

# AUTOPOIESIS AND THE ANTICIPATION OF SECURITY

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**Abstract.** *The article mainly refers to the usage of poiesis in the field of security as a robust way of building foresight. One can choose to use autopoiesis in order to better understand statal entities. This premise brings some important conclusions with respect to the anticipation of security that could be used in planning and building prosperity. The article concludes that the modelling of the future in the field of security could have promising results by using autopoiesis.*

**Keywords:** *poiesis, correlations, foresight, anticipation*

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## 1. INTRODUCTION

The international iconic events of the last ten years have demonstrated us that the analysts and the practitioners of security failed to anticipate how international order will change. From this point of view, there is a prominent necessity of cultivating the prospective spirit into security studies. As the time demonstrated, security cannot only be a consequence of some reactive attitudes; on the contrary, it must follow an anticipatory direction [1-2]. Working with possible futures offers a real challenge, helping us to identify paths for avoiding negative possibilities and fulfilling positive agreements.

But in international security practice, at international level, powerful states refined themselves a strong know-how over the anticipation and foresight with the purpose of targeting and avoiding the negative elements of the unpredictable. The existence into a world of networks and reciprocal influences in which your own actions or other actors' actions can affect your own security, pushed some stake-holders to create many work instruments, models and mechanisms for predicting security. Organizations as *National Intelligence Council, Rand Corporation, Club of Rome, United Nations or European Union* developed multiple scenarios trying to get public attention and influence the political leadership over the decisions related to the security agenda [3-5]. But even though those think-thanks had such decisions, the institutional agenda of security seldom changed over the impact of the scientific research. Even though the technological evolution and the cultivation of a well refined know-how, the national security actors and stake-holders did not succeed to better prepare for the unknown, failing to anticipate big events like Brexit, Ukrainian Crise or Syrian Dilemma of War.

## 2. ON AUTOPOIESIS

In our view, the modelling of the future in the field of security studies started on an incomplete assumption of security that somehow did not achieved the wanted result. This happened mainly because of the lack of systemic view over the statal entities. From our point of view, a powerfull

tool of anticipation could have as its starting point the systemic perspective of poiesis.

Etimologically, *poiesis* comes from Ancient Greek and is translated through *to do*, as Maturana & Varela argue [6]. At its first beginnings, the term defined the process of becoming, transforming and perpetuating systems and nature. As expected, Aristotle and Plato studied the meaning of poiesis in conjunction with praxis or physis, as Parry observed [7-8]. The term was seen as the link between matter and time, that strengthen the relations between the whole and the subsystems, as Schatten emphasised [9]. Poiesis as seen by Aristotle, tries to capture the passage from something hidden towards the act of creation. Thus, poiesis is shaping the relation between life and death. Dreyfuss and Kelly define poiesis as the ability of discerning and choosing one of the meanings already available [10].

Maturana and Varela tried to extend the meaning of poiesis, as seen in the '80s. The two authors identified two main forms of poiesis (1) autopoiesis and (2) alopoiesis. They started from the premise that autopoiesis defines a system capable of reproducing and self-sustaining itself [6]. An autopoietic system contrasts with an alopoietic one. The last system produces certain elements different from itself [11]. Therefore, the autopoietic systems are (1) autonomous, (2) self-referential and (3) self-generated. This functional perspective describes the autopoietic system as an opened system [6]. Therefore, the system has a certain *structural coupling* – according to which all systems have plastic unities. When the system changes, a symbiosis between structural association and structural change appears, as Schatten argues [9]. In 1981, Maturana described the autopoietic system as a network of production processes (mainly targeting transformation and destruction) of the components that are divided into the following two categories [11]:

(1) Components that continuously regenerate and realize the process that produced them, and

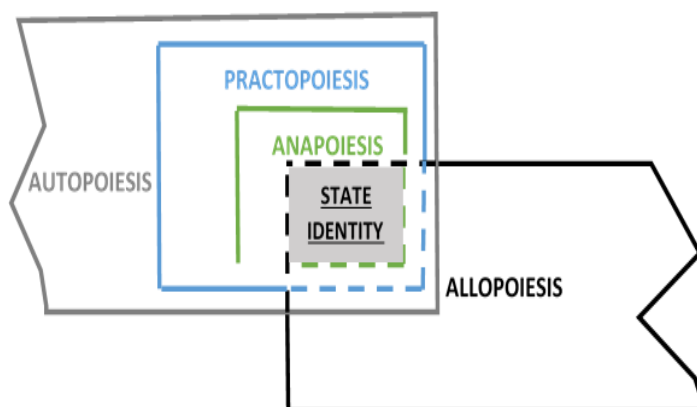
(2) Components that are a concrete unity. Niklas Luhman applied these thing to social systems. N. Luhman built a new theory of systems, based on the relation between *identity* and *difference*. In N. Luhmann's view, autopoiesis defines both the internal operations of a self-referential system, as well as the results of these processes. He considers that autopoietic systems are autonomous, individual, are limited by the operations of the system in the autoreproduction process and have no input or output.

To this tough, the operations made by autopoietic systems compensate the perturbations on the external environment, but the mechanisms used in this scope remains hidden to the observer. One of the forms of manifestation of autopoietic theory is represented by *practopoiesis* (meaning the system that creates actions). The central concept of practopoiesis is the *plasticity* of the system that develops on three properties

(functions) of the system [12]: (1) *monitor and act*, (2) *poietic hierarchy* and (3) *eco-feedback*. Those three elements are molded through the *practopoietic* traverse (traverses) that adjusts and adapt the system's components in case of emergency [12]. The traverse links together the system's specificity levels. Consequently, those levels give to the system the capacity to reconstruct the knowledge assimilated at a certain moment in the past T and use it in the present depending on the emergency of the situation creating a new approach named *anapoiesis*. From our point, this approach is considered here to be a necessary feature for the correct interpretation of state and security, due to the direct link between these concepts and the human being.

As upper described, the poiesis succeeds to anticipate the change in the systems from a certain *state A* to a new *state B*, determined by the performance of the *anapoietic* characteristic. Therefore, we think that poiesis can be used to anticipate the security of an entity, starting from the premise that *a country could be defined as an autopoietic system with alopoietic subsystems*. The auto and alo symbiosis gains momentum by a *practopoietic approach*. This conducts the construction of security through proactivity, being a solution of integrating all subsystems by a common action and by reinterpreting knowledge, as stated by the *anapoietic* feature and described in the figure one.

**Fig. 1** Poiesis and its influence over the state identity.



The statal autopoietic interpretation leads to the identification of the following elements with respect to the anticipation of security:

1. To ensure the security of an autopoietic system, its *identity must* be conserved, based on a *dynamic balance* between a series of internal and external conditions.
2. A resilient approach must be shaped in order to complete the foresight products.
3. In order to better anticipate, *monitor and act function* has to be robust and based on a solid *anapoietic* characteristic of the statal entity.
4. Monitor and act must anticipate both the possible conditions of the entity and its identity, but also the external influencing factors. Therefore, an intersection must be drawn between how it is possible to be (possible scenarios) and how do we want to be (wanted scenarios).
5. The eco feed-back must bind and link the monitor and act with the reality. Therefore, the possible scenarios and the wanted scenarios will intersect the real scenario.
6. A hierarchy of risks and threats must be shaped in order to improve the monitor and act function. The *risk prediction and ranking* represents a practical way of assuring success to the anticipatory mechanism. Particularly, in the new security studies approaches, the risk became a more suitable solution for describing the post-national era and its transnational threats [13]. The state of art shows that authors rather have been preoccupied of how emergence and resilience occurs in security and the impact of the unknown over the entities than on anticipating risks [14]. Using risk in security studies is becoming a new shift in security planning

that provides a base for implementing future-related-decisions [13].

7. A multitude of influencing factors affects the future and the success of prediction. This is why a multi-domain approach must be shaped.

8. A We-Wi approach should be build (Weak Signal discovery and Wild Card identification). The security foresight has a peculiarity: it has to obtain performant research tools while relating to the will of man and operating in uncertainty. Therefore, an encountered difficulty is dealing with the impossibility of maximum accuracy (meaning there is no perfect model). From our point of view, a solution for this difficulty might be using models and instruments that could take into account the birth of the discreet events and the weak signals interpretation (WI-WE Approach) and the cultivation of the antifragility, as N. Taleb argues [15-16]. Although the future studies methodologies are highly performant, there is a probability that the security to be influenced by the appearance of some unpredictable events [15-16]. The black swans can have major effects on reorganizing some domains and over international trends.

9. A foresight maturity model must be implemented. The monitor and act might fail to anticipate correctly future tendencies and trends; in future studies there is an actual debate regarding the fact that foresight products are validated only by time passing [17]. That means that one has no possibility of knowing what the real rate of success of the mechanism is. In order to manage this risk's consequences, a maturity scale must be shaped in the eco feed back function. This maturity scale has to prevent false assumption and wrong fundamental products. Nowadays, a maturity scale

represents one of the most appreciated and complete way of making anticipation stronger

10. *Opportunities must be anticipated, identified and fructificated* to maintain the state identity. The poiesis brings a new theme in studying security – the fructification of opportunities. The idea of fructification of the security opportunities and their transformation is a topic of interest which could be managed to make some planning security directives. In this approach, we could use opportunities in order to give practical paths for increasing security.

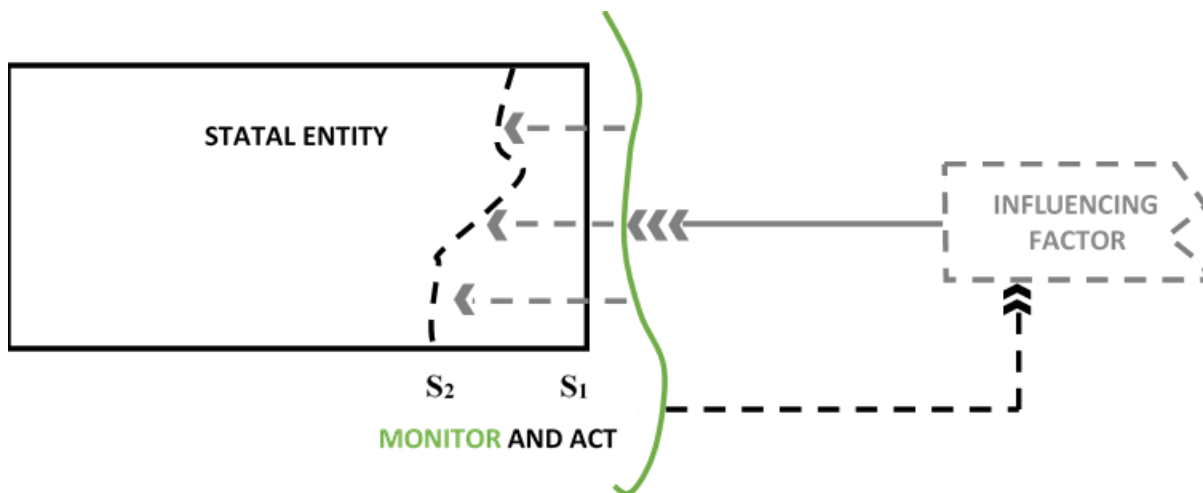
### 3. Conclusions

The main objective of our research has been to identify certain elements of content for using the idea of poiesis in anticipating security of a statal entity. We started from the assumption that only an approach stemming from the self-reflected image of security from reality can prove that our intention is successful. Thus, in this article we have offered the frame in order to build such an approach starting from

applying poiesis to security with the purpose of identifying moments of creation, of evolution, of development, of change and balance that a statal entity develop. We found out that the state is a *sui-generis* system of an (auto)poietic type that has *alopoietic* subsystems. The most usefull approach of the autopoietic statal system is the *practopoietic* one (as the statal entity constructs its development and security on the basis of its actions and its effects). From the security point of view, the performance of the anticipation and foresight can be obtained by developing the *anapoietical feature* (as the subsystems of a country reinterpret its data). The analysis of the state as an autopoietic system has resulted in at ten *food-for-thought-conclusions* and proposals that are crucially important for obtaining a well-balanced model of foresight.

Those conclusions are shaping the relation that forms between the statal entities and the influencing factors, as seen in figure no 2.

Fig. 2 Poiesis and the monitor and act function



We believe that using the aforementioned elements represents the *sine-quo-non*-starting point of the systematic understanding of security and foresight, beginning with the organizational metaphors as Morgan sustains [18]. By applying the concept of *poiesis*, we can shape the development and evolution of the statal entities for generating the possible scenarios that could create long-term social development.

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