Department of Bachelor of Business Administration
Daffodil International University
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Passage 1: Telepathy

Can humans communicate by their thoughts alone? From more than a 100 years ago experiments on telepathy have divided the scientific community. Today it is still a controversy among top scientists.

Since the 1970s, parapsychologists at leading universities and research institutes around the world have been mocked by skeptical colleagues for putting the various claims for telepathy to the test in many rigorous scientific studies. The results and their implications are dividing even the researchers who discovered them.

Some researchers say the results contain strong evidence that telepathy is real. Other parapsychologists believe the field is on the brink of collapse, because they failed to produce definitive scientific evidence. Sceptics and advocates alike do agree on one issue: that the most impressive evidence so far has come from the 'ganzfeld' experiments, a German term that means 'whole field'. Reports of telepathic experiences experienced by people while meditating lured parapsychologists to suspect that telepathy might involve 'signals' passing between people that were so faint that they were usually lost by normal brain activity. In such cases these signals might be more easily detected by those performing meditation-like tranquility in a relaxing 'whole field' of light, sound and warmth.

In the ganzfeld experiment, they try to recreate these conditions with participants sitting in soft reclining chairs in a sealed room, listening to relaxing sounds, eyes covered with special filters and letting in only pink light. In the early ganzfeld experiments in 1980, the telepathy experiment involved identifying a picture from a group of 4 taken from a larger group of images. The idea was that a person acting as the 'sender' would attempt to send the image over to the 'receiver' in the sealed room.

After the session, this person was asked to identify which of the 4 images had been used. Random guessing would give a hit-rate of 25%; if telepathy is real, however, the hit-rate would be higher. In 1982, the results from the first ganzfeld studies were analyzed by the American parapsychologist Charles Honorton. They pointed to typical hit-rates of more than 30% - a small effect, but one which statistical tests say could not be put down to chance.

Questions 1 - 4

Match each statement with the correct one.

*Write the correct letter **A-E** on your answer sheet.*

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

1. Years since the telepathic experiments started
2. Year when first results of ganzfeld experiments were analyzed by Charles Honorton
3. Year when early ganzfeld experiments started
4. Year when parapsychologists stated putting claims for telepathy

A. 1970
B. 1980
C. 1982
D. 1970
E. 1992
F. 100

Passage 2: Reducing the Effects of Climate Change

Our dependence on fossil fuels, and the volume of carbon dioxide already released into the atmosphere, has led experts to agree that global warming is now inevitable. They believe that the best we can do is keep the emission levels low. At present the only valid option for us is to cut down our carbon emissions. While a few countries are taking major action in this regard, other countries are having difficulty even limiting the rate of increase, let alone reversing it. An increasing number of scientists are exploring the alternative of geo-engineering — a term which refers to the calculated large-scale manipulation of the environment. According to its promoters, geo-engineering is like a backup generator. If Plan A - reducing our dependence on fossil fuels - fails, then we require Plan B - devise grand schemes to slow down or reverse the process of global warming.

Geo-engineering has proved to show results on a small localized scale. For many years, Mayday parades conducted in Moscow have taken place under clear skies, aircraft deposited dry ice, silver iodide and cement powder to disperse clouds. Many of the schemes now suggested look to reduce the amount of sunlight reaching Earth. The catchiest idea of all is suggested by Professor Roger Angel of the University of Arizona. According to his scheme they have to employ up to 16 trillion-minute spacecraft weighing about 1 gms each, to form a transparent sunshade refracting sunlight in an orbit 1.5 million kms above the surface of the Earth. This could reduce the amount of light reaching the Earth by 2%, says Angel.

Majority of the geo-engineering projects carried out so far include planting forests in deserts depositing iron in the ocean to stimulate the growth of algae. They have focused on achieving a general cooling of our planet. But some suggest reversing the melting at the poles, particularly the Arctic. The reason is that if we can bring back the ice sheets and frozen waters of the high latitudes, more light will be reflected back into space thus reducing the heating of the waters and atmosphere.

Questions 1 - 5

1. Present valid option to stop climate change
2. Devise grand schemes to slow down or reverse the process of global warming
3. Reduce dependence on fossil fuels
4. Option that shows result in small scale
5. Option to stimulate growth of algae in oceans

A. Plan B
B. Carbon emission reduction
C. Deposit iron
D. Plan A
E. Restore ice sheets
F. Geo-engineering

Passage 3: Objects from Different Civilizations

Objects from lost civilizations can tell us about the social relationships and the way of life of the people belonging to those societies. The Indus valley civilization and the Chinese civilization have been influential with their innovations and contributions to advanced technology. The Indus Valley civilization is also called the Harappan civilization. Developing along the mighty Indus River, it was at its peak around 2500 and 3500 BC. This Bronze Age civilization is believed to be among the oldest world civilizations together with the Egyptian and Mesopotamian civilizations. The famous figurine of the dancing girl from the Harappa region shows the advances made in art and metallurgy at the time. The statue describes details such as the hairstyle and ornaments prevalent then such as the more than 20 bangles in her left arm and four on her right arm, and the necklace. Although the bronze statuette is in standing position, it was named the dancing girl by assuming that it was her profession.

The seals are other famous objects from the Bronze Age. Seals are beautifully carved out of stone and then fired for durability. Over 3,500 seals discovered are mostly square with different symbols at the top, an animal in the center and a few more symbols at the bottom are, which are presumed to be the inscription of the Indus valley language. The inscription indicates that people of this age wrote the first line from right to left, the second line from left to right and so on. Some common animal inscriptions on these seals include elephants, unicorns, rhinoceros, and bulls. On the reverse face, most seals have projections with a hole to possibly carry it comfortably. The imprint on some of the seals suggests that they were used as clay tags for sacks of traded goods such as grain, which means that the Harappan people were involved in long-distance trading networks. Hunting tools show that the Indus people were fond of game. Many of the toys are carts and animals made from baked clay, and most were for children, which has led to the conclusion that the people had an active social life.

Standardized measurement is another valuable contribution of the Indus valley people. The oldest ruler with markings was a copper alloy rod found by a German archaeologist and he claims that it was used as a standard measurement unit. He mentions that the measurements on the ruler are divided into units that correspond to 1.32 inches which are further divided into perfectly calculated decimal subdivisions. Measurements of the bricks found in excavations of the Mohenjo Daro and Harappan civilizations match with those on the ruler mentioned by the German archaeologist.

China was the first nation to invent paper. In the older civilizations, words were written on natural materials such as grass stalks, earthen plates, wood and bamboo strips, tree leaves, and sheepskins. The first paper from the Chinese people was known as bo and was made of silk. However, it was expensive. In the 2nd century, a new kind of paper was produced from rags, bark, wheat stalks, and other materials, which was not only cheaper but was also durable and could be used for brush writing. Papermaking had spread to other parts of the world in the beginning of the third century. Ancient China also gets credit for the invention of gunpowder. In a collection of most important military techniques as described in Wujing Zongyao that was edited in 1044 by Zeng Gong Liang, three formulas of making gunpowder were discovered and have been described as the earliest formulas of such kinds. Another significant gift from China was the compass. It was developed after some miners got hold of a piece of a natural magnetite that attracted iron and pointed north. The compass that we use today is a result of a series of improvements to the earliest design. Before it was invented, navigators depended on the position of the moon, sun, and the polestar for their bearings.

Questions 1-7

The reading passage mentions a number of objects/achievements related to Indus Valley and Chinese civilisations and their relevance.

Match each object/ achievement (Questions 1-7) in List A with its relevance (A-J) in List B.

List A

1 figurine of the dancing girl

2 seals for marking goods

3 weapons for hunting

4 toys for children

5 copper alloy ruler

6 production of paper from plant material

7 invention of the compass

List B

A strength and affordability of a product

B the various uses of clay

C spread of commerce in a wide area

D advancements in metal craft

E recognition of dance as a profession

F social activity

G a consequence of the discovery of natural magnet

H navigators depended on astronomical bodies

I use of standard measurements in construction

J the consumption of wild birds and animals as food