Cambridge Assessment International Education

Cambridge International AS & A Level

PSYCHOLOGY **9990/31**

Paper 3 Specialist Options: Theory **October/November 2022**

1 hour 30 minutes

6182051247

You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)

INSTRUCTIONS

- Answer **four** questions in total:
  - Answer questions from **two** options.
  - For each chosen option, answer **all** questions.
- Follow the instructions on the front cover of the answer booklet. If you need additional answer paper, ask the invigilator for a continuation booklet.

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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Psychology and abnormality

Answer **all** questions.

1 **(a)** Outline the cognitive explanation of depression (Beck, 1979). [2]

(b) Describe the study by Oruc et al. (1997) about a biological explanation for bipolar disorder. [4]

(c) Explain **two** strengths of the study by Oruc et al. [6]

2 **(a)** Describe characteristics of obsessive-compulsive and related disorders (types, examples/case studies, measures). [8]

(b) Evaluate characteristics of obsessive-compulsive and related disorders (types, examples/case studies, measures), including a discussion of qualitative and quantitative data. [10]

Psychology and consumer behaviour

Answer **all** questions.

3 **(a)** Outline an associative learning explanation for consumers' preference for product colour (Grossman and Wisenblit, 1999). [2]

(b) Outline **two** methods used to collect data in the study by Porublev et al. (2009) on gift-wrapping. [4]

(c) Explain **one** strength and **one** weakness of the study by Porublev et al. [6]

4 **(a)** Describe what psychologists have discovered about environmental influences on consumers (cognitive maps of retail locations, crowding in retail environments, shopper movement patterns). [8]

(b) Evaluate what psychologists have discovered about environmental influences on consumers (cognitive maps of retail locations, crowding in retail environments, shopper movement patterns), including a discussion of cultural bias. [10]

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Psychology and health

Answer **all** questions.

5 **(a)** Identify **two** of the measures used in the five-city project on health promotion in communities (Farquhar et al., 1985). [2]

(b) Describe the study on health promotion in worksites by Fox et al. (1987). [4]

(c) Explain **one** strength and **one** weakness of longitudinal research, using the study by Fox et al. as an example. [6]

6 **(a)** Describe what psychologists have discovered about patient and practitioner diagnosis and style (practitioner style, practitioner diagnosis, disclosure of information). [8]

(b) Evaluate what psychologists have discovered about patient and practitioner diagnosis and style (practitioner style, practitioner diagnosis, disclosure of information), including a discussion of field experiments. [10]

Psychology and organisations

Answer **all** questions.

7 **(a)** Give the equation proposed by Vroom (1964) to calculate motivation. [2]

(b) Outline **two** non-monetary rewards that are motivators at work. [4]

(c) Explain **one** strength and **one** weakness of using non-monetary rewards as motivators at work. [6]

8 **(a)** Describe what psychologists have discovered about group decision-making in organisations (the decision-making process, groupthink, cognitive limitations and errors). [8]

(b) Evaluate what psychologists have discovered about group decision-making in organisations (the decision-making process, groupthink, cognitive limitations and errors), including a discussion of practical applications. [10]

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Answer booklet	Write the question number in the left-hand margin at the start of each answer.

Question number

Answers for paper 9990/31

Psychology and abnormality

1(a) Beck says depression is caused by faulty information processing. Negative schemas formed in childhood lead to a cognitive triad of negative views about the self, the world and the future, and to cognitive biases such as personalisation, where the person feels responsible for even insignificant events, e.g. blaming themselves because it rained on the day they chose for a family outing.

1(b) Oruc et al. studied 42 participants (25 female, 17 male, aged 31 to 70) diagnosed with bipolar disorder from two psychiatric institutions in Croatia, and a control group of 40 people with no history of mental illness, matched for sex and age. Information about family history was collected from the participants and their family members, and diagnosis was confirmed through medical records.

DNA testing looked for polymorphisms in the serotonin receptor 2c gene (5-HTR2c) and the serotonin transporter gene (5-HTT). 16 of the 42 patients (38%) had a first-degree relative with a major affective disorder. No overall association was found between the genes and bipolar disorder, but when the data were analysed separately by gender (serotonin is thought to be sexually dimorphic), associations were found for both polymorphisms in the female participants. This suggests these genes may increase the risk of bipolar disorder in females.

1(c) One strength is that the data are objective. Genetic polymorphisms were identified

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by DNA testing and the results were quantitative, so they are not affected by the researchers' interpretation or by participants' bias. This means the findings are scientific and the comparison between groups can be analysed statistically, increasing the validity of the conclusion that serotonin genes are linked to bipolar disorder in females.

A second strength is that the study is reliable and valid because of its controls and multiple sources. A control group of 40 people matched for age and sex was used, so any difference in the genes could be compared against people without the disorder. Family history was also collected from both the patients and their relatives and checked against medical records, so the diagnosis and the incidence of disorder in the family are more likely to be accurate. Examining two different gene polymorphisms rather than one also gives a more comprehensive view of the role of serotonin.

2(a) OCD affects up to about 5% of the population. Obsessions are persistent, intrusive and disturbing thoughts, such as fear of illness or infection, fear of accidentally harming oneself or others, a strong need for order and symmetry, or worry that a family member will come to harm. Compulsions are repetitive behaviours that give temporary relief from the anxiety caused by the obsessions, such as excessive handwashing, checking the front door is locked 20 times, ordering objects precisely, counting or tapping, or ritualised sequences that must be restarted if they are interrupted. They are excessive and not a realistic way of removing the source of anxiety.

Related disorders include hoarding disorder, in which the person has great difficulty getting rid of possessions, whatever their value, so their home may become unhygienic and unsafe. Body dysmorphic disorder involves obsessive thoughts about a perceived flaw in appearance, often slight and on the face, leading to compulsions such as mirror-checking, grooming or comparing oneself with others

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for hours each day.

Rapoport (1989) described Charles, a 14-year-old boy obsessed with germs who washed compulsively in an elaborate ritual that took many hours a day. He took part in a drug trial with a tricyclic antidepressant, which reduced his symptoms for a time.

OCD can be measured with the Maudsley Obsessive-Compulsive Inventory (MOCI), a 30-item yes/no self-report questionnaire scored 0 to 30, with four sub-scales: checking, cleaning/washing, slowness and doubting. The Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) is a semi-structured interview of about 30 minutes, with a checklist of obsessions and compulsions and a 10-item severity scale on which the person rates time spent, distress and resistance, scored from 0 (no symptoms) to 40 (severe).

2(b) The characteristics and measures of OCD rely on both quantitative and qualitative data. The MOCI produces only quantitative data, a score out of 30. This is a strength because scores are easy to compare between patients, or before and after treatment, and it is quick for clinicians to use. However, its forced-choice yes/no format means the patient cannot describe their experiences in their own words or give an answer in between, which may reduce validity. The Y-BOCS gathers a quantitative severity score out of 40 but, as an interview, also allows qualitative detail about the patient's feelings and rituals, so it is more comprehensive. The case study of Charles is mostly qualitative, giving rich detail about his washing ritual, but this is hard to compare with other patients. Using both types of data, as diagnosis does, is the best approach.

The validity and reliability of the measures can be questioned because they are self-reports. Patients may under-report embarrassing rituals due to social desirability, or may lack insight. The semi-structured Y-BOCS may be less reliable than the standardised MOCI, as different interviewers may ask follow-up questions

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	differently. Case studies like Charles lack generalisability: he is one boy, and OCD varies greatly between individuals, so his symptoms and response to drugs may not apply to others. The types of OCD may also be culturally biased, as what counts as excessive cleaning, hoarding or concern with appearance depends on cultural norms. The research has practical applications: knowing the common obsessions and compulsions, and having quick tools like the MOCI, helps clinicians diagnose and monitor treatment. Overall, the descriptions are useful, but they are most valid when quantitative scores are combined with qualitative detail.
	Psychology and consumer behaviour
3(a)	Through classical conditioning, consumers associate a colour with favourable experiences, so they prefer products of that colour, or learn to associate certain colours with certain products. These associations may date from early human history, e.g. blue linked with night (calm) and yellow with sunlight (arousal), so cool colours seem calming and warm colours such as red seem arousing.
3(b)	One method was observation of a Christmas gift-wrapping stall, to see the different wrappings chosen and how gifts were wrapped. A second method was in-depth interviews with 20 participants from Victoria, Australia, aged 25 to 35, who answered questions about their gift-wrapping preferences and reflected on how and why they wrap gifts.
3(c)	A strength is that the study used several methods (observation, in-depth interviews and projective workshops) and gathered qualitative data. Participants could express their views on gift-wrapping in their own words and the researchers photographed the wrapped gifts, so the findings are detailed and comprehensive.

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Because the methods support each other, the conclusions about why people wrap gifts are more valid.

A weakness is that the study lacks generalisability. It focused on Christmas gifts with a narrow sample of 20 people aged 25 to 35 from Australia. Other cultures may not celebrate Christmas, and in other festivals gifts may be different or not wrapped at all, so the expectations about wrapping found here may not apply to other cultures or age groups. The lack of quantitative data also makes it difficult to compare groups.

4(a) A cognitive map is a mental representation that a person uses to code, store and recall the relative locations of places, such as shops or products, in order to find their way. Mackay and Olshavsky (1975) asked 78 shoppers from 8 supermarkets in Indiana, USA, to report their preferences for the supermarkets and their reasons (e.g. price, quality), and to draw maps from their home to each store. A questionnaire collected details such as length of time in the area. Their cognitive maps, rather than the actual maps, correlated with their store preferences.

Machleit et al. (2000) studied crowding. In study 1, 722 marketing students completed a questionnaire after a shopping trip, rating perceived crowding (8-point scale), satisfaction (7-point scale), emotions (Izard's 10 emotions on a 1 to 5 scale) and expected crowding. The more crowded the shop, the lower the positive experience of shopping. Study 2 replicated this with adults. In study 3, a lab study, 231 participants read about a discount or upmarket bookstore and watched videos with different levels of crowding. Satisfaction fell as crowding increased in both stores, mediated by expectations of crowding and personal tolerance for crowding.

Gil et al. (2009) tagged 480 shoppers and followed them by CCTV, interviewing them before and after their trip about its purpose, use of a list, satisfaction and spending. They measured trip duration, walking speed and areas visited. They found

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four movement patterns (short, round, central and wave trips) and five shopper types (native, tourist, raider, explorer and specialist). Males were more likely to be raiders, and women shopping alone were most often explorers.

4(b) The research is culturally biased. Mackay and Olshavsky and Machleit et al. were carried out in the USA and Gil et al. in the UK, all Western societies where people shop in large supermarkets and malls. In many cultures shopping is done in markets with many stalls or in small local stores, so cognitive maps and movement patterns like the "raider" or "wave trip" may not exist in the same way. Tolerance of crowding also varies between cultures, and between rural and urban people, so Machleit's finding that crowding lowers satisfaction may not apply where busy markets are normal. The findings should be applied to other cultures with caution.

The methods have strengths and weaknesses. Gil et al. used CCTV observation, which gives objective data on actual movements and has high ecological validity, as shoppers were in a real store. Machleit et al. and Mackay and Olshavsky relied on self-reports, which may be affected by poor recall or social desirability. Machleit's study 3 was in a lab using videos and imagined shopping, so it lacks ecological validity, but it controlled the level of crowding, so cause and effect can be inferred.

Generalisability is also limited by samples: Machleit used marketing students, who may shop differently from the wider population, although study 2 replicated the results with adults, which increases reliability.

The research is useful. Retailers can design store layouts that match shoppers' cognitive maps and movement patterns, place popular products to draw people through the store, and manage crowding, for example by widening aisles. Ethically, CCTV tracking raises issues of consent, although shoppers agreed to be tagged.

Overall the research is useful but mostly applies to Western supermarket shopping.

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	Psychology and health
5(a)	Blood pressure. Weight (or smoking).
5(b)	Fox et al. introduced a token economy at two dangerous open-pit mines, using trading stamps as tokens. Employees earned stamps for working without lost-time injuries, for being in a work group in which no one had a lost-time injury, for not being involved in equipment-damaging accidents, and for safety suggestions that were adopted. They lost stamps if they or others in their group were injured, damaged equipment or failed to report an accident. Stamps could be exchanged for thousands of items at redemption stores. Afterwards there were large reductions in days lost through injury, numbers of injuries and accident costs, the savings far exceeded the cost of the scheme, and the improvements were maintained over several years.
5(c)	A strength of longitudinal research is that changes in behaviour can be seen over time. In Fox et al., data were collected over several years, so it was clear the token economy reduced injuries in the long term rather than just when the scheme was new. The long-term cost of the stamps could also be weighed against the money saved through fewer accidents, which shows its value to the mines. A weakness is attrition and changes in the sample. Over many years employees leave and new ones join, and one of the mines closed during the study, so the people at the end of the study were not the same as at the start. New workers may be more or less motivated by the stamps, so it is harder to be sure the improvement was caused by the token economy. Longitudinal research is also costly and time-consuming.

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6(a)	Byrne and Long (1976) analysed about 2500 recordings of medical consultations from countries including England and Australia and identified two practitioner styles. In the doctor-centred style the doctor asks closed questions, ignores the patient's attempts to elaborate, focuses on the first problem mentioned and links symptoms to a diagnosis without discussion, so the atmosphere is impersonal and the patient is passive. In the patient-centred style the doctor asks open questions, lets the patient elaborate, uses less jargon and lets the patient take part in decisions, so the patient is active. Savage and Armstrong (1990) carried out a field experiment in a doctor's surgery comparing a directing (doctor-centred) style with a sharing (patient-centred) style. All patients were highly satisfied, but straight after the consultation and one week later, patients who received the doctor-centred style were more satisfied, perhaps because they were more familiar with it. Practitioners can make diagnosis errors. A type I error is a false positive, where a healthy person is diagnosed as sick. A type II error is a false negative, where a sick person is diagnosed as healthy, which may be more dangerous because they do not get treatment. Robinson and West (1992) studied 69 patients at a genito-urinary clinic. Patients disclosed more to a computer questionnaire than to the doctor they saw afterwards, e.g. admitting to more sexual partners and more symptoms. This suggests computers help patients disclose sensitive information more openly.
6(b)	Savage and Armstrong and Robinson and West were field experiments. A strength is high ecological validity: they used genuine patients with real medical needs in a real surgery and clinic, so the findings reflect how patients actually respond to doctors and computers. However, there is less control over extraneous variables, such as the patients' illnesses, personalities and previous experience with doctors, which vary greatly and could affect satisfaction or disclosure. Both used

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	independent measures, which avoids order effects, as a patient could not sensibly receive both conditions, but participant variables between groups may explain the results. Validity can be questioned. Satisfaction in Savage and Armstrong was self-reported and patients may have given socially desirable answers about their own doctor. In Robinson and West, disclosure on the computer was compared with the doctor afterwards, so patients may have disclosed less the second time simply because they had already answered. Generalisability is limited. Robinson and West had only 69 patients at one genito-urinary clinic, where information is especially embarrassing, so the results may not apply to other illnesses. Byrne and Long's large sample from several countries is more generalisable, although styles may differ between cultures. The research is useful: doctors can be trained to use a style suited to the patient, and computers can be used to collect sensitive information. Understanding type I and type II errors helps practitioners reduce misdiagnosis. However, saying a style determines satisfaction ignores individual differences in what patients want. Overall, the field experiments are realistic and useful but less controlled.
	Psychology and organisations
7(a)	Motivation = Expectancy × Instrumentality × Valence (M = E × I × V)
7(b)	Praise: the manager tells the employee they have done a good job or made a real effort, which makes the employee feel good and valued, so they are motivated to keep working hard. Recognition, e.g. being named "employee of the week" or receiving a letter of commendation, publicly acknowledges the employee's contribution, so they feel valued and recognised by the organisation.

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7(c)	A strength is that non-monetary rewards involve little or no financial outlay, so the organisation can increase output without increasing costs. They can also be more motivating than money, as praise and recognition make the employee feel personally responsible for their achievement, and the manager gets to know the workforce better, improving relationships. A weakness is individual differences. Some employees, for example those who need money to support a family, may feel little motivation from praise or an "employee of the week" award. In some jobs, such as monotonous factory work, it is hard to find anything that makes workers feel empowered, and managers may have to spend time looking for something to praise, which can seem intrusive.
8(a)	Wedley and Field (1984) focused on the pre-planning stage of decision-making, before solutions are offered. The group should decide what type of leadership is needed, whether others should be involved, how information will be gathered, who to contact and how alternatives will be generated. Once the process has started it is hard to stop, which can lead to poor decisions, so pre-planning gives more flexibility. Janis (1971) described groupthink, where the desire for harmony and a lack of critical evaluation lead a group to an irrational decision that individuals would not have made alone, e.g. the Bay of Pigs invasion. The eight symptoms are: illusion of invulnerability, illusion of morality, shared negative stereotypes of outsiders, collective rationalisation, self-censorship, illusion of unanimity, direct pressure to conform, and self-appointed mind guards. Groupthink can be avoided by encouraging open enquiry, using sub-groups to work on the same task, admitting mistakes and holding second-chance meetings to reconsider decisions. Forsyth (2006) described cognitive limitations and errors in group decisions, before, during and after meetings. Sins of commission involve misusing information,

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sins of omission involve overlooking important information, and sins of imprecision involve relying on inappropriate heuristics. Confirmation bias, seeking information that supports rather than challenges the group's view, also causes errors.

8(b)

The research has strong practical applications. Wedley and Field give a clear set of pre-planning steps that organisations can follow to make decision-making more flexible. Janis's strategies to avoid groupthink, such as sub-groups and second-chance meetings, are practical and easy to put in place in any organisation. Forsyth's sins help groups recognise errors, although he does not give specific methods to reduce them, so this part is less directly applicable.

Much of the evidence for groupthink comes from case studies of historical decisions like the Bay of Pigs, analysed after the event. This lacks control and is open to interpretation, as researchers may look for symptoms that fit the theory. Also, political decisions may not generalise to ordinary workplace groups.

The theories are somewhat reductionist, focusing on a few factors, such as cohesion or cognitive errors, while ignoring others like the personalities of members, the leader's style and time pressure. This links to the individual versus situational debate: groupthink is a situational explanation, but some individuals, such as a strong-minded member, may resist conformity pressure.

Ecological validity is mixed. Case studies are real decisions, so they have high ecological validity, but laboratory research on group decisions uses artificial tasks.

Overall, the research is useful because it gives organisations practical ways to improve decisions, but it is best seen as a set of guidelines rather than an explanation that applies to every group.

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PSYCHOLOGY **9990/32**

Paper 3 Specialist Options: Theory **October/November 2022**

1 hour 30 minutes

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You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)

INSTRUCTIONS

- Answer **four** questions in total:
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INFORMATION

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Psychology and abnormality

Answer **all** questions.

1 **(a)** Explain what is meant by 'kleptomania'. [2]

(b) Outline **two** of the components that Griffiths (2005) used to define addiction. [4]

(c) Explain **one** strength and **one** weakness of the definition of addiction proposed by Griffiths. [6]

2 **(a)** Describe treatments and management of schizophrenia and delusional disorder (biochemical, ECT, token economy, CBT). [8]

(b) Evaluate treatments and management of schizophrenia and delusional disorder (biochemical, ECT, token economy, CBT), including a discussion of ethics. [10]

Psychology and consumer behaviour

Answer **all** questions.

3 **(a)** Explain what is meant by 'satisficing' in consumer decision-making. [2]

(b) Describe 'prospect theory' in consumer decision-making. [4]

(c) Explain **two** weaknesses of prospect theory in consumer decision-making. [6]

4 **(a)** Describe what psychologists have discovered about selling the product (sales techniques, interpersonal influence techniques, ways to close a sale). [8]

(b) Evaluate what psychologists have discovered about selling the product (sales techniques, interpersonal influence techniques, ways to close a sale), including a discussion on usefulness. [10]

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Psychology and health

Answer **all** questions.

5 **(a)** Identify **two** biochemical tests that measure non-adherence in patients. [2]

(b) Describe the procedure used in the study by Chung and Naya (2000) on pill counting. [4]

(c) Explain **two** weaknesses of the study by Chung and Naya. [6]

6 **(a)** Describe what psychologists have discovered about sources of stress (physiology of stress and effects on health, and causes of stress). [8]

(b) Evaluate what psychologists have discovered about sources of stress (physiology of stress and effects on health, and causes of stress), including a discussion of nature versus nurture. [10]

Psychology and organisations

Answer **all** questions.

7 **(a)** Explain what is meant by 'organisational commitment', e.g. Mowday et al. (1979). [2]

(b) Outline **two** hygiene factors identified by Herzberg (1959) in the two-factor theory of job satisfaction. [4]

(c) Explain **one** strength and **one** weakness of the two-factor theory of job satisfaction. [6]

8 **(a)** Describe what psychologists have discovered about need theories (hierarchy of needs, ERG theory, achievement motivation). [8]

(b) Evaluate what psychologists have discovered about need theories (hierarchy of needs, ERG theory, achievement motivation), including a discussion of determinism versus free-will. [10]

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Question number

Answers for paper 9990/32

Psychology and abnormality

1(a) Kleptomania is a non-substance addictive (impulse control) disorder in which the person cannot resist the urge to steal objects that they do not need for personal use and that are not stolen for their monetary value. They feel tension before the theft and pleasure or relief afterwards.

1(b) Salience: the activity (e.g. gambling) becomes the most important thing in the person's life. They think about it all the time, even when not doing it, experienced as a craving.

Tolerance: increasing amounts of the activity are needed to get the same effect as before, e.g. a gambler placing bigger bets or gambling for longer.

1(c) A strength is that it is a comprehensive definition with clear, objective criteria. A person must show all six components (salience, mood modification, tolerance, withdrawal, conflict and relapse), so it is clear whether someone is addicted, which helps diagnosis. Because it applies to both substance and non-substance addictions, such as gambling and kleptomania, the essential features of addiction can be researched together, and clear diagnosis can lead to appropriate treatment.

A weakness is that it may lack validity. Someone could have a genuine addiction but not yet show all six components, e.g. they have never tried to stop so cannot show relapse, yet would not be classed as addicted. The components also rely partly on the person's subjective experience, and an addict may deny needing more

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and more of the activity, so the definition may fail to identify them and treatment is delayed.

2(a) Biochemical treatment uses antipsychotics such as chlorpromazine, which block dopamine receptors in the brain, and atypical antipsychotics, which block dopamine and serotonin receptors. They reduce agitation and hostility quickly, and after two or more weeks reduce positive symptoms such as hallucinations.

In ECT the patient is given a general anaesthetic and a muscle relaxant. Electrodes are placed on the scalp (unilaterally or bilaterally) and a controlled current is passed for a very short time, causing a brief seizure, which treats the symptoms. It is often given twice a week and is used for acute psychotic episodes and catatonic symptoms.

Paul and Lentz (1977) used a token economy, based on operant conditioning, with 84 chronic schizophrenic patients on a hospital ward for about 4.5 years. Patients received tokens for appropriate behaviour, exchangeable for luxury items, and were compared with milieu therapy and traditional hospital treatment. In the token economy group positive and negative symptoms reduced significantly, only 11% needed drugs compared with 100% of the control group, and 97% were able to live independently, compared with 71% (milieu) and 46% (traditional).

Sensky (2000) compared CBT with befriending in a randomised controlled trial of 90 patients aged 16 to 60 whose schizophrenia had not responded to medication. Both were delivered by two experienced nurses over nine months (a mean of 19 sessions), with blind raters assessing symptoms. Both groups improved at first, with no significant difference, but at the nine-month follow-up the CBT group showed greater improvements on all measures while the befriending group had lost some of the benefits.

2(b) There are ethical issues. Drugs and ECT can be given to patients who are

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sectioned in hospital without their agreement, and it is difficult to be sure that a person experiencing psychosis can give fully informed consent. ECT carries a risk of harm such as memory loss, and antipsychotics have side effects such as tardive dyskinesia. Token economies can be seen as manipulative, and withholding privileges raises ethical concerns. CBT cannot be forced on anyone, so it may be more ethical. However, the ethical costs must be balanced against the benefit of helping the person manage their symptoms.

Effectiveness differs. Drugs work quickly on positive symptoms but less well on negative symptoms, and relapse is common if they are stopped. Paul and Lentz showed the token economy was highly effective, with 97% living independently. Sensky showed CBT had longer-lasting effects than befriending, but only at follow-up, and only for patients who had not responded to drugs.

Appropriateness is also important. CBT needs the patient to engage in discussion, so it may not suit severely disturbed patients, whereas drugs and ECT can be used in acute episodes. Token economies only work in institutions, so behaviour may not generalise outside hospital.

Biochemical treatments and ECT are reductionist, treating only brain chemistry and ignoring the person's thoughts and environment. Cost also matters: drugs are cheap compared with long-term CBT or a token economy ward. Overall, a combination of drugs with psychological treatment such as CBT may be the most effective and ethical approach.

Psychology and consumer behaviour

3(a) Satisficing is a non-compensatory strategy in which the consumer chooses the first product that meets their basic requirements, without further comparison, e.g. buying the first toaster they see when the old one breaks.

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3(b)	Prospect theory says decisions are made by weighing up costs and benefits, but value is not fixed: it depends on how options are presented. People are loss averse, so an option presented in terms of gains is chosen over one presented in terms of losses, and they value things they own more (the endowment effect). There are four stages: editing, using heuristics such as availability; coding, setting a reference point against which outcomes are judged; value, weighing costs and benefits; and weighting and risk assessment, where framing matters, e.g. "80% prefer this" is chosen over "20% do not".
3(c)	One weakness is that it does not apply to all consumer decisions, which limits its validity and usefulness. A cheap household item like a kettle is bought quickly with little weighing up, because a poor choice costs little to correct, whereas expensive items such as cars are researched for a long time. It is also not relevant where brands differ little, such as milk, and what counts as expensive varies between individuals. A second weakness is that it is a theory with little direct research support, and it is hard to test because decision-making processes can only be studied through self-report, and consumers may not be aware of how they decided. It also assumes decisions are cognitive and rational, when many purchases rely on gut feeling and emotion, so the same person may choose differently from one day to the next.
4(a)	Sales techniques can be customer-focused, competitor-focused or product-focused. In a customer-focused technique the seller identifies what the customer wants and shows how the product suits them, giving information about its long-term value, which builds loyalty, e.g. selling a car. A competitor-focused technique compares the seller with competitors, assuming all customers are the same, e.g. supermarkets comparing the price of a weekly basket, and stresses advantages like a better warranty. A product-focused technique ignores customer needs and

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emphasises producing the best product, assuming customers will come, e.g. Apple.

Kardes et al. (2007) studied the disrupt-then-reframe (DTR) technique, where a confusing message is followed by a clear reframe, which works because people have a need for cognitive closure (NFCC). In a field experiment, 147 supermarket shoppers were offered candy: "The price is now 100 eurocents... that's 1 euro. It's a bargain!" 65% bought in the DTR condition compared with 44% in the reframe-only condition. In a second experiment, 155 students were asked to pay 3 euros to join a group: 30% paid in the DTR condition versus 13% with reframe only, and the effect was found for those high in NFCC but not those low in NFCC. A third, lab experiment with 137 students confirmed DTR works because of the need for closure.

To close a sale, Cialdini (1984) gave six principles: reciprocity (giving a free trial), commitment and consistency (a small commitment leads to a larger one), liking (people buy from sellers similar to them), authority (expertise, e.g. people in lab coats), social proof (positive reviews) and scarcity ("last few days"). Other closes include the yes-set close and the alternative-choice close, e.g. "Would you like it delivered or take it now?"

4(b)

The research is useful to sellers. The ways to close a sale are direct, practical advice that salespeople can use to succeed while meeting customers' needs, and the three sales techniques can be chosen depending on the product, e.g. customer-focused for cars. Kardes et al. show DTR increases sales, but its usefulness is limited, because it had no significant effect on people low in need for cognitive closure, and a salesperson cannot tell this from looking at a customer. In practice, sellers probably mix techniques, so the categories are less useful than they seem.

Kardes et al. used field experiments in a real supermarket, giving high ecological validity, as shoppers did not know they were in a study. The standardised scripts

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and 2 second pause make the procedure replicable. However, small purchases like candy or a 3 euro fee may not generalise to expensive purchases where people think more carefully. The lab experiment had more control but lower ecological validity.

There are ethical issues. Field participants did not consent and were deliberately confused, and techniques like DTR and false scarcity could be seen as manipulating consumers into buying things they do not need.

The research may be culturally biased, as Kardes et al. was conducted in the Netherlands and the USA, and Cialdini's principles are based on Western sales, where, for example, haggling is less common.

Quantitative data, such as percentages buying, allow clear comparison, but do not explain why customers bought. Overall, the research is useful and practical, but its effects depend on the product, the customer and the culture.

Psychology and health

5(a) Blood tests.

Urine tests.

5(b) 57 patients (32 male, 25 female, aged 18 to 55) taking oral medication for asthma took part after an initial screening of 2 to 3 weeks, and 47 completed the study. They were prescribed 20 mg of zafirlukast twice a day, 12 hours apart and not at mealtimes, and were given 56 tablets at a time. The study lasted 12 weeks. The bottle lids were fitted with a TrackCap device, a microprocessor that recorded each time the bottle was opened. Every 3 weeks patients returned to the clinic to collect more tablets, a pill count was done and compared with the TrackCap data. Patients were told their pill-taking was being monitored but not how.

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5(c)	One weakness is that the measure may lack validity. The TrackCap only recorded when the bottle was opened, not whether a pill was actually taken or how many pills were removed. It did not record separate openings within one minute of each other, and if the cap was left off for more than 15 minutes it recorded an extra event. So patients could appear adherent without taking their medication, and adherence may be over- or under-estimated. A second weakness is demand characteristics. Patients knew their pill-taking was being monitored, so they may have been more adherent than usual to appear good patients. This means the results may not reflect their normal adherence. Also, only 47 patients completed the study, over 12 weeks and with one drug, so the findings have limited generalisability to other conditions and longer treatments.
6(a)	The stress response is controlled by the autonomic nervous system. In an emergency the sympathetic branch triggers the fast "fight or flight" response, raising heart rate and breathing, and signals the slower endocrine system, which releases hormones such as adrenaline and cortisol. Prolonged stress can cause hypertension and atherosclerosis, increasing the risk of heart attack, and gastrointestinal problems such as ulcers or IBS. Selye (1936) proposed the general adaptation syndrome, based on rats, with three stages: alarm reaction (fight or flight), resistance (the body tries to reduce arousal while coping) and exhaustion, where prolonged arousal causes systems to break down, leading to high blood pressure, stroke, heart attack or ulcers. Chandola et al. (2008) studied 10,308 London civil servants in a longitudinal study from 1985 to 2004, using self-report postal questionnaires and clinical examinations of biological risk factors (blood pressure, cortisol, waist size) and behaviours (diet, exercise, alcohol, smoking). Work stress was linked to lack of exercise and poor diet, was more common in those under 50, and the more stress reported, the more likely coronary heart disease was.

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Holmes and Rahe (1967) developed the Social Readjustment Rating Scale. 394 participants rated 43 life events compared with marriage, set at 50: death of a spouse scored 100 and divorce 73. People scoring over 300 in a year suffered more stress-related illness.

Friedman and Rosenman (1974) linked Type A personality (competitive, impatient, aggressive, time-conscious) to a higher risk of coronary heart disease than Type B (relaxed).

6(b) The sources of stress take different sides of the nature versus nurture debate. The GAS model is biological and evolutionary, so it is on the nature side, and Type A personality is also seen as largely innate. Work stress and life events are environmental, so they support nurture. However, it is hard to separate the two because they interact: a person born with a Type A personality may choose a high-powered, stressful job, so their nature shapes the nurture they experience. An interactionist view is most realistic.

This links to individual versus situational explanations. Holmes and Rahe and Chandola focus on situations, but people react differently to the same event, e.g. divorce may be a relief for one person, so the SRRS ignores individual differences in appraisal.

The methods differ in validity. Chandola's longitudinal study shows how stress affects health over almost 20 years and used objective measures such as cortisol and blood pressure, increasing validity. However, work stress was self-reported, and the sample was London civil servants, which limits generalisability. Selye used rats, so generalising to humans is questionable. The SRRS relies on recall of events over a year, which may be unreliable, and it is a correlation, so it cannot show life events cause illness.

The research may be culturally biased, as the SRRS weightings were made in the USA and events like marriage may be rated differently in other cultures.

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The research has practical applications: organisations can reduce work stress, and Type A people can be taught to manage their behaviour. Overall, stress is best explained by an interaction of nature and nurture.

Psychology and organisations

7(a) Organisational commitment is an active relationship with the organisation in which the person is willing to give something of themselves to contribute to its well-being. Mowday et al. say it involves a strong belief in the organisation's goals and values, a willingness to exert effort on its behalf, and a strong desire to remain a member.

7(b) Salary: pay should be fair and competitive with others in a comparable role in the same industry. If it is too low, workers are dissatisfied, but good pay alone does not create satisfaction.

Physical working conditions: the workplace should be safe, clean and hygienic, with equipment and machinery well maintained. Poor conditions cause dissatisfaction.

7(c) A strength is that the theory is useful. It tells organisations what they can change: address hygiene factors, such as pay and conditions, to remove dissatisfaction, and increase motivators, such as recognition and responsibility, to increase satisfaction. This could improve performance and productivity and reduce staff turnover. It was also ground-breaking in showing satisfaction and dissatisfaction are separate rather than two ends of one continuum, based on Herzberg's interviews with about 200 engineers and accountants in Pittsburgh.

A weakness is that it may not account for individual differences. For a worker who is the only earner in their household, high pay may be satisfying and motivating rather than just a hygiene factor, whereas for a more affluent person pay acts as

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	Herzberg predicts. Also, the sample of engineers and accountants in one US city limits generalisability, and later research has failed to replicate his findings.
8(a)	Maslow (1970) proposed a hierarchy of needs. In the original five levels: physiological needs (food, drink, warmth, shelter), safety (security, protection from harm, law and order), social (relationships, affection, family), esteem (achievement, mastery, status) and self-actualisation (realising one's potential). Lower needs must be satisfied before a person can progress to higher levels, so a worker must have physiological needs met first. The model was later expanded with cognitive (knowledge and understanding), aesthetic (appreciation of beauty) and transcendence (helping others to self-actualise) needs. Alderfer (1972) reorganised Maslow's needs into three categories in ERG theory. Existence needs are basic material needs, covering physiological and safety needs. Relatedness needs are the need to maintain relationships at work and in private life, covering social and esteem needs. Growth needs are the need for self-development, covering self-actualisation. ERG is not a hierarchy: workers can be motivated by more than one need at once, and the importance of needs can change over time with lifestyle and family. McClelland (1965) proposed three work-related needs: achievement (to master tasks and succeed through hard work rather than luck), affiliation (to be liked and accepted by others) and power (to influence and control others). It is not a hierarchy. Good managers have a high need for power rather than achievement or affiliation. Needs can be measured with the Thematic Apperception Test, in which people interpret ambiguous pictures.
8(b)	Maslow's hierarchy comes from the humanistic approach, which emphasises free will, yet the theory is deterministic: a person must satisfy each level before progressing, so behaviour is driven by unmet needs in a fixed order. In reality

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people may choose to pursue higher needs, such as an artist who works for little money, showing free will. ERG theory and McClelland's theory are less deterministic, as they are not hierarchies and allow several needs to motivate at once, with their importance changing over time. However, McClelland's idea that needs are fairly stable traits is still partly deterministic.

Research support varies. Maslow's theory is hard to test scientifically, as concepts like self-actualisation are vague. McClelland's theory can be measured with the TAT, but this is a projective test that relies on subjective interpretation, so its reliability is questionable.

The theories are culturally biased. Maslow's hierarchy reflects individualist Western values, placing self-actualisation at the top, whereas in collectivist cultures social needs and belonging may be more important. This limits generalisability.

Maslow's theory is holistic, considering the whole person, whereas McClelland's three needs could be seen as reductionist. In comparison, ERG theory is simpler and more flexible, so it may fit real workers better.

All three have practical applications: managers can identify which needs workers have and meet them, e.g. job security for existence needs and team activities for relatedness, or select managers with a high need for power. Overall, the more flexible, less deterministic theories are more useful in organisations.

Cambridge Assessment International Education

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PSYCHOLOGY **9990/33**

Paper 3 Specialist Options: Theory **October/November 2022**

1 hour 30 minutes

You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)

INSTRUCTIONS

- Answer **four** questions in total:
  - Answer questions from **two** options.
  - For each chosen option, answer **all** questions.
- Follow the instructions on the front cover of the answer booklet. If you need additional answer paper, ask the invigilator for a continuation booklet.

INFORMATION

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

This document has **4** pages. Any blank pages are indicated.

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Psychology and abnormality

Answer **all** questions.

1 **(a)** Outline the cognitive explanation of depression (Beck, 1979). [2]

(b) Describe the study by Oruc et al. (1997) about a biological explanation for bipolar disorder. [4]

(c) Explain **two** strengths of the study by Oruc et al. [6]

2 **(a)** Describe characteristics of obsessive-compulsive and related disorders (types, examples/case studies, measures). [8]

(b) Evaluate characteristics of obsessive-compulsive and related disorders (types, examples/case studies, measures), including a discussion of qualitative and quantitative data. [10]

Psychology and consumer behaviour

Answer **all** questions.

3 **(a)** Outline an associative learning explanation for consumers' preference for product colour (Grossman and Wisenblit, 1999). [2]

(b) Outline **two** methods used to collect data in the study by Porublev et al. (2009) on gift-wrapping. [4]

(c) Explain **one** strength and **one** weakness of the study by Porublev et al. [6]

4 **(a)** Describe what psychologists have discovered about environmental influences on consumers (cognitive maps of retail locations, crowding in retail environments, shopper movement patterns). [8]

(b) Evaluate what psychologists have discovered about environmental influences on consumers (cognitive maps of retail locations, crowding in retail environments, shopper movement patterns), including a discussion of cultural bias. [10]

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Psychology and health

Answer **all** questions.

5 **(a)** Identify **two** of the measures used in the five-city project on health promotion in communities (Farquhar et al., 1985). [2]

(b) Describe the study on health promotion in worksites by Fox et al. (1987). [4]

(c) Explain **one** strength and **one** weakness of longitudinal research, using the study by Fox et al. as an example. [6]

6 **(a)** Describe what psychologists have discovered about patient and practitioner diagnosis and style (practitioner style, practitioner diagnosis, disclosure of information). [8]

(b) Evaluate what psychologists have discovered about patient and practitioner diagnosis and style (practitioner style, practitioner diagnosis, disclosure of information), including a discussion of field experiments. [10]

Psychology and organisations

Answer **all** questions.

7 **(a)** Give the equation proposed by Vroom (1964) to calculate motivation. [2]

(b) Outline **two** non-monetary rewards that are motivators at work. [4]

(c) Explain **one** strength and **one** weakness of using non-monetary rewards as motivators at work. [6]

8 **(a)** Describe what psychologists have discovered about group decision-making in organisations (the decision-making process, groupthink, cognitive limitations and errors). [8]

(b) Evaluate what psychologists have discovered about group decision-making in organisations (the decision-making process, groupthink, cognitive limitations and errors), including a discussion of practical applications. [10]

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Surname	StemUp Model Solution
Answer booklet	Write the question number in the left-hand margin at the start of each answer.

Question number

Answers for paper 9990/33

Psychology and abnormality

1(a) Beck says depression is caused by faulty information processing. Negative schemas formed in childhood lead to a cognitive triad of negative views about the self, the world and the future, and to cognitive biases such as personalisation, where the person feels responsible for even insignificant events, e.g. blaming themselves because it rained on the day they chose for a family outing.

1(b) Oruc et al. studied 42 participants (25 female, 17 male, aged 31 to 70) diagnosed with bipolar disorder from two psychiatric institutions in Croatia, and a control group of 40 people with no history of mental illness, matched for sex and age. Information about family history was collected from the participants and their family members, and diagnosis was confirmed through medical records. DNA testing looked for polymorphisms in the serotonin receptor 2c gene (5-HTR2c) and the serotonin transporter gene (5-HTT). 16 of the 42 patients (38%) had a first-degree relative with a major affective disorder. No overall association was found between the genes and bipolar disorder, but when the data were analysed separately by gender (serotonin is thought to be sexually dimorphic), associations were found for both polymorphisms in the female participants. This suggests these genes may increase the risk of bipolar disorder in females.

1(c) One strength is that the data are objective. Genetic polymorphisms were identified

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by DNA testing and the results were quantitative, so they are not affected by the researchers' interpretation or by participants' bias. This means the findings are scientific and the comparison between groups can be analysed statistically, increasing the validity of the conclusion that serotonin genes are linked to bipolar disorder in females.

A second strength is that the study is reliable and valid because of its controls and multiple sources. A control group of 40 people matched for age and sex was used, so any difference in the genes could be compared against people without the disorder. Family history was also collected from both the patients and their relatives and checked against medical records, so the diagnosis and the incidence of disorder in the family are more likely to be accurate. Examining two different gene polymorphisms rather than one also gives a more comprehensive view of the role of serotonin.

2(a) OCD affects up to about 5% of the population. Obsessions are persistent, intrusive and disturbing thoughts, such as fear of illness or infection, fear of accidentally harming oneself or others, a strong need for order and symmetry, or worry that a family member will come to harm. Compulsions are repetitive behaviours that give temporary relief from the anxiety caused by the obsessions, such as excessive handwashing, checking the front door is locked 20 times, ordering objects precisely, counting or tapping, or ritualised sequences that must be restarted if they are interrupted. They are excessive and not a realistic way of removing the source of anxiety.

Related disorders include hoarding disorder, in which the person has great difficulty getting rid of possessions, whatever their value, so their home may become unhygienic and unsafe. Body dysmorphic disorder involves obsessive thoughts about a perceived flaw in appearance, often slight and on the face, leading to compulsions such as mirror-checking, grooming or comparing oneself with others

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for hours each day.

Rapoport (1989) described Charles, a 14-year-old boy obsessed with germs who washed compulsively in an elaborate ritual that took many hours a day. He took part in a drug trial with a tricyclic antidepressant, which reduced his symptoms for a time.

OCD can be measured with the Maudsley Obsessive-Compulsive Inventory (MOCI), a 30-item yes/no self-report questionnaire scored 0 to 30, with four sub-scales: checking, cleaning/washing, slowness and doubting. The Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) is a semi-structured interview of about 30 minutes, with a checklist of obsessions and compulsions and a 10-item severity scale on which the person rates time spent, distress and resistance, scored from 0 (no symptoms) to 40 (severe).

2(b) The characteristics and measures of OCD rely on both quantitative and qualitative data. The MOCI produces only quantitative data, a score out of 30. This is a strength because scores are easy to compare between patients, or before and after treatment, and it is quick for clinicians to use. However, its forced-choice yes/no format means the patient cannot describe their experiences in their own words or give an answer in between, which may reduce validity. The Y-BOCS gathers a quantitative severity score out of 40 but, as an interview, also allows qualitative detail about the patient's feelings and rituals, so it is more comprehensive. The case study of Charles is mostly qualitative, giving rich detail about his washing ritual, but this is hard to compare with other patients. Using both types of data, as diagnosis does, is the best approach.

The validity and reliability of the measures can be questioned because they are self-reports. Patients may under-report embarrassing rituals due to social desirability, or may lack insight. The semi-structured Y-BOCS may be less reliable than the standardised MOCI, as different interviewers may ask follow-up questions

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	differently. Case studies like Charles lack generalisability: he is one boy, and OCD varies greatly between individuals, so his symptoms and response to drugs may not apply to others. The types of OCD may also be culturally biased, as what counts as excessive cleaning, hoarding or concern with appearance depends on cultural norms. The research has practical applications: knowing the common obsessions and compulsions, and having quick tools like the MOCI, helps clinicians diagnose and monitor treatment. Overall, the descriptions are useful, but they are most valid when quantitative scores are combined with qualitative detail.
	Psychology and consumer behaviour
3(a)	Through classical conditioning, consumers associate a colour with favourable experiences, so they prefer products of that colour, or learn to associate certain colours with certain products. These associations may date from early human history, e.g. blue linked with night (calm) and yellow with sunlight (arousal), so cool colours seem calming and warm colours such as red seem arousing.
3(b)	One method was observation of a Christmas gift-wrapping stall, to see the different wrappings chosen and how gifts were wrapped. A second method was in-depth interviews with 20 participants from Victoria, Australia, aged 25 to 35, who answered questions about their gift-wrapping preferences and reflected on how and why they wrap gifts.
3(c)	A strength is that the study used several methods (observation, in-depth interviews and projective workshops) and gathered qualitative data. Participants could express their views on gift-wrapping in their own words and the researchers photographed the wrapped gifts, so the findings are detailed and comprehensive.

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Because the methods support each other, the conclusions about why people wrap gifts are more valid.

A weakness is that the study lacks generalisability. It focused on Christmas gifts with a narrow sample of 20 people aged 25 to 35 from Australia. Other cultures may not celebrate Christmas, and in other festivals gifts may be different or not wrapped at all, so the expectations about wrapping found here may not apply to other cultures or age groups. The lack of quantitative data also makes it difficult to compare groups.

4(a) A cognitive map is a mental representation that a person uses to code, store and recall the relative locations of places, such as shops or products, in order to find their way. Mackay and Olshavsky (1975) asked 78 shoppers from 8 supermarkets in Indiana, USA, to report their preferences for the supermarkets and their reasons (e.g. price, quality), and to draw maps from their home to each store. A questionnaire collected details such as length of time in the area. Their cognitive maps, rather than the actual maps, correlated with their store preferences.

Machleit et al. (2000) studied crowding. In study 1, 722 marketing students completed a questionnaire after a shopping trip, rating perceived crowding (8-point scale), satisfaction (7-point scale), emotions (Izard's 10 emotions on a 1 to 5 scale) and expected crowding. The more crowded the shop, the lower the positive experience of shopping. Study 2 replicated this with adults. In study 3, a lab study, 231 participants read about a discount or upmarket bookstore and watched videos with different levels of crowding. Satisfaction fell as crowding increased in both stores, mediated by expectations of crowding and personal tolerance for crowding.

Gil et al. (2009) tagged 480 shoppers and followed them by CCTV, interviewing them before and after their trip about its purpose, use of a list, satisfaction and spending. They measured trip duration, walking speed and areas visited. They found

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four movement patterns (short, round, central and wave trips) and five shopper types (native, tourist, raider, explorer and specialist). Males were more likely to be raiders, and women shopping alone were most often explorers.

4(b) The research is culturally biased. Mackay and Olshavsky and Machleit et al. were carried out in the USA and Gil et al. in the UK, all Western societies where people shop in large supermarkets and malls. In many cultures shopping is done in markets with many stalls or in small local stores, so cognitive maps and movement patterns like the "raider" or "wave trip" may not exist in the same way. Tolerance of crowding also varies between cultures, and between rural and urban people, so Machleit's finding that crowding lowers satisfaction may not apply where busy markets are normal. The findings should be applied to other cultures with caution.

The methods have strengths and weaknesses. Gil et al. used CCTV observation, which gives objective data on actual movements and has high ecological validity, as shoppers were in a real store. Machleit et al. and Mackay and Olshavsky relied on self-reports, which may be affected by poor recall or social desirability. Machleit's study 3 was in a lab using videos and imagined shopping, so it lacks ecological validity, but it controlled the level of crowding, so cause and effect can be inferred.

Generalisability is also limited by samples: Machleit used marketing students, who may shop differently from the wider population, although study 2 replicated the results with adults, which increases reliability.

The research is useful. Retailers can design store layouts that match shoppers' cognitive maps and movement patterns, place popular products to draw people through the store, and manage crowding, for example by widening aisles. Ethically, CCTV tracking raises issues of consent, although shoppers agreed to be tagged.

Overall the research is useful but mostly applies to Western supermarket shopping.

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Psychology and health

5(a) Blood pressure.

Weight (or smoking).

5(b) Fox et al. introduced a token economy at two dangerous open-pit mines, using trading stamps as tokens. Employees earned stamps for working without lost-time injuries, for being in a work group in which no one had a lost-time injury, for not being involved in equipment-damaging accidents, and for safety suggestions that were adopted. They lost stamps if they or others in their group were injured, damaged equipment or failed to report an accident. Stamps could be exchanged for thousands of items at redemption stores. Afterwards there were large reductions in days lost through injury, numbers of injuries and accident costs, the savings far exceeded the cost of the scheme, and the improvements were maintained over several years.

5(c) A strength of longitudinal research is that changes in behaviour can be seen over time. In Fox et al., data were collected over several years, so it was clear the token economy reduced injuries in the long term rather than just when the scheme was new. The long-term cost of the stamps could also be weighed against the money saved through fewer accidents, which shows its value to the mines.

A weakness is attrition and changes in the sample. Over many years employees leave and new ones join, and one of the mines closed during the study, so the people at the end of the study were not the same as at the start. New workers may be more or less motivated by the stamps, so it is harder to be sure the improvement was caused by the token economy. Longitudinal research is also costly and time-consuming.

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6(a)	Byrne and Long (1976) analysed about 2500 recordings of medical consultations from countries including England and Australia and identified two practitioner styles. In the doctor-centred style the doctor asks closed questions, ignores the patient's attempts to elaborate, focuses on the first problem mentioned and links symptoms to a diagnosis without discussion, so the atmosphere is impersonal and the patient is passive. In the patient-centred style the doctor asks open questions, lets the patient elaborate, uses less jargon and lets the patient take part in decisions, so the patient is active. Savage and Armstrong (1990) carried out a field experiment in a doctor's surgery comparing a directing (doctor-centred) style with a sharing (patient-centred) style. All patients were highly satisfied, but straight after the consultation and one week later, patients who received the doctor-centred style were more satisfied, perhaps because they were more familiar with it. Practitioners can make diagnosis errors. A type I error is a false positive, where a healthy person is diagnosed as sick. A type II error is a false negative, where a sick person is diagnosed as healthy, which may be more dangerous because they do not get treatment. Robinson and West (1992) studied 69 patients at a genito-urinary clinic. Patients disclosed more to a computer questionnaire than to the doctor they saw afterwards, e.g. admitting to more sexual partners and more symptoms. This suggests computers help patients disclose sensitive information more openly.
6(b)	Savage and Armstrong and Robinson and West were field experiments. A strength is high ecological validity: they used genuine patients with real medical needs in a real surgery and clinic, so the findings reflect how patients actually respond to doctors and computers. However, there is less control over extraneous variables, such as the patients' illnesses, personalities and previous experience with doctors, which vary greatly and could affect satisfaction or disclosure. Both used

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	independent measures, which avoids order effects, as a patient could not sensibly receive both conditions, but participant variables between groups may explain the results. Validity can be questioned. Satisfaction in Savage and Armstrong was self-reported and patients may have given socially desirable answers about their own doctor. In Robinson and West, disclosure on the computer was compared with the doctor afterwards, so patients may have disclosed less the second time simply because they had already answered. Generalisability is limited. Robinson and West had only 69 patients at one genito-urinary clinic, where information is especially embarrassing, so the results may not apply to other illnesses. Byrne and Long's large sample from several countries is more generalisable, although styles may differ between cultures. The research is useful: doctors can be trained to use a style suited to the patient, and computers can be used to collect sensitive information. Understanding type I and type II errors helps practitioners reduce misdiagnosis. However, saying a style determines satisfaction ignores individual differences in what patients want. Overall, the field experiments are realistic and useful but less controlled.
	Psychology and organisations
7(a)	Motivation = Expectancy × Instrumentality × Valence (M = E × I × V)
7(b)	Praise: the manager tells the employee they have done a good job or made a real effort, which makes the employee feel good and valued, so they are motivated to keep working hard. Recognition, e.g. being named "employee of the week" or receiving a letter of commendation, publicly acknowledges the employee's contribution, so they feel valued and recognised by the organisation.

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7(c)	A strength is that non-monetary rewards involve little or no financial outlay, so the organisation can increase output without increasing costs. They can also be more motivating than money, as praise and recognition make the employee feel personally responsible for their achievement, and the manager gets to know the workforce better, improving relationships. A weakness is individual differences. Some employees, for example those who need money to support a family, may feel little motivation from praise or an "employee of the week" award. In some jobs, such as monotonous factory work, it is hard to find anything that makes workers feel empowered, and managers may have to spend time looking for something to praise, which can seem intrusive.
8(a)	Wedley and Field (1984) focused on the pre-planning stage of decision-making, before solutions are offered. The group should decide what type of leadership is needed, whether others should be involved, how information will be gathered, who to contact and how alternatives will be generated. Once the process has started it is hard to stop, which can lead to poor decisions, so pre-planning gives more flexibility. Janis (1971) described groupthink, where the desire for harmony and a lack of critical evaluation lead a group to an irrational decision that individuals would not have made alone, e.g. the Bay of Pigs invasion. The eight symptoms are: illusion of invulnerability, illusion of morality, shared negative stereotypes of outsiders, collective rationalisation, self-censorship, illusion of unanimity, direct pressure to conform, and self-appointed mind guards. Groupthink can be avoided by encouraging open enquiry, using sub-groups to work on the same task, admitting mistakes and holding second-chance meetings to reconsider decisions. Forsyth (2006) described cognitive limitations and errors in group decisions, before, during and after meetings. Sins of commission involve misusing information,

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sins of omission involve overlooking important information, and sins of imprecision involve relying on inappropriate heuristics. Confirmation bias, seeking information that supports rather than challenges the group's view, also causes errors.

8(b) The research has strong practical applications. Wedley and Field give a clear set of pre-planning steps that organisations can follow to make decision-making more flexible. Janis's strategies to avoid groupthink, such as sub-groups and second-chance meetings, are practical and easy to put in place in any organisation. Forsyth's sins help groups recognise errors, although he does not give specific methods to reduce them, so this part is less directly applicable.

Much of the evidence for groupthink comes from case studies of historical decisions like the Bay of Pigs, analysed after the event. This lacks control and is open to interpretation, as researchers may look for symptoms that fit the theory. Also, political decisions may not generalise to ordinary workplace groups.

The theories are somewhat reductionist, focusing on a few factors, such as cohesion or cognitive errors, while ignoring others like the personalities of members, the leader's style and time pressure. This links to the individual versus situational debate: groupthink is a situational explanation, but some individuals, such as a strong-minded member, may resist conformity pressure.

Ecological validity is mixed. Case studies are real decisions, so they have high ecological validity, but laboratory research on group decisions uses artificial tasks.

Overall, the research is useful because it gives organisations practical ways to improve decisions, but it is best seen as a set of guidelines rather than an explanation that applies to every group.