

Vulnerability is a Talent in the Ecological Crisis



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Abstract Due to their autopoietic closure, the biosphere and the social communication systems are alien to each other. This impairs the societal handling of the ecological crisis as Niklas Luhmann has observed. Revisiting his social systems theory, the present article addresses the resonance of environmental problems in social systems, the temptation and danger of resorting to anxiety communication, and the chances provided by violations for interfering with the world beyond the system borders.

Keywords Autopoiesis · Systems theory · Ecological communication · Anxiety · Luhmann

1 Introduction

About a decade before James Lovelock published the “Gaia” [3] concept, Stansilav Lem already presented the idea of a being that covers a whole planet in his novel “Solaris” [2]. Unlike Gaia, however, Lem’s living planet does not yield to a rational analysis and has a most disconcerting effect on human observers. Penetrating into the realm of the planet, they cannot understand its processes and utterances. Instead, they themselves experience the most serious irritations and penetrations of their psychosocial existence.

The present paper follows the idea of “Solaris” and starts from the perspective that the biosphere, on the one hand, and the culture, on the other hand, may be fundamentally alien to each other, at least in their origins. For an illustration of that foreignness, consider the relation of the artificial world deployed in a modern computer game to the world in which that computer operates. Incidentally, this relation also has been dealt with in fiction already by Galouye [1], who published his novel “Simulacron-3” 3 years after Lem’s “Solaris.” The world within the computer knows nothing of the energetic and algorithmic processes that generate it, and conversely,

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these processes in the outside world are indifferent with regard to the meanings and contexts established within the computer world. It is not very likely that the inhabitants of the computer world will ever derive a consistent concept of the generating world. Irritations, violations, and unexplainable deformations of the apparent reality may initiate the development of such a concept, and once on the funnel, the inhabitants of the computer world may possibly try to systematically seek out or provoke similar irritations in order to test and improve their concept.

2 Luhmann's Analysis

Of course, such thoughts have precursors in the history of philosophy since Plato's allegory of the cave. Constructivist systems theory is considered here as one of the more recent generalizing approaches in this tract. According to this theory, the system of the biosphere and the social system are categorically different at the level of the autopoietic¹ operations with which the systems maintain and continue themselves. In the case of society, these operations are communications, which relate to each other. They function as distinctions along system-specific expectations. To be connectable ("anschlussfähig" in German) within the social system, communications about the mechanisms and phenomena of the natural environment do not need to be precise or realistic. Historically, even primitive or magical distinctions proved to be connectable. And today most communications are still rather undifferentiated: "What we know about the stratosphere is similar to what Plato knows about Atlantis: one has heard of it" [6]; citations translated by the author). It is true that in modern societies functionally differentiated subsystems have developed, such as politics, law, economics, or science. But even these subsystems may be indolent to hazards arising from the natural environment, because their autopoietic operations in form of specific political, juridical, economic, or scientific communications are not informed by such hazards, as long as the hazards are not translated (or even not translatable) into the communication code of the specific subsystems. What has no price does not exist for the economy, and the legal system is not triggered when the

¹ "Autopoiesis" is the recursive self-generation and maintenance of systems. "The product of their organization (is) themselves, that is, there is no separation between the producer and the product. The being and the doing of an autopoietic unit are inseparable, which constitutes its specific type of organization [7]." Such systems, therefore, consist of the continuous operations that keep them running. A living system exists as its specific, self-regulating, and self-generating organization of biochemical operations, but not as the substances and structures of the internal or external environment that are built up and broken down in the process. What an autopoietic system "knows" about its environment is identical to the self-constructed organization by which it distinguishes itself from the environment. As accidental as this distinction has arisen, as selective is a system's "knowledge" of its environment. According to Nikolas Luhmann, the autopoiesis of social systems runs through communications. The specific nature of such communication determines the perceptions and constructions of reality in social subsystems. Science does not judge what is lawful, and justice does not decide what is scientifically right.

principle of polluter liability fails in complex environmental circumstances as Niklas Luhmann has emphasized [4–6].

Already in 1986, the year of the Chernobyl reactor accident and the first SPIEGEL cover-picture depicting the “climate catastrophe,” Luhmann [4] analyzed from the perspective of systems theory whether social systems are able to meet the ecological challenge, considering that “the primary goal of autopoietic systems” is the “continuation of autopoiesis without regard to the environment.” because “the next (autopoietic) step typically is more important than the consideration of a future that will not be reached by a system if its autopoiesis is not continued” [4]; citations translated by the author). According to Luhmann, society can “only react to environmental problems under the very limited conditions of its own modes of communication. This also applies to environmental problems that it has itself triggered.” On the one hand, Luhmann saw the possibility of insufficient “resonance,” so that society remains inattentive to the ecological harms. On the other hand, he saw the danger that ecologically activated politics might generate too much “resonance” in other subsystems such as law or economics, thereby impairing their autopoiesis, that is, function so that these subsystems are even less able to solve the problems posed to them by the political system. “Nothing hampers the politicians, as one can read in the newspapers, to demand and to promise an ecological adaptation of the economy; they are not obliged to think and act economically since they do not operate within the system that ultimately fails to meet their demands.” As a result of such failure, anxiety communications (“Angstkommunikationen” in German) may become dominant with inflationary, selective, and small-scale moralizations, because “[anxiety] is the principle that does not fail when all principles fail.” Then, there is hardly a way back since “scientific attempts to explain the complicated structure of risk and safety issues just fuels anxiety with new alarms.”

3 Conclusion

One generation after Luhmann’s book on “ecological communication,” it is still the question of whether and how the extreme he pointed out can be avoided. Specifically, efforts such as a workshop entitled “Violated Earth, Violent Earth” must ask whether they efficiently shake up a public that still perhaps is not sufficiently alarmed or whether they succumb already to the temptation of too much anxiety communication. The latter would be counterproductive. Instead, such efforts must have the goal to offer ecological communications to society’s functional subsystems so that these subsystems successfully include the environmental topics in their respective autopoieses.

At the most abstract level, the term “violation” that sounds in the conference title, can be regarded as a system-theoretical concept. For Luhmann, “violations” of the world take place already by the communicated distinctions/observations with which systems demarcate themselves autopoietically, and on which the world reacts with distinction-typical irritations: “It must be assumed that the world (whatever that is)

tolerates the making of distinctions and that depending on the specific distinction by which it is violated, it irritates differentially the observations and descriptions evoked thereby. All such irritation of observation is therefore always relative to the distinction, which underlies the observation. The world thus appears as involved invisibility; or as an indication that it can be inferred only recursively" [5]; citations translated by the author). From this perspective, the circle of "violation" and "violent reaction," as stated in the title of the workshop, would be linked to the process of world injury and reactive irritation of society by the world, which society has always used to infer the world. Even that title can then be understood as a scientific communication, and not as a communication of anxiety.

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