

## READING PASSAGE 3

You should spend about 20 minutes on **Questions 27-40**, which are based on Reading Passage 3 below.

### Looking for inspiration

*Helen Phillips asks what makes one person more creative than another*

People have speculated about their own creativity for centuries—perhaps ever since we became able to think about thinking. Whatever creativity is, it is thinking that results in new ideas and new ways of doing things. The only bit of the creative process we actually know about is the moment of insight, yet creative ideas and projects may incubate beyond our awareness for months. Not surprising, then, that creativity has long eluded scientific study.

In the early 1970s, it was still seen as a type of intelligence. But when more subtle tests of IQ and creative skills were developed in the 1970s, particularly by the father of creativity testing, Paul Torrance, it became clear that the link was not so simple. Creative people are intelligent, in terms of IQ tests at least, but only averagely or just above. While it depends on the discipline, in general, having beyond a certain level IQ does not help boost creativity.

Because of the difficulty of studying the actual process, most early attempts to study creativity concentrated on personality. According to creativity specialist Mark Runco of California State University, the creative personality tends to place a high value on aesthetic qualities and have broad interests, providing lots of resources to draw on and knowledge to recombine into novel solutions. ‘Creatives’ have an attraction to complexity and an ability to handle conflict. They are also highly self-motivated, perhaps even a little obsessive, when it comes to realising their ambitions.

But there may be a price to pay for having a creative personality. For\*\* centuries\*\*, a link has been made between creativity and mental illness. Psychiatrist and author Kay Redfield Jamison of Johns Hopkins University, who herself has bipolar disorder, found that established artists are significantly more likely to have mood disorders. But she also suggests that a switch of mood state might be the key to triggering a creative event, rather than the negative mood itself.

Jordan Peterson, a psychologist at the University of Toronto, has carried out work that suggests that the brains of creative people are more open to incoming stimuli than less creative types. Our senses are continuously feeding a mass of data into our brains, which have to block most of it to save us from being snowed under. Peterson calls this process latent inhibition and argues that people who have less of it, and who have a reasonably high IQ, can juggle more of the data, and so may be open to more ideas.

But what of the creative act itself? One of the first studies of the creative brain at work was by Colin Martindale, a psychologist from the University of Maine. Back in 1978, he used a network of scalp electrodes to record the pattern of brain waves as people made up stories. Creativity, he showed, has two stages: inspiration and elaboration, each characterized at very different states of mind. While people were dreaming up their stories, he found their brains were surprisingly quiet. The dominant activity was alpha waves, which is the same sort of brain activity as in some stages of dreaming or rest. This could explain why sleep and relaxation can help people be creative.

However, when these quiet-minded people were asked to work on their stories, the alpha wave activity dropped off and the brain became busier, revealing increased cortical arousal, and more organised thinking. Strikingly, it was the people who showed the biggest difference in brain activity between the two stages who produced the most creative storylines. Nothing in their background brain activity marked them as creative or uncreative. ‘It’s as if the less creative person can’t move up a gear,’ says Guy Claxton, a psychologist at the University of Bristol. ‘Creativity requires different kinds of thinking. Very creative people move between these states intuitively.’

Researchers are now trying to identify some of the specific anatomy of creativity. Brain studies of people with particular types of creativity show, perhaps not surprisingly, that active areas are determined by the specialist knowledge being used. Imagery, spatial awareness, language and so on—whatever the skill, it is localised to some extent to a particular brain part or parts. But it’s not just these speciality areas that are active. Using information creatively needs coordination. ‘Creative synthesis requires a new pattern, to put the brain in a state where many areas are simultaneously active,’ says Claxton. When we concentrate in a less creative way, such as when reading the gas bill, there are fewer active centres and less synthesis.

But to be truly creative needs more than just the right personality and the right brain areas and networks. It’s about using them effectively. Skills, situations and our social setting can shape our creativity just as dramatically as the brain resources we are born with. The most creative people also use the different rhythms of the days, the weekends and the holidays to help alter focus and brain state. They may spend two hours at their desk, then go for a walk, because they know that pattern works for them.

Another often forgotten aspect of creativity is social. Vera John-Steiner of the University of New Mexico says that to be really creative you need strong social networks and trusting relationships, not just active neural networks. One vital characteristic of a ‘creative’, she says, is that they have at least one other person in their life who doesn’t think they are completely mad!

### **Questions 27–32**

*Look at the following statements (Questions 27–32) and the list of people below.*

*Match each statement with the correct person, A–G.*

*Write the correct letter, A–G, in boxes 27–32 on your answer sheet.*

**NB** You may use any letter more than once.

- 27** Creative people are receptive to the immense amounts of information that the brain has to deal with.
- 28** Creativity requires numerous parts of the brain to be active at the same time.
- 29** Creative people engage in, and are well informed about, a wide range of subjects.
- 30** Creative people may have unstable personalities.
- 31** Creative people are driven to achieve the goals they set themselves.
- 32** Creative people need support from others.

#### **List of People**

- A** Paul Torrance
- B** Mark Runco
- C** Kay Redfield Jamison
- D** Jordan Peterson
- E** Colin Martindale
- F** Guy Claxton
- G** Vera John-Steiner

### Questions 33–36

Complete the summary below.

Choose **NO MORE THAN TWO WORDS** from the passage for each answer.

Write your answers in boxes 33–36 on your answer sheet.

Colin Martindale carried out research into the creative brain at work. For his study, volunteers had a series of 33 \_\_\_\_\_ placed on their heads which were used to monitor brain activity while they made up stories. Martindale demonstrated that creativity consisted of 34 \_\_\_\_\_ and \_\_\_\_\_ phases. In the first of these, the brain was mostly inactive except for 35 \_\_\_\_\_, and this corresponds to what takes place during dreaming or relaxation. In the second phase, when the volunteers worked on their stories, however, their brains became a lot busier. Interestingly, the most creative stories were produced by those volunteers with the greatest 36 \_\_\_\_\_ in brain activity between the two phases.

### Questions 37–40

Do the following statements agree with the information given in Reading Passage 3?

In boxes 37–40 on your answer sheet, write

- |                  |   |
|------------------|---|
| <b>TRUE</b>      | <i>if the statement agrees with the information</i> |
| <b>FALSE</b>     | <i>if the statement contradicts the information</i> |
| <b>NOT GIVEN</b> | <i>if there is no information on this</i>           |

- 37 People with very high IQs are more likely to be creative than those with average IQs.
- 38 Society tends to value aesthetic skills highly.
- 39 There can be disadvantages to having a creative personality.
- 40 Language skills are more important than spatial awareness in any form of creativity.

### 一、配对题 (Q27–32)

题号	答案	题干翻译	精确定位句 (英) 与段落	定位句中译	详细解释
27	D Jordan Peterson	创造性强的人对大脑需要处理的大量信息更易接纳。	"Our senses are continuously feeding a mass of data... Peterson calls this process latent inhibition and argues that people who have less of it... can juggle more of the data, and so may be open to more ideas." (第5段)	"我们的感官不断把大量数据输入大脑.....彼得森称这一过程为潜抑制，并认为潜抑制较低而且智商较高的人，能处理更多数据，因此更易对更多想法敞开。"	题干中的 "receptive to immense amounts of information" 与 "juggle more of the data / open to more ideas" 完全对应，明确由 Peterson 提出。
28	F Guy Claxton	创造力需要许多脑区同时处于活跃状态。	"Creative synthesis requires a new pattern, to put the brain in a state where many areas are simultaneously active," says Claxton." (第8段)	"克拉克顿说：'创造性的综合需要一种新的模式，让大脑处于许多区域同时活跃的状态。'"	题干 "numerous parts of the brain... at the same time" 与引文 "many areas... simultaneously active" 同义。
29	B Mark Runco	有创造力的人涉猎并精通广泛主题。	"the creative personality tends to place a high value on aesthetic qualities and have broad interests, providing lots of resources to draw on and knowledge to recombine into novel solutions." (第3段)	"有创造力的个性往往兴趣广泛，这为他们提供大量可借鉴的资源，并具备可重组的知识以形成新解。"	"engage in, and are well informed about, a wide range of subjects" 对应 "broad interests + knowledge to recombine"。
30	C Kay Redfield Jamison	有创造力的人可能存在性情不稳定。	"Jamison... found that established artists are significantly more likely to have mood disorders." (第4段)	"贾米森发现，成名艺术家更可能患有情绪障碍。"	"不稳定人格" 在文中以 "情绪障碍/双相障碍" 等心理问题表述，故匹配 Jamison。
31	B Mark Runco	有创造力的人会被内在目标强烈驱动去实现。	"They are also highly self-motivated, perhaps even a little obsessive, when it comes to realising their ambitions." (第3段)	"在实现其抱负时，他们也高度自我驱动，甚至有点执念。"	"driven to achieve the goals they set themselves" = "self-motivated... realising their ambitions"。仍为 Runco。
32	G Vera John-Steiner	有创造力的人需要他人的支持。	"to be really creative you need strong social networks and trusting relationships... one vital characteristic... is that they have at least one other person in their life who doesn't think they are completely mad!" (第10段)	"真正具有创造力需要强大的社交网络与信任关系.....一个关键特征是：他们生命中至少有一位不认为他们完全疯了的人。"	直接指出创造力与社会支持/关系的需要，匹配 John-Steiner。

### 二、摘要填空 (Q33–36)

题目要求：每空 不超过两个单词。

题号	答案	题干翻译	精确定位句 (英) 与段落	定位句中译	详细解释
33	scalp electrodes	志愿者头上放置了一系列用于监测脑活动的装置。	"he used a network of scalp electrodes to record the pattern of brain waves..." (第6段)	"他使用一组头皮电极记录脑电波模式....."	题干有 "placed on their heads"，与 "scalp electrodes" 最严谨贴合；单填 electrodes 也可，但 "scalp electrodes" 更精确 (<2词)。
34	inspiration / elaboration	创造力包含两个阶段：与。	"Creativity... has two stages: inspiration and elaboration." (第6段)	"创造力有两个阶段：灵感与展开/细化。"	依次填入两个名词即可。
35	alpha waves	第一阶段大脑多处不活跃，只有_____例外。	"The dominant activity was alpha waves, which is the same... as in some stages of dreaming or rest." (第6段)	"主要活动是α波，类似于做梦或休息时的大脑活动。"	题干 "对应做梦或放松" 正是 "alpha waves" 的解释。
36	difference	最有创造性的作品来自在两阶段之间脑活动变化_____最大的人。	"it was the people who showed the biggest difference in brain activity between the two stages who produced the most creative storylines." (第7段)	"在两阶段间脑活动差异最大的那些人，写出了最有创造性的情节。"	空格直接对应 "biggest difference"。

### 三、判断题 (Q37–40)

题号	答案	题干翻译	精确定位句 (英) 与段落	定位句中译	详细解释
37	FALSE	高智商者比一般智商者更可能有创造力。	"Creative people are intelligent... but only averagely or just above... in general, having beyond a certain level IQ does not help boost creativity." (第2段)	"有创造力的人在智商上通常仅为平均或略高；总体而言，超过某一水平的高 IQ 并不会提升创造力。"	题干断言 "越高越有创造力"；原文明确说 "更高 IQ 不增加创造力"。与原文矛盾，故 FALSE。
38	NOT GIVEN	社会倾向于高度重视审美技能。	(相关但非答案) "the creative personality tends to place a high value on aesthetic qualities." (第3段)	"有创造力的个性倾向于重视审美品质。"	文中说的是创意者本人重视审美，并未谈 "社会如何看待/评价" 审美技能；缺少所问信息，判 NOT GIVEN。
39	TRUE	拥有创造性人格可能有不利之处。	"there may be a price to pay for having a creative personality... established artists are significantly more likely to have mood disorders." (第4段)	"为创造性人格可能要付出代价.....成名艺术家更可能有情绪障碍。"	原文直接指出存在 "代价"，并给出情绪障碍为例，支持题干，故 TRUE。
40	NOT GIVEN	在任何形式的创造力中，语言技能都比空间知觉更重要。	"Brain studies... show... active areas are determined by the specialist knowledge being used. Imagery, spatial awareness, language and so on—whatever the skill, it is localised..." (第8段); "Creative synthesis... many areas are simultaneously active." (第8段)	"脑研究表明：活跃区域取决于所用专门技能；表象、空间知觉、语言等——无论是哪种技能，都会在相应脑区被激活；...创造性的综合需要许多区域同时活跃。"	原文说明不同技能对应不同脑区，且强调 "无论哪种技能/多区同时活跃"，并未比较 "语言" 与 "空间知觉" 的重要性高低，也未作普遍性的先后级别判断；因此信息缺失，为 NOT GIVEN。