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2619459490

PSYCHOLOGY **9990/11**

Paper 1 Approaches, Issues and Debates **May/June 2021**

1 hour 30 minutes

You must answer on the question paper.

No additional materials are needed.

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
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INFORMATION

- The total mark for this paper is 60.
- The number of marks for each question or part question is shown in brackets [ ].

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Answer **all** questions.

1 From the study by Milgram (obedience):

(a) State the lowest voltage shock that was labelled on the shock generator.

15 volts (labelled "Slight Shock"). [1]

(b) Describe the shock instructions the participant (teacher) was told to follow when the victim (learner) gave an incorrect answer.

The teacher was told to give the learner a shock every time he gave a wrong answer, by pressing one of the switches on the generator. Each time there was another wrong answer he had to move one switch higher up the generator, so the shock went up by 15 volts. Before giving each shock he had to announce the voltage level aloud to the learner.

[3]

(c) Milgram suggested one reason for obedience was the payment to the participant (teacher).

Suggest **one** reason for obedience in this study, other than the payment.

The authority of the experimenter, who wore a grey technician's coat and used prods such as "Please continue", and the prestige of Yale University. [1]

2 From the study by Piliavin et al. (subway Samaritans):

(a) Outline **one** aim of the study, other than to test the effect of race on helping behaviour.

To investigate whether the type of victim (ill, carrying a cane, or drunk) affects how quickly and how often bystanders help, in a realistic setting (a New York subway train) where passengers have a clear view of the victim and cannot easily leave.

[2]

(b) Describe **one** result about same-race helping in the cane (ill) condition.

In the cane (ill) condition there was only a slight tendency for same-race helping: people were somewhat more likely to help an ill victim of their own race than one of a different race, but this difference was not significant (it was stronger in the drunk condition). [2]

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(c) Outline **two** comments made by participants who did **not** help the victim.

1 *"It's for men to help him."*

2 *"You feel so bad when you don't know what to do."* [2]

3 From the study by Laney et al. (false memory):

(a) Identify **three** features of the sample used in Experiment 2.

1 *103 participants (n = 103), who were volunteers.*

2 *Undergraduate students at the University of Washington.*

3 *Mostly female, with a mean age of about 20; they received course credit.* [3]

(b) Suggest **one** real-world application based on the results of the study.

Parents of fussy eaters or obese children could use the false memory technique to improve their child's diet; by suggesting that the child loved a healthy food such as asparagus when younger, the child may come to believe it and want to eat more of that food. [2]

4 **(a)** Describe **one** assumption of the learning approach, using an example other than the study by Pepperberg (parrot learning).

Behaviour is learned through experience, by operant conditioning; behaviour that is reinforced is more likely to be repeated. For example, a child who is praised and given a sticker each time they tidy their room is likely to keep tidying their room. [2]

(b) **(i)** Explain how **one** finding from the study by Pepperberg supports the assumption of the learning approach that you have described in **(a)**.

On same/different tests with familiar objects Alex was correct on 76.6% of trials, well above chance. This supports operant conditioning because in training he was rewarded with praise and the object for correct answers, so the reinforcement shaped his correct responses. [2]

(ii) Explain how **one** finding from the study by Pepperberg does **not** support the assumption of the learning approach that you have described in **(a)**.

Alex scored 82.3% correct on same/different tests with novel objects he had never seen before. He had never been reinforced for answers about these objects, so conditioning cannot explain his success; it suggests he understood the abstract concept itself. [2]

5 From the study by Saavedra and Silverman (button phobia):

(a) During diagnosis, the boy did **not** meet the DSM-IV criteria for one disorder.

Name this disorder.

Obsessive compulsive disorder (OCD). [1]

(b) Describe the Feelings Thermometer.

It was a nine-point scale from 0 to 8 that the boy used to rate his level of distress (disgust/fear) for each button stimulus, where 0 = no distress and 8 = very distressed. The ratings were used to build a hierarchy of buttons to work through. [2]

(c) Outline **one** strength of this study.

It has high ecological validity, because it was a real case of a boy receiving real therapy for his own button phobia, and the exposure tasks (handling buttons, imagining his mother's buttoned shirt) relate to situations he meets in everyday life. [2]

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6 Describe the procedure from the study by Bandura et al. (aggression) from when a participant entered the experimental room until the model began to assemble tinker toys.

The child was brought into the experimental room by the experimenter, who invited the model to come in and join the game. The child was taken to one corner of the room, which was set out as a structured play area, and was seated at a small table. The experimenter demonstrated how the child could make pictures using potato prints and brightly coloured picture stickers. Once the child had started playing, the experimenter escorted the model to the opposite corner, which contained a small table and chair, a tinker toy set, a mallet and a 5 foot inflated Bobo doll. The experimenter explained that these were the materials provided for the model to play with, the model was seated, and the experimenter then left the room. The model then began assembling the tinker toys.

..... [5]

7 From the study by Baron-Cohen et al. (eyes test):

(a) Describe the procedure used to select the target words and foils before the main study.

Before the main study each item (the eyes plus the target word and three foils) was piloted on a panel of eight judges. At least five of the eight judges had to agree that the target word was the most suitable description, and no more than two judges could choose any single foil. Items that failed these criteria had new target words and foils generated and were piloted again until they passed.

..... [3]

(b) Group 1 consisted of 15 adults recruited using adverts in a specialist magazine.

Identify **three** other characteristics of Group 1.

1 *All were male.*

2 *All were diagnosed with Asperger syndrome or high-functioning autism.*

3 *Mean age of 29.7 years, with IQ in the normal range.* [3]

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8 **(a)** Research has shown that males' brains respond to positive imagery more than females' brains.

Explain **two** ways the study by Canli et al. (brain scans and emotions) differs from this research.

1 *The sample was different: Canli et al. used only females (12 right-handed women), so the study could not test male brains or compare how males' and females' brains respond to images.*

2 *Canli et al. did not use positive imagery: the 96 scenes ranged from negative to neutral, so the study measured brain responses (e.g. amygdala activity) to negative emotional images, not to positive ones.*

[4]

(b) Explain **one** similarity and **one** difference between the study by Canli et al. (brain scans and emotions) and **one** other core study from the biological approach.

A similarity is that both Canli et al. and Dement and Kleitman collected quantitative data. Canli et al. recorded levels of brain activation from fMRI scans, ratings of how emotionally intense each scene was on a scale from 0 to 3, and recognition scores (forgotten, familiar or remembered) three weeks later. Dement and Kleitman recorded EEG and eye-movement data and counted how many awakenings from REM and from NREM sleep produced dream recall. In both studies this allowed objective, statistical comparisons, e.g. between more and less emotional scenes, or between REM and NREM sleep.

A difference is the technique used to measure the brain. Canli et al. used an fMRI scan, which showed which brain areas, such as the amygdala, were active while the women viewed the emotional scenes. Dement and Kleitman used an EEG with electrodes on the scalp, which could only record patterns of electrical brain wave activity during sleep, such as the fast, low-voltage waves of REM sleep, rather than locating activity in particular brain structures.

[8]

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9 Evaluate the study by Yamamoto et al. (chimpanzee helping) in terms of **two** strengths and **two** weaknesses. At least one of your evaluation points **must** be about the use of quantitative data.

One strength is the use of quantitative data. The researchers recorded, for each trial, whether the chimpanzee offered an object and which of the seven objects it offered, so the frequency of offering the correct tool could be calculated as a percentage and compared across conditions, such as the Can See and Cannot See conditions. This data is objective and easy to analyse statistically, so it showed clearly that chimpanzees offered the appropriate tool more often when they could see their partner's situation, supporting the conclusion that they can understand another's needs.

A second strength is the standardised procedure. The same seven objects (stick, straw, hose, chain, rope, brush and belt) were used in every trial, the two booths were set up in the same way, and all trials were video recorded so that the offers could be replayed and checked. This makes the study replicable and reliable, and the control of extraneous variables increases internal validity, as differences between conditions can be put down to whether the chimpanzee could see its partner.

However, a weakness of the quantitative data is that it shows what the chimpanzees did but not why. A count of offers cannot tell us whether a chimpanzee offered a tool because it truly understood the partner's goal or simply because the partner was requesting it, so the conclusions about targeted helping are partly interpretation. Qualitative descriptions of the chimpanzees' behaviour would give more insight into their motives.

A second weakness is generalisability. The sample was very small, a few mother and offspring pairs living in captivity at a research institute in Japan, who were used to cognitive tests and to working with humans. Their behaviour may not represent chimpanzees in the wild, and the artificial booth task lacks ecological validity because wild chimpanzees rarely help in this way.

Overall, the quantitative data and standardised procedure make the findings reliable and valid within the study, but the small captive sample and artificial task mean we should be cautious about generalising them to all chimpanzees.

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4782286037

PSYCHOLOGY **9990/12**

Paper 1 Approaches, Issues and Debates **May/June 2021**

1 hour 30 minutes

You must answer on the question paper.

No additional materials are needed.

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
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Answer **all** questions.

1 From the study by Milgram (obedience):

(a) State how many participants took part in the study.

40 (men). [1]

(b) State the highest voltage shock that was labelled on the shock generator.

450 volts (labelled "XXX"). [1]

(c) The participant (teacher) was given a 'sample shock'.

Describe this procedure.

Before the learning task began, the teacher was always given a sample shock of 45 volts, which was applied to his wrist. It was given by pressing the third switch on the generator, and its source was a 45 volt battery wired into the generator. This was done to convince the teacher that the generator was real.

[3]

2 From the study by Bandura et al. (aggression):

(a) Outline what Bandura et al. meant by 'imitative verbal aggression'.

Imitative verbal aggression is when the child repeated (imitated) the same aggressive words or phrases that the model had said during the aggressive display, such as the model's verbally aggressive remarks to the Bobo doll.

[2]

(b) Identify **two** examples that were recorded as imitative verbal aggression.

1 "Sock him in the nose."

2 "Hit him down." [2]

(c) Describe **one** result about aggressive gun play in the aggressive experimental groups.

In the aggressive experimental groups, boys showed more aggressive gun play than girls, and the most aggressive gun play was shown by boys who had watched the aggressive male model.

[2]

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3 From the study by Baron-Cohen et al. (eyes test):

(a) Identify **three** features of the sample used for Group 4.

1 *Randomly selected from the general population.*

2 *14 participants (n = 14), not diagnosed with AS/HFA.*

3 *Matched to Group 1 on IQ and age (mean age about 28).* [3]

(b) Suggest **one** real-world application based on the results of this study.

The eyes test could be used by clinicians as a screening tool to help diagnose AS/HFA in adults: people with low scores may lack theory of mind, so they could be referred for a full assessment and given social skills support.

[2]

4 **(a)** Describe **two** assumptions of the learning approach, using examples other than the study by Saavedra and Silverman (button phobia).

1 *Behaviour is learned through operant conditioning: behaviour followed by reinforcement is more likely to be repeated. For example, a child who is given praise for doing homework is likely to keep doing homework.*

2 *Behaviour can be learned by observing and imitating role models (social learning). For example, in Bandura et al. children who watched an adult model hit a Bobo doll copied those aggressive acts.*

[4]

(b) Explain how **one** finding from the study by Saavedra and Silverman supports **one** of the assumptions of the learning approach that you have described in **(a)**.

Over the exposure sessions the boy's distress ratings declined and by the end he could handle buttons. During exposure his mother gave positive reinforcement for handling buttons, so his new behaviour was learned through operant conditioning.

[2]

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5 From the study by Dement and Kleitman (sleep and dreams):

(a) From the dream-duration estimate part of the study:

State how Dement and Kleitman chose whether to wake a participant after 5 minutes or after 15 minutes of REM sleep.

Randomly, so each was equally likely to be chosen. [1]

(b) Describe the dream-duration estimates for the participant DN whose responses did **not** follow the same pattern as others.

DN was correct on 8 of 10 (80%) of the 5 minute awakenings, but only 5 of 10 (50%) of the 15 minute awakenings, so he was as likely to be wrong as right for longer dreams, often underestimating their length. [2]

(c) Outline **one** strength of the study.

There were controls on participant variables: participants were asked not to drink alcohol or caffeine on the day of the study. This means differences in dream recall were more likely to be due to REM or NREM sleep, increasing validity. [2]

6 From the study by Laney et al. (false memory):

Describe the procedure for Experiment 1 from when the participants returned for Session 2 (approximately one week after Session 1) until they completed the Food History Inventory.

When participants returned for Session 2 they were given false feedback: they were told that their earlier questionnaire responses had been entered into a computer, which had generated a profile of their early childhood experiences with food, presented as if tailored to them. Part of the profile was the same for everyone (e.g. that they disliked spinach). The Love group's profile also had the critical item that they loved asparagus the first time they tried it, while the control group received three filler items instead. All participants responded to an item about eating sweets at school. For the critical item they were asked to imagine the setting, e.g. where they were and who they were with, and to rate how much the experience had affected their adult personality. The experimenter then collected the profiles and they completed the Food History Inventory. [5]

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7 From the study by Pepperberg (parrot learning):

(a) The 'model/rival technique' was used where one human acted as a trainer.

Describe this technique.

The trainer presented objects to a second human (the model/rival) and asked questions about them, e.g. "What colour?". Correct answers were rewarded with praise and the object, while incorrect answers were met with disapproval. The second human acted as a model for Alex's responses and as a rival for the trainer's attention. The roles of trainer and model/rival were then reversed, and Alex was included in the interaction. [3]

(b) Describe what the secondary trainer did during the 'test procedures'.

The secondary trainer presented Alex with an object or pair of objects, which were varied in a predetermined order. They asked questions such as "What's same?" or "What colour?", and Alex had to answer vocally in English. Correct answers were rewarded and incorrect ones were scolded, and secondary questions were used to clarify unclear answers if necessary.

[3]

8 **(a)** Research in the laboratory has shown that people are more likely to help someone of a different race to themselves.

Explain **two** ways the study by Piliavin et al. (subway Samaritans) differs from this research.

1 *Piliavin et al.'s study was not in a laboratory; it was a field experiment on an express train of the New York subway, where the passengers did not know they were being studied.*

2 *Piliavin et al. found same-race rather than different-race helping, especially with the drunk victim; e.g. 68% of the spontaneous helpers of the white victim were white, higher than the proportion of white passengers.*

[4]

(b) Explain **one** similarity and **one** difference between the study by Piliavin et al. (subway Samaritans) and the study by Milgram (obedience).

A similarity is that both studies raise the ethical issue of deception. In Milgram's study the participants were told the study was about the effect of punishment on learning and believed they were giving real electric shocks, up to 450 volts, to a stranger who could not remember word pairs, when the learner was a confederate who received no shocks. In Piliavin et al.'s study the subway passengers were led to believe that the victim who collapsed, carrying a cane or smelling of alcohol, was genuinely ill or drunk and in need of help, when he was an actor. In both studies the participants could not give informed consent.

A difference is the setting. Milgram's study was a controlled laboratory experiment at Yale University, where the 40 male volunteers knew they were taking part in a study and the procedure and prods were standardised. Piliavin et al.'s study was a field experiment on a New York subway train, with about 4450 ordinary passengers who did not know they were in a study, so it had higher ecological validity but less control over variables such as how many people were in the carriage.

..... [8]

9 Evaluate the study by Schachter and Singer (two factors in emotion) in terms of **two** strengths and **two** weaknesses. At least one of your evaluation points **must** be about the use of quantitative data.

One strength is the use of quantitative data. Participants' emotions were measured using self-report rating scales, e.g. how happy or angry they felt, and observers behind a one-way mirror coded behaviour into categories to produce scores for euphoria and anger; pulse rate was also recorded. These numerical scores could be compared statistically between the epinephrine informed, ignorant, misinformed and placebo groups, which is objective and showed that uninformed participants were more influenced by the stooge.

A second strength is the high level of control. All participants were told the injection was a vitamin compound called Suproxin, the stooge followed a standardised script in the euphoria and anger conditions, and a placebo group received saline instead of epinephrine. This means the procedure can be replicated to test reliability, and it has high internal validity because differences in emotion can be linked to the IVs of arousal and explanation.

However, a weakness of the quantitative data is that the self-report scales may lack validity. Participants may have given socially desirable answers, e.g. not admitting to feeling angry because they wanted to appear polite, and a single number cannot capture how they actually experienced their emotion. Qualitative data, such as descriptions of their feelings, would give more detail.

A second weakness is generalisability. The sample was 184 male college students studying psychology at the University of Minnesota, so the results may not apply to females, who may label arousal differently, or to older people and other cultures. The situation was also artificial, as people rarely experience unexplained arousal from an injection.

Overall, the quantitative data and controls make the study reliable and internally valid, but problems with self-report and the restricted sample mean the two-factor conclusions should be generalised with caution.

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PSYCHOLOGY **9990/13**

Paper 1 Approaches, Issues and Debates **May/June 2021**

1 hour 30 minutes

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No additional materials are needed.

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Answer **all** questions.

1 From the study by Saavedra and Silverman about a boy with button phobia:

(a) State the age at which the boy's button phobia began.

5 years old (when he was in kindergarten). [1]

(b) State what happened to the boy's ratings of distress from session 2 to session 4.

They increased (went up). [1]

(c) Describe the disgust-related exposure sessions.

The boy explored why he felt buttons were disgusting. He had to imagine buttons falling on him from above and hugging his mother while she wore a shirt with buttons, and was asked how the buttons looked, felt and smelled, then to elaborate on his feelings. He used self-control (cognitive) strategies and cognitive restructuring, and progressed from larger to smaller buttons. [3]

2 From the study by Pepperberg (parrot learning):

(a) Outline **one** aim of the study.

To test whether an avian species, an African Grey parrot (Alex), could understand the abstract concept of same and different, using vocal English labels to answer about the colour, shape or material of objects. [2]

(b) Describe **one** result from the tests on familiar objects. You **must** use data in your answer.

With familiar objects Alex answered correctly on 76.6% (99 of 129) of all trials, which is well above chance, showing he could tell which attribute was the same or different. [2]

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(c) Outline **one** ethical guideline that was important for Pepperberg to consider when designing this study.

Housing: Pepperberg had to make sure Alex's living conditions suited a social species, with enough space, enrichment and social contact with his trainers, so that he was not stressed by being kept in a laboratory for a long time.

..... [2]

3 From the study by Dement and Kleitman (sleep and dreams):

(a) Identify **three** features of the sample used in this study.

1 *Nine adults (n = 9).*

2 *Predominantly male (seven men and two women).*

3 *Five were studied intensively; four confirmed the results.* [3]

(b) Suggest **one** real-world application based on the results of this study.

Sleep clinics could use EEG recordings to help people with sleep disorders such as insomnia; the readings could be analysed to see how much time a patient spends in REM and NREM sleep, to diagnose the problem and check whether treatment works.

..... [2]

4 **(a)** Describe **two** assumptions of the cognitive approach.

1 *Behaviour and emotions can be explained in terms of internal thinking (cognitive) processes, such as attention, perception, memory and language, which can be studied scientifically.*

2 *Similarities and differences between people can be understood through their cognitions, e.g. differences in the way individuals process, store and retrieve information.*

[4]

(b) Explain how **one** finding from the study by Andrade (doodling) supports **one** of the assumptions of the cognitive approach that you have described in **(a)**.

Participants who shaded shapes (doodled) while listening to a phone message recalled 29% more information than the control group. This is explained by a cognitive process: doodling reduced daydreaming, so attention stayed on the task.

[2]

5 From the study by Yamamoto et al. (chimpanzee helping):

(a) Identify **one** object that a chimpanzee could have chosen, other than the stick or straw.

Hose (also chain, rope, brush or belt). [1]

(b) Describe the result from the chimpanzee Pan in the first "Can See" condition. You **must** use data in your answer.

In the first Can See condition Pan did not offer the appropriate tool significantly more often than a non-tool object; instead she offered the brush in 79.5% of her first-offer trials.

[2]

(c) Outline **one** strength of this study.

The procedure was standardised, so it can be replicated to test reliability. For example, the same seven objects were always used in every trial, and all trials were video recorded so offers could be checked for accuracy.

[2]

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6 Describe the procedure of Experiment 2 in the study by Laney et al. (false memory) from when the participants began viewing slides of food until the end of the study.

Participants viewed a series of slides of common foods, each displayed for 30 seconds. For each slide they made four ratings, each on an 8 point scale (1 to 8), including how appetising and how disgusting they found the food, and also the experience of the photographer and the artistic quality of the photograph, so the food ratings were disguised. They then completed the Restaurant Questionnaire, the Food Preferences Questionnaire and the Food History Inventory for a second time. Next they completed a Memory or Belief? questionnaire about the critical asparagus item. Finally, they were debriefed about the true aim of the study.

[5]

7 From the study by Milgram (obedience):

(a) Identify **three** features of the experimenter in this study.

1 *Male, in his early thirties.*

2 *A high school teacher of biology.*

3 *Stern appearance, wore a grey technician's coat.* [3]

(b) At the start of the study, participants were told that 'we know very little about the effect of punishment on learning'.

Describe what else each participant was told before they were assigned to the role of teacher.

They were told that almost no scientific studies had been made of it in human beings. We do not know how much punishment is best for learning, or how much difference it makes who gives the punishment. So the study was bringing together people of different occupations and ages, some to be teachers and some learners, to find out what effect different people have on each other as teachers and learners, and what effect punishment has on learning. [3]

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8 **(a)** Research has shown that children who watch violent television programmes are less likely to be aggressive.

Explain **two** ways the study by Bandura et al. (aggression) differs from this research.

1 *Bandura et al. did not use violent television; the children watched a live adult model in the same room being physically and verbally aggressive to a Bobo doll.*

2 *Bandura et al. found the opposite result; children who saw the aggressive model were more aggressive, imitating the model's aggression, especially boys with the same-sex male model.*

[4]

(b) Explain **one** similarity and **one** difference between the study by Bandura et al. (aggression) and **one** other core study from the learning approach.

A similarity is that both studies show learning through observing a model. In Bandura et al. the children watched an adult model punch, kick and hit a Bobo doll with a mallet, and later imitated these exact physical and verbal acts when left with the toys. In Pepperberg's study Alex learned the concepts of same and different using the model/rival technique, where he watched a human model being rewarded for correct answers about objects, and then copied the model's responses to compete for the trainer's attention.

A difference is the species and size of the sample. Pepperberg used a case study of one African Grey parrot, Alex, who was trained and tested over many years, so the results may be unique to him. Bandura et al. used 72 human children, 36 boys and 36 girls aged about 3 to 5 years, from the Stanford University nursery school, who were placed in different groups, so their results could be compared between conditions and generalised more easily to other children.

[8]

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9 Evaluate the study by Schachter and Singer (two factors in emotion) in terms of **two** strengths and **two** weaknesses. At least one of your evaluation points **must** be about ethics.

One strength is the high level of control. All participants were given the same cover story, that the injection was a vitamin compound called Suproxin being tested for its effect on vision, the stooge followed a standardised script in the euphoria and anger conditions, and a placebo group received a saline injection instead of epinephrine. This makes the study replicable, so reliability can be tested, and gives high internal validity because differences in emotion can be linked to arousal and to the explanation participants were given.

A second strength is the use of quantitative data. Self-report rating scales of how happy or angry participants felt, observers' coded scores of euphoric and angry behaviour through a one-way mirror, and pulse rate were all numerical, so the informed, ignorant, misinformed and placebo groups could be compared objectively and statistically.

However, a major weakness is ethics. Participants were deceived about the purpose of the study and the drug, so they could not give fully informed consent to receiving epinephrine, which causes a racing heart and trembling. Those in the anger condition were also given an insulting questionnaire, with personal questions about their family, which could cause distress and embarrassment. Although they were debriefed, this does not undo the harm or deception.

A second weakness is generalisability. The sample was 184 male college students at the University of Minnesota, so the findings may not apply to females, older people or other cultures, and an injection of epinephrine is an artificial way of producing arousal, so the study lacks ecological validity.

Overall, the controls and quantitative data mean the study gives reliable support for the two-factor theory, but the ethical problems and narrow sample mean it could not be repeated today and its conclusions should be generalised with care.

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