

一. 請將下列兩篇文章譯成中文。

1.
(30%)

Some advances in science occur because of new methods to study old problems. For example, in recent years researchers have used new methods to study a very old problem: how does the brain think?

researchers have been using PET (positron emission tomography) scans to literally "light up" what the brain is doing. PET scans involve injecting small amounts of harmless radioactive glucose into the blood, which travels to the brain. Neurons take up the radioactive glucose, which is their major source of fuel. The more active the neurons are, the more fuel or glucose they take up, which means that PET scans are one way of recording levels of neural activity in the living brain. PET scans are color coded to show levels of neural activity: maximum

activity is shown in red and yellow, and minimum neural activity is shown in blue and green.

During the past five years, there has been an enormous increase in using PET scans to study neural functioning. For example, researchers have used PET scans to identify areas of the brain involved in attention, memory, perception of objects and faces, and comprehension of language (Reveza & Nyberg, 1997). This increasing usage of brain scans to study cognitive processes is changing our views of brain functioning. In the not-too-distant future, many cognitive abilities, perhaps even some forms of intelligence, may be measured by brain scans rather than by the current paper-and-pencil intelligence tests. We'll describe several experiments that use brain scans to study cognitive abilities.

Thinking in Male and Female Brains

If you held a female brain in one hand and a similar-sized male brain in another, you could not tell which was which based on any physical traits. Even if you took PET scans while a person was in a resting state (not actively thinking or imagining), you would have a very difficult task correctly deciding if the PET scan was from a male or female brain (Mansour et al., 1996). However, if you took PET scans while subjects were trying to correctly identify the shape of a figure that had been turned around (rotated figure test), you would see a clear difference in "thinking patterns." On this task, males think primarily with the right frontal part of their brains (right frontal lobe) while females think primarily with the right middle-back part of their brains (right parietal-temporal area) (Deutsch & Halsey, 1991). This difference in "thinking patterns" suggests that although males and females may achieve similar IQ scores, they may do so by using different areas of their brains.

Researchers also reported that female and male brains may have a biological difference in how they process emotional information (Gur et al., 1995). For example, when asked to produce a sad mood, women activated a larger part of their "emotional brain" (limbic brain) than did males (George et al., 1996). This difference may be the basis for the often-reported observation that females are better at showing and recognizing emotions than are men.

Besides showing differences in thinking between male and female brains, PET scans also show differences between thinking in normal individuals and those with mental retardation.

Thinking in Normal Controls and Individuals with Mental Retardation

Intelligence tests are one of several measures that are used to evaluate the abilities of individuals with mental retardation. Researchers wondered if PET scans would also show a difference in "thinking" between individuals with normal brains and those with mental retardation (Down Syndrome, p. 288). Researchers compared PET scans from individuals with mild mental retardation (IQs between 50 and 70) with those from normal individuals (IQs of 115 or higher). Individuals with mental retardation showed 20% more neural activity when engaged in a relatively simple attention task compared to normal controls (Haier et al., 1995). Examples of their PET scans are shown on the left.

Researchers concluded that individuals with mental retardation have brains that must work to full capacity on even very simple tasks. Researchers think that brains that show so much overall activity on such simple tests are less efficient than normal brains, which show reduced overall activity on simple tasks (Haier et al., 1995). This kind of research suggests that PET scans may be used to measure how efficiently a person "thinks" by identifying the number of active brain areas.

These kinds of studies give researchers hope that brain scans may lead to the development of new and better ways of defining and measuring intelligence (Haier, 1996).

Besides searching for new ways to measure intelligence, researchers are developing environmental programs to help disadvantaged children develop their intellectual potential. We'll now examine several of these programs.

2. (20%)

Darwin's notion of survival of the fittest seems to argue against altruism as an inborn motive. Many have interpreted Darwin's idea to mean that powerful, self-serving individuals who place their own needs ahead of others' are the ones who are most likely to survive. If this were so, evolution would favor the development of selfishness and egoism—not altruism—as basic components of human nature.

Martin Hoffman (1981) has challenged this point of view, listing several reasons why the concept of survival of the fittest actually implies altruism. His arguments hinge on the assumption that human beings are more likely to receive protection from natural enemies, satisfy all their basic needs, and successfully reproduce if they live together in cooperative social units. If this assumption is correct, cooperative, altruistic individuals would be the ones who are most likely to survive long enough to pass along their "altruistic genes" to their offspring; individualists who go it alone would probably succumb to famine, predators, or some other natural disaster that they could not cope with by themselves. So, over thousands of generations, natural selection would favor the development of innate social motives such as altruism. Presumably, the tremendous survival value of being "social" makes altruism, cooperation, and other social motives much more plausible as components of human nature than competition, selfishness, and the like.

It is obviously absurd to argue that infants routinely help other people. However, Hoffman believes that even newborn babies are capable of recognizing and experiencing the emotion of others. This ability, known as empathy, is thought to be an important contributor to altruism, for a person must recognize that others are distressed in some way before he or she is likely to help. So Hoffman is suggesting that at least one aspect of altruism—empathy—is present at birth.

Hoffman's claim is based on an experiment (Sagi & Hoffman, 1976) in which infants less than 36 hours old listened to (1) another infant's cries, (2) an equally loud computer simulation of a crying infant, or (3) no sounds at all (silence). The infants who heard a real infant crying soon began to cry themselves, to display physical signs of agitation such as kicking, and to grimace. Infants exposed to the simulated cry or to silence cried much less and seemed not to be very discomforted. (A second study by Martin & Clark, 1982, has confirmed these observations.)

Hoffman argues that there is something quite distinctive about the human cry. His contention is that infants listen to and experience the distress of another crying infant and become distressed themselves. Of course, this finding does not conclusively demonstrate that humans are altruistic by nature. But it does imply that the capacity for empathy may be present at birth and thus may serve as a biological basis for the eventual development of altruistic behavior.

二. 研究計畫的步驟 (steps), 雖不同小異, 可歸為下列幾點: (50%)

1. good ideas
2. knowledge of past work.
3. adequate experimental design.
4. human subjects approval.
5. pilot study
6. obtaining research participants
7. testing skills
8. statistical analysis
9. communication

請依序用英文對以上各點作進一步的描述, 約一千至一千五百字。

- 一、在實驗設計時，常要考慮建構效度。何謂建構效度？威脅它的因素有哪些？如何消除之？請說明之。(25分)
- 二、某研究操弄 A、B、C 三個變項，以了解這些變項對依變項的影響，其中 B 為受試者間變項，A 和 C 為受試者內變項。進行三因子變異數分析後，變異數分析摘要表變異來源項下，有哪些屬於實驗處理？哪些屬於誤差？在計算 F 值時，各實驗處理之均方，以何項誤差為分母？請說明之。(25分)
- 三、參與式觀察是質的研究中常採用的方法。請說明其形式與技巧。(25分)
- 四、請說明項目反應理論(item response theory)之基本假設，並以項目特徵曲線(item characteristic curve)為例，繪圖說明難度、鑑別度和猜測三個參數。

(25分)

考試科目	實驗心理學	系所組別	心理學所	考試時間	月 星期
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- 一、試述視知覺的重要理論取向，及其主要的精神所在。
(25%)
- 二、視知覺研究有那些重要議題？試簡要說明各議題及其研究現況。
- 三、在知覺領域中，選擇其中的一個研究主題，詳述主要的心得。

上列第一題一定要作答

第二題與第三題中選一題作答，佔 25%

四. Fernandez-Duque & Johnson (1999) 認為由不同 attention metaphors 會引導出不同問題, 進而引領相關假設、實驗的建構及結果的解釋。試就其中 Filter metaphor 與 spotlight metaphor 說明之, 並討論其可能導引出的爭論議題 (issues), 並進一步就下列議題進行細部討論與說明。 (24分)

- (1) 早選論與晚選論 (early selection vs late selection)
- (2) 自動化歷程與控制化歷程 (automatic processing vs controlled processing)
- (3) 物件導向與空間位置導向的注意歷程 (object based vs location based attention)

五. 在視覺搜尋作業 (visual search task) 中, Treisman (1993) 認為注意力扮演了何種角色? 試說明其理論並舉證相關現象。 (10分)

六. 試說明 Marr (1982) 的理論對於物件辨識 (object recognition) 歷程的基本步驟, 以 Biederman (1987) 的 recognition by components (RBC) model 舉證相關實驗例證並討論其重要性及發展。 (16分)

考試科目	社會與人格心理學	系組	心理學系	考試時間	6月27日上午 星期二 ⑤	第 節
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(25%)

- 一、如何有效的改變一個人的態度，一直是研究態度的學者關心的主題，其中一個論點是有效的態度改變（說服）方法，決定於此態度形成時的基礎，請根據您們所知道的研究或理論，來說明：
- 如果態度的形成是基於情感式的原因，則與其一致（情感性）或不一致（認知性）的說服方式較為有效？為什麼？而如果態度的形成是基於認知性的原因，又如何呢？
 - 如果一個人對另一個人的態度是基於情感式的原因（例如：就是很喜歡某一個人），則要他想為什麼喜歡這個人的理由（認知性），是否會導致他更喜歡這個人？為什麼？如果以某些行為來測量此態度，則行為和原來態度的一致性會增高或減低，為什麼？

(25%)

- 二、「台北市家庭暴力暨性侵害防治中心」從去年6月24日成立，至今5月24日，十一個月時間內接獲二萬五千通求助電話，其中有854通是婚姻暴力，請根據你對攻擊行為（Aggression）&/or 暴力行為（Violence）的瞭解，說明：
- 為什麼「良人」會變「狼人」，婚姻暴力產生的可能原因。此與其他暴力或攻擊性行為，例如：不同種屬間的掠食行為、國與國間的戰爭、人與人間的凶殺行為，有何異同？
 - 台北市教育局已通令各學校成立「兩性平等教育委員會」，並且將性侵害與家庭暴力防治納入課程綱要中，您覺得那些重點是應該要涵蓋在此課程中的（只說明婚姻暴力部份即可），為什麼？
 - 520總統大選後，國民黨中央黨部前民眾聚集，台北市長馬英九還遭雞蛋擊中，此事件與前述家庭暴力，有何異同？請簡單說明之。

考試科目	社會與人格心理學	系所	心理學系(所)	考試時間	6月27日上午 13:20 星期二 (下) 第1節 15:00
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國立政治大學圖書館

- 三. 試以 Costa + McCrae 的研究, 說明 Big Five Model 的內涵, 並以楊國樞和彭邁克 (M. Bond) 的發現加以評論之 (20%)
- 四. 固定角色治療 (Fixed-role therapy) 是 G. Kelly 發展出來的。不過, Kelly 曾說他僅對其十分之一的案主使用此法。請你說明在什麼情況下, 他會使用這種治療法? 為什麼? (15%)
- 五. A. Maslow 晚年曾針對其需求階層論有所檢討並加以改善, 請說明之。 (15%)

考試科目	工業與組織心理學	系組	心理學系	考試時間	六月廿七日 星期二	午第	節
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- 一. 試述如何規劃「接班人計劃」？並請比較各項管理才配評鑑工具之優缺點。(25%)
- 二. 試述⁽¹⁾「組織文化」與「領導」的關係；⁽²⁾如何塑造「學習型的組織文化」？以及⁽³⁾組織文化對工/0研究的重要性。(25%)
- 三. 試述「組織發展」與「360度回饋」之關係，並請從相關心理學理論說明如何激勵員工追求自我成長，以及一般企業在推行「360度回饋」時應注意那些事項？(25%)
- 四. 試從個人所閱讀之國內外最新的文獻，說明目前國外工/0研究的新趨勢，以及國內工/0心理學家值得努力的方向。(25%)

考試科目	諮商心理學	系所組別	心理系	考試時間	6月27日上午 星期二 (5)
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一、選擇題 (20%)：以下共有 10 位心理諮商與治療學者，請在所附的 12 種學派中選出每位學者所屬的正確學派

- 1、Melaine Klein 2、Erving Polster 3、Michael White 4、William Glasser
5、Donald Meichenbaum 6、Murray Bowen 7、Aaron Beck 8、Irvin Yalom
9、Steve deShazer 10、Carl Jung

- (a) Transactional analysis (b) Existential psychotherapy (c) Family therapy
(d) neo-Freud (e) Object relationship (f) Analytical psychotherapy
(g) Gestalt therapy (h) Reality therapy (i) Ego psychotherapy
(j) Person centered (k) Solution focused (l) Narrative therapy

二、(30%) 何謂心理衡鑑？與心理測驗有何不同？請依心理衡鑑的目的、歷程、方法、內容等說明。

三、(30%) 請說明在後現代主義 (postmodernism) 的影響下，心理諮商與治療的理論發展取向有何改變？請以一後現代的心理治療理論說明之。

四、(20%) 一新婚甫 8 個月還沒子女，正在服役的 23 歲男子，因 921 地震失去了父母、妻子及老家。地震當時，當事人在軍中，獲知埔里老家受創，回家瞭解，才從瓦礫中找到親人屍體。之後，當事人忙於後事、房事、原有生意帳務等事，在親戚朋友的協助下，目前已辦妥退伍，找到工作並和昔日同袍同租一屋。災後當事人只在災難現場及葬禮上哭過，其餘時間均有不錯的生活功能，也甚少和人提起有關地震之事。作為一位諮商人員，你認為當事人可能有何失落與哀傷？其是以何方式面對此心理傷痛？在此狀況下你的諮商目標與策略為何？