

本試卷共有兩大部分，考生只選其中一大題作答，考試成績也以該部分的回答作為評分依據。第一大題為關於Google如何影響人的行為，第二大題則為錢可以帶來的心理效果。

第一大題：

以下是2011在Science的一篇report，請閱讀以下文章後用中文回答三個相關問題。

Four years ago, Betsy Sparrow became exasperated watching an old black-and-white film called Gaslight. She recognized the young actress playing the maid but couldn't remember her name. Luckily, she had her smartphone. "I found the answer* online immediately," she says, and the relief was palpable.

That incident sparked a conversation with her husband that continued into the night. "How did we use to remember things like this before the Internet?" wondered Sparrow, who at the time was a psychology graduate student at Harvard University. In a study (<http://scim.ag/B-Sparrow>) reported online this week in Science, the now assistant professor at Columbia University doesn't directly answer that question. But in four cleverly designed experiments, Sparrow and her colleagues do explore how the Internet may be changing the way people handle such information now. The results, she says, support a growing belief that people are using the Internet as a personal memory bank: the so-called Google effect. What surprised Sparrow most was not people's reliance on nonmemorized information but their ability to find it. "We're remarkably efficient," she says.

Sparrow says her movie trivia failure reminded her of a concept called transactive memory, proposed 30 years ago by her Ph.D. adviser Daniel Wegner. According to the theory, people divide the labor of remembering certain types of shared information. For example, a husband might rely on his wife to remember significant dates, while she relies on him to remember the names of distant friends and family—and this frees both from duplicating the memories in their own brains. Sparrow wondered if the Internet is filling this role for everyone, representing an enormous collective act of transactive memory.

To test this idea, Sparrow devised a series of offline experiments to catch people in the act of relying on future access to information—say, a Google search—rather than memorizing the information themselves. "I didn't want them to actually have access to the information but just think that they would," she says. For the first set of experiments, which involved 106 Harvard undergraduates working on desktop computers, Sparrow tested whether people thought of the Internet as soon as they were posed true-false questions such as, "An ostrich's eye is bigger than its brain." She employed a psychological method called a Stroop task. After the trivia questions were posed, various colored words would appear on the screen. When those words matched topics that people were already thinking about, they tended to react more slowly when asked to name the words' colors. And indeed, when the colored words were Internet-related, such as Google or Yahoo, the students answered more slowly, indicating that they were already considering going online for

answers.

Then Sparrow played a trick on her subjects. She presented 40 different trivia statements to the students and had them type the factoids on the computer. She told half of the group in advance that the computer would save what they had written so they could see it later; she told the other half that the computer would erase it. Then all of the students were challenged to write down the statements from memory. Those who had been told that the computer would erase their notes had by far the best memory of the statements, as if their brains had made an emergency backup. Those who were expecting to retrieve the information later performed more poorly.

In a further set of experiments with 62 Columbia students, Sparrow tested whether that backup memorization comes at a cost. She again posed trivia questions but allowed the students to type notes. Some were told after each note that it would be saved in one of six computer folders with labels such as "Facts" or "Items," while others were told it would be erased. Then she showed the students a list of the statements, with several of them modified, and asked them to identify if any had been altered. In a different version of the experiment, subjects were asked to remember where the information had been saved on the computer.

In both cases, the students who had been told that their notes would be erased again had the most accurate memory of the information. But the most strikingly accurate recall was for the location of information on the computer. For example, when posed the question, "What folder was the statement about the ostrich saved in," students easily answered correctly. In short, Sparrow says, they were better at remembering where information was stored than the information itself.

The study is "convincing," and "there is no doubt that our strategies are shifting in learning," says Roddy Roediger, a psychologist at Washington University in St. Louis, Missouri. "Why remember something if I know I can look it up again? In some sense, with Google and other search engines, we can offload some of our memory demands onto machines." But Roediger says this trend started long before the Internet. "When I was a student, many years ago, we consulted books and encyclopedias to write papers. Now students can do it at home on computers. Is that a bad thing? I don't think so."

Our increasingly information-rich environment may, Roediger suggests, even be stimulating minds enough to account for the mysterious Flynn effect, the gradual increase in IQ scores observed over the past century. Never heard of it? Don't worry, Roediger says: "There is a Wikipedia article about it." —JOHN BOHANNON

1. 請用三百字以內的中文說明本文的大意。(40%)
2. 請就你對本文的瞭解說明何謂Google effect。(30%)
3. 請試以一位管理研究學者，以本文為基礎，提出三點管理意涵(managerial

implications)。(30%)

第二大題：

以下文章節錄於2010在Harvard Business Review (HBR)的一篇短文，請閱讀以下文章後用中文回答四個相關問題。

Defend Your Research: The Mere Thought of Money Makes You Feel Less Pain

The finding: Cash gives people an inner strength and can reduce their physical and emotional pain. In fact, simply the idea of cash has this effect.

The study: Kathleen Vohs asked some subjects to count cash and others to count slips of paper. Afterward, she asked the subjects to dip their hands in extremely hot water or play a computer game in which, unbeknownst to them, they'd be excluded by other players. The hand dippers were asked to rate their pain and the game players to rate their feeling of exclusion. Those who had counted money felt less pain and less excluded.

The challenge: Does cold, hard cash really make us stronger and increase our physical and psychological resilience?

Professor Vohs, defend your research.

Vohs: The effect of handling money was quite pronounced--in the four scenarios we tested, the people who handled money reported significantly less pain or social exclusion. The effect was so strong that we knew it would also work in reverse. So in another experiment we asked some subjects to jot down their expenses from the past month and others to record the weather. When we put the subjects in the same painful settings, those who'd itemized their bills felt more physical and emotional pain than those who'd described the weather. It's a consistent effect. Having money makes us feel strong. Lacking it makes us feel weak.

HBR: And this strength comes from simply being around the idea of money?

Yes. We've experimented with other valuable goods--lottery tickets, credit cards, jewelry--and they didn't have the same effect.

Hasn't your research also shown that money makes us more selfish?

That's how the media portrayed my earlier research. Suddenly, I was the person who proved that money was the root of all evil. That was maddening, because it's not nearly the whole story. The findings were far more nuanced.

Yes, we found that money makes us want to work alone and not ask for help. We become less helpful, too. We choose to sit farther away from people when we're thinking about money. [See

‘The Detachment Effect’] Cash even makes us more likely to want to enjoy leisure activities alone rather than with, say, friends.

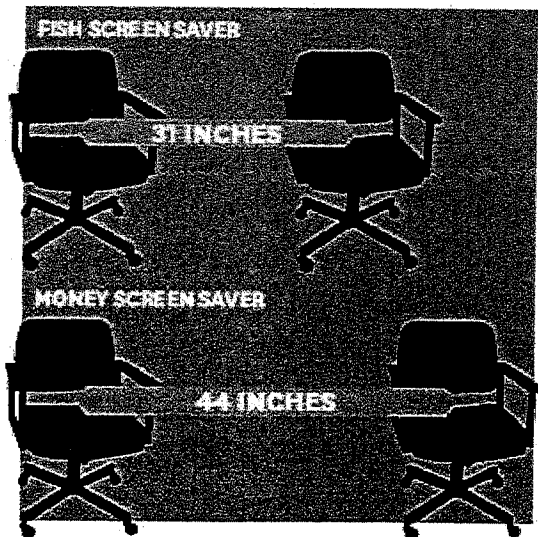
If people feel socially excluded to begin with, money becomes more important to them. In one study, when subjects felt excluded, they said they'd give up more of what made them happy to become millionaires. They also donated less to orphanages.

But we also found that people became more self-sufficient because of money. Simply being in the presence of Monopoly money or a screen saver showing pictures of cash made subjects work harder to achieve their goals, even if their tasks were impossible. They were less distracted, more focused, and more productive. When you combine this with the findings of the new study, you see that money can be a positive thing. It can serve as a source of strength. We call on it.

Whom do you mean by "we"? What's to say this isn't just showing how money-obsessed Westerners are?

I've actually been asked about that. Once, after I presented my findings at a small conference, [behavioral economist and Nobel laureate] Daniel Kahneman came up to me and said, "I really love your work, but you realize you've drawn a picture of an American." On one level, I understood the sentiment. But I also knew that this is a money effect, not a U.S. effect. In fact, our most recent research was done in China.

The Detachment Effect



1. 請用兩百字以內的中文說明本文的大意。(30%)
2. 請就你對本文的瞭解說明Kathleen D. Vohs所提出的金錢效應。(30%)
3. 請根據本文的內容提出兩個可行的假設(testable hypotheses)。(10%)
4. 請試以一位管理研究學者，以本文為基礎，提出三點管理意涵(managerial implications)。(30%)