

Souzousei wa Dokokara Yatte Kuruka [Where Does Creativity Come From]? by Yukio Pegio Gunji. Tokyo, Japan: Chikumashobo, 2023, 288 pages, JPY1,034 paperback [in Japanese].

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Cognitive science uses artificial intelligence to model the human mind. In this book, Yukio Pegio Gunji, a Japanese theoretical biologist, proposes the notion of “traumatic structure” to capture human creativity. He suggests that creativity is difficult to model with AI because it comes from “the outside.” According to Gunji, cognitive scientists like Boden (2004) view creativity merely as a manipulation of data, and fail to capture anything that comes from the outside. He compares the outside to what Wittgenstein (1922/1998) stated “we cannot speak of.” The outside is also compared to what speculative realism (Brassier et al., 2007) posits lies outside the correlation between thinking and being. Gunji not only speaks of the outside but also proposes a notion that makes us accessible to it. The notion of traumatic structure is proposed to capture creativity that comes from the outside.

The traumatic structure is defined as a pair of binary oppositions. People with trauma often feel like perpetrators even though they are victims, which can sometimes lead to their healing. Gunji suggests that this healing experience arises through a pair of binary oppositions: feelings of victims/perpetrators and positions of selves/others. The term “traumatic structure” is named after this healing experience. He attempts to show that human creativity arises through a traumatic structure by illustrating various cases from art, literature, culture, and science. In this review, I will first cite two examples from science and then two examples from culture. (1) Before Alfred Wegener developed the theory of continental drift in the early twentieth century, the geosyncline theory dominated geology. It posits that in a seafloor depression called “syncline,” sediment accumulates, and once a certain amount has built up, it is uplifted to form a mountain. The continental drift theory, which is the foundation of plate tectonics, arose through the traumatic structure of vertical/horizontal movements and uplift/drift. (2) When fish swim

in the ocean, their shadows appear dark when viewed from below due to sunlight coming from above the water. Therefore, if a predator is positioned deeper than they are, the fish can be easily spotted. The bioluminescent organs on the undersides of some fish emit light that matches the surrounding brightness, making it harder for them to be seen. This phenomenon is called “counter-lightning.” In many cases, the bioluminescent organs of animals are used to attract or communicate with mates. The researcher who discovered this phenomenon tried to understand how glowing only downward, rather than all around, could be linked to being prominent to mates, but found that it is related to being conspicuous to predators. The concept of counter-lightning arose through the traumatic structure of glowing all around/only downward and being prominent/conspicuous. (3) Yoshihiko, one of the popular wrestlers in DDT Pro-Wrestling, is just a blow-up doll. A human wrestler attacks Yoshihiko, but at the same time, he acts as if he is being attacked by Yoshihiko. Yoshihiko arose through the traumatic structure of a serious match/play and a human/doll. (4) In an affair with a prostitute, being too demanding or too indifferent can lead to the collapse of the relationship. Such an affair arises through the traumatic structure of demands/indifference and fulfillment/collapse.

I have also experienced my idea arising through a traumatic structure. In a previous paper (Kiritani, 2012), I argued that the meaning of life is survival and reproduction. In contrast, Wittgenstein (1922/1998) suggested that there is no meaning of life, since even if we survive forever, this eternal life is as enigmatic as our present life. I have recently proposed a solution to this antinomy in the following way:

Let us distinguish between *types* (abstract concepts) and *tokens* (individual instances). From the point of view of type, there is no meaning of life. We eat or have sex for survival or reproduction. But for what do we survive or reproduce? Life has no meaning from the viewpoint of type. However, from the point of view of token, there is a meaning of life. We survive now for our survival in the future. We reproduce for our children’s reproduction. Life has a meaning from the viewpoint of token. The former is *type nihilism*, while the latter is *token realism* about the meaning of life. (Kiritani, 2024)

This solution seems to have arisen through the traumatic structure of the type/token distinction and being meaningful/meaningless. The antinomy of life being meaningful and meaningless at once has been solved by distinguishing between types and tokens.

This book is challenging, as Gunji contrasts his ideas not only with the AI modeling of creativity as mentioned above, but also with other psychological or biological theories related to creativity, such as affordance and autopoiesis. Furthermore, his ideas are compared with contemporary movements in philosophy, including postmodernism and speculative realism. Although the book is written

in Japanese, Gunji presents the notion of traumatic structure and its mathematical model in English (Gunji and Nakamura, 2022).

References

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