*Pathologies Related to Information Systems and Communication Channels*

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**(VIII) How to apply the Viable System Model to get a fast design or diagnosis of an organization (Introduction-Part VIII)**

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#VSM#Pathologies#Diagnosis#Design#Organizational Cybernetics

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**(VIII) How to apply the Viable System Model to get a fast design or diagnosis of an organization (Introduction-Part VIII)**

***Pathologies related to Information Systems and Communication Channels: Are we missing some essential information systems? Do we have information systems that work fragmentarily with poor or no connection between them? Do we lack some crucial communication channels? Are we missing the needed algedonic channels? Are some communication channels incomplete or need more capacity to convey the required information?***

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1. I continue sharing some ideas taken from the Organizational Cybernetics (OC) field, with particular emphasis on the Viable System Model (VSM) that may be useful to any decision-taker in any organization.

VSM offers enormous power for making a fast diagnosis of any organization. One of its strengths is that it provides a map of the complete organization, identifying all functions essential for its viability. It provides a comprehensive model of the organization.

In addition, it offers a way of seeing the whole organization at any level of its structure, no matter how big and diverse it is. It can provide a vision of our organization in a similar way that Google Earth can show any level of the geographical site we wish to see (the whole Earth, A Continent, A Country, A Region, A City, A Street, a House, etc.). We could call VSM something like the Google Earth of organizations.

A very detailed description of the steps I propose to apply the methodology for diagnosing an organization, or designing a new one can be consulted in the book:

[Design and Diagnosis for Sustainable Organizations. The Viable System Method](https://link.springer.com/book/10.1007/978-3-642-22318-1)

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Apart from the conceptual framework for applying the VSM, the use of the Taxonomy of Organizational Pathologies can significantly enhance the diagnosis of an organization. Therefore, I suggest becoming familiar with it and using it in diagnosis and conversations.

2. In this **eighth general post,** I will continue commenting on some of the most frequent pathologies in organizations. As I mentioned, this knowledge helps design organizations so they are free of them (healthy) or for diagnosing an existing organization. Once we identify a pathology, we can try to eliminate it.

**In 7 previous posts (I-VII), I shared a short version of the first group of pathologies** (**I. Structural Pathologies) and some of the pathologies included in the second group (II. Functional Pathologies).**

3. In the presentation I made for the **Metaphorum Group in May 2022**, I showed **the three global maps** with the more frequent **organizational pathologies.**

 <https://www.youtube.com/watch?v=62mRBzRDxHI&t=11s>

**Organizational Pathologies (8)**

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As I mentioned in previous posts, identifying a pathology is a prerequisite to prescribing any treatment for the diagnosed deficiency. With that aim, I prepared back in 2008 a taxonomy of "**Organizational pathologies**" that I am sharing. I classified the 26 ones I found widespread into three main families or groups. A very detailed description of each one of the organizational pathologies I am describing can be found in Chapter 3 of the book:

[Design and Diagnosis for Sustainable Organizations. The Viable System Method](https://link.springer.com/book/10.1007/978-3-642-22318-1)

The first group (I) includes pathologies related to organizations' structural design and how the organization copes with its total environmental complexity by creating the necessary sub-organizations. I call these *Structural Pathologies.*

The second group (II) includes pathologies related to the adequacy of the organizations (at all recursion levels) to the prescription made by the VSM about functional subsystems and their relations. These I call *Functional Pathologies.*

The third group (III) subsumes *Information System and Communication Channel Pathologies*.

A short exposition of the methodological approach to diagnose or design an organization, as well as the list of organizational pathologies, can be consulted in this paper:

[Pérez Ríos, J.](https://www.emerald.com/insight/search?q=Jos%C3%A9%20P%C3%A9rez%20R%C3%ADos) (2010), "Models of organizational cybernetics for diagnosis and design", [*Kybernetes*](https://www.emerald.com/insight/publication/issn/0368-492X), Vol. 39 No. 9/10, pp. 1529-1550.

<https://doi.org/10.1108/03684921011081150>

**In 7 previous posts (I-VII), I shared a short version of the first group of pathologies** (**I. Structural Pathologies) and some of the pathologies included in the second group (II. Functional Pathologies).**

**III. Information System and Communication Channel Pathologies (8)**

Concerning the pathologies included in this group, some observations related to each are convenient.

*First of all, we may think of the VSM as a global information entity. Like the human nervous system, which allows human life by sensing, acting, and connecting all human organs/functions, the information and communications system of the VSM enables the organization to be alive and to continue being alive.*

*This information dimension will be present in each concrete organization in its actual functions and their interconnections. The role of the communication channels within the VSM is to connect all functions/sub-systems and, within them, the people and the organization's operational units with the different environments to which they relate.*

*Any failure in any of the multiple components of this information and communications system will put in danger the viability of the organization.*

*In this post, I will mention some of the pathologies related to the existence and constitution of communication channels and information systems in broader terms*.

There are many possible pathologies to consider, but I will concentrate on the following ones:

***Pathologies related to information systems and communication channels.***

**PIII1. Lack of information systems.**

Some necessary information systems are missing, insufficiently developed, or not working correctly.

**PIII2. Fragmentation of information systems.**

It refers to the case where information systems exist in the organization but work fragmentarily, with poor or non-existent connections between them.

The consequences will be a lack of coordination, inconsistencies, a lack of knowledge in some functions of what is happening in others, a general increase in costs, etc.

**PIII3. Lack of key communication channels.**

Certain required communication channels that should connect the different functions do not exist, or, if they do, are either inadequately designed or do not work correctly.

**PIII4. Lack of or insufficient algedonic channels.**

Particularly serious is the non-existence (or insufficient presence) of algedonic channels. These channels have the essential function of transmitting information on any incident occurring in System 1 (or also originating in the environment and captured by System 4) that may have a significant (or even vital) impact on the organization's viability.

**PIII5. Communication channels incomplete or with inadequate capacity.**

Communication channels do not have all the necessary elements for transmitting the required information (transducers, channels capacity, and sender-receiver in both directions). For example, absence of transducers or their inadequacy, low capacity of the channels to carry the amount of information per unit of time required.

The same will happen if the design and choice of the "sensors" at the emission points, or how the information is displayed to the receivers, are inadequate.

We could add to these five pathologies several others related to the lack of adequate communication channels between the various recursion levels and information systems covering them.

For a detailed description of each pathology, you may consult Chapter 3 of the book:

[Design and Diagnosis for Sustainable Organizations. The Viable System Method](https://link.springer.com/book/10.1007/978-3-642-22318-1)

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In Figure 1, I present the map of the pathologies included in this group.

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*Figure 1: Information System and Communication Channel Pathologies*