

Cambridge International AS & A Level

PSYCHOLOGY**9990/12**

Paper 1 Approaches, issues and debates

May/June 2025**MARK SCHEME**Maximum Mark: 60

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the May/June 2025 series for most Cambridge IGCSE, Cambridge International A and AS Level components, and some Cambridge O Level components.

This document consists of **25** printed pages.

PUBLISHED**Generic Marking Principles**

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptions for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

PUBLISHED**GENERIC MARKING PRINCIPLE 5:**

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

PUBLISHED**Social Science-Specific Marking Principles
(for point-based marking)****1 Components using point-based marking:**

- Point marking is often used to reward knowledge, understanding and application of skills. We give credit where the candidate's answer shows relevant knowledge, understanding and application of skills in answering the question. We do not give credit where the answer shows confusion.

From this it follows that we:

- a** DO credit answers which are worded differently from the mark scheme if they clearly convey the same meaning (unless the mark scheme requires a specific term)
- b** DO credit alternative answers/examples which are not written in the mark scheme if they are correct
- c** DO credit answers where candidates give more than one correct answer in one prompt/numbered/scaffolded space where extended writing is required rather than list-type answers. For example, questions that require n reasons (e.g. State two reasons ...).
- d** DO NOT credit answers simply for using a 'key term' unless that is all that is required. (Check for evidence it is understood and not used wrongly.)
- e** DO NOT credit answers which are obviously self-contradicting or trying to cover all possibilities
- f** DO NOT give further credit for what is effectively repetition of a correct point already credited unless the language itself is being tested. This applies equally to 'mirror statements' (i.e. polluted/not polluted).
- g** DO NOT require spellings to be correct, unless this is part of the test. However spellings of syllabus terms must allow for clear and unambiguous separation from other syllabus terms with which they may be confused (e.g. Corrasion/Corrosion)

2 Presentation of mark scheme:

- Slashes (/) or the word 'or' separate alternative ways of making the same point.
- Semi colons (;) bullet points (•) or figures in brackets (1) separate different points.
- Content in the answer column in brackets is for examiner information/context to clarify the marking but is not required to earn the mark (except Accounting syllabuses where they indicate negative numbers).

PUBLISHED**3 Calculation questions:**

- The mark scheme will show the steps in the most likely correct method(s), the mark for each step, the correct answer(s) and the mark for each answer
- If working/explanation is considered essential for full credit, this will be indicated in the question paper and in the mark scheme. In all other instances, the correct answer to a calculation should be given full credit, even if no supporting working is shown.
- Where the candidate uses a valid method which is not covered by the mark scheme, award equivalent marks for reaching equivalent stages.
- Where an answer makes use of a candidate's own incorrect figure from previous working, the 'own figure rule' applies: full marks will be given if a correct and complete method is used. Further guidance will be included in the mark scheme where necessary and any exceptions to this general principle will be noted.

4 Annotation:

- For point marking, ticks can be used to indicate correct answers and crosses can be used to indicate wrong answers. There is no direct relationship between ticks and marks. Ticks have no defined meaning for levels of response marking.
- For levels of response marking, the level awarded should be annotated on the script.
- Other annotations will be used by examiners as agreed during standardisation, and the meaning will be understood by all examiners who marked that paper.

Annotations guidance for centres

Examiners use a system of annotations as a shorthand for communicating their marking decisions to one another. Examiners are trained during the standardisation process on how and when to use annotations. The purpose of annotations is to inform the standardisation and monitoring processes and guide the supervising examiners when they are checking the work of examiners within their team. The meaning of annotations and how they are used is specific to each component and is understood by all examiners who mark the component.

We publish annotations in our mark schemes to help centres understand the annotations they may see on copies of scripts. Note that there may not be a direct correlation between the number of annotations on a script and the mark awarded. Similarly, the use of an annotation may not be an indication of the quality of the response.

The annotations listed below were available to examiners marking this component in this series.

Annotations

Annotation	Meaning
	A creditworthy point made by the candidate A creditworthy 'what' for a generic everyday application question
	An incorrect response
	Benefit of Doubt
	Repetition of a point
	Unclear response
	The named issue in the 10-mark essay
    	Levels used for the 10-mark essay (L1-L5) Levels used for the 8-mark similarity/difference question (L1-L4)

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Annotation	Meaning
	Not Answering the Question
	The blank page has been seen. An attached response has been seen.
	A creditworthy strength in the 10-mark essay. A creditworthy 'how' for a generic everyday application question
	A creditworthy weakness in the 10-mark essay.
	A creditworthy point in the 10-mark essay that is brief
	A creditworthy point in the 10-mark essay that is detailed The mark for data in Q4
	A creditworthy identification mark
	A creditworthy example

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Question	Answer	Marks	Guidance
1(a)	In the study by Perry et al. (personal space), Experiment 2 used four coloured pictures of a room. In these pictures there were several objects including a lamp and a clock. Name <u>one</u> other object that was always in the pictures. 1 mark for correct object. Chair/table/plant/closet.	1	If more than one response given, take first one only. Accept 'cupboard'. Accept 'chairs'.
1(b)	Outline how the participants were deceived in Experiment 2 of this study. 1 mark per correct point. At the end of the experiment, they would discuss personal topics with another participant. This would happen in an 'average' room that has been calculated by a computer. However, this was not true (for both of the above)/actually about preferred distance.	2	List is definitive. Not knowing if given OT or PL = 0 marks.

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Question	Answer	Marks	Guidance
1(c)	Outline <u>one</u> result from Experiment 2 of this study in relation to the hormone oxytocin. 2 marks for the result with a meaningful comparison 1 mark for result with no meaningful comparison Participants in the high empathy group who had oxytocin chose closer distances compared to placebo/low empathy group (2 marks). Oxytocin did not affect the average angle between objects across empathy status/treatment/condition (2 marks). Participants in the high empathy group who had oxytocin chose closer distances (1 mark). Participants with oxytocin chose closer distance (0 marks: incorrect).	2	Do not accept the opposite trend for low empathy Ps even though it did not reach significance. Must mention empathy grouping to gain credit. No significant result for tables = 1 mark max.

Question	Answer	Marks	Guidance
2(a)	From the study by Pozzulo et al. (line-ups). Identify <u>two</u> features of the female used as a ‘human face target’. 1 mark per correct point. Caucasian. Student. 22 years old. (she was) brushing her hair (in bathroom).	2	List is definitive. Accept ‘white’. Accept ‘combing hair’.

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Question	Answer	Marks	Guidance
2(b)	Explain <u>one</u> strength of this study in relation to reliability. 1 mark for standardisation <u>and</u> replication (identification of the strength) 1 mark for example from the study e.g. The procedure was standardised so could be replicated (1 mark). For example, every participant saw all four videos in a random order (1 mark link). There are other creditworthy responses.	2	Ignore reference to controls <u>only</u> .

Question	Answer	Marks	Guidance
3(a)	From the study by Milgram (obedience): Identify <u>two</u> features of the sample used in this study. 1 mark per correct feature. Volunteers/from newspaper advert/direct mail. n=40. All males. Age 20–50 New Haven area. Wide range of occupations. Wide range of educational levels.	2	List is definitive. Do not accept ‘adults’.

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Question	Answer	Marks	Guidance
3(b)	Outline <u>one</u> conclusion from this study. 2 marks full/detailed conclusion 1 mark partial/brief conclusion Individuals appear to be much more obedient to an authority figure than we might expect (2 marks). People will follow/listen to an authority figure even if it means harming another person (2 marks). People are willing to harm someone if responsibility is taken away/passed on to someone else (2 marks). People find it stressful to follow destructive orders from a person in authority (2 marks). People will be obedient to an authority figure (1 mark). People find it stressful to follow destructive orders (1 mark). 100% of participants pressed the 300 V switch (0 marks: result). There are other creditworthy responses.	2	Ignore responses that are simply results. ‘Comply’ = max 1 mark. ‘Conform’ = 0 marks. Did not support Germans are different hypothesis = max 1 mark.

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Question	Answer	Marks	Guidance
3(c)	Suggest <u>one</u> application to everyday life using evidence from this study. Your suggestion <u>must</u> be ethical. 1 mark for what the application is (clearly based on Milgram) 1 mark for how it will be achieved. e.g., A teacher could get students to be more obedient in the classroom (1 mark: what) by wearing clothes that show authority like a technician's coat (1 mark: how). Soldiers could be encouraged to be more obedient (1 mark: what) as an authority figure can give out commands in a firm tone/stern voice (1 mark: how). There are other creditworthy suggestions, including whistleblowing policies in the workplace.	2	Annotate with a tick for what the application is and a + for how it will be achieved. Military examples e.g., soldiers being made more obedient to protect a country may be ethical (the question is about the process). Link to explaining named/specific historical events is creditworthy. 'Help us to understand obedience' = 0 marks. Examples must be specific for dress code and prods to be awarded credit.

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Question	Answer	Marks	Guidance
4	From the study by Hassett et al. (monkey toy preferences): Describe <u>one</u> result for toy preferences of the male monkeys. You <u>must</u> use data in your answer. 2 marks for the result with a meaningful comparison 1 mark for result with no meaningful comparison 1 mark for correct data e.g., 3 marks Males played with the wheeled toys (average 10 times) more often than the plush toys. Males played with plush toys for less time than wheeled toys (4.76 minutes on average). 73% of males preferred wheeled toys over plush toys. e.g., 2 marks Males played with the wheeled toys more often than the plush toys. Males played with plush toys for less time than wheeled toys. Males preferred wheeled toys over plush toys. e.g., 1 mark Males played with the wheeled toys more often. Males played with plush toys for less time. Males preferred wheeled toys. e.g., 0 marks Females played with wheeled toys for less time than males. Females played with plush toys more often than males.	3	Result can be about frequency or duration. Use tick-d for the data mark. Male vs. female preference = 0 marks, but if correct direction for males given and “compared to females” written at the end, then can still be credited. Data tolerance is 0.5 or 1% Accept masculine and feminine toys.

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Question	Answer	Marks	Guidance
5(a)	Outline <u>one</u> assumption of the learning approach. 2 marks: full/detailed assumption. 1 mark: partial/brief assumption. e.g., 2 marks We all begin life as a blank slate. The experiences and interactions we have then shape our behaviour(s). We learn through the mechanisms of classical conditioning/operant conditioning/social learning/stimulus-response model (any 2 mechanisms = 2 marks) e.g., 1 mark We all begin life as a blank slate. We learn through the mechanisms of classical conditioning/operant conditioning/social learning (1 mechanism named = 1 mark).	2	Do not credit learn from environment, surroundings or conditioning by itself. Max 1 if the assumption is about naming/outlining one mechanism (e.g., we learn from models).
5(b)	Explain how the study by Saavedra and Silverman (button phobia), supports the assumption you outlined in part (a). 1 mark for result/conclusion/concept. 1 mark for linking it to an assumption explicitly. e.g., Part of this therapy was based on positive reinforcement (1 mark). He was rewarded for being able to handle buttons on the Feeling Thermometer (1 mark). He had an experience of the bowl of buttons falling on to him (1 mark). He never had this phobia before/not born with it, so it developed after this incident (1 mark). There are other creditworthy responses.	2	If the link is not with an assumption from 5(a), it can only be awarded the result/conclusion mark. For a link back to an assumption about a mechanism, a named component must be covered, e.g., positive reinforcement. 1 mark maximum if linked to the aim/procedure of the study, rather than a finding. Accept 'he was not born with the phobia'.

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Question	Answer	Marks	Guidance
6(a)	Outline what is meant by the term ‘positive reinforcement’. Include an example from the study by Fagen et al. (elephant learning) in your answer. 1 mark per correct point. 1 mark for an example from the study by Fagen. e.g., Positive reinforcement is when a reward is given after the completion of a desired behaviour. This increases the probability that the desired behaviour will be repeated. In the study by Fagen, the elephants were rewarded with banana when a specific behaviour was shown (1 mark: example). There are other creditworthy responses	3	Only credit examples from the study by Fagen. Do credit ‘encourage/strengthen/enhances behaviour’ as meaning increasing probability. Do not credit ‘rewarded with food’. Do not credit ‘rewarded with banana’ by itself.

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Question	Answer	Marks	Guidance
6(b)	Two friends, Roksana and Tien are discussing the study by Fagen et al. (elephant learning) in terms of the individual and situational explanations for behaviour. Roksana says the study supports the individual explanation, but Tien says it supports the situational explanation. Outline why you think <u>either</u> Roksana <u>or</u> Tien is correct, using evidence from the study. 1 mark per point made, with 1 mark available for definition of individual/situational explanation. Up to 4 marks for examples/explanations that support individual/situational. e.g., Roksana The individual side refers to behaviours from factors within the person (dispositional) (1 mark: definition). There were individual differences in the amount of time it took the elephants to be trained on the trunk wash (1 mark: example). Elephant 2 only needed 25 sessions/Elephant 1 needed 30 etc. (1 mark: example). Elephant 5 did not successfully complete the training (1 mark: example). This could have been because she was older than the rest of the elephants/had vision problems/abscess on foot/trunk weakness (1 mark: explanation).	4	If both Roksana and Tien feature in the answer, mark them independently and credit the highest score. If the candidate mixes up Roksana and Tien (e.g. says Tien but gives an individual explanation answer) then max 2 and annotate with a ? Do not credit definitions that are tautological, for example, the situational explanation is based on the situation. Do not credit why it is not individual or situational. Do not credit individual differences as a definition mark. Do credit statements like ‘elephant 2 as the fastest’ etc. For Roksana: If the elephants are not correctly ‘numbered’ then generic statements like ‘one elephant was faster’ or ‘one failed to complete the trunk wash’ can only be credited <u>once</u>.

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Question	Answer	Marks	Guidance
6(b)	e.g., Tien The situational side refers to behaviour from factors in the external environment (1 mark). The reason the elephants could complete the trunk wash was because of the training/operant conditioning (1 mark: explanation). Their behaviour was shaped by the researchers who rewarded a series of different behaviours like trunk here (1 mark: example). The elephants received banana pieces every time they performed a certain behaviour correctly, so this encouraged them to repeat the behaviours (1 mark: example/explanation). There were distractions like tourists which slowed training (1 mark: example). There are other creditworthy examples/explanations.		

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Question	Answer	Marks	Guidance
7	From the study by Bandura et al. (aggression): Describe the procedure for the ‘Aggression Arousal’ part of this study. 1 mark per correct point The child was brought to an anteroom/a room. It contained toys (for the children)/shown toys. These included a fire engine, locomotive, a fighter jet, cable, spinning top, doll, doll carriage, crib, car, wardrobe (two need to be named to gain 1 mark). They were told they could play with them. As soon as they did begin to play/get involved (usually 2 mins), the experimenter stopped them/took the toys away. The experimenter explained that she did not let just anyone play with the toys. She then said that she decided they were reserved for some other children. The children were told that they were her very best toys. The experimenter sat away from the child (during this phase)/completed some paperwork.	5	List is definitive. If the description follows the definitive list presented here but they say ‘model’ then award credit. Do not credit ‘they were not allowed to play with the toys’ as they were.

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Question	Answer	Marks	Guidance
8	Your friend, Rosalia, tells you that she has recently begun to feel stressed, even though nothing in her life has changed. Rosalia wants your advice on how to help reduce her level of stress. Outline the advice you would give to Rosalia, using your knowledge of the study by Hölzel et al. (mindfulness and brain scans). 1 mark per piece of advice clearly based on the study by Hölzel et al. Rosalia should engage in mindful yoga with some stretching exercises. These are slow movements in conjunction with breathing. She can be taught to become “fully aware” of her body sensations. And use the deep breathing exercise to help control feelings of stress. She can also use meditation to become aware of different sounds/feelings/emotions. She can be encouraged to practise this for 45-minutes per day/daily. She can join an (8 week) MBSR course. She can practice mindfulness when eating/walking/at home. There are other creditworthy pieces of advice.	4	No credit for justifying advice as this is not what the question is about. Do not credit ‘mindfulness’ by itself. 1 mark max can be awarded for identification of a relevant task, e.g., yoga, meditation, body scan etc. Only credit any timeframe once, e.g., 8-weeks, 45 mins, long-term, daily etc. e.g., she should attend an 8-week MBSR course = 2 marks total (1 for MBSR and 1 from the timeframe). Credit descriptions of what would happen in body scanning, yoga, meditation etc. Doing it in her ‘daily life’ as a statement by itself = 0 marks.

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Question	Answer	Marks	Guidance
9(a)	From the study by Piliavin et al. (subway Samaritans): Describe the <u>two</u> victims used in this study. 1 mark for identifying a victim plus 1 mark for a correct feature of that victim ×2. e.g., The first victim was drunk (1 mark). They smelled of liquor/alcohol (1 mark). The liquor/alcohol bottle was wrapped in brown paper bag (1 mark: alternative). The second victim was ill (1 mark). They had a (black) cane (1 mark). They acted sober (1 mark: alternative).	4	List is definitive. 1 mark max for: What they were wearing Male Aged 26–35 White/black n=4 Only award above if not been awarded 4 marks with drunk/ill statements. Accept 'sick' to mean 'ill'. Do not accept 'cane' as the identifying mark for the 'ill' victim.

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Question	Answer	Marks	Guidance
9(b)	Explain <u>two</u> differences between the study by Piliavin et al. (subway Samaritans) and the study by Perry et al. (personal space). One of your differences <u>must</u> be about the sample of participants. Use the marking grid below. 4 marks for each difference (twice), e.g., sample, stooges, ethics, data collection techniques, generalisability, (ecological) validity. Each difference must be based on psychological principles. e.g., 4 marks The studies used stooges in <u>different ways</u> (explanation). Piliavin used a human stooge that the participant did not know as acting ill/drunk/was a model. In the Perry study the participants 'met' the animated stooge in various rooms/scenarios until they felt the stooge was invading personal space. Example: 3 marks The studies used stooges. Piliavin used a human stooge that the participant did not know as acting ill/drunk/was a model and in the Perry study the participants 'met' the animated stooge in various rooms/scenarios until they felt the stooge was invading personal space. Example: 2 marks The studies used stooges. Piliavin used a human stooge that the acted ill or drunk/Perry used an animated stooge. Example: 1 mark The stooges were different/one was human/one was animated.	8	Award L1–L4 for each difference For Level 4 there must be some attempt at <i>explaining</i> the difference. If both differences do not focus on the sample, then <u>mark both but only credit the best, and place an X next to the Q.</u> Place a tick next to the difference that is about the <u>sample</u>. Note: sampling technique does not count as the sample. At least one feature of each sample must be correct to get above L2. If the sample information about one of the studies is incorrect (e.g., give it from a different study to Piliavin or Perry) = L0. Different aims = L1 Sample information from only Piliavin or Perry = L1 max. Description of two samples only = L2 To get L4, the candidate needs to explicitly state what the difference is.

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Question	Answer		Marks	Guidance
9(b)	Mark/Level	Description		
	4	The similarity/difference is well explained using both studies as examples.		
	3	The similarity/difference is well explained but only one study is used as an example OR both studies are used briefly.		
	2	The similarity/difference is brief with an attempt at using at least one study as an example OR The similarity/difference is well explained but there is no study evidence.		
	1	The similarity/difference is brief with no attempt at using the studies as examples.		
	0	No creditable response.		

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Question	Answer	Marks	Guidance
10	Evaluate the study by Baron-Cohen et al. (eyes test) in terms of <u>two</u> strengths and <u>two</u> weaknesses. At least one of your evaluation points <u>must</u> be about quantitative data. Strengths include: reliability (standardisation), quantitative data, validity. Weaknesses include: ecological validity, ethics, generalisability, quantitative data. Example: in detail (named issue) The study collected quantitative data which makes it easier to make meaningful comparisons between groups/conditions (as you compare like with like). They counted the number of correct emotions identified from looking at the eyes. As a result, they could compare performance across the four groups of participants to see any trends/differences between the AS/HFA groups and the other three groups. Example: brief but in context The sample for the AS/HFA group was 15 males which may make generalisation difficult and may not represent females with AS/HFA. Example: no context There was a standardised procedure meaning it could be replicated/tested for reliability.	10	

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Question	Answer			Marks	Guidance
10	Level	Description	Marks		
	5	• Very good evaluation including the named issue. • Thoroughly addresses both strengths and both weaknesses in detail. • Selection of evidence is very thorough and effective.	9–10		
	4	• Good evaluation including the named issue. • Addresses strengths and weaknesses but may include three or four points. The majority of the points are in depth. • Selection of evidence is thorough and effective.	7–8		
	3	• Mostly appropriate evaluation but may not include the named issue. • Addresses either two strengths or two weaknesses in detail or one of each in detail or all four briefly. • Selection of evidence is mostly effective.	5–6		

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Question	Answer			Marks	Guidance
10	Level	Description	Marks		
	2	- Weak evaluation and may not include the named issue. - Addresses either a strength or a weakness. Evaluation points are brief. - Some points may have no context. - Selection of evidence is sometimes appropriate.	3–4		
	1	- Little or no evaluation. - Discussion of strengths and weaknesses is absent or superficial. - Selection of evidence is limited.	1–2		
	0	No creditable response.	0		