

EC PSYCHOLOGY AND PSYCHIATRY

Review Article

Disturbances in the Perception of Spatiality

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Abstract

The analyse of the terminology of space in various fields of nature puts in light that our perceptions of reality are often deceived by numerous technical effects of field. Some unusual examples allow us to explain differently what it is about.

Keywords: Acrophobia; Agoraphobia; Diffraction; Measurand

Introduction

The notion of space is quite complex: we are very familiar with it, and we commonly use its specific terminology for describing specific situations, to the extent that we tend to think that space as well as its vocabulary are parts of nature. The Swiss psychologist Jean Piaget (1896 - 1980) theorized the Primary Effect of Field, according to which perception can be disrupted by the surrounding.

The word "measurand" designates a quantity intended to be measured. We have demonstrated that quantities like a length, a surface, a volume, a speed, a duration, are not measurable as such. We also use direction, estrangement, agoraphobia, perspective, vertigo, refraction, diffraction, acrophobia, feeling of space, to mention but a few, with the certainty that they correspond to realities, although they have no physical existence.

The common uses of the terminology of space and the resulting field effects are illustrated with photographs of three famous ocean liners of the 1950s, with a picture of a sunset in the Bay of Cannes and with a photograph taken in the Sahara desert. We cannot avoid a philosophical questioning of the supposed beauty of nature.

The analyse shows that, even in everyday life, we are betrayed by what we introduced and called Technical Effects of Field.

This unusual approach confirms that space has no materiality.

The direction

The crowd on the north pier of Le Havre harbour is captivated by the beauty of SS UNITED STATES (1951-1969) (Figure 1). They all look in the same direction however "direction" has no physical existence, it's a concept: the real explanation is that the crowd is looking at objects approximately located in the same direction; either the majestic chimneys with their smoke deflectors, or the white waterline, etc.



Figure 1: SS UNITED STATES leaving the port of Le Havre (c. 1953).

The deflectors are smoke path (space) correctors: the correct explanation is that smoke is draughted and therefore prevented from falling on the rear deck (Figure 2 and 4).

The waterline looks like a space indicator: in fact, the waterline is a load indicator and a load distribution indicator. Its position above sea level (Figure 2) indicates that the ocean liner is not fully loaded; on the way back to New York City, she would stop either in Portsmouth or Southampton, for picking up passengers and loading cars.

The length

The length is not measurable as such because it is a concept. One does not measure the length of SS UNITED STATES; instead, one measures what separates her two ends, and the result is called "length of SS UNITED STATES", which was 302m long. She had a huge rear deck with two derricks (Figure 2).



Figure 2: SS UNITED STATES at reduced speed in the fairway is still under the control of the port pilot.

Move in space

The crowd is observing a surprising move in space of a 1951 Packard car. In fact, there is no move "in space" because space has no physical existence: the car is unloaded from SS LIBERTÉ (1945-1962) and placed on Quai Joannès-Couvert at the port of Le Havre in September 1952 (Figure 3).



Figure 3: SS LIBERTÉ: Observe the smoke deflector at the top of the second chimney.

The estrangement

The smoke coming out of chimneys of SS LIBERTÉ (286m) suggests that the ocean liner is gradually moving away. The estrangement is a concept: we are facing a field effect (Figure 4).



Figure 4: SS LIBERTÉ meeting and passing the channel dredger, soon out at sea full speed ahead.

Perspective and vertigo

In "de rerum natura" [1], the Latin philosopher Lucretius (c. 96-55 BCE) describes the perspective effect (Song IV, 429). In the art of painting, the perspective appeared during the first century BCE (common era) on some frescoes of Pompei and it spread worldwide during the Renaissance. The hull of SS ÎLE-DE-FRANCE (1927-1959), 241 meters long, makes the stern looks much smaller than the bow (Figure 5): it's a field effect.



Figure 5: SS ÎLE-DE-FRANCE in dry dock at Le Havre in 1952.

The photo is shot from the edge of the dry dock whose depth makes you dizzy. Vertigo is another field effect because it has no physical existence. But most of the fear was that we were walking in a no-go area.

The agoraphobia

From the Greek "agora" (large place) and "phobos" (fear) [2]. Agoraphobia is a fear of space, although space has no materiality. The author at the bottom of the dry dock does not have agoraphobia syndrome, despite the gigantism of SS ÎLE-DE-FRANCE and the depth of the dry dock (Figure 6).



Figure 6: The impressive bow of the ocean liner will be protected by the huge tree trunks bumper when the water level reaches her white waterline.

Agoraphobia is caused by a field effect. At this moment, the only fear was to be spotted and caught by the police.

The refraction of light

Lucretius mentions "refringo" (break) (Song IV, 440). The refraction does not exist; in fact the sunlight is decomposed by the water contained by the clouds into red, orange, yellow, green, blue, indigo and violet lights; it's the same phenomenon as rainbows. The elementary colors depend on where the observer stands (Figure 7). The effect results from a trick played by nature (lusus naturae): a technical effect of field.



Figure 7: Sunset behind the Estérel Massif taken from the Croisette, contrasting with the Led lights on the palm trees in December 2018.

The light diffraction

The diffraction is an interaction between light and matter. The light is deflected, so that we can see an object, even when it is hidden by another object. This phenomenon happens quite often in astrophysics. Favorable weather conditions allow for seeing Corsican mountainous terrain located about 200 km off Cannes [3]. Without the light diffraction by the terrestrial surface, the mirage would not happen: its is a spectacular technical effect of field (Figure 8).



Figure 8: A sunrise behind Corsica island in January 2013.

The feeling of space and acrophobia

At night, in the middle of the Sahara desert, the atmosphere is free of light pollution and so pure, that we feel like we are watching the immensity of space; an impression which is reinforced by the absolute silence that reigns. In fact we see stars instead of space. We have had the same feeling when we reached the top of Assekrem (2790m) in the Hoggar massif in February 1973: we could see mountains and sand mist in the background, but not space (Figure 9). We were not affected by acrophobia, from the Greek "akros" (at the extremity) which is fear of high places. They both are syndromes of field effects.



Figure 9: We see mountains and sand mist, not space.

The ruthlessness of nature

In the desert, life is poorly developed because of the lack of water on the soil surface. The rare rains see plants of all kinds as well as various insects appear and rush making seeds and eggs. The apparent life is mercilessly annihilated for months or even years, as soon as the drought returns (Figure 9).

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When diving at sea (Figure 7), one is captivated by the diversity and beauty of the fish which seem to swim peacefully among the grasses and algae. In fact, each fish is seeking prey smaller than itself, in constant fear of being itself devoured by a fish larger than it self.

The "struggle for life", a law of the English biologist Charles Darwin (1809-1882), brings a correction to a reality that is distorded by field effects: contrary to our spontaneous and therefore superficial feeling, nature is not so beautiful and harmonious.

Conclusion

We have demonstrated that space and its specific terminology have no physical properties. It is crucial to remember that we don't measure a length and that we don't see space [4]. Of course these concepts are commonly used for describing, evaluating and figuring out physical realities observed in nature. These clever inventions of thought should not fall prey to technical effects of field, especially when studying the concept of space.

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