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Study 13: Rosenhan (Sane in insane places)

Qs (page 195)

1 One hypothesis is ‘Abnormality is not a characteristic of certain individuals but is rather the context they are seen in’. A more operationalised version is ‘Pseudopatients (no abnormality) are diagnosed as insane when placed in an insane context rather than being recognised as sane’.

2 They told the psychiatrist that they had been experiencing auditory hallucinations (voices in their head) saying ‘empty’, ‘hollow’ and ‘thud’. Other than that, everything else they reported was true.

3 Existential symptoms (what is the meaning of life? Is there any point to anything at all?) had not previously been connected with schizophrenia – and a ‘good’ psychiatrist should have thought about this when making a diagnosis. (Though, of course, auditory hallucinations in themselves are generally a common symptom.)

4 They both showed that the diagnosis of mental illness is totally unreliable. Study 1 suggested that unreliability is due to a type 2 error. Study 2 suggested it could be due to a type 1 error. Thus, both studies show that doctors cannot make valid judgements about whether a patient is ill or not.

5 It means that someone has had schizophrenia but at the moment the symptoms have disappeared. It implies they are still schizophrenic.

6 If they want to apply for a job (or in America, a gun licence too!), having a current diagnosis suggesting in some way an ongoing mental health problem would count against them. They probably would not get the job as the term suggests it will come back again.

7 It is better to call a healthy person sick just in case you are wrong and they then don’t get treated and are very ill. This of course depends on the severity of the treatment diagnosed.

8 Because the treatment of a physically ill person doesn’t involve a label that will stick and the treatment may be less invasive of the individual’s personality.

9 No, because I would not have liked to be stuck in a mental hospital.

Qs (page 196)

1 If someone believes themselves to be suffering from something, they will think about and dwell more on certain symptoms and gradually feel less positive about their state of health. This in turn will have a more negative effect on their illness. Also, other people will respond to them in a different way if such a label is attached to them, for example avoidance, rudeness, coldness etc. … As we do internalise how people behave towards us, this again will have the effect of a self-fulfilling prophecy.

2 Because it has a powerful influence on how we perceive the individual’s whole personality.

3 The psychiatrist saw this as evidence that he had difficulty controlling his emotions.

4 (a) They spent little time with the patients and made little eye contact (which indicates a lack of interest), and (b) they beat the patients and swore at them.

5 Because when nurses were in the cage they could not be interacting with patients at all (patients could not approach them either). In fact, even when out of the cage, they were mostly doing chores and not attending to the patients themselves. Being out of the cage then was the minimum condition for being able to interact with the patients.

6 Mortification is a term coined by Goffman to mean that once someone has been given a label and put in hospital, they are treated in a negative, medicalised manner and are socialised to behave in a certain way according to how everyone believes a mentally ill person should behave.

Evaluating the study by Rosenhan (page 197)

NB all answers should be contextualised.

The research method

Controlled participant observation (IV tested e.g. effect of voices, telling hospital staff there were pseudopatients, asking questions)

Strengths: Study may be more natural because participants were observing from within the mental institution, and the fact that the observation had some controls (using pseudopatients who are normal to observe effect on diagnosis) means a relationship can be investigated.

Limitations: Participant observation isn’t highly objective because the observations will be influenced by the fact that the observers were taking part – being treated as patients may have affected their views on the behaviour of the psychiatric staff.

Field experiment

Strengths: Able to study behaviour in a more natural environment so responses of people to mental patients are more realistic than in a contrived laboratory situation.

Limitations: It isn’t possible to control extraneous variables to the same extent as in a laboratory. For example, the way the pseudopatients presented themselves might vary from one occasion to another.

The sample

The pseudopatients were a relatively representative group in terms of age and occupation, so were not particularly unique, which means we can generalise the findings to other people.

The hospitals were also selected to represent various typical differences.

Both samples, however, were small so it could be that the results were biased because of a few unusual circumstances such as some of the pseudopatients having troubled life histories despite being ‘normal’, or some of the hospitals might have had a poor management structure.

The second study was conducted in only one hospital so perhaps these data should be treated with more caution.

Quantitative or qualitative?

Quantitative data: Number of days before release, number of true patients diagnosed as pseudopatients, percentage of types of responses of health professionals when approached by a patient.

Strengths: Easy to analyse and make comparisons, and reach conclusions about the reaction of hospital staff to the patients.

Limitations: Oversimplify the situation and do not give rich data on what life was like in the mental hospital.

Qualitative data: Quote from psychiatrist describing the case of the 39-year-old man, descriptions of lack of human rights.

Strengths: Provide interesting and new insights into the way mental patients were treated.

Limitations: Difficult to analyse and make generalisations because the examples cited may be unique e.g. the quote from the psychiatrist.

Ethical issues

Informed consent of the pseudopatients, which was obtained though they still may have experienced psychological harm as a result of spending time in the mental hospital. This could be dealt with by debriefing.

Deception of hospital staff in all of the studies. This could be dealt with through debriefing and offering participants the chance to withhold their data about their experiences in the hospital – though this would have muddied the results of the study.
Personality versus situation
The results of this study suggest that situational factors are more crucial in determining behaviour and how others view us than an individual's personality.

Ecological validity
It seems reasonable to generalise these findings to other situations where insanity is diagnosed, and to question the reliability of such diagnoses. The participants and hospitals were selected to be representative. It is true that the observations may have lacked objectivity which somewhat reduces the validity. There is also the issue of demand characteristics, which reduces validity. The willingness to commit a patient on flimsy evidence may be because the psychiatrist wouldn’t suspect for a minute that someone might be pretending and therefore would assume that anyone seeking admission must have a good reason to do so. This does not negate any of the subsequent events, for example the effects of labelling.

Applications/usefulness
This study has been extremely valuable. It was very important in questioning the treatment of abnormality and our belief in the medical diagnosis of abnormality. Partly because of this study, diagnostic criteria were reviewed and led to a new improved Diagnostic and Statistical Manual in order to try and increase the reliability of diagnosis. The study also tells us that the treatment of mental illness should be more positive and therapeutic and that mental health staff should have an interest in the patients and not just ignore them. This is no good for anyone, let alone someone who is mentally unwell.

What next?
It might be useful to consider other psychological conditions aside from schizophrenia, which is a serious disease where patients may be dangerous and thus psychiatrists more willing to commit a type 2 error. You could do the same with depression to patients may be dangerous and thus psychiatrists more willing to commit someone with depression. It might be useful to consider other psychological conditions than schizophrenia, which is a serious disease where patients may be dangerous and thus psychiatrists more willing to commit a type 2 error. You could do the same with depression.

Exam questions (page 199)

Section A questions
1 a A type 2 error is diagnosing someone as sick when they are healthy.
   b In the medical profession, it is often thought that it is better to err on the side of caution and treat someone as ill when they are healthy rather than say someone is healthy when really they are sick.
2 a Waiting for the canteen was thought of as ‘oral acquisitive behaviour’ and making notes/writing was thought of as ‘obsessive note-taking’.
   b One reason is that they are not mutually exclusive categories – so that someone who is sane may sometimes exhibit insane behaviours – and someone who is insane may also exhibit sane behaviours. This makes normality and abnormality very difficult to define
3 a They were punished for small incidents by being sworn at or even being beaten. They were not treated as real people – when they asked questions of the medical staff, they were frequently ignored.
   b The staff adopted the behaviour partly because they believed that they were really treating the patients by administering psychotropic drugs – they probably thought they didn’t really need to do anything else!
4 a It means that once someone has diagnosis of a mental illness it is difficult to shake off – they are always perceived as having some sort of problem even if they recover, and it may count against them (which is not true of a medical diagnosis – once the illness goes away, everyone forgets about it).
   b Someone who was waiting for the canteen to open for lunch (one of the few things to look forward to in the day) was said to have ‘oral acquisitive syndrome’.
5 They thought it was best to err on the side of caution and diagnose a healthy person as sick, rather than an ill person as healthy. Also, the person had actually come to the mental hospital and reported the symptoms, suggesting that they were really in need of some help.
6 One IV was mental hospital versus university campus (study 3) for when health professionals were stopped and asked questions. On the campus, the health professionals stopped and answered the questions and maintained eye contact while in the mental hospital this rarely happened (0.5% of nurses and 4% psychiatrists). Another IV was whether someone presenting themselves at hospital was mentally ill or not – in study 1 the pseudopatients were normal whereas in study 2 the patients were genuinely ill. In terms of confidence about the diagnosis, in study 2, many patients were judged to be fake even though they were genuine.

Section B questions
a The aim of the Rosenhan study was to see whether abnormality is a characteristic of certain individuals, or something that is perceived because of the situation they are seen in.
   b The sample used in this study was the hospitals (and psychiatrists therein). There were 12 altogether, from a number of different US states. Some were private, some were state-run. Some were rather old and some were modern. One limitation of this sample is that it is quite a small sample of hospitals. In the US, there were probably at least 1000 mental hospitals at the time, all of which may have had very different cultural ideas about how to diagnose and treat the mentally ill – so the findings from this study may not be generalisable.
   c A lot of data was gathered in this study – both qualitative and quantitative. There were basically three different studies. In the main study, the pseudopatients were hospitalised (mostly diagnosed with schizophrenia) and they observed the staff while they were there as well as other patients’ behaviour. For example, they noted down how long members of staff spent on the ward versus in the staff room, comments made to them, as well as how the staff responded to them when the pseudopatient asked them about their medication or when they might see a doctor or be discharged. One of the main bits of qualitative data was the number of days they had to stay in hospital before they were discharged. In the second part of the study, the data was gathered from doctors and nurses according to whether they thought there were pseudopatients when in fact there were none. They had been told there would be pseudopatients and had to rate whether they thought their patients were genuine or not.
   d One advantage of observational studies is that they involve watching genuine behaviour which really happens and this is more valid than just collecting data based on what participants say they would do. This should mean that the study has some ecological validity. So, in Rosenhan, they could actually find out what really went on inside a mental hospital and how the staff actually behaved towards patients, as well as how reliable the staff were at diagnosing mental illness. This is a much more valid picture than if the staff has just been asked about how they behave – they probably would not have recounted how little time was actually spent with patients for example.

One disadvantage of observational studies is that it is difficult for the observer to capture all the necessary information without losing some of the validity of the study. For example, in Rosenhan’s and Pilavin’s studies, the observers noted everything down in notebooks. It would have been difficult to make a note of absolutely everything and so the observers’ selection of what to record and what not to record may in some way introduce some sort of bias. In addition, the mere presence of someone constantly taking notes might alter people’s behaviour and so they do not behave naturally. This again would be a threat to the validity of the study.
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Section C questions

a One assumption of the individual differences approach in psychology is that people are different in terms of any particular trait, whether it be extroversion, intelligence, normality etc., and that these differences can be quantified or categorised.

b The individual differences approach might explain abnormality in terms of a scale or continuum of normality and abnormality – people are not just one or the other. An individual differences approach would say that we can be ranked according to how ‘abnormal’ each of us are, according to different ‘amounts’ of abnormality (or normality). The individual differences approach would suggest, therefore, that it is possible to measure and diagnose abnormality.

c One similarity between Rosenhan and Thigpen and Cleckley is that both studies are interested in abnormality and what it is. Rosenhan in particular focuses upon how schizophrenia is diagnosed – a mental illness with numerous and diverse symptoms including auditory hallucinations, delusion, and thought disorder. Thigpen and Cleckley focus upon a rarer mental disorder, Multiple Personality Disorder which is when a single person contains multiple (two or more) separate personalities which repeatedly assume control of the patient’s behaviour. One difference between the Rosenhan study and Thigpen and Cleckley is how they perceive mental illness. Thigpen and Cleckley seem to perceive that mental illness is real and a property of the person. In this case, the multiple personality syndrome is seen as a function of the person – Eve, who has three personalities. The therapists had not expected to discover anything particularly wrong with Eve as she had just been referred with a problem with headaches. They were surprised when Eve Black appeared. In contrast, Rosenhan believes that mental illness is more a property or characteristic of the situation or context a person is seen in, rather than a property of the person. He found that when normal people were admitted as pseudopatients and then acted normally, the staff actually perceived them as mentally ill even though they were of course, perfectly normal. An example of this was that a pseudopatient in the mental hospital was waiting outside the cafeteria for lunch and instead of this being interpreted as being bored and having nothing better to do (i.e. normal behaviour) it was interpreted as an ‘oral acquisitive’ problem. Therefore, the different researchers had very different views of mental illness.

d One strength of the individual differences approach is that it does not treat everybody as the same but looks for differences between them. This has a certain amount of face validity because we do all think of ourselves and our friends as unique. For example, in Rosenhan we understand that there are differences between people in terms of normality and abnormality and different behaviours. In fact, even the genuine patients could spot that the pseudopatients were normal. This helps to show that there are differences in normality and abnormality.

One weakness of the individual differences approach is that perhaps it is too idiosyncratic and not generalisable. By always focusing upon differences between people, it means that we cannot easily understand the overall situation. For example, in Rosenhan they looked at pseudopatients in a small number of hospitals and the ability of psychiatrists to diagnose mental illness. However, it is not possible to generalise the results to all hospitals or all psychiatrists or all cases of apparent mental illness. Another weakness of the individual differences approach is that it assumes that measurement and diagnosis is precise when in fact it is quite imprecise. Measuring traits or characteristics in humans is much more complex than measuring something physical such as distance. This is shown in Rosenhan because the study clearly shows that there is a lack of reliability and validity in diagnosing mental illness. Pseudopatients who were completely well were diagnosed as having schizophrenia; while in the second study genuine patients were rated/judged as not having mental health problems. Therefore, this shows that a number of diagnoses at the time were probably unsafe and not valid and that people who were ‘normal’ might have ended up in hospital.

One strength of the individual differences approach is that it is useful and many applications come out of individual differences research. This means that because it focuses on the differences between individuals, applications evolve that help or treat subgroups of the population. In the case of Rosenhan, this research was considered such a strong
criticism of the diagnostic process at the time, that the diagnostic process and manuals were reviewed and rewritten to try to prevent type 2 errors occurring. This is very useful because it helps to ensure that more people get the right diagnosis and therefore should have a better chance of getting appropriate treatment.

**Qs (page 201)**

1. One core study which shows ethnocentrism is Freud. He studied people from his Vienna, Austria in particular. Vienna and its population and culture had some particular characteristics – relatively wealthy and artistic city – and his participants also shared particular characteristics – white, middle/upper middle class, cultured etc. Freud based his theory of psychosexual development upon this group of people and he assumed this theory would apply to everyone the world over. Little Hans’ phobias and problems in childhood were seen as the developmental norm for everyone, for example that all boys go through the oedipal complex etc. However, it seems unlikely that understanding Hans and his privileged upbringing would help us understand people from other classes or ethnicities. Many people around the world face very real problems in terms of war, famine and survival, and the oedipal complex, or getting hung up on how to potty train a child, just isn’t a big deal. But Freud’s mistake is a common one – we assume our experience and the immediate world around us is the norm – when it isn’t.

2. Samuel and Bryant used children only from one town – Crediton in Devon, UK. If they had used a broader geographic sample from around the UK, they would have a greater variety of educational experiences as well as a greater range of home backgrounds and this might affect the results because overall the children might not be so good at conversation as in a middle-class UK group. If they extended the study to other cultural groups they might find that conservation appeared much later in childhood, which might cause them to re-examine the developmental stages.

3. Psychological variables are likely to be affected by cultural group – e.g. motivation, aggression, mental health, altruism/helping behaviour, self-efficacy, cognitive abilities, addictive behaviours and so on.

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**Study 14: Thigpen and Cleckley (Multiple Personality Disorder)**

**Qs (page 205)**

1. Eve White was shy, conventional and anxious. Eve Black was outgoing, unconventional and self-assured.

2. They gave EW some things to remember, told EB to erase them, and tested EW’s memory a while later.

3. Eve White had an IQ of 110, while Eve Black had one of 104 (though she didn’t really try). Eve White’s memory was above that of her IQ, while Eve Black’s matched her IQ.

4. It may have been because she had feelings of anger and jealousy (upon the birth of her younger twin sisters) and needed to repress these, which resulted in the formation of a separate personality to be the ‘other’ Eve.

5. Her marriage failed. Given that she was a quiet and conventional sort of person, she probably would have found this all very distressing. Eve White may have been quietly disappointed with her mother for letting her down and not giving her enough love and attention when her younger twin sisters were born.

6. At first, they had to hypnotise Eve White in order to call out Eve Black. But increasingly, they could call Eve Black out without hypnosis.

7. They told Eve Black that if she cooperated with the therapy and was good, then she would be allowed ‘out’ more. A dangerous bargain?

8. They may not have done this on purpose, but we know (see Loftus and Palmer) that memory is not a pure record of events and can be altered. This means that this study may not be totally reliable.

9. So that they could fully appraise the role of Eve Black – how frequently she came out, how much influence she had over Eve White – as well as to see the effects of therapy.

10. Possibly an ethical issue. On the one hand, it seems as if the personalities are not quite real. They do not have their own body but do they have a soul? This might mean it is not a problem to ‘kill off a personality’. However, at times the personalities, while distinct, are interconnected and do have feelings for one another. For example Jane tells of her feelings for Eve White ... ‘I wish I could tell her what I feel but I can’t reach her. She must not die yet’. If somehow Thigpen and Cleckley had killed off a personality, it might have been very destabilising and destructive overall.

11. Evidence suggesting the patient did have MPD: (a) Different alpha rhythms, and (b) three distinct personalities with not just small differences but three individuals. Evidence suggesting the patient did not have MPD: (a) There were not big differences in the IQ scores (104 versus 110) and (b) a handwriting specialist’s verdict on the handwriting was that, although their handwriting samples looked different, they were produced by the same individuals.

12. Many of the appropriate symptoms were absent.

13. Thigpen and Cleckley may have forgotten some of the details, exaggerated some of the depiction of Eve Black and her mannerisms, or even added details since the original therapy. They may not have done this on purpose, but we know (see Loftus and Palmer) that memory is not a pure record of
Evaluating the study by Thigpen and Cleckley (page 207)

**NB all answers should be contextualised.**

**The research method**

**Strengths:** A case study allows you to study one individual case of multiple personality or other abnormal disorder. Such cases are very rare so it is really the main way to study the disorder while getting sufficient detail.

**Limitations:** Any individual is unique. There were special things about Eve’s case which were unique such as the emergence of a third personality during therapy, and therefore the conclusions drawn from this may not apply to other cases of MPD.

**The research techniques**

Different techniques – psychometric tests, projective tests, EEG, handwriting analysis, interviews with the three personalities and relatives, observation of the three personalities.

**Psychometric**

**Strength:** Produce a single number so this makes it easy to compare the three personalities.

**Limitation:** Such tests are not always reliable – scores fluctuate due to other circumstances so the differences between EW and EB may not be because of different personalities but simply mood at different times of day, or because one personality tried harder than another.

**Projective tests**

**Strength:** Give insight into hidden feelings and attitudes which could not otherwise be accessed, especially since EW repressed her feelings.

**Limitation:** Interpretation of such tests is subjective so outcome not totally valid.

**EEG**

**Strength:** Produces quantitative data so it is easier to make comparisons between the three personalities.

**Limitation:** Interpretation of this data is limited. For example, the meaning of alpha rhythms is unclear, and differences may not be particularly significant.

**Handwriting analysis**

**Strength:** Gives insight into personality.

**Limitation:** Neither objective nor reliable, seen as a pseudoscience.

**Interviews** (with three personalities and family)

**Strength:** Gains access to reflections and thoughts/feelings.

**Limitations:** Recollections may well be biased/inaccurate; interviewee may respond to interviewer’s expectations; social desirability bias. In short, lacks validity.

**Observation**

**Strength:** People don’t often do what they say they do, so observing behaviour may be a more ‘honest’ way to find out about a person.

**Limitations:** Observer bias – the observer sees what he expects to see. Additionally, Eve knew she was being observed and so may have altered her behaviour in some way.

**The sample**

Eve was unique even in terms of MPD – every patient has a unique set of circumstances which means it is not possible to generalise to all other cases of MPD. The case does, however, give insight into the condition and together with other cases can be used to start to build up a picture of MPD.

**Qualitative and quantitative**

**Quantitative:** IQ score, EEG recording.

**Strength:** Produces simple data, such as a single number which makes it easy to compare the three personalities and draw conclusions.

**Limitation:** Such data may mask important differences because they are so simple, for example IQ score doesn’t really represent intellectual differences.

**Qualitative:** Eve’s recollections, projective test results.

**Strength:** Rich data provide insight into differences between personalities.

**Limitation:** Much more difficult to analyse and make comparisons, therefore conclusions are not so clear.

**Ethical issues**

**Informed consent:** Eve, as a mentally ill woman, was not really in a position to provide informed consent for her case to be publicised in this way. She should have had an adviser acting on her behalf.

**Privacy:** Eve’s name was kept secret but she was probably recognisable by those at the university and maybe even her home town. She chose later to reveal her true identity.

**Confidentiality:** Her personal affairs were made public and she should have been asked permission for this.

**Psychological harm:** She may have been further distressed by the notoriety of the case.

**Nature or nurture?**

The details given in the study suggest that it was life events (nurture) that triggered the disorder but one might suspect that she was in some way genetically predisposed (nature) to react in this way to distressing events – otherwise why is the condition so rare?

**Ecological validity**

MPD is extremely rare. Although there may be some similarities across cases such as the basic symptoms (two or more distinct personalities, each of which repeatedly assume control, moments of amnesia/forgetfulness), in terms of the fuller picture of how the personalities develop, the sort of different personalities, the power struggle between them, the issues they face and what they think about each other – these are all likely to be unique to a particular case. Therefore, it is probably not possible to generalise.

**Applications/usefulness**

The study was useful in establishing MPD as a recognised disorder and may help other sufferers … though it may also encourage fakes. It has little use for people in general – apart from giving a sense of relief that their own personality is coherent. It may also contribute to understanding personality from a theoretical standpoint.

**What next?**

One change would be to study some further cases to be able to draw some general conclusions about causes.

**Exam-style questions (page 209)**

**Section A questions**

1. **a** Thigpen and Cleckley might not have been totally objective. As they got to know Eve, they undoubtedly became increasingly involved with her and probably to an extent, wanted her to be an interesting case. This is also compounded by the fact that a lot of the study was written from their memory, which may also have become biased. This means that the evidence might not be totally true and valid.

   **b** They should have tape recorded all of the interviews with Eve and then another researcher (or researchers) could have listened to the interviews to see if they arrived at the same interpretation of Eve’s behaviours.

2. The EEGs between Eve White and Eve Black were different – Eve Black’s was more tense, a bit faster (borderline psychopathic) while Eve White’s was less tense and more normal. Another piece of evidence was that Eve White could not remember anything when Eve Black had taken control. This was very consistent.
One advantage of psychometric tests is that they give a clear measurement in the form of a number. Psychometric tests are rigorously checked out on large groups of people and norms are established to ensure reliability and validity. This means that, compared to ordinary questionnaires, the outcomes should produce some sort of meaningful, objective number which allows us to make comparisons between individuals. Thigpen and Cleckley’s study, the comparisons were between the various personalities of Eve and so this gave some evidence about the validity of her suffering from MPD. One disadvantage of psychometric tests is that they are a bit reductionist. They assume that whatever they are testing can become anything or anybody as long as they have the function of what we experience after conception. Any baby who we are and how we behave is largely (or entirely!) the nurture or therapy. For example, in Thigpen and Cleckley, they seemed to believe that Eve could, through therapy, resolve her multiple personalities and integrate or choose one personality in order to lead a happier life.

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6a He interpreted this as a new and separate personality to Eve White.
b Eve White might have just been play-acting or role-playing, for fun or to get attention, or to try out a new aspect of her own personality.

4 One line of evidence which suggests she did have several personalities is the evidence from Eve’s mother and husband. Both of them had noticed strange things about her at times, funny mannerisms, memory lapses and so on. One piece of evidence against was the handwriting analysis. The analyst said that even though the handwriting of each personality superficially appeared to be by a different person, they all were clearly written by the same individual.

5a They had repeatedly called out Eve Black for the purposes of the ‘therapy’... at the expense of Eve White. This might have weakened Eve White to the point that further disintegration took place – resulting in the personality of Jane.
b They decided that one of the personalities should become dominant and take control over the others. This should probably be Jane.

6 One strength was that it allows us to get a full in depth view of Eve and her Multiple Personality Disorder. One weakness is that as the researchers get to know Eve, they begin to lose their objectivity. This can often be a problem with case studies.

Section B questions

a The aim of this study is to describe the case of a woman called Eve, who had first come to the therapists suffering from recurrent headaches, and as the therapy continued demonstrated that she was suffering from Multiple Personality Disorder.
b The sample was a single person, known as Eve White. When she first attended Thigpen and Cleckley’s practice, she was a young woman of 25, married and a mother of a small child. She had been referred to them because of bad headaches. In the first sessions, she described some emotional difficulties and conflicts and to normal eyes, seemed like a fairly normal woman. But it soon became clear to Thigpen and Cleckley that she was suffering from something more – Multiple Personality Disorder. They met two more personalities – Eve Black and Jane. One limitation of this sample, is that there is only one person! This means that it might be difficult to generalise Eve’s particular MPD symptoms to other MPD sufferers – she might have very few symptoms in common with them. Therefore, this study has low generalisability.
c Lots of data was gathered. The main source of (qualitative) data came from interviews with Eve (and her personalities) – conversations about her past, her marriage, her family, her symptoms (blackouts and headaches) and so on. They also observed Eve in terms of her body language (very different for the different personalities) and general behaviour. They collected quantitative data in the form of psychometric tests – IQ tests and memory tests on Eve White and Eve Black. They also did projective tests on Eve White and Eve Black. All three personalities did an EEG which gave information about brain activity and brain waves.
d One advantage of psychometric tests is that they give a clear measurement in the form of a number. Psychometric tests are rigorously checked out on large groups of people and norms are established to ensure reliability and validity. This means that, compared to ordinary questionnaires, the outcomes should produce some sort of meaningful, objective number which allows us to make comparisons between individuals. In Thigpen and Cleckley’s study, the comparisons were between the various personalities of Eve and so this gave some evidence about the validity of her suffering from MPD. One disadvantage of psychometric tests is that they are a bit reductionist. They assume that whatever they are testing is based on a single, linear construct which some people have more of, and some people have less of. However, many things are not that narrow. There are probably many facets to intelligence and it is possible to be good at some things and not at others etc., which means that there is more of a ‘profile’ of intelligence. However, this is not shown when, for example, it is reported that Eve White scored 110 in an IQ test and Eve Black scored 104. We can’t tell from these numbers much about the different aspects of her intelligence because something as complicated as intelligence is reduced to a mere number, it is difficult to really be absolutely sure.
e One change to this study would be to tape record all of the interviews with Eve and her personalities. This would mean that, first of all, Thigpen and Cleckley would not have to just rely on memory and the odd notes. This would improve the accuracy of the study. Also, an independent researcher could review the study to check the interpretation of Eve’s behaviour and ensure that Thigpen and Cleckley showed no bias. This would make the study altogether more reliable and of higher scientific standing.

Another change to the study could be to include a greater number of MPD sufferers. They could all be studied in a reasonable degree of depth. This would help see which symptoms and experiences were common across all the sufferers, for example headaches, blackouts, amnesia and so on, and whether there were any common factors in their childhoods which may have precipitated the illness. This would make the findings much more generalisable.
f Thigpen and Cleckley’s conclusions were that Eve was suffering from MPD, in all likelihood caused by some traumatic events in childhood which had resulted in the emergence of a new personality. Eve Black, Jane, the third personality which emerged, appeared to be the way forward in terms of resolving all of Eve’s difficulties. However, they thought that there might be some ethical concerns in terms of killing off personalities. Thus they concluded that more research was needed.

d One assumption of the nurture approach in psychology is that who we are and how we behave is largely (or entirely!) the function of what we experience after conception. Any baby can become anything or anybody as long as they have the right experiences and input.
b The nurture approach would say that MPD does not come about because of genes, but because some experience in the past has caused the personality to disintegrate from one into two or more personalities. The experience is likely to be some sort of traumatic event or sequence of events. The creation of a second personality is probably some sort of coping mechanism or an escape from this trauma.
c There are issues of consent. Obviously, Eve went along willingly to the psychiatrists for therapy. However, she may not have consented to all that occurred while she was under hypnosis. Also, Eve Black did not really want to take part in the therapy but she was ‘bribed’ by being told they would ‘let her out’ more. This leads on to the next problem – harm. It is possible that Thigpen and Cleckley did more harm than good. They helped Eve Black gain more control, she could get out more easily, misbehave and so on. This was probably quite destructive. The arrival of a third personality, Jane, may also have been because of the ‘therapy’, possibly indicating that the therapy to date had actually been quite harmful. Finally, there was the issue of harm if they killed off one or two of the personalities and whether there was sufficient consent for this to happen.

d One strength of the nurture approach is that because it says any baby could grow up into anything (given the right experiences and nurturing), it says that everyone has great potential – this is a very positive and optimistic message. It also means that people who are in a bad state at one time might be able to get over it and change, given the right nurture or therapy. For example, in Thigpen and Cleckley, they believed to believe that Eve could, through therapy, resolve her multiple personalities and integrate or choose one personality in order to lead a happier life.
Another strength is that, compared to the nature view, it is not such a reductionist standpoint as all sorts of things count as nurture such as drug exposure, trauma, upbringing, gene therapy, modelling, peer relationships, attachment. There is a variety of different levels of explanation. This means it is a fuller explanation than anything nature might offer us. For example in the Thigpen and Cleckley study, to some extent, they explore biological factors (IQ), cognitive factors (IQ, memory), as well as childhood factors and her accounts of childhood. A weakness is that a nurture view is still a highly deterministic view and does not allow for free will. It does not make room for anyone to take control of their life, take responsibility and take their own genuine choices – who you are and your behaviour is a product of everything that has gone before. For example, in terms of Eve, could she really control anything? Could she control whether she was hypnotised, which personality came out when and why? It seems as if the therapy is something which is done to her, rather than her being an active participant. This is all quite demotivating as we do like to believe that there is such a thing as free will.

Another weakness is that the nurture approach ignores predispositions and genes. Increasingly with the mapping of the human genome, more and more behaviours are being discovered to be predictive from genes. For example, in Thigpen and Cleckley, they do not really explore this – though of course it is many decades before modern genetics got underway. But still, the nurture approach can ignore an important piece of the jigsaw.

Qs (page 211)
Core study: Thigpen and Cleckley
1. The data were collected through interviews with the patient by the psychiatrists. Sometimes they would talk to Eve White and sometimes to Eve Black and later Jane. Eve had over 100 hours of therapy sessions spread over more than 14 months. They collected other data by having a psychologist interview her and give her an IQ test, memory test and projective tests. They also tested the patients’ EEG and obtained some information about Eve from her relatives.
2. One strength is that you can collect rich data. In the case of Eve White the therapists recorded information about her case over a long time and provided considerable insight into Multiple Personality Disorder. This means that the research will be more useful to psychiatrists in the future who think they may have a patient with the same syndrome.

Another strength is that the case study approach allows the study of unusual cases as in this case study of Multiple Personality Disorder. At the time of the study there had only been a handful of such cases so this provided an opportunity to better understand the condition, as it would have been impossible to study a normal sample size of participants with MPD. Thus, a case study, in this situation, is the best possible option and can still be useful for other psychiatrists. One weakness is that each case is unique and thus may give us a biased view of the situation. Eve may not be a typical case of Multiple Personality Disorder; in fact each case of MPD would have unique characteristics, but reading this case would make us assume that it is typical. For example, we might think it was typical that MPD sufferers had an alter who represented their younger self. Thus, care should be taken in generalising from this study.

A second weakness of case studies is that the researchers can get too involved in the single participant and this may mean the report is too subjective. For example, Thigpen and Cleckley clearly felt emotionally involved with the plight of Eve White, and were surprised at the emergence of Eve Black and soon began to see her as more negative. This judgement may have affected how they treated Eve Black and their further observations of her. Therefore, they may have overemphasised differences between Eve White and Eve Black. Thus, a case study may lose objectivity which can then endanger the validity of the study.

3. Data could have been gathered by interviewing a number of MPD patients and gathering data on particular aspects of each patient, such as early experiences, descriptions of alters, experiences of ‘fugue’, unexplained physical symptoms such as headaches etc.

This would mean that the results gave a fuller picture of the range of symptoms shown by MPD sufferers and would give us a fuller picture of the condition. It is likely that other MPD sufferers have more than just the one ‘alter’, like Eve. Also, it is likely that many of the main personalities are not aware of the existence of the other personalities. However, the other features, such as whether the other personalities represented ‘repressed’ negative emotions from an earlier period of the patients’ lives, may well be different. Some may have alters who are more mature and responsible.

4. Consent is an issue for a case study. A lot of focus is on one person and when the study begins, they may not realise the extent of their obligation. Or possibly, the situation might change and they may wish to stop being studied, for example their circumstances might change (new job/place to live/new relationships) or they may get tired of the study, or may even ‘fall out’ with the researcher. However, they may still feel obliged to continue and see it through. Therefore, case studies, because they are usually longitudinal in nature need ongoing, no-pressure consent with continual no-pressure right to withdraw – even if they have been in the study for 5 years. Frequently, case studies involve people who are particularly unusual or interesting – this is often because they are mentally ill or ‘damaged’ in some way. Think of Eve, Genie, David Reimer... are they ‘fit’ to give their consent and undergo such full-on scrutiny without experiencing further harm?

Study 15: Griffiths (gambling)

Qs (page 214)

1. This study is an experiment because there is an independent variable – whether the participant is a regular gambler (RG) or a non-regular gambler (NG). Because the variable hasn’t been manipulated by the researcher this means that this study is a ‘natural experiment’ (or ‘quasi experiment’).

2. a. A one-tailed hypothesis is that the regular gamblers will produce more irrational rationalisations when thinking aloud while playing on fruit machines than the non-gamblers.

b. The null hypothesis is that there will be no difference in the number of irrational rationalisations produced by regular gamblers and non-gamblers when thinking aloud while playing on fruit machines.

3. Three key aspects of the thinking aloud method are: (i) Say everything that goes through your mind. Do not censor your thoughts even if they seem irrelevant to you. (ii) Keep talking as continuously as possible. (iii) Speak in complete sentences if possible, but do not hesitate to use fragmented sentences if necessary.

4. If the study had been conducted in a lab setting the participants might not have behaved in the same way as a real arcade. They may have thought the fruit machine might be rigged in some way and so changed their normal behaviour and thought processes towards the machine and the gambling: it may be that other situational or environmental cues, such as the sounds of other fruit machines etc. are quite important in a regular gambler’s experience of gambling.
Evaluating the study by Griffiths (page 217)

The research method

Self-report
Strengths: We actually get to find out how gamblers think (in real time) about their gambling – this gives us important insights into the situation. Also it may provide unexpected insights, which closed questions in a questionnaire would not elicit.

Weaknesses: People might be selective in what they say either to make themselves look good, or because they are not totally conscious of what they are thinking (some of the gamblers lapsed into silence at times, lost in their own worlds of fruit machines!). Also, the self-report might interfere with what they are doing, especially as gambling on fruit machines often involves quick thinking.

Content analysis
Strengths: Helps to make sense and find patterns in qualitative data so that it can be reported meaningfully and/or quantitatively.

Weaknesses: Complex and time consuming task, which may suffer from problems in reliability. What people say, gamblers in this instance, might be slightly ambiguous especially as it is 'stream of consciousness'. In this study the gamblers were asked to say whatever came into their head and continue talking and so the gamblers' utterances wouldn't have been in proper sentences with one idea per sentence – but complex and sometimes jumbled. These would be difficult to content-analyse reliably (in fact, the inter-rater reliability in this study was low).

The sample

This sample is probably representative of fruit machine gamblers as the target population (or 'parent population') of fruit machine gamblers are mainly men. This would mean that the conclusions drawn from this study are generalisable to this group. However, the sample may not be representative of all gamblers. For example, national lottery players are probably a more balanced mix of male and female, bingo players are mostly female and so on. Additionally, there might be other personality or cognitive differences between different types of gamblers. Therefore, this study might not tell us about all gamblers – just fruit machine gamblers.

Quantitative or qualitative?

Verbalisations were measured both quantitatively and qualitatively. Qualitatively, we are given examples of utterances – the strength of which is that it gives us insight into the gambler's thought processes – 'the machine is in a bad mood' or 'I had a feeling it wasn't going to pay very much after it had given me a feature'. Weakness – lots of data which can be very time consuming for the researcher.

Verbalisations were also measured quantitatively by putting them into categories and then counting the number of utterances per category. Strength – allows researchers to make comparisons between the gamblers and non gamblers in a clear, numeric way – so it is possible to really see on which categories there are significant or interesting results. However, Griffiths says that the reason there was low inter-rater reliability was basically because the other coders were not up to the job – they didn't know about fruit machines or had not been present when the data was collected. This might be true ... or it might be a case of hindsight bias! You decide!

Ethical issues

In particular, non-gamblers, who otherwise might never have walked into an arcade, were introduced to fruit machine gambling. This might have given them a taste for it and later on they might have become addicted gamblers. Thus, the study has encouraged negative behaviours. In order to deal with this, the researchers should perhaps have screened the non-gamblers for any other addictive behaviours (e.g. drinking, smoking) and not chosen these people as they may be at more of a predisposition to gamble. Also, they might make sure they do an extensive debrief which involves giving information about how much money people lose on fruit machines per year to try to help deter people.

Reliability

If something has low reliability, it also has low validity (it cannot have low consistency and still be measuring what it claims to!). Therefore, this does damage the conclusions of the study. However, Griffiths says that the reason there was low inter-rater reliability was basically because the other coders were not up to the job – they didn't know about fruit machines or had not been present when the data was collected. This might be true ... or it might be a case of hindsight bias! You decide!

Ecological validity

It's reasonably good – mainly because of the location but also because they could keep the winnings meant they were involved in the task. However, they may take more risks with someone else's money (they personally haven't got a stake or made an investment). And some of the gamblers would not have normally gambled on the particular machine. Therefore, there is not perfect ecological validity, but it is still relatively high.

Applications/usefulness

This helps us get quite specific insights into faulty thought processes in gamblers. This could help gambling treatment become more focused on treating particular cognitive biases and helping gamblers think more rationally in those particular areas.

What next?

Try a different group of gamblers, for example horse racing, roulette, lottery cards, and see whether similar patterns emerge.

Exam-style questions (page 219)

Section A questions

1 a One hypothesis was that the gamblers would be more subjective skill-oriented than the non-gamblers on measures of self-report.

b Evidence was collected by semi-structured interviews and participants were asked whether they thought there was any skill in playing the fruit machine, how skilful they thought they were, and what skill they thought was involved in playing fruit machines. For each question, participants chose their responses from a fixed set of responses.

2 a A heuristic is a 'short-cut' strategy used to solve a problem or work something out. The heuristic could be a set of rules, just common sense, or an educated guess.

b One gambling heuristic is representativeness – that is thinking that random events have some sort of pattern. For example if you toss a coin 10 times and get 10 heads, then it becomes increasingly likely that you will get ‘tails’ – when in fact, on any toss of a coin, the probability of getting tails is always 50-50 and does not change or increase.

3 One similarity between RGs and NGs was their objective measure of skill at fruit machine gambling (e.g. win rate, end state etc.). One difference between the two groups was that the regular gamblers were much more likely to ‘personify’ the fruit machine – e.g. ‘this machine likes me’.

4 a Thinking aloud involves a participant verbalising their stream of thoughts whilst they are doing something. They are encouraged to keep talking throughout the whole process, not to edit or censor what they think/say, and if possible to talk in whole sentences.

b One weakness is that fruit machine gambling involves quite a lot of speedy reactions and pressing various buttons or nudges etc. within a time limit. So, if the person is having to say out loud what they are thinking, this is likely to slow down their reaction time and so may change their skill behaviour. Also, having to make fast reactions like these means that responses are often not ‘conscious’ but, with practice, become automatic. And so it means that participants might not be able to consciously verbalise the thought processes behind some behaviours – so aspects of gambling behaviour cannot be captured by the method.
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5 a A rational verbalisation would be a reference to a win, for example ‘I won 40 pence, I think’. b An irrational verbalisation would be explaining away losses ‘I lost because I wasn’t concentrating’.

6 a One DV was the end stake – total winnings in number of 10p pieces after a play session finishes; and a second DV was win rate (plays) – total number of plays between each win during a play session. b 14/30 RGs had broken even (i.e. end stake = £3 or more) after 60 plays, compared to 7/30 NGs.

Section B questions

a The aim of the Griffiths study was to see whether there are differences between gamblers and non-gamblers in terms of cognitive processes – specifically heuristics which cause cognitive biases. There are two explanations about what goes on in the mind of a gambler – one suggests that their thinking is basically rational and the other approach says there are common distortions produced by heuristics.

b The sample in the Griffiths study was 30 regular gamblers (RGs) and 30 non-gamblers (NGs). Of the gamblers (mean age 23.4 years), there were 29 men and 1 woman. For the NGs, the gender balance was equal – 15 males and 15 females. Griffiths used a mixture of methods to recruit the samples – in the first place a poster advertisement around local university and college campuses (self-selecting sample), but also a ‘snowball sample’. This was because it can be quite difficult to find regular gamblers and so one way in which to get a decent sample size is for people who have already been recruited as RGs to recommend another gambler known to them.

One limitation of this sample is that the RGs are mainly male. This means that the results of the study will tell us much more about male gamblers and their cognitive biases than all gamblers. It also means that the RGs and NGs are not a good match in profile and it is possible that differences between the two groups are not related to gambling but just because of gender differences. Someone might say that the differences are because women are more rational than men!

c Griffiths researched RGs and NGs in a fruit machine arcade whilst playing on a particular game – FRUITSKILL. They were given £3 to gamble and asked to stay on their machine for at least 60 gambles and to aim to break even (i.e. win back the original stake). Griffiths collected his data in three ways. Firstly, half the participants of each group were asked to ‘think aloud’ whilst playing on their fruit machine – say out loud everything that they are thinking as they play without self-editing and trying to talk as continuously as possible. These utterances were recorded onto a tape via a microphone attached to the participant’s collar, and later transcribed and coded into rational and irrational verbalisations. Secondly, Griffiths measured ‘behavioural skill’ – objective outcomes of their play, for example number of total plays during the session, total time playing, how frequently they won (in minutes and per play), rate of play, and what their final end stake was. He also measured their ‘subjective skill’ through a questionnaire and asked them to rate themselves with questions such as ‘how skilful do you think you are compared to the average person?’

d One advantage of an experimental study is that the researcher can control for extraneous variables which might otherwise affect the DV and therefore limit the validity of the conclusions that could be drawn from the results. In this study, Griffiths was able to control for the environment in which the study took place – always the same arcade – just in case the setting might alter how people think or play on a fruit machine. Also, they controlled for the actual machine – always using FRUITSKILL. This meant that any differences in participants win rate or play rate etc. could not be attributed to how the machine is programmed or designed. All this means that the conclusions Griffiths drew were more likely to be valid.

One disadvantage of an experimental study is that, in general, participants know that they are in a study and therefore are likely to respond to demand characteristics. This means they are looking for cues about the aim of the study and may alter their behaviour and not behave as they may do normally. For example, in the study by Griffiths, the regular gamblers may ‘try harder’ than normal to try to ‘show off’. In the ‘think aloud’ task, even though they are instructed not to, they may well inevitably self-edit and try to present themselves in a way which they think makes them look more skilful e.g. blaming the machine rather than themselves. Meanwhile, the non-regular gamblers would want to emphasise their unfamiliarity with the machine etc. This all might have an impact on the measurements of the dependent variable (i.e. NRGs appear more rational) and therefore on the validity of the overall conclusions.

e One change to the Griffiths study could be for each participant to play on two machines. One could be the FRUITSKILL game for everybody, and the other could be another machine of their choice. The reason for this is that some of the regular gamblers did not like playing FRUITSKILL because they did not know that particular game or did not like it. This then might have ended up understimating their skill. So, if they are allowed to play on a machine of their choice, it might be that their skill level is increased because they know the machine and the sequences of buttons to press in response to a particular situation. It might also be that their ‘think aloud’ data alters – it might become more irrational because when people think they ‘know’ a machine, they tend to personify it more and might say things like: ‘You’re doing this because you don’t like me’.

Another change could be to use matched samples in the RG and NG groups. This would mean that the NG group would be matched to the RG for age and sex, so there would be 29 males and 1 female in the NG group too, with a mean age of 23.4 years. This would mean that comparisons between the two groups would be ‘fairer’ comparisons – that is that differences between the two groups could not be ascribed to gender differences in the composition of the two groups. It might also mean that the NG group now are more similar to the RG group in terms of their ‘subjective skill’ and are more likely to talk up their skill – as in general, men are more prone to ‘boast’ than females.

f The results of this study supported Griffiths’ hypotheses. Firstly, the RGs were more likely to give ‘irrational rationalisations’ than the NGs. Irrational rationalisations include things such as: personification, explaining away losses and swearing at the machine (although overall, most utterances were classed as rational rather than irrational). RGs had a much higher play rate than NGs – 8 plays per minute compared to 6 plays per minute. In terms of subjective skill, there were some differences between RGs and NGs. NGs said that playing fruit machines was ‘mostly chance’, while RGs said it was both chance and skill. NGs viewed themselves as below average skill, but RGs thought that they were above average skill. Finally, after 60 plays, 14 RGs broke even compared to 7 NGs. However, RGs were more likely to continue gambling until they had lost everything.

Section C questions

a One assumption of the individual differences approach is that everyone is different and unique – that the combination of characteristics, traits, intelligence, behaviours, compulsions, normality, mental health, ways of thinking, emotional responses etc. is pretty much unique for everyone. Each of these things has varying degrees or levels, for example, there are individual differences in intelligence and some researchers believe they can measure or reliably detect such differences between people.
b The individual differences approach could explain gambling in terms of normality and abnormality, or another way of putting it is adaptive and maladaptive behaviour. At the root of this maladaptive behaviour is faulty thought processes or cognitions. These faulty thought processes lead to or encourage gambling behaviours. For example, a person might believe that gamblers have a greater probability of winning (making a profit) overall than making a loss overall, or might overestimate the degree to which ‘skill’ (rather than just luck or odds) makes a difference in whether a person wins or loses.

c One similarity with the study by Thigpen and Cleckley and the Griffiths study is that both studies are interested in what people think and therefore both rely upon capturing people’s thoughts through self-report. In Thigpen and Cleckley, they gain insight into Eve White and how she thinks and why she behaves in the way that she does, through her qualitative self-reports. Similarly, Griffiths gains insights through qualitative data provided by gamblers self-reports (‘think aloud’ is a subset of self-report) and this gives insight into how gamblers think and behave.

One difference is that Griffiths’ study is an experiment (natural) with a sample of 60 participants; while Thigpen and Cleckley’s study is a case study with just one participant. This means that while Griffiths’ findings are likely to be generalisable to other gamblers, given that their sample is large enough and representative enough. In other words, this study helps us to understand many other people and understand why other gamblers are likely to have similar cognitive biases. However, Thigpen and Cleckley’s study only really tells us about one particular case of Multiple Personality Disorder, and it would not be appropriate to extrapolate from that study in order to understand anyone else with the same disorder – another case may only share a small number of the same symptoms and patterns. There may be significant differences in how different ‘alters’ relate to each other and can gain access to each others’ minds, and also the reasons why they came about.

d One strength of the individual differences approach is that it helps us to understand why people might behave in a maladaptive way, that is in a way which does not really help them in all aspects of their life. For example, in Griffiths’ study, we can have the opportunity to understand why gamblers do continue to gamble despite incurring losses. For example, one cognitive bias is that they think that the more they lose or experience losses, the greater chance of a win any second. This bias leads to them continuing to gamble. Of course, in reality, any one play has no more chance of winning than another. Therefore the individual approach helps us to understand why people gamble.

Another strength of the individual differences approach is that it usually involves measurement – trying to identify different levels of skills, characteristics or behaviour through measuring them and this helps us to remind us that everyone is different. For example, in the Griffiths study, the degree of behavioural skill was measured through analysing the number of plays per minute, the win rate (per play and per minute), the end stake and so on. Griffiths also used a subjective measure through asking participants questions on a pen and pencil test. This study then helps identify different levels of the same variable through different kinds of measurement.

One weakness of the individual differences approach is that it relies too heavily upon abnormality and not on normality and this is a rather negative approach to understanding behaviour.

For example, in the Griffiths study, we find out that gamblers have irrational heuristics which cause cognitive biases and encourage them to lose money. This study could be seen to be a bit negative in that it doesn’t tell us how to prevent people from getting such irrational heuristics in the first place, or how to correct them once they have become more deeply rooted. This shows that the individual differences approach can be overly negative.

Another weakness of the individual differences approach is that it often only sees things in one dimension – one variable which can be measured and expressed on a single scale or continuum. In fact, many characteristics are multidimensional. For example, much research in individual differences in the last 100 years has looked at intelligence and differing levels within the population, assuming that there is a single continuum of IQ (with 100 as the mean), as if intelligence is a single thing, like weight, which can be given a single number. Lots of people see intelligence as multidimensional – people might be more intelligent in some departments than in others. So, the desire to put everyone on a single continuum is reductionist. In the Griffiths study, in terms of behaviour skill level this is reductionist. Skill in even just doing something as straightforward as playing a fruit machine is probably multidimensional and requires knowledge of the machine, fast reactions, alertness, motivation etc. Trying just to report one score is reductionist and this is often the problem in the individual differences approach.

Qs (page 220)

1 One study with psychometric data is Thigpen and Cleckley. They used an IQ test (Wechsler Bellevue) and a memory test on each of the Eves. Then they used this to compare the personalities to see if there was any significant difference.

2 One strength is that it is more objective than just talking to someone and thinking ‘she’s intelligent, but not as intelligent as the other person’. Therefore, the outcomes were not a result of a bias on the part of Thigpen and Cleckley.

Another strength is that it produces quantitative data which is good for comparison, so here we could easily see that Eve White had higher IQ than Eve Black.

One weakness is that it is reductionist – reducing intelligence down to a number does not give the full complexity (e.g. difference intelligences) of someone’s ability. Eve B might have been more intelligent in some ways than Eve White.

Another weakness is that it is actually possible for the participant, to some extent, to fake the results. If they want to try hard and do well compared to someone who does not really care, that will be reflected in the scores. Therefore, they do not just measure what they claim to be, but other factors like motivation; for example Eve Black, it was noted, did not try hard on her test – so her score may not give a true picture of her IQ – it might have been much higher.

3 One aspect of IQ tests is vocabulary/verbal. Therefore, another way to assess this would be to analyse the vocabulary used by each of the personalities and see whether there were differences in complexity, abstractness and so on of the words used.

4 They are relatively quick and easy to administer and some people regard them as providing reliable and valid evidence.

5 This is one for you to think about! Can they measure how good a driver you are? Or how good a sportsperson you are? Or whether you are reasonable and rational in a discussion? Or whether you are easy to live with or a nightmare?