

## Human development XVIII: A theory for immune system regulation (the “self-nonsel self discrimination”)

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### Abstract

The immune system is the most important defence against dangerous attack from the outside world and a strong immune response is necessary for a human to stay healthy. In this paper the immunological self-nonsel self recognition is discussed from the view of the holistic paradigm. The biological immunological self-nonsel self discrimination is discussed in context to the mental, consious self-nonsel self discrimination and the possible informational connections between these two levels are discussed. Immunological self-nonsel self discrimination and the non-genetic somatic diseases is discussed and we hypothesize that these diseases could be a consequence of incorrectly adjusted immunological self-nonsel self discrimination due to unsolved emotional, sexual and existential problems on the consious, organismic level.

**Keywords:** Immunology, self-nonsel self discrimination, holistic biology, theoretical biology, clinical holistic medicine, public health, human development.

### Introduction

A key problem in immuno-regulation today is the self-nonsel self discrimination, characterized by the ability of the organism to react toward the nonself-antigens and to avoid to react against self-antigens. By the 1970s it had become increasingly clear, that the immuno regulation was taking place at a systemic level. At that time, however, there was no general conceptual handling of biological systems at a systemic level. The existing cybernetic analyses were summarized as a network of interactions. A number of network theories appeared to describe biological systems, e.g. network theories of gene expression in eukaryotes (1), for the function of the cerebellum (2), and later also for the function of the cerebrum (3,4).

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However, the Danish immunologist Niels Kaj Jerne (1911-1994) (5) developed an immunological network model trying to explain the capability of a body to discriminate between organismic self and nonself through its immune system (5). We have discussed Jerne's immunological network model in Ventegodt et al (6) and came to the conclusion that Jerne's network was not able to explain the crucial immunological self-nonsel self discrimination essential for a body to stay fit and survive, and for people with non-genetic, somatic diseases, to be able to overcome their illnesses and stay fit. Therefore we, in this paper, give our explanation of how the immune system can be able to discriminate between self and nonself in the human body. We discuss the immunological self-nonsel self discrimination in the view of the holistic paradigm (7-13).

Because of the very complicated mechanism behind the immunological self-nonsel self discrimination, there have been some attempts to explain this mechanism. But no model proposed in the past has been sufficient enough to be able to explain such mechanisms in a satisfactory way. On the other hand, we think the holistic paradigm is able to give scientists a tool to explain the immunological self-nonsel self discrimination in a more satisfactory way than the past models, because it predicts an interaction between the psychical level (through the consciousness and the intent), and the immunological-systemic level. In this paper we will discuss the immunological self-nonsel self discrimination and its interaction with the mental self-nonsel self discrimination that following the holistic paradigm are a consequence of the interaction between the intent and the systemic fractal levels of a human body, and thereby, are under tight control from the super orbital of the individual human being (8).

### *Self-nonsel self discrimination of the human wholeness*

Morphogenetic analyses show that biological system function like sensitive control systems, which naturally have the ability to evaluate the placement of the cells and correct this, if it is wrong. This ability of biological systems is the foundation of the self-nonsel self discrimination.

Psycho-neuro-immunology is a rather new discipline. It aims to expounding the control of the psyche through the immune system and brain. Self-nonsel self discrimination is a crucial point of this control. Besides the morphological self-nonsel self discrimination, this new science deals with immunological-systemic self-nonsel self discrimination and mental self-nonsel self discrimination. The psychoneuroimmunologists believe the immune defence of the body can be conditioned in a pavlovian way, because the mental self-nonsel self discrimination is able to influence the immunological-systemic self-nonsel self discrimination. These two kinds of self-nonsel self discrimination are only seen as the specific expressions of the self-nonsel self discrimination of the organism pertaining to the brain and the immune system respectively, explaining the close affinity between these two different ways of discrimination.

### *The immunological-systemic self-nonsel self discrimination is governed by the biological information carried by the quantum field of the organism (the "super orbital")*

The super orbital is united by all quantum chemical energies of a body and following the holistic paradigm it is the source of the consciousness and thereby of the intention (8). The super orbital are following the holistic paradigm governing everything in a biological body that demands an energetic source, including all biochemical and biophysical functions (8). Following the holistic paradigm this means that the immunological-systemic self-nonsel self discrimination is tuned by the super orbital /read consciousness (8).

The intention that is sourced from the super orbital interacts with the energies of positional information of the fractal levels that exists in a human body (8). These fractal levels (7) represent the different levels of the building plane of the body as e.g. the cells, the organs (build by the cells), the tissues (gathered by the organs) and the complete organic body (gathered by the tissues). The immunological-systemic self-nonsel self discrimination is directed through the interaction between the intention and the systemic fractal levels (meaning all the fractal levels represented in the body).

The consciousness that sources the intention is also the source of the mind and the psyche. The psyche is representing the mental self-nonsel self discrimination. Because of the psychological relation between the consciousness, the intension, the mind and the psyche, and thereby the clear connection between the intension and the positional information of the systemic fractal levels of the human body, there is also a connection between the mental self-nonsel self discrimination and the immunological-systemic self-nonsel self discrimination that interacts in a united co-operation to fine tune the body to be fit and capable of survival.

### *The interaction between the psychical- and the immunological self-nonsel self discrimination*

Following the holistic paradigm the interaction between the physical body and the consciousness is very tight coupled. This gives the individual human being the possibility through his consciousness and his intention (9) to govern the positional information (10,11) of the systemic fractal levels (7) in a way so that he is able to control the coordination between the mental self-nonsel self discrimination and the immunological-systemic self-nonsel self discrimination. This means that these two kinds of self-nonsel self discrimination perform a very close interaction between these two different ways of the human body and mind to discriminate between itself and the outside world. How effective this discrimination is depends on the interaction between the intention and the systemic fractal levels (8). This interaction makes the holistic paradigm very powerful, because it makes it possible for the individual human being to adjust his immune system after his immediate psychological state. Following the holistic paradigm this means that the interaction between the intention and the positional information of the systemic fractal levels also are directly dependent of the individual human being's immediate psychically state. Thereby, the human self-nonsel self discrimination becomes an important part of the united system that controls the most important mechanisms leading to fitness and survival, namely human self-nonsel self discrimination and adult human metamorphosis (12,13), but the self-nonsel self discrimination can also lead to decay, self

destruction and dead, because a sick mind can direct a human being's immune system to attack his own body. Therefore, it is of an immensely importance for a human being to be able to fine tune his immunological self-nonsel self discrimination to be as optimal as possible, because only in this way he will be able to maintain the appropriate fitness necessary for survival, the main function of the evolution (12).

### *Immunological self-nonsel self discrimination and evolution*

Without the capability of being able to fine tune the immunological self-nonsel self discrimination the human being would probably never have been created. We think this is the case, because by this capability the immunological-systemic self-nonsel self discrimination, in a way, side by side with the naturally selection proposed by Charles Darwin (14) and the "metamorphous top down" evolution described by Hermansen et al (12) is responsible for the evolutionary mechanisms that leads towards fitness and survival and probably towards further evolutionary development of the human being (12). By this, the immunological-systemic self-nonsel self discrimination becomes a key function of human fitness and survival, but also a key function of the evolution.

The "metamorphous top down" evolution, as mentioned in Hermansen et al (12), is coupled to adult human metamorphosis (12,13), because the last one is a reminiscent of the first (12). Following the holistic paradigm, this means that the interaction between the immunological-systemic self-nonsel self discrimination and the adult human metamorphosis, in the human body, both have the mission of getting the individual human being capable of staying fit for fight and capable of survival, and to cooperate to insure the farther evolution of the human being.

### *The connection between self-nonsel self discrimination and somatic diseases*

Immunology has been a scientific discipline for about 120 years. According to Niels Jerne it has been developed through a number of phases, each based on

specific ideas (see table 1). It is a plausible hypothesis that choices of self-nonsel self discrimination throughout life are the cause of such diseases. If this is the case the elucidation of the mechanisms will provide both a therapy and a generally preventive medicine for these diseases.

Of cause it is not yet possible to understand the fundamental mechanisms behind immunological self-nonsel self discrimination. However, following the holistic paradigm it is given that the intention has an essential influence on the immunological self-nonsel self discrimination, and thereby that the consciousness is deeply involved in the human health. A badly intention will lead to malfunction of the body’s building plane and structures (8) and give the immune response, and capability to distinguish between self and nonself, bad conditions for optimal activity, while a good intention will involve a fit and sound body capable of survival. In such a body the conditions for the immunological self-nonsel self discrimination are optimal and capable of helping the body to stay fit. Such a body involves a kind of positive feed back mechanism, where a more fit body makes the conditions for the self-nonsel self better. This makes an even fitter body etc. On the other hand a bad intention involves a kind of negative feed back. Such persons

that involve a negative feedback are very vulnerable to attack from bacteria, vira and other parasites, and thereby the non-genetic, somatic diseases often confront them. However, by the help of a therapist such persons can reverse a negative feed back to a positive feed back and by this activate the adult human metamorphosis (12,13) and strengthen the immunological self-nonsel self discrimination leading to fitness and survival.

Of cause such mechanisms are much more complicated then this. For instance, for humans in a negative feed back cycle the etiology of the non-genetic, non-traumatic somatic diseases probably can be explained by too weak or too strong a self-nonsel self discrimination (see table 2) and why the choices of the self-nonsel self discrimination could be the cause of somatic diseases. If this is the case, it will provide both a therapy and a generally preventive medicine against such diseases. Therefore it is most important to focus the future research on such problems and realize that a better understanding of the self-nonsel self discrimination could be the key to a better health. Such ideas are the general subject of this serial of papers (15-17).

**Table 1. Development of immunological ideas according to Jerne (5)**

<b>Aims</b>	<b>Periods</b>	<b>Pioneers /Types of theory</b>	<b>Notions</b>
<b>Application</b>	<b>1870-1890</b>	<b>Pasteur Metchnikoff</b>	<b>Immunization Phagocytosis</b>
<b>Description</b>	<b>1890-1910</b>	<b>Bering Ehrlich</b>	<b>Antibodies Cell receptors</b>
	<b>1910-1930</b>	<b>Bordet Landsteiner</b>	<b>Specificity Haptens</b>
<b>Mechanisms</b>	<b>1930-1950</b>	<b>Sub-cellular</b>	<b>Antibody synthesis Antigen template</b>
	<b>1950-1970</b>	<b>Cellular</b>	<b>Selection Clones</b>
<b>System analysis</b>	<b>1970-1990</b>	<b>Multi-cellular</b>	<b>Network Cooperation and suppression</b>

**Table 2. Results of imbalance in the self-nonsel self discrimination**

<b>Origin of stimulus</b>	<b>Too low a discrimination</b>	<b>Too high a discrimination</b>
<b>Outer stimulus</b>	<b>Infection</b>	<b>Hyperreactivity</b>
<b>Inner stimulus</b>	<b>Neoplasm</b>	<b>Autoimmunity</b>

## Discussion

In our quest for a new understanding of the mysterious connection between life, matter and consciousness (6-13,15-17), we have now turned our interest towards the immune system. The structure held responsible for the structure and quality of human immune response is called the “immune system” but the problem is that it might not be a separate organ in the same way as the kidney or brain, but a much more integrated cell population completely depending on the state and informational conditions of the local tissue. Our motivation for the exploration of the immune system is our finding that quality of life, health and ability primarily is determined by our consciousness (18). This discovery has led us to the interesting possibility that guided shifts in the state of consciousness and the development of self-insight with a more positive, responsible and constructive philosophy of life can be used to strengthen the human immune response and help cure patients i.e. by reducing the number of recidivant infections. We have made a series of papers setting the strategy for alleviating healing many different physical, mental, existential, and sexual diseases and health problems (19-59). We also know that the discriminative ability of the immune system is closely connected to the patient recovering his experience of “sense of coherence” (SOC) (60-66). SOC is actually the experience that one conscious being is connected to the whole universe through our physical and mental existence (67); to bring the patient back to be an integrated part of the world seems to be the fundamental idea of all medicine, the tradition going all the way back to Hippocrates and his students (67).

## Conclusions

The self-nonsel self discrimination is characterized by the ability of the organism to react toward the nonself-antigens and to avoid to react against self-antigens. A number of network theories appeared to describe biological systems. Professor Niels Jerne developed an immunological network model trying to explain the capability of a body to discriminate between organismic self and nonself through its immune

system. We came to the conclusion that Jerne’s network was not able to explain the immunological self-nonsel self discrimination. No model proposed in the past has been sufficient enough to explain such mechanisms satisfactory enough, but we think the holistic paradigm is able to give an appropriate explanation of the immunological self-nonsel self discrimination because it predicts an interaction between the psychical level and the intention.

Following the holistic paradigm the super orbital is governing everything in a biological body that demands an energetic source. This means that the immunological-systemic self-nonsel self discrimination is tuned by the consciousness (sourced by the super orbital). The immunological-systemic self-nonsel self discrimination is directed through the interaction between the intention and the systemic fractal levels, and the intention is sourced from the consciousness (read super orbital). Also a connection between the psychological self-nonsel self discrimination and the immunological-systemic self-nonsel self discrimination exists, that interacts in a united co-operation to fine tune the body to be fit and capable of survival. All this activity is governed from the super orbital of the human wholeness.

Following the holistic paradigm the interaction between the intention and the positional information of the systemic fractal levels are directly dependent on the individual human being’s immediate psychically state. Thereby, the human self-nonsel self discrimination becomes an important part of the united system that controls the most important mechanisms leading to fitness and survival, namely human self-nonsel self discrimination. It is of an immensely importance for a human being to be able to fine tune his immunological self-nonsel self discrimination to be as optimal as possible, because only in this way he will be able to maintain the appropriate fitness necessary for survival, the main function of the evolution. The immunological-systemic self-nonsel self discrimination becomes a key function of human fitness and survival, but also a key function of the evolution. Therefore, the interaction between the immunological-systemic self-nonsel self discrimination and the adult human metamorphosis, in the human body, both have the mission of getting the individual human being capable of staying fit for fight

and capable of survival, and to cooperate to insure the farther evolution of the human being.

At last, following the holistic paradigm it is a plausible hypothesis that choices of self-nonsel self discrimination throughout life are the cause of non-genetic, somatic diseases. If this is the case the elucidation of the mechanisms will provide both a therapy and a generally preventive medicine for such diseases.

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