to combine the two in "imaginative" ways.

I feel there are appropriate ways of combining the two but this needs to be done in a very careful way, and taking into account the underlying assumptions is a fundamental aspect to consider not something that can be ignored.

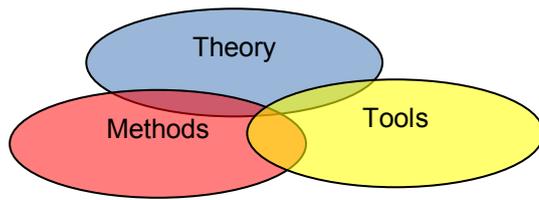
4.4.1 Operationalisation

Within the world view 1 approach there is a very important stage of the process that is often ignored; that of Operationalisation. This is the process of taking a concept and making it into one or more measurements. Some concepts are uni-dimensional that is only require one scale to adequately measure them such as temperature or height while others are more complex, being multidimensional, such as intelligence, empathy, anxiety and happiness often requiring a battery of measures along different dimensions to adequately measure and capture them.. From a world one viewpoint this process of **scale development and validation** is one of the great achievements of quantitative research.

In contrast those with a world 2 view believe that these more complex things can't be measured.

Before we move onto investigating various world views in more depth I feel it would be appropriate to discuss the relationship between world view ("theory"), research method and the particular tools one may use from both a world 1 (i.e. quantitative research) and world 2 (i.e. qualitative research) perspective.

5. Theory, Methods and Tools - comparisons between qualitative and quantitative approaches



The research method (the process), the Tools used and the philosophical foundations (the theory / World View) are different but related aspects of the research context. For example those espousing a *World View 1* would find the 'tool' of a day's shadowing (i.e. a particular research method) of little use, however, if you were a fervent *World View 1* advocate (quantitivist like myself!), you would attempt to force the process and Tools associated with your world view upon it – after

all what is the 'time and motion' approach other than this. You would also conceive of the shadowing exercise as a pilot for a follow-on study consisting of a proper randomised sample. However if you were a *World View 2* advocate you would see the exercise as a valid process in itself which would be the basis for further reflection, interpretation and interaction etc.

However there is a fundamental difference why the world view 1 and world view 2 researchers would carry on with the process. For the world view 1 researcher it would be to gradually develop some type of measure, that is they would probably consider it part of the operationalisation stage. However for the world view 2 researcher it would be to gain a greater understanding of the experience, they therefore might decide to either spend more time with the individual over a period of weeks or consider another individual until they felt they had adequately understood the situation.

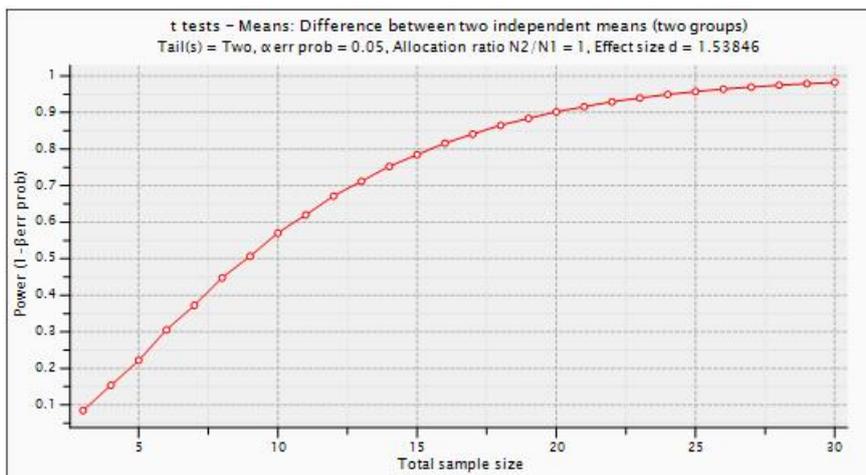
5.1 Sample size

Sample size is often considered to be a defining characteristic of the type of research undertaken, World view 1 researchers are said to work with large samples whereas those with a world 2 view use smaller ones and this view is seemingly verified in the quote from Sandelowski, 1995 concerning qualitative research (i.e. those with a world 2 viewpoint)

A common misconception about sampling in qualitative research is that numbers are unimportant in ensuring the adequacy of a sampling strategy. Yet, simple sizes may be too small to support claims of having achieved either **informational redundancy** or **theoretical saturation**, or too large to permit the **deep, case-oriented analysis** that is the *raison-d'être* of qualitative inquiry. Determining adequate sample size in qualitative research is ultimately a **matter of judgment and experience in evaluating the quality of the information** collected against the uses to which it will be put, the particular research method and purposeful sampling strategy employed, and the research product intended. (Sandelowski M 1995)

There are several important aspects to note from the above abstract, which I have highlighted. Most importantly the actual sample size is determined by judgement and experience and as would be expected from a world view 2 researcher this is in direct contrast to a world view 1 researcher which would usually use a statistical formulae to ensure that a adequate sample size is achieved with a power of .8 and a type one error of 0.05 . However it is erroneous to say that quantitative research always uses large samples, there is a optimum sample size in both types of research and in quantitative research (i.e. world view 1) it may be surprisingly small.

Let's consider a example from a world 1 viewpoint. A fictitious researcher wishes to investigate the effects of a new blood pressure reducing drug which has shown in a previous study with male Scottish, newly diagnosed hypertensive subjects (age range 50 to 55 yrs) to reduce the diastolic blood pressure by 10 mmHg (SD=6.5) the current researcher wishes to see if it has a similar effect upon a similar sample in London she carries out the necessary calculations (using the Gpower program) and discovers that she



requires a minimum sample of 15 subjects (i.e. 8 in the treatment group and 8 controls) furthermore given this information it is pointless increasing the sample size greatly as informational redundancy would result.

While this is a fictitious example with possibly values to suggest a smaller sample size that would be required in reality it is important as it demonstrates that it is not necessary to have large samples for world view 1 (i.e. quantitative) research. In fact one of the main areas of statistical research in the 20th century was small sample theory notably by William Gossett who developed the t tests specifically for small sample sizes.

We can conclude from this that whereas researchers with a world view 1 approach can specify a sample size using objective measures researchers using a world 2 view rely upon personal judgement. So both in particular circumstances might be happy with a sample of less than 20.

It would be more fair to say than that whereas qualitative researchers always use small samples quantitative researchers might do so if the circumstances are conducive. In contrast the type of sample used by each researcher is very different and this has a major impact on the validity of the findings for researchers who undertake world 1 view research, a topic discussed in the next section.

5.2 Methods

Lets remind ourselves of the typical method for quantitative research, that is those espousing a world 1 viewpoint:

You would attempt to gain **objectivity**, by attempting to develop methods that would minimise the dangerous possibility of **subject /researcher interaction** by **Blinding**

You would aim for **standardisation** by appropriate Sampling, Randomisation, Grouping and scale development (all forming part of the research protocol). You would aim for a method that would allow **replication**.

Comparisons - You would usually include one or more **comparator** group(s). Such comparator groups are usually real that is a control, placebo or alternative intervention(s) but might be theoretical that is statistically defined.

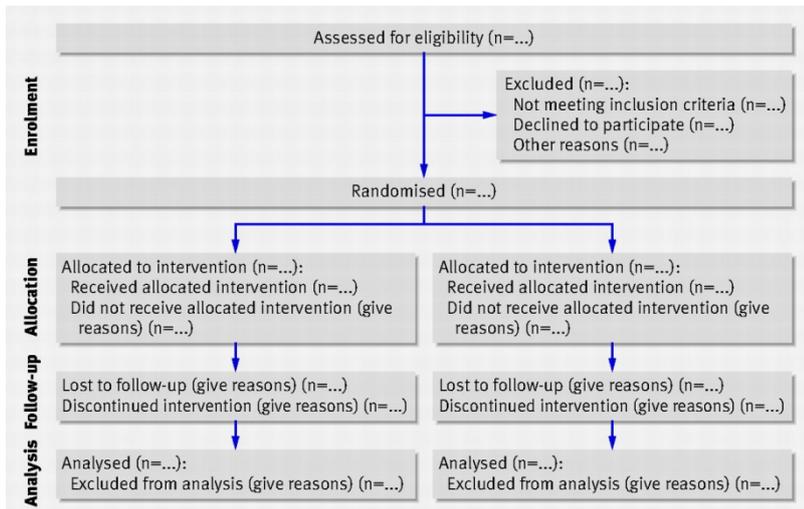
Measurement - You would develop **hypotheses** describing the values of possible **variables** (relating to the objective real world). You would define objective **valid reliable** measures by a process of **operationalisation** producing **validated standardised scales** the result of which would be data consisting of **numbers**. The data would be interpreted using formal **statistical theory** involving **probability** theory and making **inferences** from your **sample** to a **defined population** (the process of **generalisation**).

Interpretation - The possibility of **Individual interpretation of the results would be minimised**. Others following the study protocol and analysing the data would come to the same conclusions.

Exercise 5.

Taking some of the terms in bold, in the above paragraph consider how each violates one or more of the assumptions of world view 2. The list is provided below to help you

Potts & Newstetter 1997 Five Axioms	World 1 method/tools used which violates world 2 assumptions
Simple Cause and effect is a simplistic illusion	
Knowledge is contextual and can only be described as a working framework	
The inquirer and the object of enquiry interact with each other so they are inseparable	
Reality consists of multiple constructed realities that can be understood to some extent but cannot be predicted or controlled.	
All enquiry is value laden	



Another way of looking at the above description is to consider the world view 1 gold standard research approach, the RCT, which can be expressed in the form of a flow diagram (Schulz, Altman & Moher 2010):

Sampling - In quantitative research we attempt to ensure that our sample is a representative sample (usually **random**) from some theoretical population we are interested in **generalising** our findings to by using mathematical procedures (**inferential statistics**). In contrast those undertaking qualitative research often use non random samples such as

those individuals that the researcher feels will provide particularly rich data.

In quantitative research a representative sample is essential for a large number of statistical procedures to produce valid results and if it is not the results might simply be garbage. Depending upon the research design various **eligibility criteria** might be applied to allow more control (i.e. a more homogenous sample), for example in the previous discussion concerning power the researcher selected, newly diagnosed hypertensive males (aged between 50 to 55 yrs).

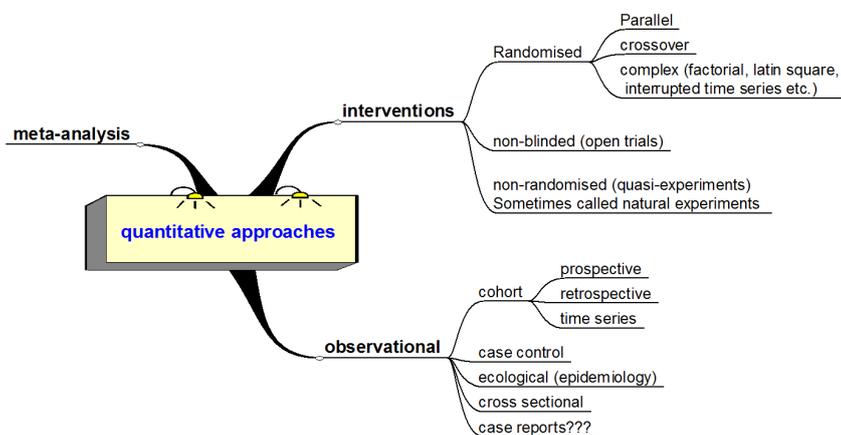
Random allocation - In quantitative research a second level of control is achieved by Randomisation which usually means **random allocation** to a particular group. This ensures that each subject entering the trial has equal chances of being in any of the treatment groups. One group may be a **placebo** or **control** group which is another important aspect as it allows the measurement or any effect/change over and about that brought about by any specific effects the other groups are subjected to. For an excellent introduction to the placebo effect I recommend you read Ben Goldacres' book Bad science which includes a whole chapter on the subject.

The above simple design has been adapted and expanded in numerous imaginative ways, we have **crossover** trials, **cluster** designs (where the randomisation is at the group level) and **stepped wedge** designs to name but a few.

Where it is not possible to randomise (often due to spurious ethical reasons) the alternative might be to use some type of matching where subjects in the intervention group are matched on important characteristics that have been shown to effect the outcome either prospectively (**case control**) or retrospectively (**historical control**).

Blinding - Blinding in this context means that the person does not know which group they belong to and is another important aspect of many trials. Blinding can be at one of three levels, the lowest level is that of the subject only not knowing, the second level is that of the subject and immediate researcher not knowing and the third level is where the data analysis is also carried out blind.

Where it is necessary to make compromises regarding randomisation and/or blinding the quantitative researcher has at their disposal alternative designs such as the clinical controlled trial and the pragmatic controlled trial. If it is not possible to apply an intervention of some sort then a **observational study** can be undertaken where group(s) are usually repeatedly measured over time.



Hierarchies and networks of data - It should not be forgotten that it is possible to analyse complex structures such as patients within wards within hospitals within districts and ascertaining the effects at each level using advanced statistical techniques (i.e. **multilevel modelling** or other similar techniques), once again where some qualitative researchers would erroneously argue it is just too complex to analyse their quantitative opponents would disagree and demonstrate how this can be done..

The mindmap opposite shows some of the possible methods used in quantitative research.

Exercise 6.

I have attempted to only give you a very brief introduction to methods used by quantitative researchers to find out more please glance over Gerard E. Dallal's excellent article entitled Some Aspects of Study Design at <http://www.jerrydallal.com/LHSP/STUDY.HTM>

Now we will consider some of the methods used by the qualitative researcher.

The aim would be to understand the situation, from either the persons perspective or through a particular theoretical framework. Themes and areas of interest might develop as they learnt more, this would be by using **open ended unstructured interviews** or by **observing** a specific group, additional data rich subjects might be identified by a process of **convenience sampling**. The research might also focus on bibliographic materials such as books, medical records or diaries etc.

The researchers relationship with the 'subject' would be to gain trust from them this might mean they become as transparent as possible - disappearing into the background or might decide to take on a specific role (participant observation) When they felt that they had gained enough insight they would then leave and write up the results along with their own interpretation of the experience. **They would not attempt to generalise any findings or indicate that the same findings could be replicated**, other than in a very tentative manner.

Interventions and comparison groups are not usually considered appropriate. However they might in some situations use a form of blinding to allow them to gain trust and access to certain groups, an example is given latter in the section concerning Irving Goffman.

Those who hold a world 1 viewpoint often feel the above method and tools are not research but rather something akin to investigative journalism or even creative writing. Clearly the underlying reason for such attitudes is because they subscribe to world 1 assumptions/beliefs.

Exercise 7.

Some aspects presented above cover what is known as the ethnographic approach, have a quick look at the ethnography entry in wikipedia: <http://en.wikipedia.org/wiki/Ethnography>

If you are interested in this approach also search out the Fine GA, 1994 Ten lies of ethnography: moral dilemmas of field research. Journal of contemporary Ethnography 22 3 267-94

5.3 Tools

Both quantitative and qualitative approaches made use of many 'tools'. Traditionally in qualitative research the researcher and their textual write-up is the sum of the tools used, however now with detailed conversational analysis it is possible to produce transcripts of entire conversations/interviews and then analyse then by using specialist software, the process usually involving the researcher going through transcripts and marking specific words/phrases that have significance from which they then build up a pattern of themes etc. Obviously although computers are involved the process of selecting and developing the themes along with their relationships it is a highly creative act under the control of the researcher.

Questionnaires as a tool, can straddle both quantitative and qualitative research, the open ended question being akin to a interviewer asking a question. However, the quantitative researcher develops and uses the questionnaire in a very different way, to provide numeric data, for example:

- Questionnaires with pre-defined responses that could be coded numerically. I.e. Likert scales etc.
- Text or 'soft' data would be translated (i.e. coded) to numeric values. For example a sentence might be coded as 1 to 10 on an aggression scale. Similarly diary entries might be coded in particular ways.
- Instruments such as questionnaires and other measuring devices would be reliable with the same input value (regardless of the researcher) producing the same result (code) each time.

In contrast the qualitative researcher will use different tools and methods to provide context rich descriptions, for example:

- You might write up daily notes
- You might provide the opportunity for people to write down what they think in the form of diaries, critical incident reports or "any comments" sections to questionnaires
- You might use transcripts of interviews
- You might use videotapes
- But the most important thing is yourself!

Exercise 8.

Revisit exercise 3 and consider how your feelings in that exercise equate to those who undertake either qualitative or quantitative research.

I hope from the above material that it is now obvious that quantitative researchers offer very different outcomes to that of qualitative researchers **but do basically answer the same questions.**

Whereas the qualitative researcher is primarily focused on the **uniqueness** of the experience the quantitative researchers interest is that of **inference**, applying their findings to a population in other words they are primarily concerned with **generalisability**. This makes sense as it conforms to their philosophical foundations.

I would also suggest that you now look at the FAQ section at the end of this chapter as it reinforces and expands on these aspects.

Usually when formulating policy decisions concerning such things as education and healthcare etc one would rely upon research that is of a quantitative nature however unfortunately because the output from such research is less clear than a carefully placed quote from an interview to the general public qualitative research is used to help sway public opinion.

We will now look more closely at a number of theories that represent various viewpoints along the Quantitative / Qualitative continuum in the field of communications theory.

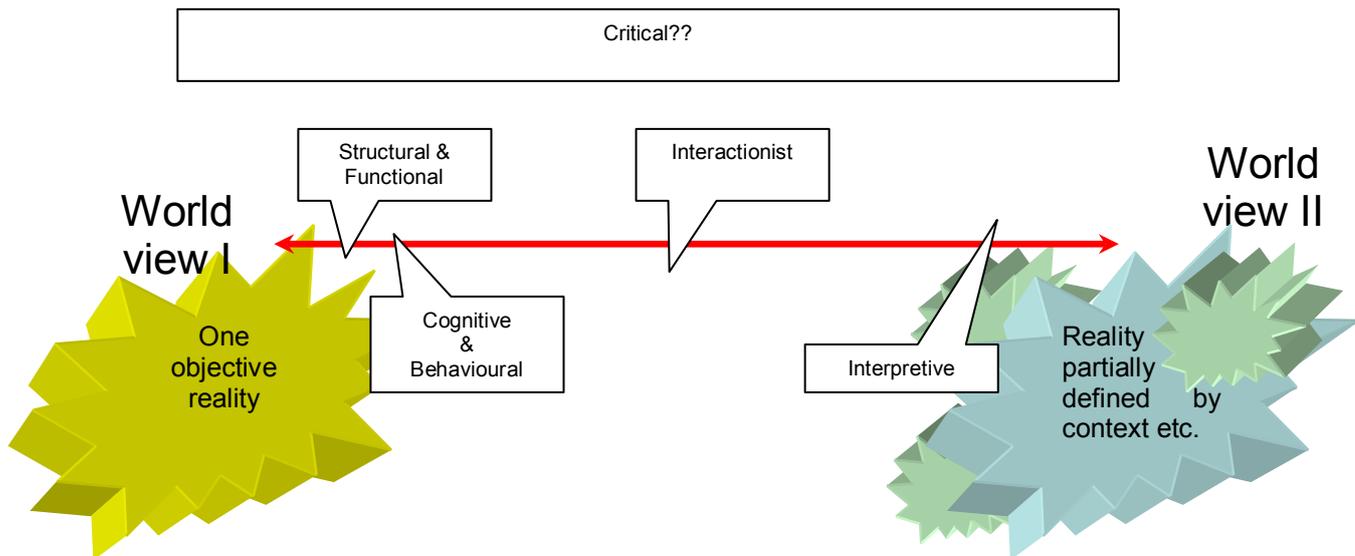


6. Genres of Communications Theory

There is a large amount of research concerned with human communication, and numerous conflicting theories attempting to explain how we should examine and interpret (etc.) communication. Littlejohn (5th ed. P13 - 18 not in the present 10th ed.) suggests five broad categories (he calls them "genres") of communications theories:

1. Structural and Functional
2. Cognitive and Behavioural
3. Interactionist
4. Interpretive
5. Critical

Each genre/ theory can be thought of lying along a line representing the two opposing world views.



We will now take a look at each of the above groups of theories ("genres").

6.1 Structural and Functional Theories

Examples of these types of theories are Systems Theory, Shannon and Weaver's communications model and cybernetics. All these theories possess some common characteristics:

One of the consequences of accepting Synchrony is that there is a reliance, to a certain degree, on rationality in both the subjects under scrutiny and those carrying out the investigation. For those being investigated one assumes they are basically rationale and for those carrying out the investigation the aim is to achieve the highest level of rationality.

One particular area of communications research that takes on this approach is that of 'non-verbal' communication, such as body language ('Kinesics') and the use of personal space ('Proxemics').

An example of using the structural approach

A particular project (Prodigy - UK) was interested in investigating the possible effect the introduction of a simple computer based prescribing support system might have upon communication in patient consultations in UK GP practices.

The structural approach would probably do something like the following:

- Select a random group of GP practices and divide randomly into a control & treatment group
- Video consultations
- Measure the "effect upon the consultation" a number of ways such as the length of the consultation, Percentage of time spend with Doctor patient eye / eye contact, percentage of time doctor spend looking at the computer screen and also the results of a consultation satisfaction questionnaire which might be administered to both doctor and patient.
- Statistical analysis would then be carried out to see if in reality there was any significant difference in the various measures as a result of the introduction of the system. Importantly the (inferential)

statistics would allow us to take into account any difference due to random sampling variability that would occur between individual consultations. The aim would be to gain some overall measure for each group, stripping out the individuality so that it is possible to compare the two groups easily. (think this is what happens when you obtain an average, or standard deviation etc.)

- Blinding (hiding details of the experiment from various participants, such as Patients GPs or researchers). Due to practical reasons this would be almost impossible for the situation described above. A technique that achieves a similar result (i.e. allows use to measure the placebo effect) is to use a **Placebo**. For example, a paper version of the electronic prescribing guidelines. Ideally you should use both blinding and a placebo.

6.2 Cognitive and Behavioural Theories

This group of theories accepts the premises of the Structural and Functional theories, but the level of analysis is at the individual rather than the group. It is the standard approach in Psychology (Behaviourism and Cognitivism) and Psychiatry (ignoring the watershed of psychoanalysis!).

By adopting the premises of the Structural and Functional approach, these theories attempt to identify variables ("variable analytic") that explain human behaviour in the form of "schema". A schema in this context is a set of measurable beliefs. A persons actions are also considered to be worthy of measuring.

An excellent example of the variable analytical approach is that demonstrated in Cognitive Therapy. Cognitive therapy accepts the Schema concept and believes that a specific psychological illness (e.g. Anxiety, Phobia etc) is due to a dysfunctioning Schema (i.e. set of beliefs).

An example of the Variable analytical approach - Cognitive Therapy

Cognitive therapy has the following clearly defined phases (much of the information below has been taken from Wells 1997: Cognitive therapy of Anxiety Disorders):

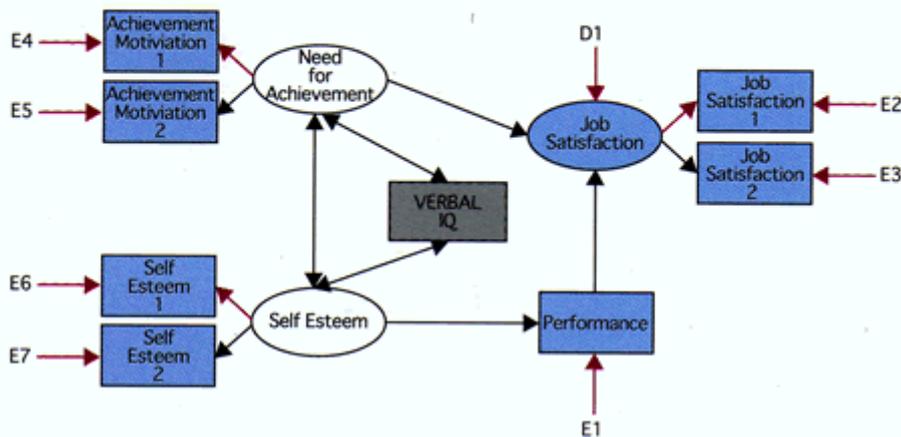
- **Full assessment** – Here the patient is measured on a number of important variables where standardised scales are used wherever possible. Amongst the regular scales used are: Beck's Depression / Anxiety inventories, Hopelessness and State-Trait Anxiety scales, additionally for specific disorders a number of other scales have been developed such as the Agoraphobic Cognitions Questionnaire, Fear questionnaire, Symptom interpretation questionnaire, Illness Attitude Scale, and the Social Avoidance and Distress Scale. The important thing here is that the problem is defined by a set of measurements that provide information about various traits and beliefs (i.e. the schema).
- **Conceptualisation / Goal setting / Socialisation** – This involves educating the patient (bibliotherapy) concerning cognitive therapy, their specific disorder and getting them to understand the role they will play in the therapy.
- **Symptom and schema-focused intervention** - This phase consists of two stages firstly modifying the cognitive and behavioural variables (i.e. the symptoms), secondly the inappropriate Schema is modified (i.e. beliefs are changed).
- **Relapse prevention** – This provides techniques for preventing and managing any relapses.

Throughout the whole process variables are constantly measured to gain objective measures for assessing the results of the intervention. This example shows the use of the variable analytical approach at the individual level (but it is important to realise that data can be aggregated to obtain normative values) The following example shows the use of the Variable Analytic approach to a number of people.

Examples at the group level

The development of various computer based statistical methods (structural equation modelling - **SEM** and multilevel modelling etc.) along with the software to support them (Amos, EQS: LISREL: <http://www.ssicentral.com/home.htm>) has made it possible to construct models in which a network of variables are analysed. A typical example is that of Bagozzi (1980) who reported a study on performance and satisfaction in an industrial sales force. He was interested in looking at the relationship between Job satisfaction, motivation, measures of performance and verbal IQ. The resultant diagram (various statistics omitted) is given below.

Performance and Job Satisfaction Model



For a history of Structural equation modelling see: <http://www.ssicentral.com/lisrel/word.htm>

To give you an idea of how the technique has been used I include a few references below:

Catalano, R. F., Kosterman, R., Hawkins, J. D., Newcomb, M.D., & Abbott, R.D. (1996). Modeling the etiology of adolescent substance use: A test of the social development model. *Journal of Drug Issues*, 26(2), 429-455.

Labouvie, E. (1966). Maturing out of substance use: Selection and self-correction. *Journal of Drug Issues*, 26(2), 457-476.

Swaim, R. C., Oetting, E. R., & Casas, J. M. (1996). Cigarette use among migrant and nonmigrant Mexican American youth: A socialization latent-variable model. *Health Psychology*, 15(4), 269-281.

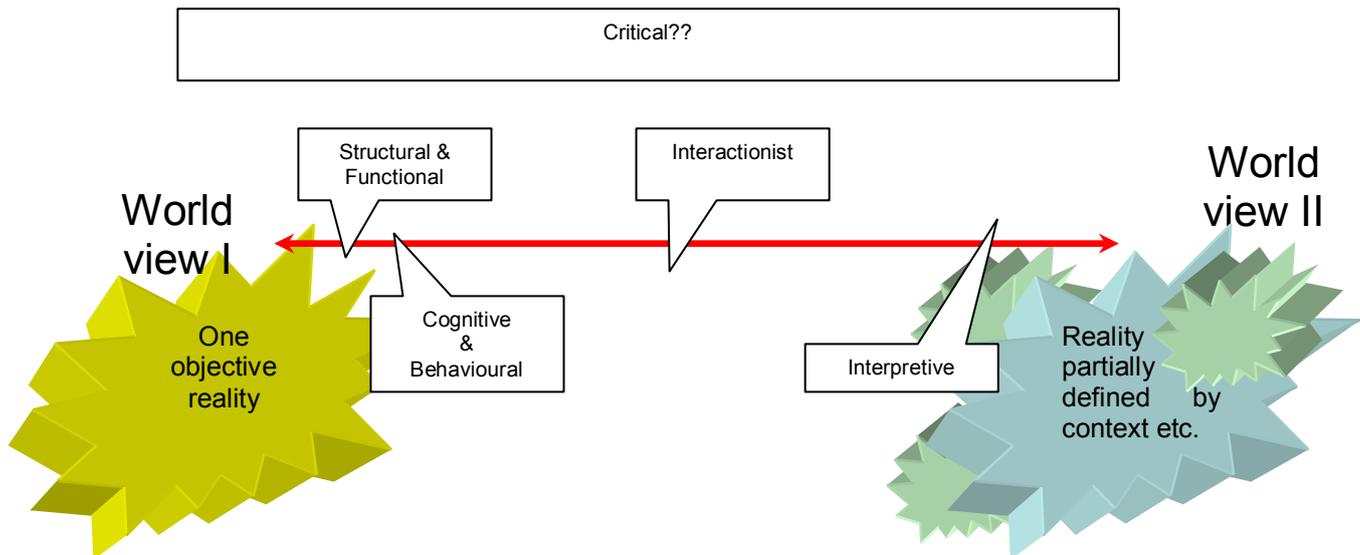
Vinokur, A. D., Price, R. H., & Caplan, R. D. (1996). Hard times and hurtful partners: How financial strain affects depression and relationship satisfaction of unemployed persons and their spouses. *Journal of Personality and Social Psychology*, 71(1), 166-179.

A similar technique has been used in the business work to help with complex decision making, in this instance a statistical technique called the “**analytic Network Process**” (see Saaty 1996 for details) is used and once again special software has been developed to facilitate the process (<http://www.expertchoice.com/>).

Within the field of sociology the above techniques have been used to measure the level and type of interrelations of individuals within and between groups (In this instance it is called “Social Network Analysis”).

To sum up, the Variable analytic approach accepts the premises of the Structural and Functional theories but focuses attention at a lower level, although it is often difficult to distinguish the two genres.

6.3 Interactionist Theories



We have now moved from the nice cosy world of the structuralists / Functionalists to a more personally defined, negotiated reality of the interactionist theorists. No longer are the premises of Synchrony, Objectivity, One reality, Dualism and Correspondence accepted without question.

The theories of this genre view social life as a process of interaction. Interaction is considered to be the process that individuals use to make sense of the world. Social structures are a result of these interactions, rather than the other way round (as suggested by the structuralists). Social conventions are similarly the result of interactions which are continually being re-negotiated. An important aspect is the **lack** of emphasis given to measurement and making inferences about what people understand, and believe from their overt behaviour.

Because interactions are defined partly by the situation, these theories tend to stress the importance of considering each situation as unique. Examples of Interactionist theories include the following:

1. Symbolic Interactionism (ie Erving Goffman)
2. Rule using theories (only some of them)
3. Social constructionism
4. Cultural theories (only some of them)

The history of the Interactionists follows that of the “Chicago school” of sociology which was founded in 1892. The first person who developed Interactionist theories was G H Mead who developed the concept of ‘role’ theory.

“In this context ‘role’ connotes the bundle of formal and predictable attributes associated with a particular social position, as distinct from the personal characteristics of the individual who occupies that position. The waiter or the doctor, for example, is called upon to perform a professional role expected of him by his public audience which may be quite at variance with his own inclinations of the moment. Roles which are official and publicly recognised as these which are frequently supported by uniforms and strict linguistic codes. But most social ‘roles’ are so inexactly defined that they are barely more than intuitively felt guidelines to the correct behaviour for a particular social situation.” (Bullock 1988 pp750).

An example

Becker found that new Marijuana users learn at least three sets of meanings and actions through interaction with other users. The first is to smoke the drug properly. Virtually everyone Becker talked to said that they had trouble getting high at first until others showed them how to do it. Second, smokers must learn to define the sensation produced by the drug as 'high'. In other words the individual learns to discriminate the effects of Marijuana and to associate these with smoking. Becker claims that this association does not happen automatically and must be learnt through social interaction with other users. In fact, some experienced users report that novices were absolutely stoned and didn't know it until they were taught to identify the effects as pleasant and desirable. Again this is not automatic; many beginners do not find the effects pleasant at all until they are told they should consider them so.

Here we see marijuana as a social object. Its meanings are created in the process of interaction. How people think about the drug (mind) is determined by those meanings, and the assumptions of the group (society) are also a product of interaction. . . .it is easy to see that part of the self may also be defined in terms of interactions in the marijuana smoking community."

[Becker H 1953 Becoming a Marihuana user, AJS 59 (1953) 235-242 quoted in Littlejohn 1996 pp163]

[The concept of 'role' was used] first in Mead's Social psychology (Symbolic interaction) which emphasised the importance of 'taking the role of the other' and role playing therapy invented by J L Moreno." (Bullock 1988 pp750). Various other writers have suggested that 'role' in everyday life has an element of the theatre about it ('Dramaturgical') and Narrative ('we live by stories') approaches.

6.3.1 Erving Goffman

Erving Goffman a Symbolic Interactionist interested in primarily dramaturgical interpretations analyses human behaviour with a theatrical metaphor (Littlejohn 1996 pp169). Goffman expanded the 'role' term in his book *The presentation of Self in Everyday Life* (1956), "where he elaborated two key concepts:

- **role distance** - the extent to which the individual may free himself from the demands of mere adequacy in a given role, and exploit the possibilities of play and improvisation above and beyond the necessities of 'correct' behaviour); and
- **role conflict** - what happens when the individual finds himself in the position of playing two or more roles at once – when, for example, the doctor has to minister to a member of his own family, thereby confusing his professional and fatherly roles.

Armed with these more subtle and modified terms, Goffman presented a most influential analysis of social behaviour as an elaborately mounted **drama**, in which virtually no area of human activity, public or private, was excluded from the essentially histrionic demands and conditions of the 'presented' self." (Bullock 1988 pp750).

Williams 1998 provides a very lucid account of Goffman's work focusing on his use of Metaphor (p158) stating that Goffman used the metaphor of the "theatre", "ritual" and "game" amongst others.

If you want to understand Goffman's work I recommend that you read either *Asylums* or *The Presentation of Self in Everyday Life*.

In the 1960s Harold Garfinkel took Goffman's work further in analysing the interactions in more detail using a method he called Ethnomethodology. You can find out more about this particular technique either by looking at the document called "Obtaining requirements - Qualitative methods" or by reading Heritage 1998 Harold Garfinkel for an unusually lucid account of the subject.

Techniques used by Interactionist Theorists

The 'Case study' is the standard approach. This is very much a face to face process trying to understand peoples beliefs from their own perspective, followed by a period of reflection which involves reflection and seeing how the information obtained fits into the symbolic Interactionist framework.

The face to face approach might include:

Interviews long, in-depth and unstructured

Covert or Overt - you may tell the group what you are doing or just join it

Non-participation or participation – you may stand and observe or actually take part in the activities of the group.

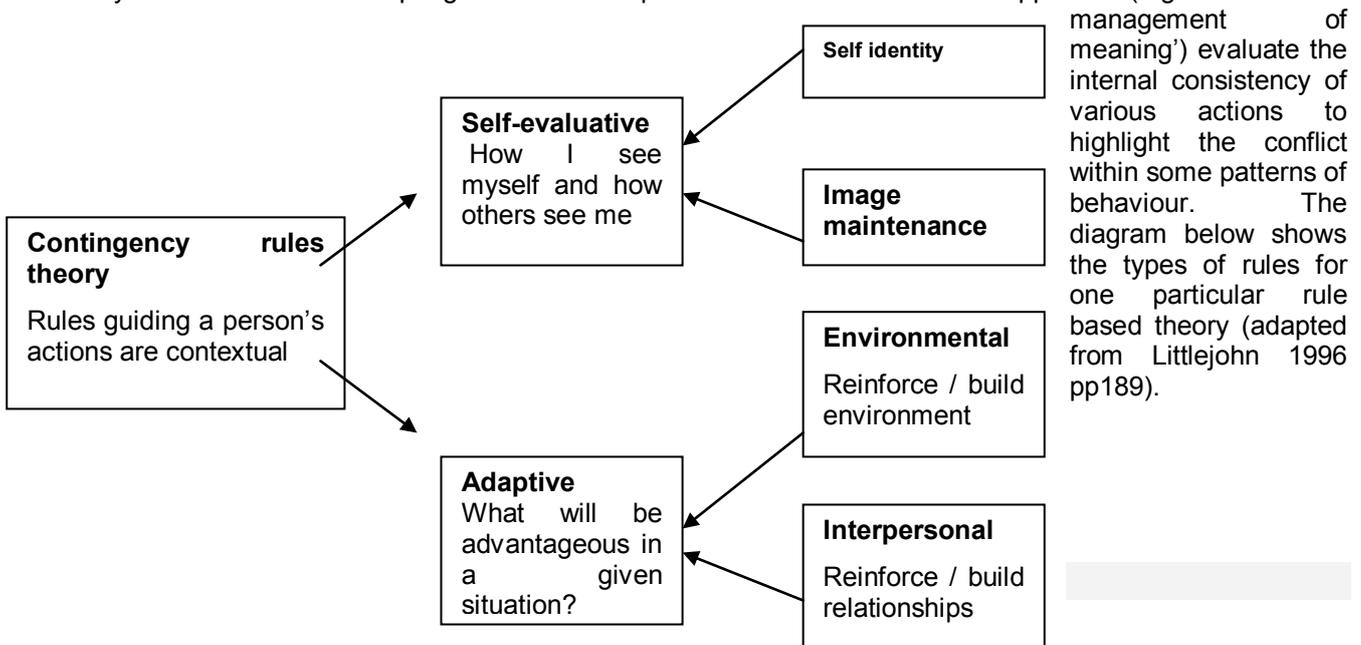
Therefore a study may be of one of four types; non-participate covert, Participant covert etc.

Because one of the assumptions is that interactions partly define the self it is logical to follow that realities are partially socially constructed.

There are a large number of approaches that subscribe to the belief that reality is partially socially constructed including various Rule based approaches and cultural theories. We will consider each of these very briefly.

6.3.2 Rule based approaches

Rule based approaches believe that the way people construct and use various [social] rules influences their reality. Some theories accepting some of the premises of the structuralist approach (e.g. 'Conditioned



6.3.3 Language and Culture – Linguistic Relativity

The Theory of linguistic relativity is based upon the work of Edward Sapir and Benjamin Lee Whorf. In the words of Sapir,

Human beings do not live in the objective world alone, nor alone in the world of social activity as ordinarily understood, but are very much at the mercy of the particular language which has become the medium of expression for their society . . . The fact of the matter is that the “real world” is to a large extent unconsciously built up on the language habits of the group . . . We see and hear and otherwise experience very largely as we do because the language habits of our community predispose choices of interpretation” (from Whorf 1956 Language thought and reality. Quoted in Littlejohn 1996 pp196).

Whorf provides the following example of the difference between the Hopi’s perception of time and that of the Standard average European (SAE) due to the different way they have of describing ‘time’ within their language.

“As a result of . . . linguistic differences, Hopi and SAE cultures will think about, perceive, and behave toward time differently. For example, the Hopi tend to engage in lengthy preparing activities. Experiences (getting prepared) tend to accumulate as time “gets latter”. The emphasis is on the accumulated experience during the course of time, not on time as a point or location. In SAE cultures, with their spatial treatment of time, experiences are not accumulated in the same sense. Elaborate and lengthy preparations are not often found. The custom in SAE cultures is to record events such that what happened in the past is objectified. “(Littlejohn 1996 pp.197)

It should be noted that while both the theory of Linguistic Relativity and Symbolic Interactionism believe in a socially constructed world the former believes that the ‘reality’ is already embedded in the language whereas the Symbolic Interactionists believe that ‘reality’ is created by the process of interaction.

6.3.4 Is social constructionism a load of rubbish?

In direct opposition to those who believe in Linguistic Relativity is Chomsky who taught that language structures are universal and that cultural differences in language are merely superficial. The argument that if one is put in front of a locomotive one can be sure that it is not socially constructed is simply taking the argument too far. Social constructionists do not deny the fact that objects exist in the world, what they are concerned about is the vast and rich context of which the locomotive is a part.

Cherwitz and Hikins (Communication and knowledge 1986 Littlejohn pp201) give five basic reasons for dismissing the constructionist approach:

A Reality exists - They simply state that no one believes that a socially constructed reality exists so it is very unlikely to be the case.

Evolution – If man has evolved and objective sense of reality is required as a baseline with which to measure this.

Logical consistency – Without an outside reality there is no way to test validity or quality of socially constructed knowledge. We are stuck at the individual / group?

Anthropological – There are commonalities across cultures where cross-cultural understanding does occur

Nature of communication – Some studies have shown that communication itself results in an undeniably objective world. In other words, the communication that supposedly “constructs” reality cannot be understood without reference to its own reality.

For an excellent criticism of the qualitative world view in general see *Intellectual Impostures* by Alan Sokal and Jean Bricmont (1998 profile books).

As Littlejohn so succinctly put it (pp202): “The basic question is: Is communication a tool for communicating accurately about the world, or is it the means by which the world itself is determined?” I would add to this sentence “and to what extent”?

An aside – the Edwardian House

In May 2002 on Channel 4 (a UK television channel) a series of programmes followed a group of people who agreed to live like Edwardians in a country manner for three months with the series becoming far more popular than the makers had originally imagined. The various groups, a family to play the Lord and Lady and a set of individuals none of whom knew each other to act as the servants. While this type of series (“reality TV”) has become very popular in the UK the actual result is usually pretty uninteresting, however in this instance the result was very different. Why was this so? To understand why I think we need to consider how previous similar series were set up. Such previous experiments consisted of a single family and therefore during the experiment the social unit itself was not disrupted.

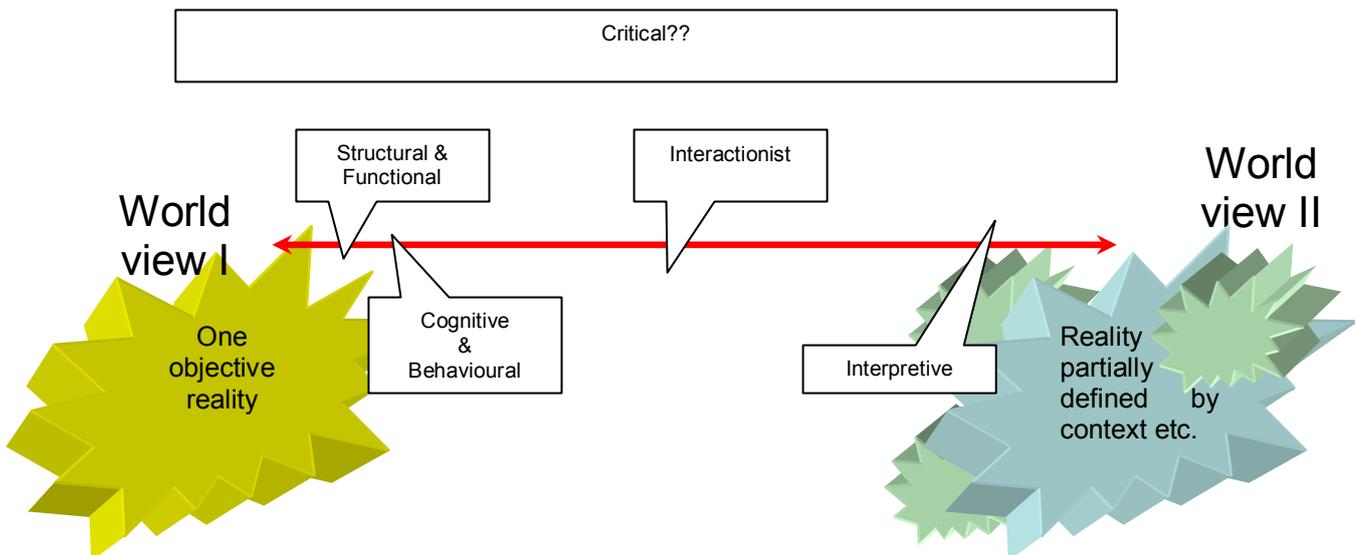
However in this case, each of the servants were given a book of detailed rules, and expected to initiate interaction with fellow servants, and obviously the masters, in the required manner. Similarly those above stairs did not know those beneath and also had a set of strict rule books determining every aspect of living.

The result was that various players developed in their perspective roles and furthermore developed interactions within their role. It was fascinating to watch during the series attitudes changing to those suggested by the various roles. One felt that the individuals had lost a sense of self and just became the roles, all very disturbing. When it was time to go the Lord and Lady were obviously very upset but could not perceive how the servants might view it as a welcome release (which they clearly did). This was in distinct contrast to the views they had expressed at the beginning of the experiment, where they had stated that they were worried about the type and amount of work the servants were required to do and also the dismissive way in which they were required to interact with the servants.

Similarly the servants who initially felt that they would be able to 'suffer' the masters at the beginning seemed to have developed a real animosity to them by the end.

Unfortunately there was no follow up to see the groups reunited in their present day situations.

6.4 Interpretive Theories



These theories approach the world as a subjective experience and, as Littlejohn (p17 5th ed.) says, 'celebrate' it. For them, how the individual (that is the subject primarily, not the researcher) interprets the world is the most important aspect of discovery. Taking the theories discussed in the last section these theories take things further by unashamedly placing the individual's interpretations, upon the findings. They are not immediately concerned with finding shared meanings, although there is a crossover between interpretive theories and Interactionist theories.

Phenomenology, Hermeneutics and some cultural/ media theories are examples of interpretive theories. Hermeneutics is the study of understanding through interpretation, a good example is the study of interpretation of the bible (exegesis).

Ethnography sits between the Interactionist and interpretive theories depending upon the approach taken, for example Goffman applies much more reflective interpretation to his work, particularly with his use of metaphor, than would most traditional ethnographers.

6.5 Critical Theories

You will notice that I am not sure where to put this group of theories along the qualitative / quantitative continuum in the above diagram. Littlejohn also seems to have a problem with them (p17 5th ed.) considering them to be 'a loose confederation of ideas held together by a common interest in the quality of communication and human life'. They are especially concerned with inequality and oppression. Critical theories do not merely observe; they also criticize. Most critical theories are concerned with the conflict of interests in society and the ways communication perpetuates domination of one group over another. Many critical theories are based on **Marxism**. **Feminism** is also a variety of critical theory.

Marxism focuses attention upon the struggle of interests within society. Marxism encourages an analysis of power structures within the organisation and the beliefs that various groups hold. It then interprets these within the framework of Marxism, identifying the oppressor and the oppressed etc. One important aspect of Marxism is the concept of **Hegemony**. Hegemony is the process of domination, in which one set of ideas subverts or co-opts another. It is the process by which one group of society exerts leadership over all others. For example advertisers often play into the "women's liberation" theme, making it look as though the corporation supports women's rights. Other popular tactics include the organic/green or healthy spins seen in advertising.

Feminist interpretations are similar to Marxist except the oppressed are females rather than the workers. Feminist interpretations often highlight issues of **transparency**. Women often carry out tasks which are either not attributed to them or / and re-attributed to others (Littlejohn calls this inclusion pp.239 5th ed.). This approach has been taken further by anthropologists Edwin Ardener and Shirley Ardener (Littlejohn pp.139 5th ed.) who found that in most cultures language is largely defined by men and as a result certain female aspects are muted. The so called '**Muted-group**' theory which they have developed analyses communication from the viewpoint of the women, it looks at female language differences and gaps within the culture, exposes underlying structures causing oppression and suggests directions for positive change.

Possibly another critical theory could be considered to be that of "a religious ideology". The believer has a set of beliefs similar to that of a Marxist.

For example you might observe something that is rather strange but if you consider it from a religious perspective it might be entirely appropriate. Take an extreme example, a famous saint in the fourteenth century said Jesus told her to suck the puss out of soldier's wounds? To one person she is a saint and to another a mad women. This may be an extreme example but consider the dietary habits, role of women etc. in most religions

7. MCQs

1. Which of the following is a characteristic of the Structural and Functional genre of theories? (one correct answer)

- a. The innate goodness of man
- b. The homeostatic characteristic of systems
- c. The existence of an objective reality
- d. The importance of a subjective reality
- e. The separation of objects and classes

2. What is the correct name for the study of 'body language'? (one correct answer)

- a. Kinesia
- b. Takinesia
- c. Kinesics
- d. Kinemia
- e. Kernia

3. What is the correct name for the study of 'personal space'? (one correct answer)

- a. Protogyny
- b. Prothalamia
- c. Proxaxia
- d. Proxadynamics
- e. Proxemics

4. What does the 'variable analytic' approach attempt to do? (one correct answer)

- a. Discover hidden variables ('latent') to demonstrate new relationships
- b. Discover a commonality between a number of variables
- c. Discover sets of variables that explain human behaviour
- d. Discover key variables that predict basic instincts
- e. Discover a general variable ('g') that explains the core intelligence of a person

5. Which of the following is the most subjective (qualitative)? (one correct answer)

- a. SEM theories
- b. Cognitive theories
- c. Structualism
- d. Marxism
- e. Symbolic Interactionism

8. FAQs (Frequently asked Questions)

8.1 If you repeat the same research what does it mean?

In a previous version of this document exercise 4 repeated the research

"2. A researcher wants to find out about patient satisfaction at a local hospital outpatients department. She spends a few days in the department asking treated patients to tell her what they think of the department and their experience. She records the interviews and then quotes (sometimes at length) the parts she feels are most relevant in a document describing individual patients experiences."

The idea behind the two identical pieces of research was to get you thinking about the consequences of the assumptions of world view 2.

In littlejohn you will read about phenomenology - basically gaining knowledge through personal experience/ interpretation, for example if you want to understand blindness you wouldn't read about it but cover your eyes and force yourself to be blind for a time. You would then reflect upon it interpreting your personal experience.

Along with this concept comes the idea that it is not possible to generalise as we all have unique experiences which are constantly developing. In music the first time you hear a chord has a different impact and significance to a repetition of it, and even more repetitions have yet other effects which the minimalist composers have investigated. For a researcher who espouses world 2 beliefs the same research repeated offers unique insights each time. This is in complete opposition to the world I viewpoint where replication / reproducibility is considered a good thing.

So if you hold world I beliefs both research exercises are the same (replication), but if you hold world II beliefs they are not.

Notice that the difference relates to the researcher not the research method etc.

8.2 Can I have some more information about World views and Littlejohn?

Provided by a past student:

To start with I needed to understand Littlejohn's worldview 1 and 2 so I read a paper by Tomaszewski. 2003 as the 8th edition of "Theories" doesn't seem to explain it.

<http://www2.hawaii.edu/2tomaszecis701/paper/html>

The explanation he gave of the 2 views are: world view 1 is a "classical, objective study of nature" whereas worldview 2 is concerned with the phenomenological approach to conceptualising the world.

Nomothetic theory seems to fit well with the traditional scientific approach...here are our findings and make of them what you like. The relationship between variables must be "tested and falsifiable" Practical theory seems more "modern" and as Deetz suggests theories evolve along with the issues humans are faced with in the modern world.

Craig and Tracey's ideas about goals were confusing to me also. Perhaps the use of the terms "levels" is misleading implying one is more important than the other although we can use any combination to address a theory.

Tomaszewski in his paper (1) has mentioned another form of explanation - logical explanation - in addition to 'casual' and 'practical' explanations identified here (Littlejohn) and thought it important as well.

I agree with Robin that in this new edition, Nomothetic theory & Practical Theory refer to World view 1 and World view 2 of previous editions respectively. I was wondering if we could generalise and say Nomothetic theories are end-products of quantitative research and Practical theories result from qualitative research?!!

8.3 Qualitative and quantitative research ask different questions - wrong

Consider the following from a past student:

"Statement: Questions such as "How many parents would consult their general practitioner when their child has a rash?" or "What proportion of common cold sufferers take over the counter preparations?" clearly need answering through quantitative methods. However, questions like "Why do parents seek medical opinion when a child has a rash?" and "What stops people with common cold seeing their general practitioner?" cannot be answered by these methods. Hence, qualitative techniques have to be employed."

The above shows many misunderstandings. The writer is confusing method adopted with philosophical approach. A person with qualitative beliefs would apply those techniques in any situation; similarly a researcher with quantitative beliefs would apply those in any situation. Think of the different and (opposing approaches to measuring cognition - from personal biographies to complex experimental designs).

8.4 Qualitative research does not use hypotheses - wrong

Consider the following from a research methods book:

"Quantitative research begins with an idea (hypothesis), which then, through measurement, generates data and, by deduction, allows a conclusion to be drawn. Qualitative research, in contrast, begins with an intention to explore a particular area, collects "data" (observations and interviews), and generates ideas and hypotheses from these data largely through inductive reasoning."

This is not true - Look at possible shadowing exercise (a qualitative technique) - you may decide to enter it with a clean slate (e.g. the Glazzer and Strauss grounded theory approach), alternatively, knowing about the particular environment your entering you may have researched the literature in that area (i.e. women working in engineering etc) and have already decided to take a feminist lens to the day. Similarly at other times those with a world view 1 set of beliefs may well start with a hypothesis (as recommended by Fisher and Neymenn Pearson etc) however there are techniques which encourage the researcher to interact and explore the data such as Structural equation modelling, longitudinal designs and some newer, beyond significance testing techniques.

So both qualitative and quantitative research approaches may use hypotheses or not.

8.5 Qualitative research is high in validity whereas quantitative research is high in reliability - wrong

Again this is not true - I do not want to get into a discussion about the many verities of validity but once you look into the literature you can see this is more to do with the process of 'operationalisation' and how this is handled in a quantitative research design (i.e. world 1 view assumptions).

Why do people make the above mistakes, I think one of the common causes is the table that is often reproduced below - most of these dichotomies do not exist.

Qualitative versus quantitative research:

	Misleading WRONG table	
	Qualitative	Quantitative
Social theory	Action	Structure
Methods	Observation, interview	Experiment, survey
Question	What is X	How many Xs?
Reasoning	Inductive	Deductive
Sampling method	Theoretical	Statistical
Strength	Validity	Reliability

Basically - a misleading inappropriate table.

8.6 You can combine the two philosophical approaches - not really

You can combine both qualitative and quantitative research - no, how can you be a catholic and a muslim at the same time? Look at the table which lays out the propositions of world view I and II in the fundamental proposition document - they contradict each other!

When you do combine the two you always make a value judgement - for example you use qualitative interviews to help inform the development of a quantitative questionnaire - so you are espousing world 1 beliefs really. etc.

8.7 There is one hierarchy of Evidence - no

World I viewpoint		
Sackett's hierarchy of evidence has provoked much unresolved controversy about the kind of evidence that is actually most relevant to practice; for example, controlled trials often restrict the kind of patients recruited, whereas cohort studies better reflect normal patterns of patient management.		
The hierarchy of levels of evidence is briefly:		
1.	A	Systematic reviews/ meta-analyses
	B	RCTs
	C	Experimental designs
2.	A	Cohort control studies
	B	Case-control studies
3.	A	Consensus conference
	B	Expert opinion
	C	Observational study
	D	Other types of study eg. Interview based, local audit
	E	Quasi-experimental, qualitative design
4.		Personal communication

Possible World II viewpoint from a phenomenological perspective?		
1.	A	Self reflection - autobiographies, collected journals, life histories etc
	B	Letters to friends etc
	C	Public interviews etc
2.	A	Shared documents
3.	A	Consensus conference
	B
	C
	D
	E	RCTs, Experimental designs
4.		Systematic reviews/ meta-analyses

Basically one table is a mirror reflection of the other!!

8.8 The basis of knowledge is belief or the scientific method!

Much of what you read about qualitative and quantitative methods does not taken into account the philosophical considerations and is not worth the paper it is written on (!) and you will soon be able to critique such superficial dribble. Obviously your own viewpoint means that you either adhere to one or the other - one is right because you have proved (i.e. believe in) it. Religion - a good example of a world 2 viewpoint states that the basis of knowledge/wisdom is belief and this in essence reflects the world 3 view of the nature of knowledge. For those with a world 1 viewpoint the foundation of knowledge is seen as the scientific method offering a very different approach.

The philosophical study of the nature of knowledge is called epistemology so we can say that those with a world 1 viewpoint posses a very different epistemological viewpoint to those espousing a world 2 viewpoint which is demonstrated above in the two different hierarchy of evidence tables.

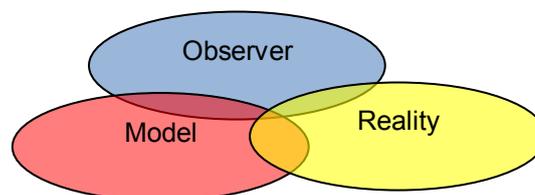
8.9 Quantum theory validates the world 2 viewpoint - no!

Much has been written about various descriptions in quantum mechanics to suggest that there is no one single external reality. Common arguments present such findings as:

- Viewing an experiment changes its outcome
- A thing can be in two places/states at the same time.
See Schrödinger's cat http://en.wikipedia.org/wiki/Schr%C3%B6dinger%27s_cat

This is not the case and no respectable scientist would subscribe to the use of these subatomic **mathematical modelling** constructs to large atomic structures such as a cat! Two excellent sources of information are; Fashionable Nonsense by Sokal & Bricmont 1998, and the road to reality by Penrose 2005.

I think the stumbling block is that people see the mathematical model whether it be Newtonian or Quantum Physics as reality rather than just a possible imprecise model of it, Models only ever offer a lens through which to analyse it (note the singular it).



Exercise 9.

The following abstract is taken from a confused student; consider an appropriate answer, highlighting his main misunderstandings

"Quantitative studies are where responses are predefined for analysis purposes I understand, and although it does have limitations I can see the value of it Qualitative research adds depth. Where I have great difficulty is the analysis of notes taken by an observer of the perceived interactions of others.

Not having been involved with qualitative studies I find it hard to comprehend how such research is undertaken so that there is a useful outcome. Surely if subjects are made aware that they being observed they will change their attitudes/ actions and therefore influence the outcome of the study. This could be good or bad. There are number of factors that could influence this e.g bad mood, dislike of the observer etc. I know that I am influenced when making a phone call to a bank/ utility service, and I'm told that the call may be recorded for training purposes; I make a effort to be pleasant. Surely this invalids the research."

9. Summary

Returning to the introduction to this document it is important to return to the

Who, Why, What, When, Where and How

The two opposing world views have allowed us to create a number of very fruitful lenses to view the world within each of which different answers to each of these questions can be found.

For example, considering the area of human communications studies within the Marxist context we would identify the *Who* in terms of the oppressed and the oppressor we then might describe *What* and *How* communication is managed in terms of how the power structure (hegemony) is maintained / reinforced. In contrast to some of the other genres the why would be largely irrelevant, as we would be working within the Marxist approach.

Exercise 10.

The mindmap at the front of this chapter was developed for a previous version - Please print it out and update it with the additional material you will have identified.

If you are working through the chapter as part of an online course share your improved mindmap with others - you can use any drawing package, or even just hand draw it and then scan and post.

10. References

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