SOME MORE APPLICATIONS AND EXAMPLES OF RESEARCH METHODS IN PSYCHOLOGY

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1. STRUCTURED VERSUS UNSTRUCTURED OBSERVATIONS: TWO EXAMPLES FROM STUDYING CHILDREN'S PLAY

1.1. INTRODUCTION

Observation methods attempt to study individuals without interfering with their behaviour if possible. The focus is upon what can be learnt from individuals in their own habitat acting "normally". In fact, Lofland (1971) described the observation method as "the most penetrating of strategies, the most close and telling mode of gathering information".

Both qualitative and quantitative data can be collected by these methods.

Leary (2001) listed the three decisions for researchers using this method:

i) Will it occur in a natural or contrived setting?
ii) Will the participants know they are being observed?
iii) How will the behaviour be recorded?

Herbert (1990) distinguished five types of observation:

- Unstructured - record as much as possible using no pre-determined format;
- Semi-structured - partly using pre-determined format;
- Structured - fully making use of pre-determined format;

These first three variations are all non-participant.

- Active participant - observer joins in the activities of the group, and their identity as observer is unknown to the group;
- Passive participant - participation in the activities and identity as observer known to the group.

This article concentrates upon structured and unstructured observations. Structured observations can test hypotheses about specific behaviours while unstructured observations tend to describe all the behaviour in the situation (Dyer 1995) (table 1.1).

Play is an ideal behaviour to observe because

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children are acting naturally, and this would be lost if they are placed in a controlled environment of an experiment. They can be observed playing with parents (structured observation example) or with peers (unstructured observation example).

STRUCTURED OBSERVATION	UNSTRUCTURED OBSERVATION
- Concentrates on specific behaviour.	- All behaviour in situation observed.
- Checklist devised before observation begins.	- No checklist used, but any and all data recorded.
- Test hypotheses.	- Describe behaviour.
- Reliability possible to establish.	- Difficult to establish reliability.

Table 1.1 - Comparison of structured and unstructured observations.

1.2. STRUCTURED OBSERVATION

This type of observation makes use of detailed coding frames prepared before the observation. It usually concentrates on specific behaviours and collects quantitative data. It can be "a good deal more complicated, time-consuming and challenging than some other forms of data collection. It can also be a good deal more interesting" (Wilkinson 2000 p238).

Though the categories used in this type of observation are scientific, it is a reductionist method:

> To describe a person as "lifting an arm" may be objective physically but is striped of social meaning compared with "she waved", "he made a bid" or "she threatened the child". Reduction to the simplest units of behaviour (the "molecular" level) can create observations which are numerous, separated and meaningless (Coolican 1990 p65).

Table 1.2 lists the main strengths and weaknesses of this method.

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STRENGTHS	WEAKNESSES
- Quantitative data collected which allow statistical analysis. - Comparison on data possible. - Ease of coding observations.	- Limited use because such narrow focus. - Ignores events other than the observed behaviour. - Depends on clarity of definition of behaviour categories.

Table 1.2 - Strengths and weaknesses of structured observations.

1.2.1. Methodological Issues with Structured Observations

A number of the methodological issues are important here.

1. Coding of Behaviour

There are a number of ways to record the data observed: frequency or the duration and intensity of the behaviour.

The frequency can be recorded by behaviour coding: counting the number of a particular behaviour (table 1.3). While behaviour rating can be used for the duration or intensity of a behaviour. Behaviour rating involves scoring each behaviour on a scale (table 1.4).

TICK CHART FOR BEHAVIOUR OBSERVED
Record every time behaviour seen: 1. Knees trembling 2. Face flushed 3. Swallows 4. Perspires on face 5. Perspires on hands 6. Perspires, other areas

Table 1.3 - Example of behaviour coding system for rating anxiety in children speaking in public.

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SCORE FOR EACH BEHAVIOUR (using 5 point scale)

1	2	3	4	5
no sign	just noticeable	slightly noticeable	quite noticeable	very noticeable

1. Shuffles feet
2. Hand tremors
3. Breathes heavily
4. Voice quivers

Table 1.4 - Example of behaviour rating system for rating anxiety in children speaking in front of an audience.

Table 1.5 compares the two methods of coding for strengths and weaknesses.

FREQUENCY RECORDING/ BEHAVIOUR CODING	DURATION AND INTENSITY RECORDING/ BEHAVIOUR RATING
STRENGTHS - Easy to use. - Can be used for low frequency behaviours. - Measures how much of behaviour present. WEAKNESSES - Each unit of behaviour recorded as same. - Requires behaviour to have clear start and end. - Can be difficult with multiple behaviours.	STRENGTHS - Can show differences between same unit of behaviour. - More sophisticated than frequency. - Can transform into frequency data. WEAKNESSES - Requires behaviour to have clear start and end. - Intensity ratings can have reliability issues. - Demanding on observer.

Table 1.5 - Strengths and weaknesses of frequency, duration and intensity recording in structured observations.

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2. Sampling

A structured or systematic observation must sample the behaviour being observed. Other observation methods may also sample, but it is less important. This can include time, event, or point sampling.

i) Time sampling

The observer does not watch for long periods but sample the time; for example, five minutes in every hour, and what is happening during that time is seen as representative of the whole.

This sampling can be either continuous (every instance of the behaviour in an uninterrupted time) or discontinuous (Gelfand and Hartmann 1984). Discontinuous recording uses repeated sampling periods in different ways:

- Interval sampling - Occurrence or absence of behaviour in observed period. Partial interval time sampling notes the behaviour if it appears for some of the time, and with whole interval time sampling, the behaviour must be present throughout the whole period observed.

- Momentary time sampling - Occurrence or absence of behaviour at a specific moment.

Each technique has strengths and weaknesses (table 1.6).

ii) Event sampling

This records every time the behaviour appears. Whole interval event sampling records the occurrence or not of the behaviour every "x" seconds (whatever the time period being used) (Oldfield 2001).

It tends to study the behaviour from beginning to end (Wilkinson 2000).

iii) Point sampling

This records the behaviour shown by each individual in turn. It is useful for small groups.

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CONTINUOUS TIME SAMPLING	INTERVAL RECORDING	MOMENTARY TIME SAMPLING
STRENGTHS - Can measure frequency and duration of behaviour. - Can show connection and order of behaviours together. WEAKNESSES - Behaviours must have clear start and end. - Can be difficult for observers if multiple behaviours.	STRENGTHS - Useful when start and end of behaviours unclear. - Use for both frequency and duration of behaviour. WEAKNESSES - Can underestimate (whole interval) or overestimate (partial interval) behaviour. - Depends on length of interval used, particularly for whole interval time sampling.	STRENGTHS - Good when start and end of behaviour unclear. - Convenient. WEAKNESSES - Cannot measure "stream" of behaviour. - May miss rare or brief responses.

Table 1.6 - Strengths and weaknesses of different types of sampling.

3. Reliability of Observations

When observing a large amount of data, it is possible to miss a certain amount or selectively concentrate on the more "interested" aspects. This is observer bias, and challenges the reliability of the observation. It is a example of "chance response tendencies" (Dunnette 1996). The behaviour observed is not representative of the behaviour generally. This can also occur in structured and systematic observations with poorly defined behaviour categories.

It can be overcome by the use of multiple observers (to establish inter-observer reliability), practising with the behaviour categories beforehand (pilot study), and video recording the behaviour to be observed.

Dunnette (1996) adds three other sources of error

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for reliability: inadequate samples (due to poor sampling), changes in the participants' behaviour (reactivity because they know they are being watched), and changes in the environment due to the observation. The use of unobtrusive observation can reduce the last two problems.

4. Record-Keeping

When to record the information is more of a problem than it seems. The simple answer is while observing (running or specimen record-keeping), but this is not possible in participant observations or covert observations. Specimen record-keeping is more detailed than running record-keeping. Recording the data later is anecdotal record-keeping. Table 1.7 compares the different means of record-keeping.

Because of these problems the use of video may be better, but it is not perfect (table 1.8). George et al (2006) noted the "especially sensitive topic" of video-recording children today. Though gaining consent to study children is relevant to any observation with or without video cameras.

	ANECDOTAL RECORD-KEEPING	RUNNING RECORD-KEEPING	SPECIMEN RECORD-KEEPING
STRENGTH			
	- Not rushed.	- Observe the behaviour as happens.	
	- Allows for more details.	- Unbiased estimates of frequency and duration of behaviours.	
WEAKNESS			
	- Memory problems.	- Difficult to observe and record at same time.	
	- Issues about reliability.	- Aided by responses having clear start and end.	

Table 1.7 - Strengths and weaknesses of three methods of record-keeping in observations.

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STRENGTHS	WEAKNESSES
- Ability to replay and pause behaviour, and use slow motion. - Observer can stop when tired. - Analyse or include other behaviours not originally in study.	- Takes long time to analyse. - Effect of presence of equipment on children. - Limits of fixed camera points or problems of moving camera operators.

Table - 1.8 - Strengths and weaknesses of the use of video-recording in structured observations.

Structured Observation Example: Langlois and Downs (1980)

This study involved the observation of the reaction of parents and peers to young children's gender-appropriate and gender-inappropriate play behaviours.

There were two observations. The first study involved observing forty-eight sets of children, their mothers and peers (using a video camera) in a familiar room in the children's nursery. Undergraduates naive to the purpose of the study categorised the behaviour on the videotapes for every five-second interval.

In the second observation, forty-eight children aged 3-5 years old played with their fathers for two 15-minute sessions. In one session, only "masculine" toys (eg "army set with soldiers and war vehicles") were available, and in the other, "feminine" (eg "a large stove with pots, dishes, and utensils"). The father's reaction to the child's play was scored for each ten second interval based around categories of reward and categories of punishment (table 1.9).

Fathers showed more reward behaviours for their children when they played with appropriate-gender toys (eg smile - mean percentage of observed intervals: 6.58 vs 3.38; praise: 3.77 vs 1.94), and more punishment behaviours for gender-inappropriate toys (eg negative talk: 4.54 vs 1.73; verbal ridicule: 2.71 vs 0.04). Overall fathers were more definite in approving appropriate-gender behaviours for boys than peers and mothers, and peers and fathers were disapproving of gender-inappropriate behaviours for boys.

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CATEGORY OF BEHAVIOUR	DEFINITION
REWARD	
- Verbal agreement	- Statements by fathers which acknowledged what child had said, give permission to requests, or concur with child's judgment
- Behavioural approval	- Nod head in agreement or pat the child on the head, back or legs to indicate approval for the child's behaviour
PUNISHMENT	
- Verbal ridicule	- Derogatory, critical, or sarcastic remarks made to child
- Negative talk	- Any negative verbal communication excluding all other forms of verbal punishment

(After Langlois and Downs 1980)

Table 1.9 - Examples of definitions of categories used by Langlois and Downs 1980).

1.3. UNSTRUCTURED OBSERVATION

Used often at the beginning of research projects, the aim is to record as much as possible. This not only includes the specified behaviour, but the context and surroundings of the behaviour.

Data collected with this method tends to be "narrative data" (ie qualitative) rather than statistics (quantitative). Jean Piaget (eg 1951) used this method when observing his own children.

Table 1.10 lists the strengths and weakness of this method.

Unstructured Observation Example: Fein (1984)

This study, using unstructured observation of pretend play sequences, focused upon the whole interaction. Pretend play is where children learn to use an object as something else from 2-3 years old onwards.

The observations of the play with other children were transcribed in order to highlight the sophisticated interaction involved. The whole situation was included and this gains a greater insight than simple categories.

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STRENGTHS	WEAKNESSES
- Whole context of behaviour observed: who, what, when and where (Banister et al 1994). - More ecological validity. - Access to events not possible to study in lab experiments.	- Observer bias (particularly when no clear focus). - Interpretations collected by observer rather than observations introduces subjectivity. - Time-consuming and labour intensive, particularly with transcripts.

Table 1.10 - Main strengths and weaknesses of unstructured observations.

In one example, Peter and Michael (both 3½ years old) are playing a game with a "Dracula Monster" and a "Monster-vanishing Hero" while using toy blocks as laser guns. They showed "a continual shift between talk about their play - who is to be which character and particular suggested sequences of action - and the engagement with and the acting out of the details of the pretence" (Littleton and Miell 2005 p102) (table 1.11).

1. Peter: (Swings hat in air, approaches Michael) You be Dracula;
2. Michael: OK (Gets up, extends arms in front of him) Grrow;
3. P: (Points block at M) Pow;
4. M: (Falls down);

23. P: (Falls down)(Gets up) Now you be Dracula;
24. M: (gets toy from shelf) No, I..pow, pow, pow (Points toy at P);
25. P: You be Dracula;
26. M (Pushes P);
27. P: Be you like you?;
28. M: No, you be Dracula, and you say wow, and I push you down, and I (29) shoot you (Approaches P with block extended in front of him);
30. P: the hell you shoot me. No (Pushes M's arm) You..;
31. M: All right (Lies down).

(After Fein 1984 pp136-137 quoted in Littleon and Miell 2005 p100)

Table 1.11 - Example of transcript of observation from Fein (1984).

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2. MEASURING THINKING OBJECTIVELY IN COGNITIVE PSYCHOLOGY USING REACTION TIMES: TWO CLASSIC STUDIES

2.1. INTRODUCTION

Thinking is a process that cannot be seen, it must be inferred from subsequent behaviour. Thinking "goes all the way from the ability to perceive the world around us by sight, hearing, touch, and smell, through our ability to reason, to solve problems, to use language, to learn and remember, and to move and act in the world" (Medin et al 2001 p4).

For cognitive psychology, which emphasises the scientific approach, it is necessary to find objective ways to measure thinking. In other words, it is how the aspect of thinking being studied is operationalised. A common way is to use reaction times - "the length of time it takes people to do something of interest" (Medin et al 2001).

The measurement gained feels objective and is comparable between participants and studies (table 2.1). When the speed of response to a stimulus is used by pressing a key as quickly as possible, a warning signal is usually given first and then a random waiting period to the stimulus. A lot of practice is required to stabilise performance (over 100 repetitions). But averaging the data can be problematic. The data are positively skewed (ie there are more longer reaction times from the early trials). It can be represented by the median, or the central 90% or 95% of the distribution (Rose 2000).

Two classic studies from cognitive psychology are included as examples of how researchers use reaction times in their work.

2.2. EXAMPLE: MEMORY (Collins and Quillian 1969)

This experiment tested the speed of response to true or false questions about information in semantic memory. The researchers proposed that information is stored as hierarchies of general and specific facts. For example, the statement "a robin is a bird" is easier to access

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STRENGTHS	WEAKNESSES
1. Clear objective score. 2. Allows comparison between participants in the study, and between studies. 3. Gives the researchers interval or ratio data (1), which allows the use of parametric statistics. 4. Reliable measuring system ie units of time do not change in quantity. 5. Can measure reaction times of both conscious and non-conscious behaviour (eg neurons firing). 6. Can be used to measure stimulus intensity because generally reaction times decrease as stimulus intensity increases. 7. Performance on reaction time trials does stabilise after practice.	1. The validity of reducing cognitive processes to reaction times. 2. Assumptions have to be made about changing reaction times. For example, if individuals take longer to verify that a picture is of a mammal than it is of a dog, what does that tell us? 3. Reaction times can vary due to order effects - reduced by practice or increased with fatigue or boredom. 4. Problems of averaging the data over many trials. 5. Some reaction times are very fast (milliseconds) and are difficult to measure accurately. 6. Often reaction time measures take place in artificial lab environments with tasks low in ecological validity. 7. Cannot be used to measure sensory mechanisms that detect sustained attention.

Table 2.1 - Strengths and weaknesses of using reaction times as measures of thinking.

because it is specific and thus takes less time to find in memory than the statement "a robin is an animal". This latter statement is general and stored higher in the hierarchy of information taking longer to access (figure 2.1; table 2.2).

This model has been challenged by contrary evidence. For example, the response time to the statement that "a chicken is a bird" is longer than to "a chicken is an animal" (Medin et al 2001).

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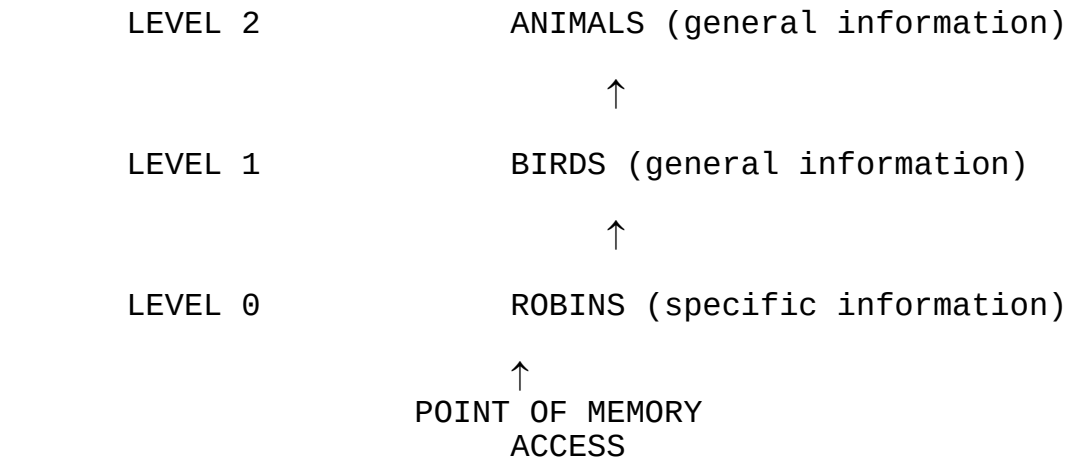

Figure 2.1 - Simple example of the hierarchical organisation of memory.

Statement to verify as true of false	Level of information in memory	Approximate mean reaction time (milliseconds)
Canary can sing	0	1300
Canary can fly	1	1350
Canary has skin	2	1500

Table 2.2 - Example of mean reaction times based on statement asked to verify as true or false.

2.3. EXAMPLE: PERCEPTION (McGinnies 1949)

This classic experiment tested the idea of "perceptual defence" in the process of visual perception. Perceptual defence is the "filtering" (at a below conscious level) of information that is emotion-inducing or unpleasant. The upshot is that individuals will take longer to consciously recognise anxiety-provoking words than neutral ones.

Using a Gerbrand's Mirror Tachistoscope, which shows words for 0.01 - 0.05 seconds, sixteen students were asked to response on recognition of the word. Eighteen words were used , of which seven were critical words (taboo for the time)(eg penis, whore) and the others were neutral (eg broom, stove). The order of presentation was mixed together making this a repeated measures design.

The participants took significantly longer to recognise the critical words (mean difference of 0.045 seconds).

Critics (Howe and Solomon 1950) argued that

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participants were simply reluctant to say the critical words rather than taking longer to consciously recognise them, thereby challenging the idea of perceptual defence.

2.4. FOOTNOTE

1. Whether reaction times are interval or ratio data depends upon the existence of zero as a reaction time. Ratio data requires an absolute zero. It is more of a philosophical debate as to whether zero reaction time is possible.

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3. SCIENTIFIC PSYCHOLOGY AND WHAT TO DO WITH NON-STATISTICALLY SIGNIFICANT RESULTS

3.1. NON-STATISTICALLY SIGNIFICANT RESULTS

Scientific psychology is focused around the statistical testing of hypotheses. Finding statistically significant results is the ultimate achievement as well as being satisfying for the researcher. But what to do with results that are not statistically significant? It would be easy to conclude that such findings tell us nothing of use.

There are different types of non-statistically significant (NSS) results:

i) Findings that are as predicted but do not reach the level of statistical significance.

Generally in scientific psychology, a level of statistical significance of p=0.05 (5%) is accepted. This is as much convention as any absolute fact (1) (Whatson 2004).

Put simply, and some will disagree with this description (2)(3), a statistical significance of 5% accepts that the data produced could be due to chance in five out of one hundred times. A study that finds their results to be p=0.06 (six in one hundred), for example, is not statistical significant.

"Just missing" statistical significance could be due to poor statistical testing, or the sample size, for example, and "really" the findings are statistically significant. It can be an example of a type II error (Neyman and Pearson 1933), particularly if the significance level chosen is too strict (4).

ii) Findings that are NSS and this tells us what could be statistically significant.

If researchers are attempting to isolate the causes of a behaviour, and there are many, knowing that one cause is NSS crosses that off the list and the next one can be tested.

iii) The results are NSS because there is no

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difference between the groups.

This is the traditional meaning of NSS - the results occurred by chance. For example, in a clinical trial comparing a new psychotropic drug to a placebo pill, there is NSS difference found between them because the drug is no more effective than the placebo in reducing the disorder being studied. That is not to say that the drug has no effect, but that the effect is not statistically significantly greater than the placebo's effect.

In such clinical trials, there is a tendency to not publish such findings (Sterne and Davey Smith 2001). But the NSS results are as important as the statistically significant ones, or else a bias picture of the drug's effectiveness will be presented.

iv) Results that are NSS because they are completely opposite to the prediction.

For example, the one-tailed research hypothesis predicts group A to do better on a measure of behaviour, but it is found that Group B does better. The results being NSS here are very different to (i) above, for instance.

3.2. INTERPRETIVE BIAS

Hewitt et al (2008) are concerned about how the NSS results are interpreted. They highlight the risk of interpretive bias - overemphasis or underemphasis of results. Of course, interpretive bias is also relevant with statistically significant results.

For Hewitt et al the risk is greater with NSS results because the "observed difference may be real and the study is underpowered or the observed difference may occur simply by chance" (p23). In the case of randomised clinical trials, researchers are often "rarely neutral" because of their investment of "intellectual capital in developing the treatment under evaluation".

Hewitt et al looked at seven randomised clinical trials published recently in the "British Medical Journal" with NSS differences, and whether the authors still recommended the intervention being studied.

Taking one example, Henderson et al (2007). This was a comparison of "normal sex education" and a more detailed programme (SHARE) among 13-15 year-olds in twenty-five schools in Scotland. The outcome measure was a reduction in the NHS pregnancy termination rate.

The results were NSS because the intervention group

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(SHARE programme) actual had an increase in terminations compared to the control group. The authors did not recommend withdrawal of the SHARE programme. They saw other benefits to the programme in areas like willingness to discuss condoms with partners, and intentions to resist unwanted sexual activities.

There may have been secondary benefits to the SHARE programme but it failed (ie NSS) on the main measure. Scientific psychology emphasises that it is that - scientific - and so must obey the rules of science. If findings are NSS, they are not "true". Such a belief is too simplistic, but if the aim is for psychology to be a science, the world has to be viewed like that. Those that live by the sword also die by it to use a common phrase.

That is why there are many benefits to psychology not being a science, and to making full use of qualitative methods. The psychology of teen pregnancy, terminations, and sex education are better understood by searching for the meaning that these hold for the individual rather than by numbers. But that is another story.

3.3. FOOTNOTES

1. Fisher (1950) is credited as the founder of the idea: "We shall not often be astray if we draw a conventional line at 0.05" (quoted in Sterne and Davey Smith 2001).

2. Coolican (2000) is concerned with the precision of explanations and terms used in teaching statistical testing.

3. Another common way to describe statistical significance is in terms of the probability that the null hypothesis is true.

4. Statistical significance is not the same as something being true. The results can be statistically significant but still due to chance because of the small probability of chance accepted. Likewise, NSS results could be true because there is always a small possibility that chance is not responsible for the findings.

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4. DISCOURSE ANALYSIS AND DISCURSIVE PSYCHOLOGY: AN INTRODUCTION WITH EXAMPLES

4.1. INTRODUCTION

Discourse analysis is an indirect form of observation, that concentrates on the written or spoken words used in communication.

"Discourse analysis treats the social world as a text, or rather as a system of texts which can be systematically 'read' by a researcher to lay open the psychological processes that lie within them.." (Banister et al 1994 p92). In other words, the researcher is looking for the underlying social assumptions in interactions.

In particular, the ideas seen as "common sense":

> Some discourses or constructions are so familiar that they appear as 'common sense'. If these discourses are deconstructed or taken apart it becomes possible to see how certain dominant ideologies have become 'taken for granted', and from this point consideration can be given to alternative discourses.. (Marshall 1992 p203).

4.2. LANGUAGE AND DISCOURSE

Discourse or ideas are "carried" in language, so the focus is upon language.

Language "exists as a domain of social action, of communication and culture, whose relations to the external world of event, and to the internal world of cognitions, are a function of the social and communicative actions talk is designed to do" (Edwards et al 1992 p442).

Wetherell and Maybin (1996) gave three features of language use which challenged the assumption that language is neutral:

i) Language has an "action orientation" - utterances state information, and perform an action. In an argument, individuals are not just stating opposite facts, but are using language to justify their position and undermine

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the other's. Individuals are doing something with our utterances.

ii) Language is part of the social world - rather than language simply telling us about the social world; it is a "constitutive part of those actions, events and situations" (p244).

iii) Indexical property of discourse - all language is defined by the context of its use.

The whole emphasis is away from language as referring to objects "out there" to the idea that language is about building the social reality. The same event can be described in a number of different ways. It is always possible to see how the choice of words can influence the whole understanding of an event. For example, during a news report, the use of words like "murdered", "killed", "slaughtered" - all set the context for understanding the perpetuators as good or bad. Taken a step further, with language the individual is also defining themselves.

Interactions involving language are negotiations where the participants are using their language carefully to establish the meaning of the situation (for example, to show that they are blameless in an argument), and consequently to set the meaning of themselves. This is called the "double property of talk" (Wetherell and Maybin 1996).

The term "discourse" can also mean different things - sometimes a word for language, others "a linguistic object that can be counted and described" (Potter 2004).

Discourses fulfill a number of functions:

a) At an interpersonal level, they are used to explain and attribute causes of behaviour;

b) They have a "political" function of setting out norms and standards against which behaviour is judged;

c) Discourses maintain differences between categories of people by making the similarities between these categories invisible and the differences visible.

It is possible to see discourses at work if we take the example of a rise in water levels leading to a flood. How this event is explained will make use of different discourses, including "meteorological discourse" (unusually heavy rain), "greenhouse effect discourse" (changing global climate), "political management discourse" (failure to build flood defences), or "God's

anger discourse" (punishment for sins)(Jorgensen and Phillips 2002). Which discourse(s) used makes sense of the event, and of the individual themselves.

The aim of discourse analysis is to study the entire discourse - "what is said, in what way, by whom and for what purpose" (Hogg and Vaughan 1995 p509).

Wetherell and Potter (1992) believed that discourse analysis focuses on the "activities of justification, rationalisation, categorization, attribution, making sense, naming, blaming and identifying" which are "quintessential psychological activities" (p2).

Potter and Wetherell (1987) have shown that the way individuals construct their arguments can be used to show the underlying social assumptions. This is the focus on rhetoric.

Potter and Wetherell (1995) highlighted six central themes with the use of discourse analysis:

i) Practices and resources

The aim is to look at "what people do with their talk and writing" (known as discourse practices), and the resources used to achieve this aim (the categories and interpretative repertoires used). An interpretative repertoire (Potter and Wetherell 1987) is "a recognizable routine of arguments, descriptions and evaluations distinguished by familiar cliches, common phrases, tropes and characterizations of actors and situations" (Edley and Wetherell 2001 p443).

ii) Construction and description

This is the study of "how people assemble (versions of) the world in the course of their interactions".

iii) Content

The focus on what is said.

iv) Rhetoric

Within discourses are inbuilt "argumentative organisations" ie what is said is in reference to an imaginary counter-argument.

v) Stake and accountability

People are treated as having an interest (stake) in

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their actions.

vi) Cognition in action

It is more important to study what is actually said then an individual's cognitive attitudes.

Table 4.1 outlines the main advantages and disadvantages of discourse analysis.

ADVANTAGES	DISADVANTAGES
1. Focus on what is said. 2. Highlight underlying social assumptions in communication. 3. Shows how behaviour is socially constructed. 4. Shows meanings of behaviour.	1. Language given too much emphasis: ie plays down cognitive processes. 2. Argues against language as means of communication only. 3. Subjective interpretation of research. 4. Problems of validity and reliability.

Table 4.1 - Advantages and disadvantages of discourse analysis.

4.3. DISCURSIVE PSYCHOLOGY

Hepburn and Wiggins (2005) pointed out that discursive psychology (DP) is a "broad title for a range of research done in different disciplinary contexts" including language and communication, psychology, and sociology.

Potter (2005) made this distinction between "traditional psychology and DP:

> Traditional psychology perspectives focus on giving a technical account of the actual psychological states, processes and entities that underpin (and thereby partly explain) action. Discursive psychology focuses on psychology from the position of participants - it considers their practical and situational constructions, terms, orientations and displays (p740).

Potter (2005) the argued that DP has a number of elements:

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i) Practical

The study of practice: ie how psychology categories are used. For example, not remembering some information or event can be used to resist an accusation. Traditional psychology focuses upon the cognitive processes of not remembering rather than it being a process of social construction.

ii) Accountable

How individuals construct themselves as accountable (control and responsibility) for their behaviour or not. For example, the desire to conserve water is outside an individual's control with the pressure of neighbours to water the garden properly (Kurz et al 2005).

iii) Situated

Psychology is situated or embedded in the present interaction. For example, a measurement of an attitude is not an objective process by the product of who and how the attitude is being measured.

iv) Embodied

DP focuses on discourse, and, in particular, how it constructs the body rather than the study of the body itself.

v) Displayed

DP rejects the inner, private world and concentrates upon what is said (displayed) publicly. Mind and intention are visible in talk rather than lying behind it. There is no attempt "to explain actions by reference to underlying cognitive states or processes" in DP.

DP is interested in analysing the devices used in speech as individuals construct themselves for themselves and for others. For example, Auburn (2005) analysed the interactions of sex offenders in therapy, and highlighted the idea of "narrative reflexivity". This is where the speaker shifts in their narrative from past events to current ideas. One offender describing their use of rape said: "she was petrified I know that now".

The speaker shows that they are now aware of the past mistakes (in this case the belief that the victim had consented). This is a requirement of the therapy situation - to show reflection and realisation. It could

be asked whether the offender really believes that now, but that assumes an inside (beliefs) and outside (talk). DP challenges this distinction and focuses upon what is said. Whether the offender would revert to past beliefs in a future situation is something that DP may not be able to answer.

4.4. THREE EXAMPLES OF THE USE OF DISCOURSE ANALYSIS

1. Kurz et al (2005) Environmentally Sustainable Behaviour

This research was based upon 30-45 minute interviews with members of nine households in Perth, Western Australia. The topic of the interview related to water and energy conservation.

The researchers noted that despite the interviewer maintaining a neutral position, many of the participants "often appeared to position the interviewer as being sympathetic to an 'environmental agenda'" (p606). This challenges any idea that the interview can take place in a vacuum as long as the interviewer is neutral. Participants are trying to make sense of the interview in the wider context as well as of the questions themselves, and consequently positioning themselves in relation to that. This may have influenced the themes that emerged from the interviews.

a) Water as a "precious commodity"

Water is "constructed as being a finite entity that runs the risk of depletion if not conserved or managed correctly" (p607) as shown by an "extreme case formulation" (Pomerantz 1986):

"As our population grows.. so it is inevitable that one day we are going to reach the stage that we are going to have too many people for too little water.." (D; extract 1; p607).

Extreme case formulations involve emphasising the worse situation, in this example, in order to show the commonsense position. It is obvious that water is not infinite, and a pro-conservation position is the "correct" stance.

b) Suburban aesthetics

Even if pro-conservation is the obvious position, there are competing discourses around the "good lawn":

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"..is a very nice place to live and I'm lucky that I live there. But if I didn't water my street lawn and let it die it would stick out like a sore toe.. So I am under pressure to maintain a good lawn.." (D; extract 5; p609).

The speaker positions themselves as forced to water their lawn regularly despite their awareness above of finite water resources. It is as if the speaker is saying: "I want to save water, but circumstances force me not to". The removal of responsibility is a key defence.

c) Positioning of the self

When talking about the use of energy, individuals made a distinction between themselves and others; for example:

".. We try to turn our lights off when we go out of a room and just small things like that. But I know a lot of people that wouldn't bother" (K; extract 11; p614).

Speaker K is constructing their argument in relation to the potential criticism of wasting energy. They use two devices:

i) Show that they do not waste energy by highlighting a small action (turning off lights);

ii) Compare themselves to individuals who are worse. Again they are almost saying: "Even if you accuse me of waste, I'm not as bad as other people".

Individuals are always aware of potential criticisms, particularly as the interviewer was positioned as "pro-environment". Other techniques are used to emphasise that the speaker is not wasteful:

- R admitted to using water in frequent showers, for example, but "in this climate" that was a necessity;
- S, in receiving negative feedback from the local authorities about their water use, questioned the validity of the comparison with a "supposed similar household", and also highlighted that their household's use was down compared to the past;
- S later referred to being committed to "sort of the 'greenie' approach". Thus by defining themselves as a "greenie" it negates any criticism of their high energy and water use.

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This research by Kurz et al showed two things. Firstly, that the interviewee will always be aware of potential criticisms (in this case from a supposedly "pro-environment" interviewer). Secondly, positioning "the other as being responsible for the wasting of resources, while positioning the self as merely a user of resources" (p617).

2. Charteris-Black (2006) Immigration Discourses

Immigration is a hotly debated topic in many countries, especially in Western Europe in recent years. When talking about immigration, politicians often use metaphors to simplify the facts or to stir the emotions among other things. Often metaphors have negative associations and link to fears. The most obvious example being terms like "invasion" or "flooded".

Santa Anna's (1999) study of "The LA Times" found metaphors relating to "immigrants are animals" (eg "ferreting out illegal immigrants"), and "immigrants are weeds" (eg "new crop of immigrants").

In another US study, O'Brien (2005) noted the metaphors of "immigrant as object" (eg object of labour), and "organism metaphor" (eg immigrants are "digested" or "absorbed" as if food).

Charteris-Black (2006) analysed thirteen speeches given by members of the British Conservative Party relating to "asylum and Immigration" between July 2002 and April 2005, and articles from party manifestos (Conservative and British National Party (BNP) in elections between 2001 and 2005), from MigrationWatch UK, and from "The Daily Mail" and "The Daily Telegraph" on the same issues. This produced a "British right-wing corpus". The research was particularly interested in the use of metaphor in persuading the receiver in relation to immigration. Right-wing parties tend to be against immigration.

Charteris-Black (2006) drew out two types of metaphors from his research - metaphors of natural disaster, and container metaphors. "What both 'disaster' and 'container' metaphors have in common is that they discourage empathy with immigrants by treating them as objects, rather than as the subjects of life stories" (p569).

A. Immigration as "natural disaster"

Individual metaphors within this category related to "an excessive flood of water":

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- "massive and unnecessary wave of immigrants.." (BNP 2004 manifesto);
- "a nightly tidal wave of asylum seekers from Cherbourg" (Daily Telegraph 25/8/02);
- "flood" linked to immigration on 56 occasions in Daily Telegraph;
- "a growing flood of Roma asylum seekers.." (Migrationwatch UK).

"Flood based natural disaster metaphors may be employed as legitimate because they fit in with underlying myths related to Britain as an island that has been historically threatened by invasion.." (Charteris-Black 2006 p572).

B. Britain as a container metaphors

This category of metaphors related to containers:

- With limited capacity: "Britain is full up.." (BNP 2005 manifesto);
- In relation to security: troops "redeployed to secure the Channel Tunnel and Kent ports against illegal immigrants" (BNP 2005 manifesto);
- Opening the container: ".. as Britain prepared to open its gates to a flood of immigrants.." (Daily Telegraph 4/4/04);
- Building up of pressure in the container: ".. Europe's most densely-populated country was full to bursting point.." (Daily Mail 11/12/04).

This research by Charteris-Black (2006) highlighted the use of metaphor in political discourse as a means of legitimising certain views.

3. Edley and Wetherell (2001) Views on Feminism

This research used two sets of group interviews with men about their views on feminism. The first set were 17-18 year olds at an independent boys' school in the UK, and the other was Open University students. The topic of discussion was introduced as "What is a feminist (feminism)?" and "What do you think of feminism?".

Discourse analysis of the interviews identified a "Jekyll and Hyde" binary which presented feminism as reasonable/unreasonable. On the one hand, feminists were seen as wanting equality (which is reasonable), but, at the same time, there was an unreasonable side:

"Simon: Well, I think they want us all to jump in the river don't they really? Kill ourselves?.. they just

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hate men.." (extract 4 p444).

The binary positions appear separately as either/or positions, but also "men's accounts of feminism moved backwards and forwards across the discursive field these two interpretative repertoires establish" (p444).

The unreasonable side was presented as extremism and wanting more than the "middle-of-the-road" desire for equality:

"Aaron: They want everything.. they want to go past the half way line.. Yeah 'Right we'll let you live to the age thirty and collect your semen and then we'll cut you off.. and then we can just live as women'.." (extract 14 p448).

By emphasising the extreme position as unreasonable, it allowed the speakers to criticise equality indirectly. Equality is beyond reproach and cannot be openly criticised by "reconstructed males" today. Edley and Wetherell argued that equality for women becomes presented as sameness and in comparison to the "gold standard" set by men:

"Neil: If you want feminism you've got to take the good with the bad like get down the pit and get in the front line.." (extract 20 p452).

Discourse analysis used here helps to show the complex and subtle use of rhetorical positions including contradictions, and the ability to criticise something without appearing to criticise it.

4.5. THREE PROBLEMS WITH DISCURSIVE PSYCHOLOGY

1. The emphasis on text tends to ignore the actual person who speaks and their emotional experiences in interactions. Individuals are not just "political animals" saying things to position themselves in different ways, but are emotionally involved in interactions.

Thus it neglects the inner world:

> In its remorseless concern with the details of what people are saying about the world (and what they are doing when they are saying it), it appears to throw out the psychology baby with the bathwater" (Dixon 2007 p159).

2. DP makes no attempt to explain the cause of behaviour, only how the individual makes sense of the behaviour in their talk.

3. DP can be accused of arguing that "there is nothing meaningful outside discourse - nothing that is extra-

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discursive" (Finlay and Langridge 2007 p185). Finlay and Langridge believed that the physical body and its activities, for example, are "extra-discursive".

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5. PSYCHOLOGY AND DECISION-MAKING IN INTERNATIONAL RELATIONS: INDIVIDUAL-GROUP/SOCIAL DEBATE

5.1. INTRODUCTION

Among the many debates in psychology is that of individual-group/social. This focuses upon the origin of behaviour as within the individual (eg cognitive processes, personality) or outside the individual in the group or society. Different approaches and explanations of behaviour can be placed on different sides of this argument.

In applying this debate to decision-making in international relations, the focus is upon how politicians/leaders make decisions, including about others (nations), in relation to conflict. The individual side of the debate concentrates on the individual everyday psychological processes (like social cognition), while the group/social side is exemplified in "groupthink". Here it is the group pressure that influences the individual's decision.

5.2. INDIVIDUAL SIDE OF DEBATE

Social cognition is the process by which individuals make sense of the social world. It includes processes like stereotyping, and attribution, but also cognitive distortions or biases. The process of how we decide upon the behaviour and intention of other individuals in everyday life is exactly the same in international relations.

Robert Jervis (1976) explained decision-making by governments through the "general ways in which people draw inferences from ambiguous evidence".

So impressions are formed of others (individuals or nations) based on certain assumptions, these impressions are difficult to change, and all behaviour by the others is interpreted in relation to the impressions.

Jervis was most interested in how misperception of others can lead to conflict.

Holsti (1979) concentrated upon three factors in

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crisis decision-making: cognitive rigidity, time pressures, and stress. These combine to reduce the rationality of decisions made. Time pressures and stress together reinforce cognitive rigidity, and reduce creativity.

Cognitive rigidity is the tendency to focus upon a specific aspect of the situation and base all decision-making around that. Holsti talked of the decision-maker having "a dominant percept through which to interpret information, and to maintain it tenaciously in the face of information that might seem to call for a reappraisal". The dominant percept is characterised by stereotypes, and may even be inappropriate to the current situation.

Cognitive rigidity limits cognitive performance and thus decision-making in a number of ways:

- Reliance on past experience (eg "lessons from history") which reduces the search for alternatives;
- Dominance of "cognitive set" ie noticing only information that fits with existing views;
- Reduced tolerance of ambiguity which encourages the rigidity because it feels certain;
- Stereotyping;
- Reduced sensitivity to others' perspective.

All the elements combine to produce decision-making that is not necessarily rational by the individual leaders.

5.3. GROUP/SOCIAL SIDE OF DEBATE

Irving Janis (1972) used the principles from the social psychology of groups to explain the actual decision-making process of the leader's group. These principles produced a "mode of thinking that people engage in when they are deeply involved in a cohesive ingroup, when the members' strivings for unanimity override their motivation to realistically appraise alternative courses of action" (p9). He called this "groupthink".

The characteristics of such situations are limited discussion of alternatives, failure to re-examine rejected ideas, and little information from outside the group (particular challenging information). Overall, groupthink produces a conformity to the norms of the group of a cohesive group, possibly at the expense of

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rational thinking.

The upshot is that "brilliant, conscientious men" sometimes make very bad decisions. Even leaders of nations are subjected to the same group pressures as everyone else.

Building on the ideas about conformity to majority group pressure established by Solomon Asch (eg 1955), Janis used examples from everyday life, and historical cases of foreign policy decisions by political leaders to show groupthink in action. In terms of foreign policy decisions, Janis distinguished six "defects":

i) Limited discussion of alternatives;

ii) Failure to re-examine courses of action initially preferred by the majority;

iii) Neglect of options initially assumed unsatisfactory;

iv) Little use of experts "who can supply sound estimates of losses and gains to be expected from alternative courses of actions";

v) Selective response to information ie more interest in information that supports their initially preferred policy;

vi) Failure to work out contingency plans to deal with foreseeable problems with their preferred policy.

Even when problems arise with the preferred policy, group loyalty encourages members to stick with their decision. The cohesion of the group produces "the concurrence-seeking tendency, which fosters overoptimism, lack of vigilance, and sloganistic thinking about the weakness and immorality of out-groups".

Groupthink will occur if added to cohesiveness, there is insulation of the group from the outside world, and a strong opinioned leader of the group. Putting all the ideas together, Janis argued that the group members feel invulnerable, they negatively rationalise warnings, stereotype the enemy, and make the group pressure so strong that dissent is not permitted.

Kramer (1998) reanalysed two of Janis's US foreign policy examples from the 1960s. Using now declassified documents, he felt that group cohesiveness was overstated, and political considerations were more important.

5.4. CONCLUSIONS

The "Dialoguing Across Divisions in UK Social Psychology" group set up by the British Psychological Society in 2005 was an attempt to overcome divisions within (social) psychology (Langridge 2007). This is part of a move to break down the traditional divisions within psychology.

One of these divisions is individual or group/social. In reality, behaviour like international relations decision-making is a combination of both. The individual processes of social cognition and the group pressures of conformity combine to produce bad decisions not either/or (as well as to produce good decisions).

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