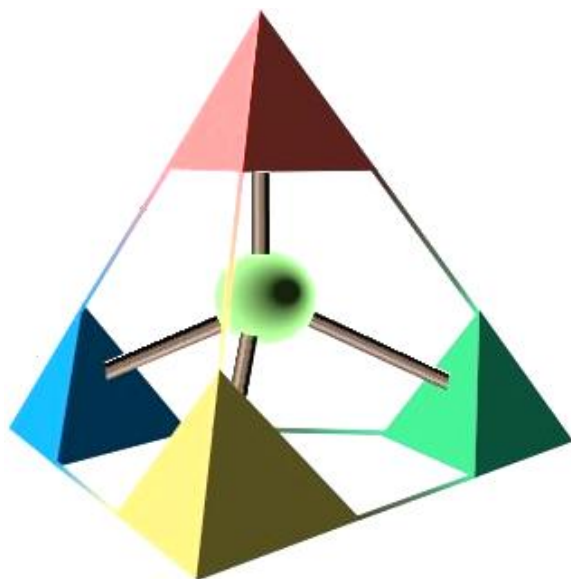


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The Official Journal of the Bonoi Academy of Science & Education

<http://www.bonoi.org>

12 January 2014, Volume 6, no. 1



The Official Journal of BASE



When life starts,
It is so fresh.
Who knows the future?
Sunny
Rainy
Droughty
Or
.....

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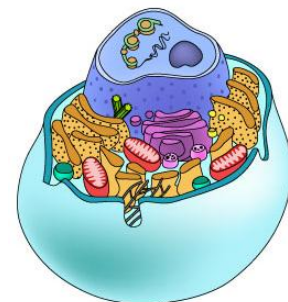
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Logos are typical multimodal discourses combining languages, pictures, colors and so on with spatial distribution and often used in propagandizing a city. Lanzhou, the provincial capital city of Gansu Province in north-west China, released two logos about the image and the tourism successively to propagandize the city. Images and words can work together to create a synergic effect of propagandizing the city, and multimodality is an effective way to present such information about the characteristics of a city in meaning-making process of logos. Through the interaction of these different semiotic elements, the logos express much more abundant information than separate ones. See page 100.
Image: BASE illustrating group

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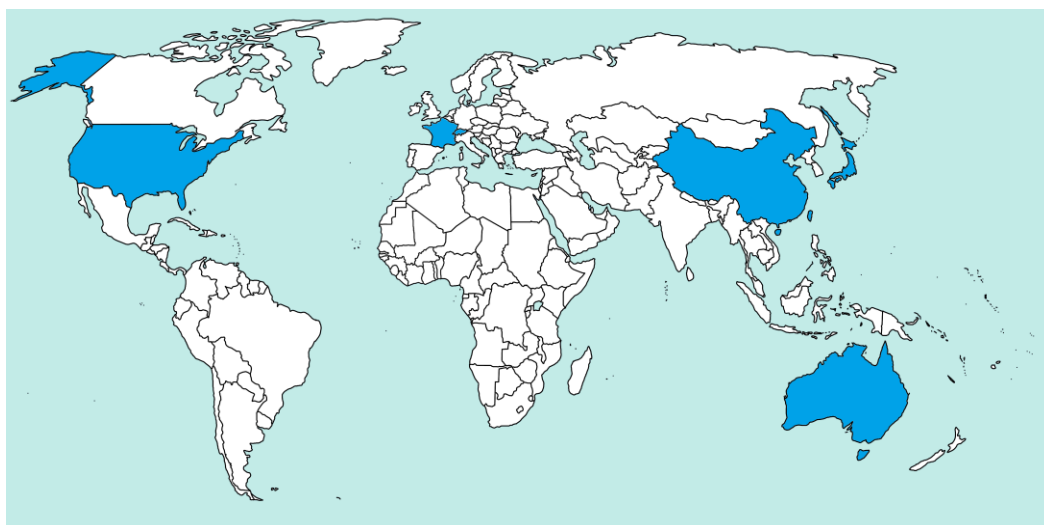
The Official Journal of The Bono Academy of Science & Education (BASE)

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Submission System

Shanghai, CHINA

Chinese Unmanned Spacecraft Landed on Moon

Our human being strives to exploit the outer space to find intriguing and theoretically suitable place for us emigration some day. China landed an unmanned spacecraft on the moon in the first such “soft-landing” since 1976, joining the USA and the former Soviet Union. The Chang’e 3, a probe named after a lunar goddess in traditional Chinese mythology, is carrying the solar-powered Yutu (aka Jade Rabbit buggy) which will dig and conduct geological surveys. China has been increasingly ambitious in developing its space programs, for military, commercial and scientific purposes. It has moved in lock step with its emergence as a major global economic and political power. In its most recent manned space mission in June, 2013, three astronauts spent 15 days in orbit and docked with an experimental space laboratory (‘Space Education’ on <http://www.bonoi.org/node/28>), part of Beijing’s quest to build a working space station by 2020. A soft landing does not damage the craft and the equipment it carries. In 2007, China put another lunar probe in orbit around the moon, which then executed a controlled crash on to its surface. The Bay of Rainbows was selected



Canberra, AUSTRALIA

Antarctica May Contain Diamonds

What will happen for the world if diamonds really exist in Antarctica? May be it would be a “Diamond Rush” there. In general, diamonds form under the immense heat and pressure found nearly 100 miles below Earth’s surface, in the planet’s mantle layer, which is sandwiched between the outer crust and the core. Powerful volcanic eruptions bring these precious stones to Earth’s surface, where they are embedded in blue-tinged rocks known as kimberlites. Now, scientists have discovered these rocks on the southernmost continent. Researchers analyzed geological samples from boulders on the southeastern slopes of

Mount Meredith, part of the vast Prince Charles mountain range in East Antarctica. The scientists found three kimberlite samples that were about 120 million years old; they formed around the time when the area that is now India was drifting away from the combined landmass of Australia and Antarctica. Only about 1 to 2 percent of kimberlites contain valuable grades of diamond. Establishing the viability of any clump of kimberlite as a potential diamond mine requires processing several tons of kimberlite to establish its grade. Incidentally, although diamonds are often thought of as nature’s hardest material, it turns out two other rare natural substances are harder - wurtzite boron nitride, which is formed during intense volcanic eruptions, and lonsdaleite, which is sometimes created when meteorites hit Earth.■



Geneva, SWITZERLAND

United Nations Calls for End to Excessive Electronic Spying

Have you ever thought that someone is spying you? It is so common now for people be spied by each other. That is the same thing for nations. The United Nations (UN) General Assembly called for an end to excessive electronic surveillance and expressed concern at the harm such scrutiny, including spying in foreign states and the mass collection of personal data,

may have on human rights. The United States, Britain, Australia, Canada and New Zealand - known as the Five Eyes surveillance alliance - supported the resolution after language that had initially suggested foreign spying could be a human rights violation was weakened to appease them. The resolution does not name specific countries but comes after former U.S. National Security Agency contractor Edward Snowden released details this year of a global spying program by the NSA, sparking international outrage. General Assembly resolutions are non-binding, unlike resolutions of the 15-nation Security Council. But assembly resolutions that enjoy broad international support can carry significant moral and political weight. It also asks UN human rights chief Navi Pillay to present a report to the UN Human Rights Council and the UN General Assembly on the protection and promotion of the right to privacy in domestic and extraterritorial surveillance and the interception of digital communications and collection of personal data, including on a mass scale. ■

San Francisco, USA

Is Halley's Comet Really Associated with the Famine 1 500 Years Ago

Is it true for the view of comets as harbingers of doom? A newly published study headed by Dr. Dallas Abbott from Columbia University's Lamont-Doherty Earth Observatory found that a piece of the famous Halley's Comet likely slammed into Earth in AD 536, blasting so much dust into the atmosphere that the planet cooled considerably. This dramatic climate shift is linked to drought and famine around the world, which may have made humanity more susceptible to "Justinian's plague" in AD 541-542, the first recorded emergence of the Black Death in Europe. The new re-



sults come from an analysis of Greenland ice that was laid down between AD 533 and 540. The ice cores record large amounts of atmospheric dust during this seven-year period, not all of it originating on Earth. Certain characteristics, such as high levels of tin, identify a comet as the origin of the alien dust. And the stuff was deposited during the Northern Hemisphere spring, suggesting that it came from the Eta Aquarid meteor shower. Ice core data record evidence of a volcanic eruption in 536, but it almost certainly wasn't big enough to change the climate so dramatically. Halley zooms by Earth once every 76 years or so. It appeared in Earth's skies in A.D. 530 and was astonishingly bright at the time. It is unclear where exactly the putative comet chunk hit Earth or how big it was, she added. However, a 2004 study estimated that a comet fragment just 2 000 feet wide could have caused the 536-537 cooling event if it exploded in the atmosphere and its constituent dust were spread evenly around the globe. ■

Washington DC, USA

Cancer Immunotherapy: Breakthrough of the Year

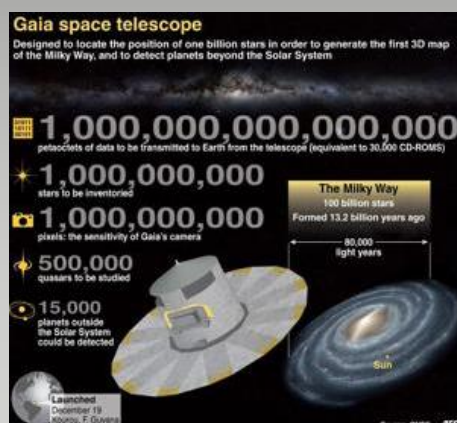
We are surrounded by thousands of thousands new findings released every minute on the therapeutic effectiveness and underlying mechanisms of cancer, but we still don't know how to conquer the thorny problem haunting over so many patients like ghosts around the world. A type of cancer treatment that directs the body's own immune system to fight cancer cells has been named as the "breakthrough of the year" the journal Science even though that research is still in its early stages. Cancer immunotherapy is causing a paradigm shift in the way cancer researchers think about treating people with the disease, the editors of Science said. Instead of targeting the tumor itself, cancer immunotherapy harnesses the immune system to fight cancer. This year, trials testing different types of cancer immunotherapy showed promising results, the editors said, hinting at a large potential for the treatment to help patients. One type of cancer immunotherapy, called T-cell therapy, takes a person's T-cells, a type of white blood cell, and uses genetic engineering to modify the cells' genetic code so it recognizes and targets cancer cells. In March of this year, researchers reported in the journal Science Translational Medicine that in a small study of five adults with acute leukemia, a disease often lethal in adults, three patients' cancer went into remission after they underwent T-cell therapy. Another type of cancer immunotherapy works by "unblocking" T-cells so they are able to carry out a full attack. This is done through the use of antibodies, one of which is called anti-CTLA-4 (brand name Ipilimumab), and another called anti-PD-1. ■

Tokyo, JAPAN

Japan Researcher Built Device to Transmit "Force"

Paris, FRANCE

Europe Launches Billion-Dollar Milky Way Telescope



How far can you see with your eyes? The European Space Agency on Thursday launched an advanced telescope designed to detect a billion stars and provide the most detailed map yet of the Milky Way and our place in it. The Gaia telescope was successfully hoisted by a Soyuz-STB-Fregat rocket from ESA's space base in Kourou, French Guiana, the agency reported in a webcast. The star-hunter separated from the last of the rocket's four stages 42 minutes after launch, and mission controllers said everything was fine. The \$1.02-billion device, the most sophisticated space telescope ever built by Europe, aims at building an "astronomical census" of a billion stars, or around one percent of all the stars in the Milky Way. By repeating the observations as many as 70 times throughout its mission, Gaia can help astronomers calculate the distance, speed, direction and motion of these stars and build a 3-D map of our section of the galaxy. The stellar haul will be 50 times greater than the bounty provided by Hipparcos, a telescope of the early 1990s whose work provided a gold-standard reference guide still widely used by professional astronomers today. A Soviet-era workhorse of space with an excellent record of reliability, Soyuz is deployed at Kourou under a deal to widen Arianespace's options for the world's satellite launch market. Gaia will also help in the search for planets beyond our Solar System -- as many as 50,000 so-called extrasolar planets could be spotted during the satellite's five-year life, astronomers hope. Gaia will also observe the asteroid belt between Mars and Jupiter to help the search for any rocks that may one day threaten Earth, and keep a watch for distant exploding stars, called supernovae, which are rarely observed in real time. ESA members have set up a network of 30 centers, manned by 450 people, to crunch the raw data, including a supercomputer at CNES's base in Toulouse, southwestern France, capable of carrying out six thousand billion operations a second. Even so, it will take years to transform the million billion bytes of input into useable maps and catalogues. ■

Have you heard the "force" can be transmitted by air? A Japanese researcher unveiled an invention that instantly and wirelessly transmits force between two devices, in a development that could allow physical therapists to treat patients remotely. Kouhei Ohnishi, a system design engineering professor at Keio University said his "force transceiver" permits two-way communication of the amount of pressure being applied and the resistance it is encountering in real time. If applied to a robot, for example, it would mean a skilled operator could use the device to remotely carry out complex work in areas where it was not safe for people to be -- for example because of high temperatures or radiation. The technology should help reduce the burden on medical care providers while increasing convenience for patients. The system uses high-speed wireless communication

many times faster than the presently-available wifi used for domestic Internet connections, along with high-speed computing capacity. To demonstrate the technology, Ohnishi's team built two box-like tools with levers on top. When a user moved the lever on one of the units, the lever on the other moved at exactly the same speed and force instantaneously, as if they were physically connected. Ohnishi said the device could in the future be used to preserve the techniques of skilled craftsmen, such as master lens grinders, who apply differing levels of pressure as they work their materials. ■





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PUBLIC HEALTH

It Is Time to Stop Using Supplements Everyday

It is so popular for people pop a multi-vitamin tablet each day, believing they are boosting their health. Several years ago, a large body of studies provided “scientific” evidence showing that daily dietary supplements benefit their health in certain situations like pregnant women who take 400 micrograms of folic acid daily to prevent spina bifida and other birth defects and iron supplementation to protect against anemia, and vegetarians and vegans who avoid meat, eggs, and dairy should eat foods fortified with B₁₂ or take supplements. However, almost two third populations believe that routine consumption of supplements is good for health no matter how healthy you are. Is it true? Newly emerging evidence said no to this consideration. First, supplements may not prevent cancer, but even cause harm. Researchers at the Kaiser Permanente Center for Health Research in Portland, Oregon examined 26 studies of dietary supplements, including single, paired, or multivitamin combinations of nutrients. They did not find consistent link between supplement use and decreased risk of cancer, heart disease, or all-cause mortality. For some, beta-carotene supplements may boost the risk of lung cancer and death among high-risk populations, such as smokers. Second, multivitamins don't prevent cognitive decline in men. In a study including nearly 6 000 participants over the age of 64 used a daily multivitamin or placebo regimen. Over twelve years, the changes in participants' cognitive function were assessed and found no significant differences between multivitamin and placebo users. Third, high-dose multivitamins won't stop heart problems. In another study, researchers assigned over 1 700 men and women to a high-dose multivitamin or placebo regimen.



All of the participants had experienced a heart attack at least six weeks before the start of the study. After an average follow-up of 4.6 years, the researchers found no difference in the rate of recurrent cardiovascular events among participants who took supplements compared to those who did not. Multivitamins did not appear to be harmful; however, the supplements also did not seem to offer any protection against ongoing heart problems. Therefore, what is the real effect of daily supplements to our health? “(It is time to) stop wasting money on vitamin and mineral supplements”, as suggested by physicians. The fact is that we have a lot of accumulated evidence that vitamin supplements aren't helping. They aren't working in the general population to prevent chronic disease. Yes, the real important thing is that eating a variety of healthy foods is all it takes to meet their nutritional needs.■

Ann Intern Med 2013; 159(12):797

Ann Intern Med 2013; 159(12):806

Ann Intern Med 2013; 159(12):824

Ann Intern Med 2013; 159(12):850

BIOPHYSICS

Viscosity and Drag Force are Involved in

Organelle Transport

How our bio-organelles function? It is not that easy to anatomize the precise role of these guys and tell the accurate story for them. A new study led by Dr. Kumiko Hayashi, from Tohoku University, Japan, focuses on the motion of motor proteins in living cells, applying a physicist's tool called non-equilibrium statistical mechanics. It is becoming even more intriguing when observed *in vivo* in biological cells. Using an ingenious setup, the research group has now calculated the force of molecular motors acting on inner components of biological cells, known as organelles. In this study, the focus is on mitochondria travelling along microtubules in a cell. The authors have investigated, for the first time, the so-called Einstein relation for the motion of mitochondria transported by motor proteins, kinesin and dynein, in living cells. The researchers observed the motion of a mitochondrion transported by motor proteins using fluorescence microscopy. They applied a single-particle tracking algorithm to the images of fluorescently tagged mitochondria. They then compared this motion with the random motion of a bead artificially incorporated into a cell, ob-

served by using fluorescence correlation spectroscopy. By comparing both evaluations of the diffusion coefficient, from both mitochondria and bead estimates, they found that the value of the medium's viscosity obtained using the beads was slightly lower than that obtained using the organelle motion. This discrepancy is linked to the fact that physical laws such as the Einstein relation are not sufficient to fully describe the organelles' motion, which is subjected to many simultaneous complex biological processes, such as the chemical reaction of motor proteins and the interaction with the cell's vesicles. ■

Eur Phys J E 2013; 36: 136

MEDICINE

Vitamin D and Chronic Obstructive Pulmonary Disease

Chronic obstructive pulmonary disease (COPD) is a leading cause in both developing and developed countries reducing people's well-being of life. A new study headed by Dr Wim Janssens from Katholieke Universiteit Leuven, Belgium, reviewed the current understanding of vitamin D and COPD. In their summary, they mentioned that abundant laboratory findings showed the important role vitamin D has in the

innate and adaptive immune system. In human beings, observational studies have associated vitamin D deficiency with an increased risk for different inflammatory, infectious, and autoimmune diseases. With regard to COPD, conflicting data have been reported. Most epidemiological studies have been restricted by their design and larger longitudinal studies of population-based samples and of cohorts with COPD are warranted. An alternative explanation for the discordant results in COPD might be related to the complexity of the intracellular vitamin D signalling pathway, which is not shown in systemic levels of the precursor 25-hydroxyvitamin D. For COPD in particular, we speculate that local downregulation of vitamin D signalling from and beyond the receptor might clarify why pro-inflammatory processes in the airways are not or are insufficiently countered by vitamin D-dependent control mechanisms. In a disease already characterised by glucocorticoid resistance, the potential activation and reactivation of an intrinsic comprehensive system of immune control should attract more attention to design appropriate interventions with promising therapeutic potential. ■

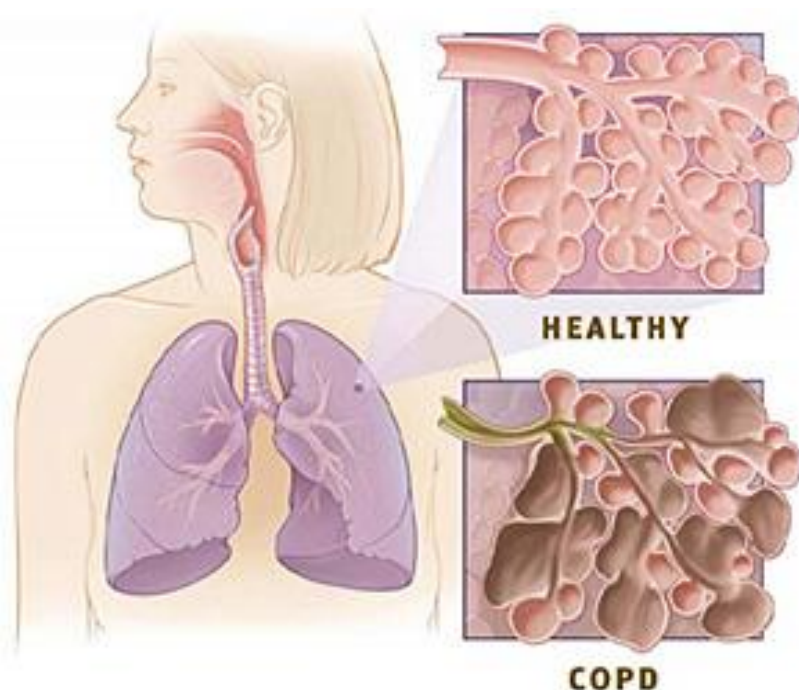
Lancet Resp Med 2013; 1(10): 804

NEUROSCIENCE

Neural Prosthesis for Brain Function Restoration after Brain Damage

Function defects are the common feature after brain damage. How to restore the function plays an important role in keeping normal well-being of physiological life. In a new study led by Dr. Randolph J. Nudo from Kansas University Medical Center, USA investigated a novel tool named "neural prosthesis" in helping patients restoring their brain function after damage. As abstracted by the researchers that neural interface systems are becoming increasingly more feasible for brain repair strategies. They tested the hypothesis that recovery after brain injury could be facilitated by a neural prosthesis serving as a communication link between distant locations in the cerebral cortex. The primary motor area in the cerebral cortex was injured in a rat model of focal brain injury, disrupting communication between motor and somatosensory areas and resulting in impaired reaching and grasping abilities. After implantation of microelectrodes in cerebral cortex, a neural prosthesis discriminated action potentials (spikes) in premotor cortex that triggered electrical stimulation in somatosensory cortex continuously over subsequent weeks. Within 1 wk, while receiving spike-triggered stimulation, rats showed substantially improved reaching and grasping functions that were indistinguishable from prelesion levels by 2 wk. Post hoc analysis of the spikes evoked by the stimulation provides compelling evidence that the neural prosthesis enhanced functional connectivity between the two target areas. This proof-of-concept study demonstrates that neural interface systems can be used effectively to bridge damaged neural pathways functionally and promote recovery after brain injury. ■

PNAS 2013; 110(52):21177



Judith

By Giorgione (Giorgio da Castelfranco)



Judith, by Giorgione (Giorgio da Castelfranco, 1477-1510). Oil on canvas (transferred from panel); 144 x 68 cm. This work is regarded as the best of the Hermitage's works from the Venetian School. The artist has taken as his subject the Biblical legend of Judith. When the Assyrian army laid siege to her native town of Bethulia, Judith set out to save both the city and its people. She penetrated the camp of Holofernes, commander of the enemy army, fascinated him with her beauty and intelligence, and when left alone with him after a banquet, beheaded the sleepy general with his own sword. Rather than depicting the final dramatic scene of the legend, Giorgione represents Judith in a state of tranquil meditation. The serenity of both the heroine and the landscape behind her do not seem to be in keeping with the dramatic events set out in the Bible, and only her traditional attributes confirm Judith as the subject of the painting.



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A Multimodal Discourse Analysis of Two Logos about Lanzhou China

Junbang He and Shunliang Shi

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A Multimodal Discourse Analysis of Two Logos about Lanzhou China ^[PC]

Junbang He,^{*, Δ} Shunliang Shi *

BACKGROUND Logos are typical multimodal discourses combining languages, pictures, colors and so on with spatial distribution and often used in propagandizing a city. Lanzhou, the provincial capital city of Gansu Province in north-west China, released two logos about the image and the tourism successively to propagandize the city.

OBJECTIVE The purpose of the study was to analyze the logos from the perspective of linguistics and to identify how images and words in the logos work together to fulfill the aim of propagandizing the city, what the respective advantages and disadvantages of the two logos are, and how to achieve a better propaganda aim of the city logos.

METHOD Based on the Kress and Van Leeuwen's visual grammar, this paper attempts to adopt a multimodal analysis and descriptive-analytical method to two logos about Lanzhou China and make a comparison between them, analyzing the representational meaning, the interactive meaning and the compositional meaning of the two logos.

CONCLUSION We found that images and words can work together to create a synergic effect of propagandizing the city, and multimodality is an effective way to present such information about the characteristics of a city in meaning-making process of logos. Through the interaction of these different semiotic elements, the logos express much more abundant information than separate ones. ■

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ACCORDING to the World Tourism Organization, China will become one of the largest tourist destinations all over the world in the next decade. Therefore, it is

crucial in tourism to deliver or present the information about tourism resources and unique cultures in China to domestic and foreign tourists and investors. Tourism is also one of the

most important industries and has been increasingly developing in Lanzhou China, which attracts not only domestic tourists but a great number of foreign friends. Along with the de-

velopment and the increasingly important status of tourism in the overall development, propagandizing the city in an effective way is becoming more and more important. Therefore, the local government released one vivid logo about the tourism of Lanzhou and another one about the general image of Lanzhou successively. The logo of a city is one of the most effective and common forms with very vivid and rich information which combines languages, number, pictures and so on with spatial distribution and is “the meaningful text realized by symbols by any more than one semi-otic code”(1), that is , multimodal discourse.

Two books mark the birth of Multimodal Discourse Analysis (MDA): *the Language of Displayed Art* (7) and *Reading Images* (4). Kress and Van Leeuwen propose a comprehensive and systematic theoretical framework of visual grammar, providing theoretical foundation and methodology to understand and analyze multimodal discourses. Since Li (1) introduced Kress and Van Leeuwen’s visual grammar to China, many articles have appeared in periodicals and magazines around China. Hu (3) and Zhu (1) have made comprehensive explanation to the theoretical foundation of MDA and its research methods as well as its application in social practices. In addition, a number of scholars apply MDA to diverse fields such as textbooks (2), advertisement (9), academic speech presentation (11), film or film poster (12), picture (10), news (13) and many other aspects of MDA. But there are only a few logo researches which adopt the perspective of visual grammar of multimodal discourse analysis, and most of the researches mainly involve logo of web page (7) or enterprise logo (13). This paper attempts to adopt Kress and van Leeuwen’s methodology to briefly analyze two logos from Lanzhou, China and discuss how different modes work together to create a comprehensive meaning to fulfill the propaganda aim.

METHODS AND MATERIALS



Figure 1: The two logos used in this MDA modality. (A) The logo about Lanzhou tourism was released in 2012. Lanzhou is one of the most important cities on the ancient silk road and the unique provincial capital city in China through which the Yellow River is running, and “Dunhuang Feitian” is one of the major symbols of Gansu province even the north-west China. The images of the Yellow River in a zigzag form and the two flying “Dunhuang Feitian” in the logo form an ensemble image of the Chinese character “兰” (Lan). On the images of the Yellow River, there is some typical design of Ma Jia Yao culture representing the ancient booming culture of Yellow River watershed, and the color of the background represents the loess plateau of the North-west China. The lingual parts include two points: Lanzhou Tour; Lanzhou as the Center of Tour in North-west China. Available from: <http://www.linbang0769.com/60/n-256.html>. Last accessed date: December 14, 2013. (B) The logo about the image of Lanzhou city was released in 2013. The Yellow River Mother Sculpture is one of the most typical and representative symbols of Lanzhou city, and its image is the center of the logo; the design of Ma Jia Yao culture gives prominence to the characteristics of the culture of Yellow River watershed; the three stripes (in blue, orange and green respectively) symbolize the blue sky, the Yellow River and the loess plateau, and the green mountains of Lanzhou region respectively. The lingual parts means Lanzhou China is the city of the Yellow River. Available from: http://www.gs.xinhuanet.com/news/2013-05/24/c_115888461.htm. Last accessed date: December 14, 2013.

Multimodal Discourse Analysis

The aim of MDA is to take representational, interactive and compositional meanings labeled in the various communicative modes into consideration to analyze how they work together to create a complete discourse or communicative event.

1. Representation can either be narrative, presenting unfolding actions and events, processes of change, transitory spatial arrangements, or conceptual, representing participants in terms of their class, structure or meaning.

2. Interactive meaning is about the relationships among the three components of an image: the designer, the participant, and the viewer. It can be realized by four major factors: contact, distance, attitude and modality, which can work together to create complex and subtle relations between the viewer and the participant.

3. Composition relates the representational and interactive meanings of the image to each other through three interrelated systems: information value, salience, and framing.

(4)

The MDA of visual grammar provides theoretical foundation and study method for the present modality analysis, in which a descriptive-analytical method is adopted.

DISCUSSION

To conduct propaganda of Lanzhou tourism and the city, the local administration adopts various approaches including the above vivid logos, which present the typical information in a general way to help viewers instantly know the general characteristics, charm and representatives of the city.

Representational Meaning

In the representational analysis, Kress and van Leeuwen draw into the concept of “vector” to distinguish narrative and conceptual representations. In the narrative pattern, participants are connected by a vector or vectors and represented as doing something to or for each other, while the conceptual pattern represents participants in terms of their generalized, more or less stable and timeless essence (4).

In the first logo, the typical images include the Yellow River in a zig-zag form and two “Dunhuang Feitian” constituting an ensemble image of the Chinese character “兰”. One Feitian’s arm and the Yellow River intercross to form the most obvious vector, and the ribbons of Feitian also form vectors. The vectors indicate a narrative representation, which presents unfolding actions or events about the city tourism and transitory spatial arrangements. It could be understood as an invitation to this wonderful city through which the Yellow River is running and as an implication that there is something amazing and unique in this region of the loess plateau. At the same time, the ensemble image “兰”, the Chinese characters “兰州”, the seal with the characters “旅游” and the English words “Lanzhou” and “tour” distinguish the logo as a conceptual representation as well. In addition, there are other conceptual elements such as the flowing Yellow

River with the typical design of Ma Jia Yao culture representing the ancient booming culture of Yellow River watershed, the flying Feitian with fluttering ribbons and the bright yellow background representing the loess plateau. All these elements make up the main portion of the whole logo and interconnect with each other in a classificatory, analytical and symbolic way, making the logo full of dynamics, hope, enthusiasm and delight and highlighting the exact topic and meaning of the logo. Therefore, the logo is very typical and appropriate to present the information of Lanzhou city and tourism in northwest China.

The second logo is conceptual without vectors. The main images of concept include the Yellow River, blue sky, green land, the words in both languages and the Yellow River Mother Sculpture. There also exists an ensemble Chinese character “兰”. Three aspects of the conceptual meaning are involved — classificatory: all the above elements are subordinate to the concept “Lanzhou City” or “Lanzhou Tourism”; analytical: each of the elements is the possessive attribute, and the ensemble image “兰”, the character “兰州” and the words “Lanzhou” are the carriers; symbolical: the Yellow River Mother Sculpture is the center of the logo and one of the most typical and representative symbols of the city, the design of Ma Jia Yao culture gives prominence to the characteristics of the culture of Yellow River watershed, the blue sky and green land show that excellent environment is always the beautiful dream that local people have been trying to fulfill with unremitting efforts, and the three stripes (in blue, orange and green respectively) symbolize the blue sky, the Yellow River and the loess plateau, and the green mountains of Lanzhou respectively. So this logo also shows the landforms and the characteristics of the city and fulfills the goal of propagandizing effectively.

Interactive Meaning

Contact

When the participant looks directly at the viewer, or there are eye contacts between them, it is “demand” image; when there is no eye contact, “offer” image (4).

In both logos, the participant is not a living human but quasi-human, there is no eye contact between the participant and potential viewer, and it is taken as an imaginary “contact”, that is, personal relationship between the participant and the viewer does not exist. These images are “offer”, only expressing the meaning of information that provides potential viewer with very general and brief but representative characteristics, symbols and other information about Lanzhou. The verbal mode also “offers” the similar information.

Distance

There are six types of distance between the participant and the viewer: intimate distance, close personal distance, long personal distance, close social distance, long social distance (the whole person shown, and surrounded by space) and public social distance. The different types are the standards for judging the distance between the participant and the viewer in an image (4).

In the logos, the whole bodies of Feitian and the Yellow River Mother Sculpture are shown and surrounded by space, reflecting the long social distance between the participant and the viewer, which indicates that the viewer need to learn about this city better and more thoroughly. It is the case especially for nonlocals, for many of them virtually have some misunderstandings and wrong ideas about the city. Attracted by the logos and the transmitted information, people would like to visit Lanzhou and northwest China, which is the propaganda aim of the logos. Even some local people do not know and understand the city, its culture and its characteristics well, so they could be also attracted by the logos and would like to learn more about their city.

Attitude

Attitude is used to analyze the representation of a subjective image, and perspective is the way in which images bring about relationships between represented participant and the viewer. Horizontal perspective includes frontal angle which makes the viewer feel that he or she is experiencing the image personally or feels what the participant feels and oblique angle which conveys a message that the viewer as a bystander holds an indifferent and unconcerned attitude. On the other hand, vertical perspective involves a view angle of looking down, which represents a forceful position the viewer stands, a view angle of looking up, which shows a forceful position of the participant, and a straight angle which suggests a relatively equal relationship between the participant and the viewer (4).

From horizontal perspective, both of the logos have a frontal angle which shows involvement, that is, the viewer is “involved” with the represented participants, what the viewer sees in the logos is part of the world we are involved in, the viewer could feel that he or she is experiencing the image personally or feels what the participant feels, and the viewer could enjoy and appreciate the beautiful scenery and culture such as the Yellow River running through the city, the characteristics of the landforms, and rich culture represented in Feitian and so on when visiting Lanzhou or being in the region.

From vertical perspective, two logos show different interactive meanings. In the first logo, the viewer has a view angle of looking up at the represented participants Feitian, which shows a forceful position of the participant over the viewer. Feitian, flying in the sky and serving or praising the Buddha and other gods, do not belong to earthly world and have a forceful position in the aspect of art, culture or religion. When visitors go to Dunhuang, they would also look up at the Feitian in the murals on the wall or vault. In addition, the Yellow River is at eye level, which is a straight angle and suggests a relatively equal relationship, that is, the river running

through the city is very close and common to people. In the second logo, the sculpture is at eye level and the viewer has a straight angle, which suggests a relatively equal relationship between them. When visiting the city and appreciating the Yellow River Mother Sculpture, which is one of the landmarks of the city and connotes that the Yellow River has nourished generations of Chinese people, visitors would like to look at it closely and take photos with it, and this shows equal relationship between the participant and the viewer.

Modality

There are eight markers of visual modality, color saturation, color differentiation, color modulation, contextualization, representation, depth, illumination and brightness. Each of these dimensions can be seen as a scale of high, medium or low sensory modality (4).

For the first logo, the hue of image and the background from brown to yellowish is lowly saturated, the black words and characters are of lowest saturation, and the red seal is of high saturation; the color differentiation is not very obvious, but the degree of color modulation is high. For the second logo, the bright colors of blue, yellow and green make it highly saturated, while the white image of the Yellow River Mother Sculpture, the black words and the characters are absent of color; the color differentiation is very obvious with high degree of color modulation. On the other hand, the logos have medium contextualization scale with an articulated but not very detailed background of the Yellow River, the yellow land and the sky in bright light. The detail of representation is reduced and abstracted to much lesser and coarse degree, and the texture is also omitted altogether - the Yellow River, Feitian and the Sculpture are then represented merely by the lines that trace the contour with plain flat mono-color, and other elements are presented just by stripes in different colors in the second logo. As for depth, the first logo, with the zigzag Yellow River below,

the bigger Feitian above and the smaller Feitian in the distance is perspective and has comparatively high modality, while the second logo is not perspective. As for illumination, there is very low scale of shadows and light in the first logo (lowly illuminated), and there is not any in the second one (abstracted from illumination). Finally, brightness values can also contrast to a greater or lesser degree: in the first logo, there is a range of yellow hue from dark brown to yellowish even pale yellow, which is of high scale of brightness; in the second logo, there is no scale of brightness. Above all, the logos have medium sensory modality generally, but the modality of the first one is much higher than the second one.

Compositional Meaning Analysis

Information Value

Information value refers to the placement of elements that endows them with the specific informational values attached to the various “zones” of the image: left and right, top and bottom (the ideal and the real), center and margin (nucleus and subservience) (4).

In the first logo, Feitian is placed on the top as the ideal, and the image of Yellow River is placed at the bottom as the real. The character “Lanzhou Tour” and the ensemble image of “兰” are presented in the center as the nucleus of the information; other elements are in some sense subservient. In the second logo, the Sculpture and the characters “中国兰州” are presented in the center as the nucleus of the propaganda, while other elements are presented as margin or background. In both logos, there are similar valuation between the image and the verbal mode to present the similar valuation.

Salience

Salience is realized by such factors as placement in the foreground or background, relative size, contrasts in tonal value (or color), differences in sharpness, etc. to attract the viewer’s attention to different degrees (4).

In the first logo, the image of Feitian, the river, the ensemble image “兰”, the big character “兰州” and the red seal “旅游” are most salient with big size, sharpness of focus and obvious color contrasts. Both of the two elements Feitian and the Yellow River placed in the foreground are potent cultural and regional symbols and representative. In the second logo, the Sculpture and the characters “中国兰州” are placed in the foreground with relative big size and most salient. As for the general salience on the page, the image is of higher salience with more than half percentage of the logos. These most salient elements are the most eye-catching in the composition, not just because they are placed in the foreground and form the biggest elements in the pictures but also because they are in sharper focus and present the major topic and meaning of the logos.

Framing

Framing refers to the presence or absence of framing devices (realized by elements which create dividing lines, or by actual frame lines) that disconnect or connect elements of the image, signifying that they belong or do not belong together in some sense (4).

In the first logo, there is media-degree-connection between the image elements. Two zigzag lines that form the edges of the Yellow River run through the middle of the picture, and one line is also crossed with one Feitian's arm to show the connection. The blurred line between the image part and the verbal part also show the close connection, and the word “在” and “Lanzhou Tour” are connected closely by the image. The image of

“Feitian”, the Yellow River, and the word “Lanzhou” makes up the major framing of elements. In the second logo, three stripes in different colors form lines, broken lines or shared lines to show not only the differences of the elements but also the connections between them, thus creating a comprehensive meaning of the logos.

CONCLUSION

The two logos about Lanzhou are composed of different modes such as vivid visuals which are the symbols or representatives of the city and very brief verbals which focus on the topic and the propaganda to correspond to the characteristics and ultimate goals of propaganda of logos. The multimodal discourse analysis of logos overcomes the limitations of monolingual methods which ignores the interaction of different semiotic modes and provides a more effective way to create and understand the meaning of such city logos. According to the analysis, we could see multimodality is an effective way to present information about the characteristics of a city in meaning-making process of logos. Through the interaction of these different semiotic elements, the logos express much more abundant information than separate ones. In addition, based on the above analysis, we could also see the first logo is relatively more vivid, informative and dynamic than the second one. ■

Author Contributions

The paper is written by Junbang He. Professor Shunliang Shi is the tutor who offers very earnest tutorial instruction in the work.

Abbreviations

MDA: Multimodal Discourse Analysis

Conflict of Interests

None

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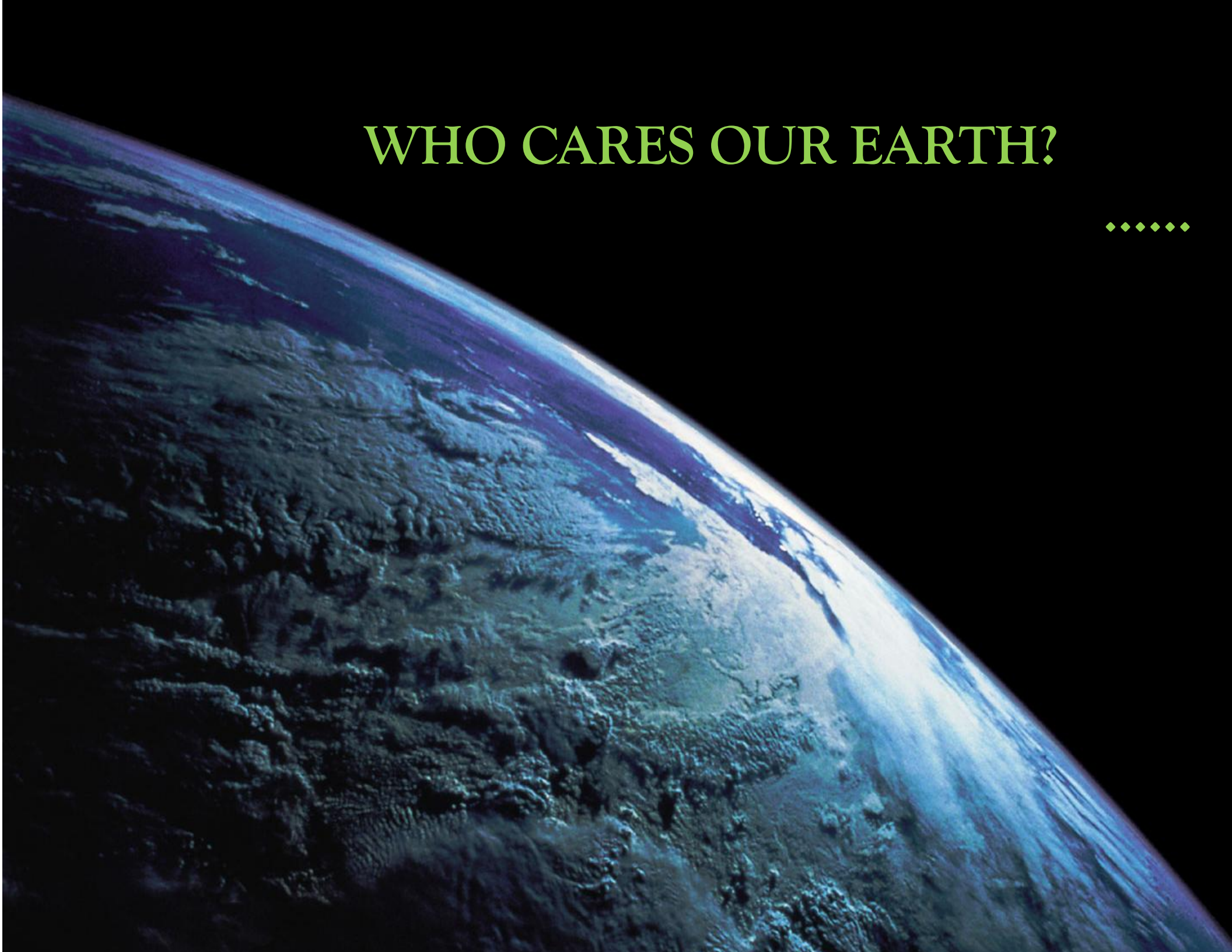
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