Have health professionals become do-it-yourself professionals?

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Abstract:

The coronavirus crisis completely disrupted the operations of hospitals and created a situation of utter uncertainty. Consequently, health professionals had to quickly find ways to adapt to this unprecedented situation and find solutions to take care of the persons hit by the virus. As classic pre-established processes and protocols designed by 'engineers', could no longer work, they resorted to Do-It-Yourself and worked out makeshift solutions. This dramatic situation had a positive aspect in that it spurred new behaviours and relationships between health professionals, fundamentally based on cooperation and the breakdown of the established structure of the organization. However, only after a few months, the old ways and habits re-appeared, creating a situation of misunderstanding and mistrust among health establishments. One strategic and organizational lesson that can be drawn from this crisis, is that health establishments should combine the positive aspects of the 'engineer' and the 'DIY' approaches to find more flexible, adaptive and reactive approaches, and weave closer and cooperative relationships between health professionals resulting in better care of patients.

Methodology:

The analysis was based on the observation of a number of hospitals during the crisis and exchanges with health professionals.

Keywords: coronavirus crisis, health care organization, behaviours of health professionals

Introduction

On 31 December 2019, the Chinese authorities informed the World Health Organization about several cases of an unknown type of pneumonia in the city of Wuhan. In May 2020, five months after the official announcement of first cases of the new coronavirus, almost five billion people had to respect measures of confinement in order to avoid contamination. Two years later (Spring 2020), more than 450 m people, nearly 6% of the world population, a figure certainly underestimated, have been contaminated by the virus and more than 6 m people have died. The world was then confronted with a major and brutal crisis. In this never seen context, hospitals found themselves on the front line. How could the

management of hospitals be organized to face the unknown in an extremely short time? How could they integrate this new uncertainty and the fear that went with it into their routines? What can we learn from this crisis about the management and needed transformation of hospitals? We will base our analysis on the case of French hospitals.

To answer this question, we will recourse to the archetypes of the do-it-yourself person and the engineer developed by the French anthropologist and ethnologist Claude Levi-Strauss in his book "La pensée sauvage" (Wild thought) published in 1962. Our analysis shows how inside hospitals health professionals became real DIY persons as soon as March 2020 (Section 1), and then three months later resumed being the engineers they were before the crisis (Section 2). The pandemic also offered the occasion to professionals to experiment a third archetype, that of the reflective practitioner (Schön, 1983), able to articulate engineering and DIY both in a situation of routine and one of uncertainty.

1. The fruitful DIY in hospitals to face the arrival of the new coronavirus

As soon as the pandemic arrived in 2020, professionals in front-line hospitals observed two simultaneous phenomena. On the one hand they could no longer solve the problems they were confronted with as their magnitude was too big, on the other hand they were facing unprecedented difficulties for which there was no planned solution. On the medical plane, the lack of knowledge of the new coronavirus was total and on the managerial plane there were logistical problems (lack of stocks, difficult supplies of some equipment), human resources problems (lack of personnel) and organizational problems, particularly concerning work, as, of course, no procedure can anticipate something unpredictable, notwithstanding all the safety and quality provisions. The Regional Health Agencies also met difficulties. They could no longer answer the needs of the population, nor ensure totally the effectiveness of the health system according to the health plans of the national health strategy. So, they put their trust in hospitals and let them organize themselves as they thought best to fight the pandemic. Thus, the Agencies gave professionals the legitimacy for becoming DIY persons and use makeshift solutions with disparate materials and tools as no adequacy was any longer possible with the current situation.

The DIY person is only equipped with his tool box (with a limited number of tools), his 'repertory' according to the word of Levi-Strauss, to tackle an unexpected situation and overcome obstacles to find a solution. Thus, hospitals began to make makeshift overalls and masks outside the regulatory certification channels, to look for suppliers without respecting the purchasing procedures, to put personnel 'on the job' without previous training, to try and adapt treatments with the current as new information (reliable or not) about the virus came up. This chaotic situation was worsened by the hectic and incoherent communication of governmental authorities and the cacophony of experts (real or supposed) (Martin, Baccarani, Brunetti, 2020).

The structure of the organization was spontaneously reconfigured on the basis of an unformalized cooperation between the different specialties, between the medical

and administrative personnel, between the hierarchical levels, between establishments, between public and private sectors (with some delay), etc.
Health professionals revealed themselves as being competent, creative and wise DIY people who knew their tools well and found together the best (or least bad) possible solutions to meet the challenge facing them. They demonstrated an agility in acting which permitted to continue to take care of patients.
At that stage, the crisis seemed to produce a positive evolution; debates began to take place on the changes already under way and to come. The health workers, who were on strike before the general confinement of March 2020, found again a meaning to their work, establishments were supported by their overseeing authorities, and all health personnel were supported by the general public.
It seemed that the evolution was on a good track, but as soon as the confinement was lifted in May 2020, the return to 'normality' was organized; the "white plans" were gradually lifted, the tool box was back in the cupboard and DIY disappeared.

2. The end of DIY and the return of the engineers

The episode of DIY finished, the overseeing authorities became again the chief engineers that they had been before the coronavirus. The vertical management of establishments was back, with at the very bottom of the pyramid the personnel in direct contact with the patients (medics and paramedics). Their unique expertise recognized a few weeks before was no longer sufficient to justify their leadership.
Contrary to the DIY person, the engineer always "seeks to find a way and see beyond… he operates according to concepts." He defines a project and "uses materials and tools designed and supplied to fit his project." (Levi-Strauss, 1962). The engineers do not improvise. They follow the plan established by the national health strategy, the multi-year contracts of objectives and means, and all the specific projects, procedures and protocols. Whatever his position in the chain of command, the engineer identifies and seeks the resources necessary to achieve the mission assigned to him. He is encouraged in this approach as his work is evaluated according to the gap between the forecast and the final result in terms of patient safety, quality of care, respect of budgetary constraints, etc. But in such an unstable period as the coronavirus crisis, the measurement criteria are rarely compatible with the reality of the work of DIY medical personnel.
The engineer of Levi-Strauss has the rational legal power of Weber (1961). Rules define the extent and the limits of his capacity to do. When the task is beyond the limits of his knowledge, it is handed over to another expert. Contrary to the DIY person, he cannot think and act by encompassing the whole of a project. He thinks and acts according to the parts that have been assigned to him without there being necessary a link between them. Personnel in nursing homes for the elderly for example needed indications on how to deal with deaths in a dignified way. The answer of the Regional Health Agency was to send them a protocol established for hospitals which was ill-adapted to nursing homes whose personnel lack the competencies and equipment to apply it. This type of injunction reinforces in the eyes of the personnel the lack of legitimacy of the overseeing authority which is not close to the patients, has not got the expertise of the sector, is far from down-to-earth problems and does not recognize the limits of its expertise.

Therefore, from May 2020, mistrust replaced trust, in spite of some efforts made by the government to re-establish trust through negotiations that were given the name of *Segur de la santé.*

3. DIY-engineers or engineer-DIY persons : reflective practitioners to seize uncertainties better in health establishments ?

When the coronavirus tide arrived, the principles of the Weberian bureaucracy exploded. The engineers became paralyzed and made way for DIY, both as a process and result (Levi-Strauss, 1962). Cooperation was preferred to the division of work and the hierarchical structure, on-the-job training was selected to the detriment of the classic way of recruiting, *ad hoc* solutions were looked for, day in day out, without abiding by the established rules, the mobilization and mutual help of the personnel swept away the impersonal character of relationships. DIY transformed a work based on pre-established rules into a work more based on the person thanks to the autonomy acquired from the overseeing authority. DIY means "giving something of oneself" (Levi-Strauss, 1962), which makes all the more difficult going back.

Therefore, two worlds clash with each other. The positivist approach of the engineer leads him to think that the laws that govern a phenomenon (like a sanitary crisis) apply even if these laws are not all known. His work then consists in finding these laws and the possible cause-effect links between them (Le Moigne, 2012). For example, when a law says that a lack of hygiene is a cause of the spreading of the virus, the engineer concludes that there is a positive correlation between the use a hydro-alcoholic gel in hospitals and the spread of the virus. The DIY person does not reason in the same way. Its constructivist epistemology leads him to make knowledge emerge which cannot be dissociated from the construction process which is at its origin (Le Moigne 2012, Piaget 1967). Engineers and DIY persons are then right at the same time. But considered independently the knowledge of the former can come into conflict with the knowledge of the latter, whereas the problem to solve is the same.

The different stakeholders seem to be converging today towards the ambition of permitting to professionals to become 'reflective practitioners' (Schön, 1983) that can ensure the improvement of the quality and security of care, and find meaning in their work. A reflective practitioner develops his thoughts in action and acting. When a situation is unprecedented, fuzzy and uncertain, he reorients himself to find another way and tries to model problems to be able to solve them (Le Moigne, 2012). He tests solutions, scenarios, including unexpected ones, so that there is a movement of redefining problems as he goes along, giving new meanings to the situation. The reflective practitioner ponders on the problem as he constructs it. There is an articulation between the positivist epistemology and the constructivist epistemology to develop an epistemology of *praxis*.

This does not mean, however, that the problems of hospitals would be solved if the overseeing power of authorities were transferred to the health care personnel. Each has their expertise, role and legitimacy. It is more a question of making the organization permeable to the contribution DIY-engineers can make at all the hierarchic levels and inside the different bodies involved in the global health system.

Conclusion

A health system relying on DIY-engineers requires the development of a practical wisdom, a *φρόνησις (phronesis)*, which is highly important at a time when there is a widespread denial of scientific knowledge and expertise when we hear such things as 'the virus is destroyed by heat, 5G is at the origin of Covid-19, the vaccine modifies our DNA, etc. The *phronesis* comes from Aristotle (Nichomachean Ethics) and Nonaka and Takeuchi apply it to enterprises (2011). It implies the following:

- Sharing values of equality, neutrality, adaptability and continuity of health care and act according to these values;
- Seizing the complexity of phenomena to better convey the *raison d'être* of hospitals residing in ensuring safe and quality health care and designing preventive actions;
- Exercising power with benevolence and assuming one's responsibilities in all circumstances and functions;
- Developing an environment fostering the creation of knowledge, its transmission and learning through doing.

The management of the system should encourage professionals to acquire a practical wisdom and to become reflective practitioners equipped with the talents of both the engineer and the DIY person to make decisions that are both true and just.

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