

JOÃO COSTA

HEALTH AS A SOCIAL SYSTEM

LUHMANN'S THEORY APPLIED
TO HEALTH SYSTEMS.
AN INTRODUCTION



[transcript]

From:

João Costa

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Luhmann's Theory Applied to Health Systems. An Introduction

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While it has become fashionable in the arena of international health to think about health systems, the theoretical underpinning of Niklas Luhmann's vast and productive theory has been given too little consideration in the field. It is rich in concepts that can facilitate a fuller understanding of what health systems are. João Costa applies these concepts and shows the analytical possibilities they open up. He argues concisely how Luhmann's Social Systems Theory offers an integrated theoretical body as well as a consistent articulation of concepts that can lay the groundwork for a vastly improved health systems thinking.

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Presentation

This book has two aims: first, to introduce Niklas Luhmann's Social Systems Theory to students and researchers of health systems interested in health services provision as a social system; second, to encourage the use of Luhmann's theory in health systems research. During his productive life, Luhmann covered the social systems of media, law, politics, economy, art, education, religion and others. However, he did not apply his theory to health as comprehensively as he did for the other systems. This book therefore is an attempt to apply his concepts more extensively to health services provision and show the analytical possibilities the theory opens.

In the international health arena, Health Systems Strengthening (HSS) and Health Systems Thinking (HST) have acquired prominence, influencing agendas of international organizations and academic institutions in the last two decades. However, the theoretical underpinning is sketchy, borrowing concepts and tools from diverse fields of knowledge, without a unifying vision of what a health system is. Although it has received some attention, Luhmann's theory is largely unknown among health researchers, and the resources the theory provides for solving identified weaknesses remain untapped. The Social Systems Theory constitutes an integrated theoretical body with consistent articulation of a number of constructs; therefore it has more to offer than just collections of unrelated theories and narrow frameworks.

Luhmann's theory is complex and has a plethora of concepts. It was developed over the course of around 30 years. This book has been conceived to introduce a comprehensive summary of the theory for those who are coming into contact with Luhmann's work for the first time or have only superficial information about it. Therefore, the text tries to be as reader-friendly as is possible for such a conceptually rich theory. Nevertheless, the book also introduces references to advanced topics for those interested in delving deeper into the theory.

The book is structured with an introduction and nine chapters. The chapters intend to gradually immerse the reader in the conceptual network while acquiring a good grasp of its particularities. With this orientation, the **introduction** prepares the ground for the subsequent discussions, presenting the current use of notions of systems in health systems studies.

The **Chapter 1** presents the key concepts of the theory. **Chapter 2** applies the concepts to health systems, referring to the texts Luhmann wrote on health as a social system, where he stated that the systems of provision of healthcare could be analysed as a social system, having standard features of functional social systems. This chapter is a generic application of the theory with brief explanations about how the theoretical concepts can explain health systems' structural and functional features, without looking into details of programmes, institutional roles and operations.

Chapter 3 discusses methodological issues concerning research within the scope of the theory and **Chapter 4** discusses the differences between health system from Luhmann's perspective and Health Systems Thinking (HST) approaches. This chapter discusses critical views of HST. Sequentially, in light of the theory, **Chapter 5** offers in-depth discussions of tools promoted by HST.

Chapter 6 further expands the application of the theory and presents *methodological* implications for *health systems strengthening* initiatives; it introduces the discussion of relations between *political systems* and health systems; and discusses issues of *complexity* and health systems. The chapter reflects on important implications for applications of the theory.

Chapter 7 is dedicated to *health organizations*, such as hospitals and polyclinics. Occupying a prominent position in Luhmann's conceptual architecture, organizations are defined as one of the three types of social system. His theoretical contributions in the field of management theory have received considerable attention in Scandinavian and German-speaking countries. Health systems researchers may find valuable elements for reflection.

Chapter 8 presents some criticisms that have been formulated about Luhmann's theory. Readers interested in becoming further acquainted with the debates will find the pertinent literature recommended in the chapter. **Chapter 9** reflects on the way forward, exploring possible avenues for applications of the theory, discussing a number of alternative approaches and interpretations of recently published health systems research.

Final remarks addresses the issue of assessing theories, distinguishing science from the technologies it brings about. The message is directed to those

interested in reflecting on the value of the work of building and assembling theories.

An **Annex** is added to introduce some advanced topics; readers can find snapshots of the more demanding conceptualizations appearing in Luhmann's works, such as: Medium and forms; Symbolically generalized medium of communication; Paradoxes and contingency formulas; Structural features of the political system.

While readers may have interest in the topics addressed in specific chapters, it would be advisable to start with the introduction and the first two chapters, and move on to selecting the theme of interest. The composition of the chapters follow an ascendant "spiral" format, whereby the theoretical concepts reappear, progressively bringing formulations of higher levels of complexity.

Due to author's limitations, Luhmann's original texts in German could not be studied. However, readers will find in the reference section an extensive list of Luhmann's books published in English and Spanish, with a number of Luhmann's key texts that are not found in English but are available in Spanish translation.

Introduction

Preliminary discussion

Let's start with the basic concept, the notion of system itself. There were and still are countless definitions of "system". We do not list them here or try a comprehensive categorization of those notions. For our purpose at this point, we only need reflect on what a system is. That is the question: what is a system?

The first answer that may come to our minds is a unit. When something is called a system, the notion of unit is immediately conveyed; a unit with collections of elements inside; a sort of a set in mathematic terms, whose elements have relations among themselves.

With this notion comes the corollary idea of limits and, with that, the abstract image of internal and external difference, in whatever conceptual space we may project it. Thus, something belongs to the system while something else doesn't. The opposition can be characterized as a distinction between system and environment. Some things belong to the system and everything else to the environment, including other systems that may exist there.

The acceptance of this apparently trivial distinction between system and environment paves the way to additional considerations. There must be something that regulates the borders, to use an appealing metaphor. There must be mechanisms, processes, and rules, or whatever we may call it, that does the job of selecting what to "let" in while the rest remains outside.

We can then imagine that this active process is carried out by regulatory instances of the system itself. But we can also imagine that something we may call "system" does not have any such selective capability. A new distinction we may make here then is that the so-called self-referenced system carries out the selections while the other type doesn't.

Self-reference therefore implies an active way of selecting. In whatever way it might be done, in correspondence with some sort of "self-identity", some

systems are able to perform such an operation as opposed to others without such “refinement”, as we could call it.

In the first case, the observer is the system itself; in the other case, the observer is outside it, drawing borders and defining the content and limits of the system – being the system, a construction of that external observer. Yes, we have brought the figure of the observer into our considerations. It is necessary to recognize that observations are being carried out, and they play a role in the constitution of systems.

It seems that we now have two clear categories of systems, those that self-regulate and those that do not have any such functionality, in spite of the ordered functions they may display. Surely the two types are still mental representations of phenomena we observe. However, we accept that those capable of self-regulation are endowed with aims that, in contrast, the others are not.

Let’s get into some more concrete examples. A planetary system does not seem to have any self-regulated selection competence.¹ Whatever is pulled by gravitational forces may be incorporated into the planetary system without any determinant other than mass and speed.

Likewise, an ecological system does not seem to conduct any selection of the species living in it. A large piece of land can have a number of species on it and they can, theoretically, at some point in time, all be replaced by other species and the ecological system will remain as such. An ecological system does not show preferences.

What would destroy those systems (the ecological and the planetary) is not error or failures in what should be brought in and kept in or left out. They can be destroyed by the annihilation of their limits. On the other hand, there are different types of system that, although equally destructible by obliteration of their limits, need to be rigorous in their selection of what belongs to it and what does not.

We can say that social systems are indeed that sort of system. They need constantly to keep deploying their selection criteria. Let’s think, for instance, of a health system. If we accept that health systems are indeed social systems, and this is an important decision with many implications, we can see that this is a self-referential system, dealing with matters that are its concern.

A health system would not be concerned with issues that belong to, for instance, the legal system – another social system. The complexities of legal def-

1 Unless one adopts the idea that gravity fulfils that role, implying the principle that gravity has a deliberative function, which no physicist has so far attempted to describe.

initions, interpretation and argumentation are alien to the health system and vice versa. Judges and lawyers often resort to technical medical opinion, but the rationale and construction of the medical expert's argument would not be a matter of legal scrutiny. The expert conclusion is enough from the legal perspective.

Likewise, the health expert would not be troubled by what the legal professionals do with their expert opinions as the intricacies of the legal interpretation is beyond their realm. In these two cases, the legal system and the health system need to maintain the regulatory mechanisms that perform the selection of themes and topics that are matters of concern for them.

Health professionals are highly sensitive to any medical opinion without the identifiable marks of a legitimate medical communication. Impostors can be easily identified. They do not belong to the system, nor do their communications. We have here a key word: communication.

We can anticipate here that these lines of argumentation reflect Niklas Luhmann's comprehensive theory of Social Systems that this book is about. There will be a lot more about him in the chapters to come. For the moment, we can say that Luhmann categorically said that the only thing that is capable of building social systems is communication. "A social systems emerges when communication develops from communication" (Luhmann 2013, p. 53). This statement may be a tough one to begin with, but its corollary – any social system would cease to exist if its respective communications no longer happened – is easier to assimilate.

So, when we talk about systems' limits, and in particular social systems' limits, we talk about the universe of semantics that make the communication inside the system meaningful in itself. And, it is important to emphasize, "meaningful to itself", regardless of outsiders' views. This is how social systems' limits are drawn.

The selections made at the borders of a social system carries out the "triage" of communications, with recognizable meanings therefore allowed to circulate internally. Only the system can control what belongs to it or not; no other system can perform such operations for any other social system. Otherwise the borders and the system itself would be destroyed.

We can try to wrap this up by saying: yes, health is a system; yes, it is a social system; it can control what belongs to it (or does not); this self-reference keeps it differentiated from everything else in its environment; only the health system can perform the operations it recognizes as its, and no other system can do that for the health system. It is impossible to downplay the relevance

of these assertions. There will be a lot more about these themes throughout the following pages. For the moment, though, we can go to our brief historical review.

Health Systems - main approaches

Strong awareness of the systemic character of healthcare service provision emerged by the end of the twentieth century. The structures and organizations of health services started to be considered as having characteristics of systems. Around the same time, departments and units focusing on health systems studies started to appear in universities around the Globe, and diverse notions of systems were brought into debates.

From the acknowledgement of health sectors' systemic features, countless studies and concepts have been deployed, establishing health systems as an important research topic and target for development aid. A key moment for the establishment of the topic was the WHO's *World Health Report* (Health Systems: Improving Performance – WHO 2000), and years later the proposition of the Six Building Blocks (six pillars) framework (WHO 2007).

The trend grew stronger with the promotion and dissemination of guidance for health systems strengthening by international organizations and development agencies, alongside the establishment of health systems thinking approaches also fully supported by the WHO, with the publication of *Systems Thinking for Health Systems Strengthening* (WHO 2009).

This book extensively discusses these references in light of Social Systems Theory. The usefulness and relevance of those views about health systems cannot be underestimated, and their appearance in the international health arena has significantly marked the orientation in addressing public health problems.

Nevertheless, this book also points to their weaknesses, particularly originating from the lack of a clear understanding of social systems. The Six Pillars framework is discussed in the next section and the other two major references, health systems strengthening and health systems thinking are respectively discussed in specific subsequent chapters.

Key STEP – WHO Six Pillars framework

The health systems six building blocks (the six pillars) framework promoted by the World Health Organization (WHO, 2007) has become a major influence for health systems research since its publication. Subsequent works, broadly linked to health systems thinking (WHO, 2009), added other concepts, tools and references imported from a range of different sources from social science to general systems theories.

Concurrently, major agencies supporting health systems in development aid contexts, including the Global Fund for Fighting AIDS, Tuberculosis and Malaria, GAVI (The Vaccine Alliance), World Bank, and bilateral agencies such as the British DfID (Department for International Development), the American USAID (United States Agency for International Development), the German GIZ (Gesellschaft für Internationale Zusammenarbeit), and others, published their views on this key issue, Health Systems Strengthening, which is strongly influenced by the WHO Six Pillars framework. The conceptual field of international health is very much constructed by the works, now comprehensively addressed under the banner of “Health Systems Thinking”.

The Six Pillars framework is based on simple notions of systems as comprising articulated parts, whereby changes in one component have effects on the others. In this section we discuss the evident purpose of the Six Pillars framework to assist developing countries as well as development aid donors in the early twenty-first century context to reflect on the systemic nature of health systems.

The framework calls for cautious assessment of system-wide implications of any investment in the health sector, taking into account that massive injection of resources in some projects and programmes can have powerful distorting effects on everything else, undermining the capacity of the recipient health system to respond adequately to its on-going challenges.

However, it has become clear that the framework has limitations for comprehensive analyses of health systems structures and dynamics, particularly for analysing health systems in more complex settings, in developing as well as developed countries. The subsequent attempts to bring systems analysis to a higher conceptual ground, although enriching the conceptual arsenal, did not achieve the desired consistency, as pointed out in widely read papers such as Balabanova et al. (2010), which have repeatedly asked for more studies on the theoretical background of systems research.

It may sound ironic that high-profile academic experts, who were themselves expected to propose solutions for the weaknesses they pointed out, were in fact only asking for more studies and more contributions. Evidently, they did not know where to find the answers they were looking for.

The banner itself, “Health Systems Thinking”, rather conveys the message that this is a field where questions instead of answers predominate. There is also a certain irony in a field of knowledge being named and defined by the basic method of approaching any topic – “thinking”. In the history of scientific knowledge there may not be any field defined in such a way. Thinking is surely the basic process for pursuing knowledge on anything; this is self-evident. Therefore, one cannot avoid the thought that such formulation reveals lack of option and the powerlessness of having no other way of conceptually addressing the subject called “health system”. How do we deal with it? The answer seems to be: “we do not know, but we can carry on *thinking*”.

Here we therefore suggest that some of this hopelessness derives from the weaknesses of the frameworks so far adopted. We focus on the Six Pillars framework in this introduction, as the succeeding currents – Health Strengthening and Health Systems Thinking – are dealt with in specific chapters of the book. After Luhmann’s theory is presented in the first chapter, his concepts can then be used in the discussions of those two approaches.

For the discussion on the Six Pillars framework in this introduction, we do not use Luhmann’s conceptual tools, as they are presented later, but our discussion is thoroughly informed by Luhmann’s views on social systems. This introduction mainly focuses on the lack of systemic features in the notion of pillars and therefore the limited scope the framework offers for systems analysis.

Overview

The WHO’s Six Pillars framework conceives health systems as comprised of the following components: medicines, vaccines and other technologies; health information; health service delivery; health workforce; leadership and governance; and financing.

Evidently these pillars are basic structural and functional features of any large healthcare services complex, with inpatient and outpatient facilities, and all related support. In principle, the Six Pillars structure intends to portray a macro-level, nationwide institutional apparatus, commonly viewed as comprising ministries of health and/or related institutions, according to the political organization of the country’s healthcare service provision. Nevertheless,

the same pillar structures can be found as distinctive features of large providers of healthcare services, including diverse types of organizations, public and private alike. The intention behind the WHO formulation was, however, specifically orientated towards public systems or equivalent structures intended to serve the population of a country.

The idea of system informing this vision consists basically of the notion of an interconnected set of components, drawing from a limited pool of resources (human, financial, equipment, etc.), exchanging inputs between them and generating measurable outputs. The framework suggests the existence of central coordination of some sort, represented by the governance pillar, with support from the health information pillar.

This model comprehends a structural whole, where each part is relevant and affects all the others, and therefore depends on the others for its operations. The model portrays the system as being the unit that brings the individual pillars together, having dynamic pull that interlinks all parts.

An intrinsic *modus operandi* is understood to be at work in such a system, and planners, managers and researchers should account for all interconnectivity of the systemic parts. Unplanned, unforeseen and undesirable effects may spread across the system, in correspondence with its integrated characteristic. The framework therefore calls for comprehensive attention in any effort to change operations and functionalities of any elements of the pillars.

The framework came as a response to the growing concerns over the impact of specific aid programmes (Hafner and Shiffman, 2013), and drew attention when the inflow of supports to health systems in developing countries started to cause disruptions, with excess resources going into some programmes without a clear understanding of their systemic interrelationships.

The intention then was to create a tool for approaching health systems in their interconnectedness. Such a tool should guide the explorations to be carried out, focusing on the connections between the parts. Therefore, the model became an observational tool intended to generate descriptions of the constitution of the system, and to communicate those narratives in decision-making processes. The framework entertained the ambition that once health is properly understood in its systemic features, and therefore cautiously studied, interventions are more likely to succeed or, at least, prevent avoidable disruptions.

In conclusion, the Six Pillars framework is a tool for a health system to observe itself. It was made available for any health system to use it as a reference for self-observation. However good the intentions, another story was whether

the tool was or was not properly employed; whether the tool delivered convincing arguments in the midst of the political struggles and decision-making dynamics.

On the face of it, a more comprehensive view of health systems has to account for the dynamics and systemic structural and functional dimensions where such tools are or are not used, and do or don't achieve the expected effects. In admitting such processes of tool selection and use, the self-observation capability of health systems comes to the fore and, with it, self-reference as a feature of the system and its components. This self-referential functionality was not considered within the Six Pillars framework. A more comprehensive framework is therefore needed to incorporate such complexities.

Furthermore, envisaging a comprehensive view of health systems that could be applied to any country context, developed and developing alike, the framework clearly represents a modest attempt to reduce the immense complexity and diversity of elements of any health system.

A comprehensive view of a health system must include: the regulatory functions of the professional bodies; the distinct role of public health within a system predominantly orientated to curative care; the large sets of programmes and interventions under the banner of health promotion, community health and health education of communities; the diversity of interest groups including patients' associations and advocacy; the institutional roles of entities assessing and issuing accreditation and quality certificates, etc.

Perhaps even more important, the understanding of health systems should account for the huge variety of autonomous components in the service delivery field as well as in the provision of inputs such as medicines, and how, despite their variety, they are distinctly and unquestionably part of the same health system. The notion of health systems informing an all-inclusive analysis needs to reflect the diversity of entities and their distinct *modus operandi*. The following sub-sections discuss in detail questions about structures and functionalities of the pillars.

Tracing decision-making in the pillars

The WHO's notion of pillar conveys the idea of integrated elements, assembled in distinct units whose operations are similar, possibly articulated and coherently brought together. But in the real world the outlook of the so-called pillars is of rather fragmented sets independently composed of several distinct and

mostly unrelated entities. The pillars in fact do not constitute coordinated operational units covering all elements identified as belonging to the same pillar.

Taking, for example, the medicines pillar. Entities dealing with medicines appear in diverse organizational settings; they can be independent and autonomous sellers, wholesale operators, divisions inside hospitals, dispensers at Primary Health Care (PHC) facilities, etc. Medicines may be provided by public facilities under public funding arrangements, where patients can get them for free or for a small fee. In other cases, patients may have to pay out of their own pockets for most of the medicines they need, if they find them at private, regulated (or not) pharmacies. Patients could also be reimbursed for some drugs by health insurance arrangements they may be covered by. The variety as well as independence of the entities involved is usually large. At the same time, regulations on pharmaceuticals are ubiquitous and, in one way or another, all countries set rules for producing, importing, storing, assuring quality, commercializing, managing, prescribing and dispensing drugs. Although large variety can be expected among countries' willingness and capacity to adopt and enforce rules, the existence of rules is pervasive. However, on the operational side, much depends on what the organizations and entities in the system are capable of. Besides that, structural features, such as whether there are only private independent healthcare providers, or a mix of public and private ones, or only public ones, may have crucial influence on the overall aggregated "performance" of the pillar. In short, what is called the medicine pillar can hardly be seen as a consistent and coherent unit linked to the other pillars according to precise, simple and unique rules. In this regard, the notion of pillar gives a false impression of what actually goes on.

The same sort of fragmentation can also be observed in the way health information is gathered, analysed and used at several structural and functional levels of any health system. Health information management systems respond to a huge variety of purposes. The purpose can vary greatly. For instance, to give a few examples: operations in programmes such as referral of patients across PHC facilities; internal communication of operational services in large hospitals; gathering of nationwide vital statistics; regional epidemiological surveillance, etc. Each case has distinct concerns, and adopts independent diverse solutions. Not all information systems need to be under the same managerial and decision-making structure or be implemented across the board in all healthcare services providers under a unique nationwide organization.

Human resources pillars also cannot be seen as a sole entity. Besides the centralized management of, say, ministry of health staff, there are countless

possibilities for human resources to be independently managed by the structures of service provision that exist in the country, such as private providers, charities, large autonomous public complexes. Each can have independent management and decision-making processes related to their own human resources.

Because of the large variety of component entities, and given the multiplicity of ways these components are set up and autonomously operate within the system, health systems constitute a considerable challenge for comprehensive application of the Six Pillars framework. The disposition of elements in the presumed pillars is multifaceted, rather than uniform and unique. Again, the diversity of configurations of structures and practices is oversimplified by the notion of pillars.

In short, the pillars, as conceived in the framework, are not organizations; they do not operate as such. The pillars are abstract collections of practices and resources without objective organizational expression, which makes them of very limited value for understanding the dynamics and complexities of health systems.

The centrality of services delivery

Healthcare services delivery is the core business of any health system; this may sound like stating the obvious and no further justification is required. However, the Six Pillars framework redirects the focus of attention to the set of pillars itself, without recognizing the crucial importance of communication in continuously building the system in sets of healthcare provision.

Approaching health service delivery as a pillar among others does not properly account for its centrality or its high level of complexity. In any country, health services are delivered by thousands of providers, with large variation of interdependences or independence. Regardless of the diversity, the delivery of healthcare services is central to the justification and reproduction of any organizations taken part in healthcare as a social function.

Service delivery cannot be considered only a pillar among others because it is essential and fundamental; without it there is no health system of any kind. The other pillars may even disappear for some time, or may not have existed historically, while the health system, or some proto-system in embryonic stage, was already functioning at the early stages of the historical development of

health systems.² The other pillars appeared at later stages, mainly in connection with technological developments.

In situations of catastrophe or war, the systems may regress to those early precarious junctures where nothing else but the fundamental health communications among providers and between providers and patients still work. Someone recognized as a doctor by individuals or communities may communicate with patients about, for example, putting hot or cold compresses on the part of the body affected. That could be a healing technique stripped down to the bare minimum in circumstances that cannot offer any other option. Nevertheless, health messages are still communicated and accepted, and the authoritative roles find expression and sustain the structural fundamentals of the system. Once the temporary crises are over, from that rudimentary persistent base the system evolves into previous or even new complex articulations.

On the governance pillar

The question of fragmentation and diversity of components is relevant for understanding how governance operates and how little the notion of pillar helps to a good understanding of what goes on. A key issue concerns how distributed or concentrated are governance roles performed in a health system. If the governance pillar were thought of as a centralized command in charge of defining, regulating and deciding on all operations of all pillars, that would imply overstretching the pillar with a highly complex and impossible task of actually directing a huge variety of performances taking place in an equally huge range of settings.

These questions arise from the lack of definition in the framework of whether autonomy is or is not a relevant feature of the pillars. On one side, the pillars are not formulated as organized units and all the regulatory functions are supposed to be performed by the governance pillar. On the contrary, if the pillars are supposed to have some level of autonomous regulations and decision-making powers, that would empty the governance pillar of its key roles, and leave the overall coordination of the pillars to their own abilities, making the stability of the whole system less likely.

2 The works of Canguilhem (1978) and Foucault (2003) shed light on the constitution of healthcare services with systemic characteristics although these authors did not use such terminology. That discussion is beyond the scope of this section.

Therefore, the governance problem has to be solved at some intermediate level, where overarching rules might be defined centrally but decision-making capabilities should be distributed across the autonomous entities, as is for instance the case in autonomous hospitals, making decisions concerning all matters in all pillars. In short, the notion of pillars creates an insurmountable problem for mapping out and convening all the diverse regulatory, accountability and decision-making roles into a single governance pillar

Surely, a certain level of self-observation and self-management is carried out at each organization and respective divisions implementing the pillars' operations. For instance, the work carried out inside the health information sections (be it at ministerial, regional, organizational or facility level), is indeed the object of continuous self-evaluation by those working in those sections, wherever their location. Hospitals have their own health information system for their own management, to assess operational performances, optimizing routines and many more applications. The same can be said about the medicines pillar. Any pharmacy, whether inside or outside health facilities, autonomous, independent or subordinated to a network, has its own internal self-maintained processes for controlling storages, dispensing, purchasing, selling, etc.

The systemic nature and complexity of a health system implies necessary reliance on degrees of self-management competences at all levels and components. This brings to the fore the question on how every element in the system can act in accordance with what needs to be done at whatever level the element is located, no matter the linkages with other elements in the system. In other words, governance becomes a matter of alignment (where necessary) of the operations of all of a system's components with the orientation of the overarching system they belong to. Governance therefore has to become a reality in a context of internal differentiation of the system, where the components should have autonomous status.

In this sense, it is impossible to conceive of coordination of distributed competences without organizations performing their decision roles within their structures and functions. The argument can also be presented in the following terms: if socially relevant decisions are being made, they belong to the organization, where those decisions are communicated to the respective members and those affected by it. In consequence, we can say that the pillars do not make decisions; decisions are made by the organizations that can be conceptually described as being linked to one pillar or another, but the pillars

themselves are not organizations, and therefore do not have the features and functionalities of organizations.

The distribution of decision-making capabilities across all organizations in the health system (no matter the pillar) raises pertinent questions about the capacity of the organizations to correspond and comply with the applicable orientations emanating from core regulatory bodies of the health system. However, every organization is still individually concerned with operational and “survival” matters, about which they are the sole responsible decision-makers.

Health systems’ governance structures and self-regulatory mechanisms

If the reflections in the previous section are valid, the model of governance to achieve a systemic dynamism is not one of a unified command structure with subordination of the whole system to a centralized decision-making pillar. It needs to account for independence of autonomous structures, with cohesion nevertheless maintained, preserving the system’s unit and identity. In many countries, apart from observance of the same regulatory frameworks, the independence of sub-systems and organizations in the health system is vast.

The internal differentiation of the health system gives room for the emergence and reproduction of several organizations, nevertheless sharing the same sense of identity of being operators in the same health system. This includes numerous healthcare service providers, as well as several organizations with system-wide overarching roles, concerned with observing, normative, oversight etc. across entities operating in the system.

The differentiation of service providers and non-service providers endows the system with sophisticated self-observation and self-organization competences, bringing it to a higher level of complexity. This internal differentiation of the system creates partial systems with specific roles. In this way, the system acquires capacity to orient its own reproduction without losing its central communication references and basic codification of operations related to service provision.

The partial system constituted by councils, associations, quality monitoring entities, accreditation, licensing organs, disciplinary regulators, etc. bring into health systems the mechanisms to guarantee compliance with basic normative codes. Such bodies oversee practices to ensure their legitimacy and correspondence to acceptable recognizable standards within the system. The influence of such bodies is felt inside each healthcare service delivery organization, as they assimilate standards and incorporate internal mechanisms of

supervision and assessment of compliance by their respective professionals. The stability effect thus gained by the system is of enormous consequence. Every organization, by adopting the required standards and acknowledging the consequences of not doing so, is at the same time monitored by the other organizations, in mutual observation of their commitments to the same sets of rules binding everyone together. Without the autonomous adhesion and compliance of service providers to common standards, the task of the regulatory and normative sub-systems would be ineffective and irrelevant, and basically impossible.

The evolution of a health system, from underdeveloped configurations to high levels of complexity, can be traced by following how the sets of providers evolved together in their adoption of higher standards of care and regulatory compliance, simultaneously with the creation and capacity building of supervisory and regulatory bodies, performing their functions independently but still as components of the system (Foucault 2003).

The governance effects of such components cannot be understated. The proposition and approval of any legislation regulating aspect of health services provision, although established in the political system (not in the health system), are implemented by the health system itself. The health system maintains its control over the means of its own reproduction, or, in other words, its internal communications on adoption of regulations and practices. No other system has the legitimacy to do that for the health system.

Regulation implies observation and control. The governance pillar is meant to comprehend such internal self-regulatory dynamics of the system, but in fact the self-regulation systemic function goes beyond the exercise of governing the system by a ministry of health with its dissemination of norms, policies, guidelines, etc. supposed to orient all actors in the system. Several mechanisms of self-observation and self-regulation that are performed by the sub-systems themselves do not correspond to the operations considered to be part of the governance pillar.

Yes, regulations establish standards of observation and related communications. However, a partial-system like a hospital deliberates continuously and autonomously on rules to be followed. That includes from setting up simple daily routines to major structural changes in line with legal or macro-policy determinations. Once a rule is set, further observations are required to check compliance and results. And additional cycles of communication are set in motion for monitoring, information processing and decision-making. The hospital itself takes care of all of that.

Therefore, the two functions – self-observation and self-regulation – are carried out in tandem, eliciting and orientating the self-reproduction of elements of the system. Obviously, small healthcare centres staffed with a nurse and midwife would have a small range of decisions to make at its discretion compared to a large and complex hospital. Nevertheless, if an element of the system has any degree of autonomy in organizing and setting up its routines, it will conduct self-observation and self-regulation in whatever way it can in order to reduce the complexities it faces. This is part of the distributed manner by which centrally enacted policies and rules are reprocessed, adjusted and followed according to the competences at the level of each component of the system.

Besides, there are many other arrangements that the components need to design and integrate into their functionality, which are not determined by any enacted rules at higher or central hierarchical or political levels. The exercise of autonomy may or may not be subject to supervisory and compliance monitoring, but the absence of such controls do not eliminate the capacity of the components to take initiatives and therefore self-observe and self-regulate. This can be rather a matter of survival of the components than of just complying with or corresponding to requirements of governance rules.

When staff in health facilities take under-the-table payments from patients, this may be against the explicit rules of the system, but could be essential for the continuity of services in adverse circumstances, for instance when salaries are too low or not regularly paid. The informal fees may guarantee the permanency of the professionals as well as the continuity of the services and perhaps the survival of the overall system.

Concluding remarks

Obviously, the notion of Six Pillars is a simplification of what is in fact observed in any health system. There is no question that the idea of pillars as bearers of the larger structures above them reflects the essential elements for the operations of the system: medicines, finances, human resources, information, etc. These are fundamental inputs for healthcare delivery. The metaphor of the pillar expresses this composition of essential elements sustaining the overall structure. But, at the same time, this symbolic representation does not facilitate awareness of the complexities it hides.

Yes, the notion of pillars is simple and useful. It calls planners' and researchers' attention to essential elements of a health system. However it leaves

unanswered questions on how to reconcile the notion of pillars with the concept of system and its autonomous parts.

A few concluding remarks are pertinent. Health systems pillars are not conceptualized as units of the health system; they rather encompass structures and functions that independently operate and are spread out across many levels, among several organizations of the health system. While sets of indicators reflecting pillars' composition and dimensions (WHO 2010) give valuable aggregated pictures of relevant elements for country-level macro-planning, at less aggregated and more operational level, the organized component units of the system deal with elements of the pillars as their own resources, know-how and practices, not as macro-pillars sustaining the system.

A health organization, independently from the macro-aggregated attributes of the pillars of the overall system, deals with its resources not as elements of pillars but rather as components or its "production function", which needs to be optimized with little concern about what the macro-planning foresees.

An important conclusion to draw from this discussion is that the conceptualization of the Six Pillars, despite its contribution to macro planning of health systems, still lacks the actual systemic view crucial for conceiving initiatives to strengthen health systems.

Of course, better human resources, higher budgets, effective health information systems, comprehensive packages of medicines, and so on, improve the performance of the system and make it better able to deliver what is expected from it, i.e. more and better health services.

But this does not address health as a system. Those investments correspond to traditional managerial approaches, where the health system is seen as a large organization of service provision, expected to use inputs and control mechanisms, according to production functions, to generate outputs, in the same way as for any large enterprise. There is little systems insight in such approach, apart from the input-output and the interconnectedness of the parts as described in models of the very early stages of general systems science.