READING PASSAGE 1

Telepathy

Can human beings communicate by thought alone? For more than a century the issue of telepathy has divided the scientific community, and even today it still sparks bitter controversy among top academics

Since the 1970s, parapsychologists at leading universities and research institutes around the world have risked the derision of sceptical colleagues by putting the various claims for telepathy to the test in dozens of rigorous scientific studies. The results and their implications are dividing even the researchers who uncovered them.

Some researchers say the results constitute compelling evidence that telepathy is genuine. Other parapsychologists believe the field is on the brink of collapse, having tried to produce definitive scientific proof and failed. Sceptics and advocates alike do concur on one issue, however: that the most impressive evidence so far has come from the so-called 'ganzfeld' experiments, a German term that means 'whole field'. Reports of telepathic experiences had by people during meditation led parapsychologists to suspect that telepathy might involve 'signals' passing between people that were so faint that they were usually swamped by normal brain activity. In this case, such signals might be more easily detected by those experiencing meditation-like tranquillity in a relaxing 'whole field' of light, sound and warmth.

The ganzfeld experiment tries to recreate these conditions with participants sitting in soft reclining chairs in a sealed room, listening to relaxing sounds while their eyes are covered with special filters letting in only soft pink light. In early ganzfeld experiments, the telepathy test involved identification of a picture chosen from a random selection of four taken from a large image bank. The idea was that a person acting as a 'sender' would attempt to beam the image over to the 'receiver' relaxing in the sealed room.

Once the session was over, this person was asked to identify which of the four images had been used. Random guessing would give a hit-rate of 25 per cent; if telepathy is real, however, the hit-rate would be higher. In 1982, the results from the first ganzfeld studies were analysed by one of its pioneers, the American parapsychologist Charles Honorton. They pointed to typical hit-rates of better than 30 per cent - a small effect, but one which statistical tests suggested could not be put down to chance.

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The implication was that the ganzfeld method had revealed real evidence for telepathy. But there was a crucial flaw in this argument - one routinely overlooked in more conventional areas of science. Just because chance had been ruled out as an explanation did not prove telepathy must exist; there were many other ways of getting positive results. These ranged from 'sensory leakage' - where clues about the pictures accidentally reach the receiver - to outright fraud. In response, the researchers issued a review of all the ganzfeld studies done up to 1985 to show that 80 per cent had found statistically significant evidence. However, they also agreed that there were still too many problems in the experiments which could lead to positive results, and they drew up a list demanding new standards for future research.

After this, many researchers switched to autoganzfeld tests - an automated variant of the technique which used computers to perform many of the key tasks such as the random selection of images. By minimising human involvement, the idea was to minimise the risk of flawed results. In 1987, results from hundreds of autoganzfeld tests were studied by Honorton in a 'meta-analysis', a statistical technique for finding the overall results from a set of studies. Though less compelling than before, the outcome was still impressive.

Yet some parapsychologists remain disturbed by the lack of consistency between individual ganzfeld studies. Defenders of telepathy point out that demanding impressive evidence from every study ignores one basic statistical fact: it takes large samples to detect small effects. If, as current results suggest, telepathy produces hit-rates only marginally above the 25 per cent expected by chance, it's unlikely to be detected by a typical ganzfeld study involving around 40 people: the group is just not big enough. Only when many studies are combined in a meta-analysis will the faint signal of telepathy really become apparent. And that is what researchers do seem to be finding.

What they are certainly not finding, however, is any change in attitude of mainstream scientists: most still totally reject the very idea of telepathy. The problem stems at least in part from the lack of any plausible mechanism for telepathy.

Various theories have been put forward, many focusing on esoteric ideas from theoretical physics. They include 'quantum entanglement', in which events affecting one group of atoms instantly affect another group, no matter how far apart they may be. While physicists have demonstrated entanglement with specially prepared atoms, no-one knows if it also exists between atoms making up human minds. Answering such questions would transform parapsychology. This has prompted some researchers to argue that the future lies not in

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collecting more evidence for telepathy, but in probing possible mechanisms. Some work has begun already, with researchers trying to identify people who are particularly successful in autoganzfeld trials. Early results show that creative and artistic people do much better than average: in one study at the University of Edinburgh, musicians achieved a hit-rate of 56 per cent. Perhaps more tests like these will eventually give the researchers the evidence they are seeking and strengthen the case for the existence of telepathy.

Questions 1-4

Complete each sentence with the correct ending, A-G, below.

Write the correct letter, A-G, in boxes 1-4 on your answer sheet.

A a solution to the challenge presented by random guessing

B a need to continuously changing the circumstances.

C how important the Ganzfeld experiments were.

D method for telepathy being discovered.

E their assertions of a high success rate.

F the requirement to provide telepathy-friendly conditions.

G a more selective choice of topics.

1 Researchers with opposing viewpoints on telepathy agree on

2 Experiences reported during meditation revealed

3 Regards towards parapsychology would change significantly with

4 There is evidence from recent autoganzfeld experiments that success rates will rise with

Questions 5-14

Complete the table below.

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

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Write your answers in boxes 5-14 on your answer sheet.

Telepathy Experiments			
Name/Date	**Description**	**Result**	**Flaw**
Ganzfeld studies 1982	Involved a person **5……** as a sender , who picked out one picture/image from a **6……** of four, and a receiver , who then tried to **7……** it.	Hit-rates were higher than with **8…… ……..**	**9…… ……** could be produced by factors such as sensory leakage or fraud
10…… …… …… …… 1987	computers were used for **11…….** to limit the amount of **12…… ……..** in carrying out the tests.	The results were then subjected to a **13…… ……..**	The lack of consistency between **14…… ……** was put down to the fact that sample groups were not big/large enough (as with most ganzfeld studies).

READING PASSAGE 2

Second nature

Your personality isn't necessarily set in stone. With a little experimentation, people can reshape their temperaments and inject passion, optimism, joy and courage into their lives

A Psychologists have long held that a person's character cannot undergo a transformation in any meaningful way and that the key traits of personality are determined at a very young age. However, researchers have begun looking more closely at ways we *can* change. Positive

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psychologists have identified 24 qualities we admire, such as loyalty and kindness, and are studying them to find out why they come so naturally to some people. What they're discovering is that many of these qualities amount to habitual behaviour that determines the way we respond to the world. The good news is that all this can be learned.

Some qualities are less challenging to develop than others, optimism being one of them. However, developing qualities requires mastering a range of skills which are diverse and sometimes surprising. For example, to bring more joy and passion into your life, you must be open to experiencing negative emotions. Cultivating such qualities will help you realise your full potential.

B 'The evidence is good that most personality traits can be altered,' says Christopher Peterson, professor of psychology at the University of Michigan, who cites himself as an example. Inherently introverted, he realised early on that as an academic, his reticence would prove disastrous in the lecture hall. So he learned to be more outgoing and to entertain his classes. 'Now my extroverted behaviour is spontaneous,' he says.

C David Fajgenbaum had to make a similar transition. He was preparing for university, when he had an accident that put an end to his sports career. On campus, he quickly found that beyond ordinary counselling, the university had no services for students who were undergoing physical rehabilitation and suffering from depression like him. He therefore launched a support group to help others in similar situations. He took action despite his own pain - a typical response of an optimist.

D Suzanne Segerstrom, professor of psychology at the University of Kentucky, believes that the key to increasing optimism is through cultivating optimistic behaviour, rather than positive thinking. She recommends you train yourself to pay attention to good fortune by writing down three positive things that come about each day. This will help you convince yourself that favourable outcomes actually happen all the time, making it easier to begin taking action.

E You can recognise a person who is passionate about a pursuit by the way they are so strongly involved in it. Tanya Streeter's passion is freediving - the sport of plunging deep into the water without tanks or other breathing equipment. Beginning in 1998, she set nine world records and can hold her breath for six minutes. The physical stamina required for this sport is intense but the psychological demands are even more overwhelming. Streeter learned to untangle her fears from her judgment of what her body and mind could do. 'In my career as a

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competitive freediver, there was a limit to what I could do - but it wasn't anywhere near what I thought it was/ she says.

F Finding a pursuit that excites you can improve anyone's life. The secret about consuming passions, though, according to psychologist Paul Silvia of the University of North Carolina, is that 'they require discipline, hard work and ability, which is why they are so rewarding.' Psychologist Todd Kashdan has this advice for those people taking up a new passion: 'As a newcomer, you also have to tolerate and laugh at your own ignorance. You must be willing to accept the negative feelings that come your way,' he says.

G In 2004, physician-scientist Mauro Zappaterra began his PhD research at Harvard Medical School. Unfortunately, he was miserable as his research wasn't compatible with his curiosity about healing. He finally took a break and during eight months in Santa Fe, Zappaterra learned about alternative healing techniques not taught at Harvard. When he got back, he switched labs to study how cerebrospinal fluid nourishes the developing nervous system. He also vowed to look for the joy in everything, including failure, as this could help him learn about his research and himself.

One thing that can hold joy back is a person's concentration on avoiding failure rather than their looking forward to doing something well. 'Focusing on being safe might get in the way of your reaching your goals,' explains Kashdan. For example, are you hoping to get through a business lunch without embarrassing yourself, or are you thinking about how fascinating the conversation might be?

H Usually, we think of courage in physical terms but ordinary life demands something else. For marketing executive Kenneth Pedeleose, it meant speaking out against something he thought was ethically wrong. The new manager was intimidating staff so Pedeleose carefully recorded each instance of bullying and eventually took the evidence to a senior director, knowing his own job security would be threatened. Eventually the manager was the one to go. According to Cynthia Pury, a psychologist at Clemson University, Pedeleose's story proves the point that courage is not motivated by fearlessness, but by moral obligation. Pury also believes that people can acquire courage. Many of her students said that faced with a risky situation, they first tried to calm themselves down, then looked for a way to mitigate the danger, just as Pedeleose did by documenting his allegations.

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Over the long term, picking up a new character trait may help you move toward being the person you want to be. And in the short term, the effort itself could be surprisingly rewarding, a kind of internal adventure.

Questions 15-18

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

Write your answers in boxes 1-5 on your answer sheet.

Psychologists have **15……** that a personality transformation was impossible and that by a young age the **16……** of personality tends to be fixed. This is not true according to positive psychologists, who say that our personal qualities can be seen as habitual behaviour. One of the easiest qualities to acquire is optimism. On the other hand, acquiring attributes necessitates **17……..** a variety of varied and perhaps unexpected skills; for example, a person must understand and feel some negative emotions in order to increase their **18…….**

Questions 19-22

Write T (True) or F (False) in boxes **19-22** on your answer sheet if each statement matches the correct person.

Statement	Person	T/F
19. It is possible to overcome shyness when faced with the need to speak in public.	**Christopher Peterson**	
20. People must accept that they do not know much when first trying something new.	**Suzanne Segerstrom**	
21. Courage can be learned once its origins in a sense of responsibility are understood.	**Cynthia Pury**	

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22. It is important for people to actively notice when good things happen.	**Todd Kashdan**	

Questions 23-26

Reading Passage 2 has eight sections, **A-H**. Which section contains the following information?

Write the correct letter, **A-H**, in boxes **23-26** on your answer sheet.

23. an explanation of how someone changed their mind about continuing in the academic field

24. An illustration of someone who put their career at jeopardy out of a feeling of obligation

25. An example of how logical thought helped someone accomplish a physical objective

26. A description of a person overcoming a difficult situation

READING PASSAGE 3

Collecting as a hobby

Collecting must be one of the most varied of human activities, and it's one that many of us psychologists find fascinating.

Many forms of collecting have been dignified with a technical name: an archtophilist collects teddy bears, a philatelist collects postage stamps, and a deltiologist collects postcards. Amassing hundreds or even thousands of postcards, chocolate wrappers or whatever, takes time, energy and money that could surely to much more productive use. And yet thereare millions of collectors around the world. Why do they do it?

There are the people who collect because they want to make money - this could be called an instrumental reason for collecting; that is, collecting as a means to an end. They'll look for, say, antiques that they can buy cheaply and expect to be able to sell at a profit. But there may

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well be a psychological element, too - buying cheap and selling dear can give the collector a sense of triumph. And as selling online is so easy, more and more people are joining in.

Many collectors collect to develop their social life, attending meetings of a group of collectors and exchanging information on items.

This is a variant on joining a bridge club or a gym, and similarly brings them into contact with like-minded people. Another motive for collecting is the desire to find something special, or a particular example of the collected item, such as a rare early recording by a particular singer.

Some may spend their whole lives in a hunt for this. Psychologically, this can give a purpose to a life that otherwise feels aimless.

There is a danger, though, that if the individual is ever lucky enough to find what they're looking for, rather than celebrating their success, they may feel empty, now that the goal that drove them on has gone.

If you think about collecting postage stamps another potential reason for it - Or, perhaps, a result of collecting is its educational value. Stamp collecting opens a window to other countries, and to the plants, animals, or famous people shown on their stamps.

Similarly, in the 19th century, many collectors amassed fossils, animals and plants from around the globe, and their collections provided a vast amount of information about the natural world. Without those collections, our understanding would be greatly inferior to what it is.

In the past - and nowadays, too, though to a lesser extent - a popular form of collecting, particularly among boys and men, was trainspotting. This might involve trying to see every locomotive of a particular type, using published data that identifies each one, and ticking off each engine as it is seen. Trainspotters exchange information, these days often by mobile phone, so they can work out where to go to, to see a particular engine. As a by-product, many practitioners of the hobby become very knowledgeable about railway operations, or the technical specifications of different engine types.

Similarly, people who collect dolls may go beyond simply enlarging their collection, and develop an interest in the way that dolls are made, or the materials that are used. These have changed over the centuries from the wood that was standard in 16th century Europe, through

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the wax and porcelain of later centuries, to the plastics of today's dolls. Or collectors might be inspired to study how dolls reflect notions of what children like, or ought to like.

Not all collectors are interested in learning from their hobby, though, so what we might call a psychological reason for collecting is the need for a sense of control, perhaps as a way of dealing with insecurity. Stamp collectors, for instance, arrange their stamps in albums, usually very neatly, organising their collection according to certain commonplace principles-perhaps by country in alphabetical order, or grouping stamps by what they depict -people, birds, maps, and so on.

One reason, conscious or not, for what someone chooses to collect is to show the collector's individualism. Someone who decides to collect something as unexpected as dog collars, for instance, may be conveying their belief that they must be interesting themselves. And believe it or not, there is at least one dog collar museum in existence, and it grew out of a personal collection.

Of course, all hobbies give pleasure, but the common factor in collecting is usually passion: pleasure is putting it far too mildly. More than most other hobbies, collecting can be totally engrossing, and can give a strong sense of personal fulfilment. To non-collectors it may appear an eccentric, if harmless, way of spending time, but potentially, collecting has a lot going for it.

Questions 27-34

Complete the sentences below.

*Choose **NO MORE THAN 3 WORDS** from the passage for each answer.*

*Write your answers in boxes **27-34** on your answer sheet.*

27 The writer mentions collecting antiques as an example of collecting in order to make ……..

28 Collectors may get a feeling of triumph from …… items.

29 Collectors' clubs provide opportunities to share information on ……...

30 Collectors' clubs offer contact with people who are ……..

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31 Collecting sometimes involves a life-long hunt for a ……..

32 Searching for something particular may prevent people from feeling their …….. is completely aimless.

33 Stamp collecting may be educational because it provides facts about ……...

34 Trainspotting, a …… of collecting, tends to be mostly a male hobby.

Questions 35-40

Do the following statements agree with the information given in the reading passage?

*In boxes **35-40** on your answer sheet, write*

***TRUE** if the statement agrees with the information*

***FALSE** if the statement contradicts the information*

***NOT GIVEN** if there is no information on this*

35 Over the years, more individuals have started purchasing dolls.

36 European dolls from the sixteenth century were often fashioned of porcelain and wax.

37 Comparatively less frequently than other approaches, arranging a stamp collection by stamp size.

38 Someone who amasses strange artifacts would want people to believe the same about them.

39 Collecting evokes a sense of inspiration unlike that of other pastimes.

40 It could seem like an odd, if harmless, way to pass the time to those who are collectors.

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