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Abstract: *»Die Industrialisierung der „liberalen Medizin" in Frankreich. Zur Analyse der Qualitätskonventionen der Arbeit«*. This article seeks to analyze the evolution of the regulation of liberal medicine in France from the theoretical framework of the economics of convention. The recent introduction by the state of multiple management devices aimed at quantifying and evaluating the performance of physicians could be interpreted as a process of rationalization of medical practices. However, we propose to analyze the transformations in the regulation of liberal medicine as the transition from an inspired/domestic convention of healthcare quality to an industrial convention of healthcare quality. What is at stake is not improving the quality of care, but changing the conception of quality. Do doctors treat sick people or illnesses? This induces significant changes not only in the entire healthcare system but also in medical ethics. While the profession has historically been built against the market, it seems that the industrialization of healthcare opens the door to its commodification.

Keywords: Economics of convention, industrialization, liberal medicine, pay for performance, medical ethics.

1. Introduction

French health system reforms since the 1980s/1990s are revolutionizing the organization of healthcare work. The work of healthcare personnel is being increasingly standardized and regulated to enhance productivity. This reorganization of work is grounded in fuzzy theoretical concepts of New Public Management and requires the introduction of quantified quality standards by which to gauge healthcare output. The basic idea is that the old ways of organizing and financing work that valued autonomy actually promoted worker opportunism. By quantifying and overseeing work, one can supposedly tap into reserves of productivity. Work is overseen so as to improve healthcare quality and to optimize spending in times of budget austerity. In healthcare,

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as is the case elsewhere, workers are under statistical and bureaucratic pressure (Bruno and Didier 2013; Hibou 2012).

Despite the proliferation of healthcare quality standards (Setbon 2000), greater suffering is observed among health professionals who complain they are unable to do their work as they should. France is experiencing a "hospital crisis" which is now acknowledged and goes back a long way. Back in 2013, for example, the doctors' collective "*Docteur Blouses*"[1] rejected "the industrialization of healthcare of these last decades conducted in the name of budgetary logic with the tools of new public management and with a view to commodification because it is done to the detriment of patients" (Docteur Blouses 2013, 54). The social movement that arose in the hospital sector in 2019 around a throng of collectives (*Inter-Hôpitaux, Inter-Urgences, Inter-Bloc, Infirmières en colère, Blouses noires*,[2] etc.) similarly points out the incompatibility between healthcare as a profession and the industrialization of practices. In its founding motion, the *Collectif Inter-Hôpitaux* calls for an "emergency scheme for hospitals across the board" and its first point refutes that healthcare delivery can be likened to "an industrial production line": such a claim being incompatible with "the hospital service's mission of care provision for all" (Collectif Inter-Hôpitaux 2019).

The proliferation of quantified healthcare quality standards and the many associated management mechanisms is part and parcel of the industrialization of healthcare work (Da Silva 2018; Da Silva and Rauly 2016). Industrialization of healthcare can be defined as a process aimed at founding professional practice on compliance with quantified standards. Industrialization seeks, then, to strip away all autonomy from work, specifically by denying professionals the possibility of defining "good" practice for themselves. This involves laying down standards, ensuring that professionals comply with them, and, as need be, imposing sanctions for departing from them. However, the industrialization of healthcare causes suffering at work because it denies all the wealth of healthcare work and that there are incommensurable and competing conceptions of "doing a good job," of quality.[3]

In the theoretical language used in the economics of convention (box 1), it can be said that there are different conventions of healthcare quality, one of them being the industrial convention which does not value things that do not count and/or things one does not seek to count. Accordingly, everything that is invaluable in the healthcare relationship, the things that count because they cannot be counted (Chanial 2010; Molinier 2013), loses its legitimacy, in

[1] "*Blouses*" is the name for the white coats carers wear. In French, it sounds similar to the musical genre the "blues" with its connotation of sadness and melancholy.

[2] Respectively: cross-hospital, cross-emergency, cross-operating room, angry nurses, black coats (mental health workers).

[3] Obviously, the industrialization of work is not a new problem nor is the resulting depletion in its worth.

contradiction with professionals' traditional conceptions. The industrial convention cannot take account of time unaccounted for, attentiveness, altruism, empathy, and so on, or worse still, it counts it as waste to be cut to the minimum. The contradiction between the way professionals think of their work and what they are told to do lies at the root of much of the suffering at work (Dejours 1998; Benallah and Domin 2017).

This paper examines the industrialization of healthcare in "liberal medicine" in France on the basis of the economics of convention. The industrialization of healthcare may be construed as the transition from an inspired/domestic convention (1.) to an industrial convention of healthcare quality (2.). Contrary to what is heard in public debate, industrialization is not rationalization and it overturns medical values (3.) by promoting the prospect of an industrial/market compromise.

Box 1: The Quality Convention Notion

In health economics, there are non-standard approaches that emphasize the role of institutions by highlighting social rules whether formal (especially legal rules) or informal (customs, traditions, habits, or conventions). In healthcare, one institutional approach, the economics of convention, emphasizes the role of "values" in accounting for the specific character of health as an essential component for individual and collective well-being. The normative embedding of health argues for an economic analysis recognizing the ubiquity of values in this area. These values, defined as reasons for acting, are institutionalized in ethical and social codes, deontological instruments, moral standards, or rationales of gift-making from which economic policies cannot free themselves.

There are multiple values acting as a conception of the "good" and serving to justify or criticize behavior or policy. Values can be used to characterize situations in terms of norms. A narrow view of values would see them as the product of self-interest. There would then be as many conceptions of the "good" as there are individuals and individual rationality (*homo œconomicus*) would be enough to take account of the existence of values.

Contrariwise, in the theoretical apparatus of the French heterodox school of economics of convention, there are a small number of shared references, detached from individual interests, that may be termed "conventions" and these conventions are collective representations of institutions like the social security system or the hospital system. By giving meaning to these institutions, conventions breathe life into them. They paint a fair or true picture of an institution (fair meaning both passable and impartial, true meaning both genuine and accurate).

Since conventions are in competition, they do not block out conflict. But only one convention may prevail at a given time. Conventions can be categorized by their level of generality. Boltanski and Thévenot (2006) came up with a limited number of general conventions, claiming them to be universally valid because they are directed towards a form of common good. A "market" convention gives precedence to individual self-

interest and competition; a "civic" convention affirms the role of the general interest as a criterion for justification and criticism; an industrial convention values efficiency and performance; a "domestic" convention derives its legitimacy from its capacity to uphold tradition, proximity, etc. This interpretation can be used to characterize the quality of goods or work (Eymard-Duvernay, 1989) and take seriously people's capacity to judge or criticize.

2. The Inspired/Domestic Convention of Healthcare Quality

This section proposes to define the inspired/domestic convention of healthcare quality. This involves examining the historical construction of the medical profession. In France, the profession has been constructed between market and state (2.1). Eluding both market competition and bureaucratic rules, doctors have built their trust-based relationship with patients around the adherence to values specific to the medical world – medical ethics (2.2).

2.1 The Medical Profession: Between Market and State

The history of medicine has been characterized since the French Revolution as an attempt to build a monopoly of medical activity. The liberal dimension of the Revolution can be seen in medicine by the removal of protection for the profession by the Allarde decrees of March 1791 (abolition of corporations). Doctors then came into competition with those they called charlatans, bringing down prices and making the medical business insecure. The years of struggle bore fruit in 1892 with the Chevandier Act restoring the doctors' monopoly over medicine and prohibiting "health officers" (position introduced in 1803)[4] and other claimants (bone-setters, healers, and so on).

While doctors rejected competitive medicine, they also rejected administered medicine. At the same time as the Chevandier Act removed the danger of competition, social conflict situations brought the spectra of the socialization of healthcare production stage-front. The 1893 legislation on free medical assistance posed the central problem for doctors over the ensuing period: Should third-party involvement (public or non-public financing) be accepted for financing medical procedures and therefore determining prices and arrangements for payment?

The profession was far from united over the question especially because of the insecurity experienced by many doctors whose patients were insolvent.

[4] "Health officers" were people who practiced medicine without the title of doctor but who had proved their experience to a panel. They worked primarily with the rural poor. Before 1892, this was actually a minor victory for doctors who secured minimal regulation of their profession.

Nonetheless, in 1927 doctors adopted the Charter of Liberal Medicine which is the profession's common ground even today (Hassenteufel 1997). Among other principles, the Charter provides that healthcare should be financed by direct agreement between patient and doctor (without the financer's involvement) through the interplay of a negotiation in which the doctor takes account of the patient's specific situation and is ready, when required, to perform procedures inexpensively or free-of-charge.

This direct understanding cannot be thought of solely as a financial mechanism; it is also a principle intended to ensure the quality of healthcare. The non-involvement of third parties (like the rejection of competition) is justified for the sake of healthcare quality. When a third party is involved in financing (especially the state), there is a danger it will seek to intervene in the organization of healthcare and administer work to the patient's detriment. Accordingly, alongside the principle of direct agreement, the Charter of Liberal Medicine promotes therapeutic freedom and freedom to prescribe. Doctors, guided by their conscience, are in the best position to decide what the proper procedure for each patient is.

This history explains the importance of medical ethics for the profession. Medicine is organized around codes of deontology, professional councils, and Hippocratic values that codify practice and legitimate professional autonomy with respect to bureaucratic and market rules. In order to analyze medical practices in the language of the economics of convention, it is helpful to make a detour by way of the sociology of professions. For Florent Champy (2009, 2015), what makes professions specific is the type of problems they have to solve, which relates to the singularity and the complexity of cases.

The professional was confronted, then, with a twofold uncertainty. On the one side, there was great uncertainty about the singularity of the case under study and, on the other side, the uncertainty surrounded the tension among the different principles allowed for when deciding on the end-purposes of the action. This choice among several possible conceptions of the good, among several conventions, underpins the ethical dimension of professions. Deliberation over the end-purposes of the action implies ethical dilemmas that are what constitute the professional's work.

We shall refer to this work quality convention as the inspired/domestic convention.

For Boltanski and Thévenot (2006), the conflict of worlds and criticism does not necessarily impose the victory of one convention over another, of a conception of justice over another. Criticism can be overwhelmed by compromise. It is a situation of suspension of the dispute, without eliminating it, with the aim of moving towards a common good. The authors give the example of a loan from a local bank to a client with whom the owner maintains personal ties. Two principles of justice are in competition to decide on the granting or not of the loan: the market convention (profit perspectives) and the domestic

convention (personal relationships). In this situation, a compromise between market and domestic worlds emerges when the participants give up clarifying the principle of their agreement, focusing only on an intention oriented towards the common good. In the case of liberal medicine, two conventions form the basis of the compromise: the inspired convention and the domestic convention.

An essential condition for professionals to be able to manage uncertainty suitably is that they have substantial autonomy in their work. This autonomy does not relate to the end-purposes of the activity (the doctor cannot do just anything) nor to the means used in the activity (autonomy of means is not specific to the learned professions). Professional autonomy relates to two things: (1) The margin of interpretation of the cases studied. Since the activity is characterized by the singularity of cases and complexity, doctors have considerable leeway for interpretation. (2) The capacity to deliberate on the hierarchy of end-purposes and on their precise content in the context of the general end-purposes of the activity. Given the general requirements of medical activity, doctors may, within this framework, define and rank the end-purposes of the activity: do no harm rather than cure, relieve pain rather than do nothing, and so on.

In this sense, medical practice takes on the attributes specific to the inspired city. Deliberation may be viewed as a way to find inspiration in order to respond to the singularity and complexity of cases. As the divide between the universal principle and singular practice cannot be closed, the professional must act with prudence – in the sense of practical wisdom – in deliberating on what ought to be done. In the inspired city, "people are creative when separated from others, withdrawn as it were into their inner selves" (Boltanski and Chiapello 2007).

The inspired character of the health professional's quality convention cannot fully grasp the complexity of the "art of medicine." The deliberative space that opens up for the doctor implies that the illness should not be dissociated from the patient. Doctors' detachment is therefore primarily metaphysical; their practice, however, is firmly attached to the patient, to the individual in all their singularity and with whom the career must be able to forge a relationship of trust and closeness. Such practice then resonates with the "personification of resources" that is specific to the domestic city. The domestic characterization of beings rests on approximations of time relations and appeal to the ancestral, either through topological correspondences referring to what is near, or through hierarchical comparisons resorting to authority (Thévenot 1990). This brings us back to the characteristics of health professionals founding their practice on their traditional knowledge of medicine and of their patients to whom they are close enough to enter the sphere of intimacy by becoming "the family doctor." The familiarity of this relationship underpins the trust on which doctors can base their authority.

Because it takes on the attributes of both the inspired city and the domestic city, it is proposed to characterize this healthcare quality convention as inspired/domestic, following the logic of the "compromise" that may be found between two orders of magnitude. Regarding the inspired/domestic compromise, Boltanski and Thévenot (2006) particularly insist on the relation of master to disciple. Theoretical knowledge of the texts is insufficient for learning because only experience, transmitted by the personal and bodily authority of the master, allows the apprentice to understand all the complexity of the profession. In the case of the medical relationship, the compromise between inspired and domestic convention expresses the overcoming of the conflict between the inspiration necessary to find a medical solution in an uncertain universe and the proximity between patient and doctor necessary to obtain the confidence of the patient who puts in play his own body. The inspired / domestic convention is thus the closest thing to what doctors call medical art. Although these two types of justification may seem to abandon any dimension of quality control, this is not actually the case. The autonomy bestowed on doctors in their practice is only acceptable to the extent that it is offset by institutions that make it acceptable.

2.2 Medical Ethics as a Solution to the Problem of Trust

The existence of a medical council, of codes of deontology, of the Hippocratic Oath, of long years of study, and so forth are what cements trust between doctors and patients. Medical ethics is the counter-gift necessary for professional autonomy in the inspired/domestic convention (Batifoulier 1992). From this perspective, since only a doctor is in a position to judge another doctor, quality is controlled by professional institutions and not by the state or the market.

Conventionalist work has demonstrated that medical ethics can be understood as a convention ensuring coordination of the healthcare system (Batifoulier 2009). Deontological rules are incomplete and evasive by nature. They alone cannot prescribe what behavior to adopt. Ethical codes are pointless unless interpreted by doctors. Endowing doctors with interpretative rationality within the frame of the economics of convention fills the gap between the rule and its contents. Situations are then interpreted on the basis of the representations doctors have of the collective interest – of what ought to be done.

Medical ethics can thus be understood as the plural set of normative resources specific to the medical profession. In this light, it is possible to isolate three "characteristic values" marking the outlines of medical ethics without providing an inflexible definition of it (Batifoulier 2011). Doctors' normativity is made up of a range of values by which the rules can be interpreted. These values are drawn on differently in the different professional areas and the places where medical activity is conducted. Doctors in public-sector hospitals

are probably more sensitive to the quality of the public service than doctors in full liberal practice or in private for-profit establishments. Doctors, like other guilds or corporations, do not form a uniform whole. But, at some level of identity, the level of the profession, a form of unity (which does not mean identical representations) may come about around distinctive values, which each doctor might recognize, even if the onus placed on each of these values may vary from one doctor to the next. From this perspective, three types of characteristic values can be identified supporting doctors' capacity from making ethical judgements: Hippocratic values, healthcare values, and liberal values (Batifoulier 2009).

(1) Hippocratic values: These values express doctors' concern – as members of a professional group – for patients. Hippocratism is the corner stone of medical paternalism and care as exercised by doctors. These values arise from the four founding principles of medicine listed by Gillon (1994): respect for the patient's autonomy, non-malevolence, benevolence, and fairness. These values are intended to organize the socialization of members of the profession (Gadreau 2009). The profession must be aligned with the interest of the individual patient. Hippocratic values derive from the institutions of trust that assure society that doctors' give of their time and their person.

(2) Healthcare values: Doctors bear responsibility for the valuable good of health. This time, beyond the individual case, healthcare is a value in itself that should be protected by social organization. Several theoretical traditions form part of this approach: health is a primary natural good (Rawls 1971), a specific mode of the good life (Ricoeur 2004), or a need (Batifoulier and Da Silva 2014). These different approaches justify the doctor having the role of promoting health as a generality just as attorneys, as a profession, defend the idea of justice (Bessis 2008). Doctors are therefore not just responsible for improving individual well-being but are also the trustees of the idea of health.

(3) Liberal values: According to these values, the only way to defend the Hippocratic mission and the health objective is the liberal organization. These values are more recent and correspond, in France, to the construction of liberal medicine as against the social state. As seen, the 1927 Charter of Liberal Medicine can be considered the kernel of the liberal project of medicine in France. The principle of direct agreement, direct payment, and freedom of where to set up in practice are thought of as the conditions that guarantee quality healthcare and rigorous ethics. This liberalism is not economic liberalism. Competition is prohibited and the question of income is made a relative matter by and large. Besides, medical liberalism is built around doctors' duty to be generous. Waived fees and variable prices are the symbol of liberal charity by which the only judge of the "gift of care" should be the individual doctor and not the administration. But socialization deprives doctors of the ability to do justice.

All told, medical ethics is fed by multiple representatives of what ought to be done. These normative principles are not fully defined turn-key solutions: they are liable to change with time and place. Public policy is one of the most important sources for explaining the development of medical ethics. Many works have already shown how, through predominantly market reforms, medical ethics has gradually shifted towards legitimating market behaviors in the medical relationship (box 2).

Box 2: The Market Coloring of Medical Ethics

Public policy is not without its effect on behaviors and representations ensuring coordination in the health system. Since 1980 at least, the market orientation of public health policy has modified the medical profession's conception of what ought to be done (Batifoulier et al. 2007): opening of the fixed-charge sector to fee surcharges, multiplication of financial incentives aimed at doctors, growing direct contribution from patient to healthcare financing, etc. All of these developments contribute to modifying the conception of healthcare. Healthcare is tending to become a commodity in a market like any other.

The market principles disseminated by public policy do not fall upon value-free ground. They must fit in with traditional medical values. Modification of the rules does not change doctors into out-and-out retail dealers. Values remain multiple, which is why the conventionalist literature on healthcare speaks of "market coloring" of medical ethics (Batifoulier and Biencourt 2005; Batifoulier and Gadreau 2006). But within that plurality, public policy has made the market framework salient.

In terms of rules and instruments of governance, certain works have shown that law is being colonized by economic terminology. Abecassis and Domin (2008) have thus analyzed the development of terms used in drafting national medical contracts and have identified an increasing occurrence of financial concerns. In the French healthcare system, relations between the medical unions and the social security system are legally organized by collective contracts called "medical conventions." Medical conventions are not related to the economics of convention, but one can analyze medical conventions from the theoretical framework of economics of convention. The 2005 convention introducing the position of gatekeeper ("*médecin traitant*") is the one that provides the most propitious ground for economic and accounting notions. The medicalized control of spending at the core of the analysis also pushes aside any ideas of sanctions or constraints for doctors. More generally, this economics-based formatting of law puts financial incentives at the nexus of the analysis as the prime instruments of regulation (Allouache and Vacarie 2008).

The market orientation of public policy means that expensive procedures are run-of-the-mill. Surcharges become higher and more common (Aballea et al. 2008). The market coloring of medical ethics can be identified by the movement towards ending charge-free care (Batifoulier et al. 2009). The literature has highlighted the whittling away of the "free-of-charge share" of care in liberal medicine (Batifoulier and Ventelou 2003).

3. The Industrial Convention of Healthcare Quality

This analyzes how the industrial convention of healthcare quality transformed since the 1970s in counterpoint to the inspired/domestic convention that has come under a great deal of criticism over this period (3.1). On the basis of that criticism, I emphasize the state's role in building up institutions for the industrialization of healthcare (3.2).

3.1 Criticism of the Inspired/Domestic Convention

From the late 1970s onwards, with the surge in post-Fordist capitalism and the progressive questioning of the socialization of health spending, a radical shift came about in the formalization of problems of regulating liberal medicine: instead of regulating prices, the authorities were to look more closely at the question of healthcare quality (Da Silva and Gadreau 2015). The main angle of attack for this new question concerns the generic phenomenon of variability of practice (Kerleau 1998). The fact that, in the same situation, therapeutic treatments and prescriptions may be different is necessarily viewed as a "problem" of healthcare quality. Variability in practice reflects the occurrence of potentially dangerous and/or pointless procedures, which is an unconscionable waste of resources in times of economic crisis. This empirical problem can be interpreted in terms of two theories that format the reformist discourse in healthcare.

On the one hand, a whole branch of the public health literature points to the problems of information processing (Sackett et al. 1996). With the exponential advancement of medical research throughout the 20th century, data have accumulated with no synthesis of good and bad practice. There is a wait of several years before primary-care doctors can apply the latest research findings. This means that for want of training and clear dissemination of information, many practices persist that are barely pertinent and even dangerous. Therefore, the variability of practices related to difficulties in processing information directly poses a problem to healthcare quality.

On the other hand, standard economic literature adopts an interpretation in terms of information rent (McGuire 2000; Rochaix 1997). In contradistinction to the foregoing theories underscoring the frailty of medical knowledge in an increasingly complex world, this literature focuses on the informational advantages doctors have over patients and insurers. The abundant use of the idea of "agency relationship" fully attests to this theoretical position. As an agent, the doctor supposedly has more information in the exchange than the principal: he has discretionary power. Now, because the doctor is a *homo œconomicus* looking to maximize utility, he or she will exploit this surplus information so as to extract an undue rent. The performance of the task for the

principal therefore departs from the optimal market situation and is as variable as the extent of the doctor's informational advantage may be.

These two sources of variability in practice (information processing and information rents) were to lead to medical power being challenged as in the 1970s. For one thing, the lasting occurrence of long-term illnesses, such as HIV, were to call medical paternalism into question (Barbot and Dodier 2000). Sufferers, being the leading specialists of their illness in many respects, became organized to contribute to the therapeutic process against the tradition of medical paternalism. For another thing, health crises, such as the contaminated blood scandal, did much to sap trust in the medical profession (Benamouzig 2005). Questions of transparency of information came to the forefront with control over the exercise of medical power as their main objective.

Despite historically strong symbolic power, the wariness of contemporary times is reflected by the attempt to control medical power – no longer with respect to prices, but to quality. Whether the justification was the sheer volume of information or alternatively doctors' information rents, the variability in practice became an intolerable problem of healthcare quality in the last third of the 20th century. Improvement in healthcare quality and the restoring of the bond of trust between medicine and the health system consequently necessitated resolving the informational problems specific to liberal medicine – that is they necessitated that practices be made uniform.

However, because of past history, direct intervention by the authorities in the medical relationship is reputed to be an intrusion that threatens healthcare quality. How did the institution traditionally associated with a threat to the quality of care – the state – manage to become its staunchest defender? This turnaround, which rested on the quantification of healthcare quality, came about in two stages.

The first condition for the regulator to earn legitimacy to control the quality of care is the transformation in the definition of that quality within the field of medicine itself. Traditionally, the medical field was barely codified and formalized although the register for legitimization was that of "science." In the post-war years, a new method revolutionizing the production of medical evidence came to light in the United Kingdom: the randomized clinical trial (box 3). Further to the first randomized clinical trials, medicine was gradually to make systematic use of statistics in its research – with this method becoming the hub of evidence-based medicine. Evidence-based medicine rests upon the principle of a rank order of evidence, with the random clinical trial being the leading level of evidence ahead of traditional laboratory experiments. The idea is to contest and/or supplement knowledge from individual practice with statistically grounded outside data so as to reduce variability in practices by choosing the most effective treatments by which "good practices" can be defined.

Box 3: The Emergence of the Gold Standard of Randomized Clinical Trials. (Keel 2011)

In the post-war USA and UK, research into tuberculosis was the subject of innovative methodology with multi-center trials. These were trials in a large number of different healthcare centers so as to statistically mix a large number of patients and doctors. The idea was to remove any local contingency from the observed effect of the treatment. The multi-center trial criterion was therefore the first of the two criteria for defining the randomized clinical trial, the second being randomization. Randomization is a statistical procedure for apportioning patients selected to take part in the trial between an experimental group and a control group by chance alone.

It was more specifically in the UK, against the backdrop of a medicinal drugs shortage and some doctors being unconvinced of the effect of streptomycin on tuberculosis, that the gold standard of the randomized clinical trial was defined. The clinical experimentation of 1947/1948 by the Medical Research Council involved the two criteria of a randomized clinical trial: multi-center tests and randomization. The treatment was proved to be largely effective with a death rate of 7% for patients receiving treatment versus 27% for those not receiving treatment.

The surge in randomized clinical trials in the medical field answered the problem of synthesizing information by the use of statistics. But there were not any institutions then to compel doctors to apply quantified standards (this is the problem of informational rent). The second stage in the quantification of healthcare quality was the appropriation by the authorities of the standards of the medical field in order to regulate professional practices. While initially having no legitimacy for debating healthcare quality, the regulator can defuse this criticism since it is now the one that is seeking to improve the quality of care by way of quantified standards produced by evidence-based medicine. This second stage, which fits in with the expansion of new public management in healthcare, is that of the construction of institutions for industrializing care.

3.2 The Strategies of Healthcare Industrialization

What I shall refer to as the industrial convention is the convention of healthcare quality that arose in the 1970s in criticism of the inspired/domestic convention. The industrial convention is thus characterized by the conception it has of illness as a quantitative variation of the normal state (not ill) which may be defined from the intensive use of statistics (in the lineage of evidence-based medicine). The legitimate organization of the medical profession ensues from this starting point. Since the disease can be isolated from the sufferer by quantifying it, it is the disease and not the sufferer that should be treated. The major medical problem therefore is not adaptation to the

singularity of the case or the resolution of a complex problem. It lies in reducing variability in practices by resorting to quantified standards.

In this context, "independent" agencies are called on to produce incontrovertible scientific syntheses. In France, this falls to the High Authority of Health (*Haute Autorité de Santé*). It is the job of The National Institute for Health and Care Excellence in the United Kingdom, Belgian Health Care Knowledge Centre in Belgium, and Institute for Quality and Efficiency in Health Care in Germany. Evidence-based medicine provides medical data that are supposedly neutral and objective and which serve as the basis for drafting "good practices." Doctors must then use these standards to treat the "average patient." Once the diagnosis has been made, their main job is to assign the specific case to one of the general categories of the nomenclature and deliver the corresponding treatment.

Now, "submission to quality standards is a basic element of industrial logic" (Eymard-Duvernay 1989, 346). This convention is industrial because it conceives of the healthcare service as a product and because its primary objective is to gain in productivity and efficiency. The "rationalization" of which it is often questioned relates to the reduction of complexity through standardization. It is a necessary step for controlling medical work and making scale economies. This convention is also related to a massive use of statistics. Quantified indicators have pride of place in the new healthcare quality convention: the quantified standard is the bedrock for quality control and quality incentives.

Numerous tools have come to light to provide a fulcrum for the industrial convention. In the case of liberal medicine, the authorities created new dispositives from scratch to challenge the inspired/domestic convention. Several tiers of construction of the industrial convention can be made out, that might be called the strategies of healthcare industrialization:

- Creation of norms: standardized norms are created in the medical field itself with the support of evidence-based medicine. These norms have little power in themselves, which is why the authorities have their work cut out when attempting to introduce them into medical practices.
- Certification and circulation of norms: the creation of independent agencies is an essential step since they are thought to be a-political and entirely technical (Benamouzig and Besançon 2005). This means their quality can be certified (depending on the results of medical research) and they can be circulated among professionals. In this way, in 2004, the Haute autorité de santé superseded the Agence nationale d'accréditation et d'évaluation en santé, which itself, in 1997, had taken the place of the Agence nationale de développement de l'évaluation médicale (founded in 1989).[5]

[5] Respectively, "High Authority of Health," "National Accreditation and Assessment Agency," and "National agency for the Development of Medical Assessment."

- Supervision of practices: the supervision of actual practices, to determine the deviation from the norm, requires the black box of the patient/doctor relationship to be opened up. The development of information systems throughout the 1990s filled this gap, with for example, the Système national d'information inter-régime de l'Assurance maladie[6] and the creation of the carte Vitale.
- Modification of practices: knowledge of the norms and of deviations from the norm is not enough to modify practices. For this, a first stage, begun in the late 2000s, was to provide financial incentives to doctors to adopt standardized practices. This was the case with the Contrat d'amélioration des pratiques individuelles of 2009 and, since 2011, the Rémunération sur objectifs de santé publique.7 Doctors can claim bonuses for attaining objectives relating to quantified healthcare, for efficiency in prescribing, and for the organization of their medical practice (see below).
- Sanctions for wayward practices: alongside the incentive model, but less distinctly, one can see the development of a threat of sanctions for failure to abide by the norms. The soft law made up by publications relating to the standardization of care is being drawn on increasingly in law suits brought by patients (Mascret 2008).

Among the strategies of healthcare industrialization, performance-based remuneration is a central tool for modifying the healthcare quality convention. For public health insurance, performance-based insurance is a tool for improving individual practices that can cut spending and provide an incentive to achieve quality (Polton 2010). Performance-based remuneration establishes a correlation between attaining quantified performance objectives and doctors' pay. The 2011 medical convention[8] institutionalized the Remuneration on Public Health Objective (*Rémunération sur Objectif de Santé Publique*; ROSP) as a supplement to traditional pay arrangements: ROSP has become the third pillar of remuneration of liberal medicine – alongside payment by procedure and lump-sum payments. Initially (in 2001), this mechanism concerned only general practitioners for adult patients. It now involves specialists (cardiologists, gastroenterologists, endocrinologists) and doctors caring for children. In 2018, ROSP represented €259.4 million in spending for gatekeeper doctors for adults divided among 55,102 professionals. Average remuneration for general practitioners treating adults was €4,705 versus €153 for indicators concerning children, €2,146 for cardiologists, and €1,406 for gastroenterologists. ROSP is also concerned with health centers (non-liberal group medicine), which received on average €7,646 (for 433 centers). While

[6] "National Inter-Regime Health Insurance Information System."
[7] Respectively, "Individual Practice Improvement Contract" and "Remuneration on Public Health Objective."
[8] See Box 2 for the distinction between medical conventions and economy of convention.

such payment represented just 3 to 8% of doctors' income, there is no denying the dynamics of the extension of performance-related pay in France.

4. Industrialization as the Overturning of the Medical Relationship

This section provides a critical review of the industrial healthcare quality convention. Although the convention is based on legitimate arguments, the state, by presenting it as a rationalization, is denying how complex medical reality is (to the detriment of patients and doctors alike [4.1]). Industrialization brings about a rearrangement of medical values that is not without consequences for the patient-doctor relationship and the health system (4.2).

4.1 Industrialization is not Rationalization

The reforms leading to the adoption of the industrial healthcare quality convention are often presented in the public debate as a necessary "rationalization" of medical work. The practices arising from the inspired/domestic convention are supposedly devoid of legitimacy and the industrialization of healthcare is seen as an incontrovertible process for improving quality – quality in the singular. However, the industrial convention also suffers from major criticisms both in terms of the epistemology of illness and the epistemology of the statistics it deals in.

In terms of the epistemology of illness, in the wake of work by Georges Canguilhem (1966; Durive 2014), recent research tends to show that, although evidence-based medicine enables numerous advances, it does not exhaust the whole of medical reality. In his renowned book, *The Normal and the Pathological,* Canguilhem argues outright against the positivist definition of illness that took it to be a mere quantitative variation of the normal state.[9] He claims that normal and pathological states are two different things. Illness should be viewed as "another way of life" or a clean break with the state of well-being. Here, the break is not the outcome of a measurable quantitative variation between two states since that would mean there is a continuum between normal and pathological. Illness is the expression of the invalid's subjectivity, making it a value judgement and not just an indisputable fact as in the positivist conception. It is no longer the scientist who is the source of knowledge but the invalid: it is because the sick person feels there is a sharp break with the normal state that there is illness. The bounds of the "normal" being the subject of debate in the positivist conception take on a whole new meaning: the

[9] For the relation between the economics of convention and Canguilhem's conception of health, see also Diaz-Bone (2021; in this Special Issue).

characterization "normal" no longer refers so much to a statistical norm as to a social norm. Illness becomes a value judgement each invalid makes when suffering. In many cases, the healthcare relationship counts just as much as the healthcare procedure. The emblematic case illustrating this idea is the placebo effect: symbols can cure. In this context, alongside evidence-based medicine, there are calls to defend patient-centered medicine that take account of emotions, experience, and the individuality of patients more generally (Bensing 2000).

In terms of the epistemology of statistics, other works show that one should be cautious about generalizing evidence-based medicine. In a recent article, Rainer Diaz-Bone (2016) recalled that one of the origins of the economy of convention was precisely the study of statistical conventions. He shows that a large part of Alain Desrosières' work has consisted in demonstrating the conventional dimension of statistical tools. Measuring unemployment rates or illness requires prior agreement on the definition of the thing to be measured. To quantify is to agree and then to measure. However, all statistical work is marked by the cultural and material conditions in which it is registered.

In the case of evidence based medicine, the material conditions in which statistical proof is produced may adversely affect its relevance. This is notably the case with research into medicinal drugs then recommended by the various health authorities and prescribed by doctors. As studies are expensive, laboratories tend to exert pressure to shorten the statutory duration of research or take intermediate indicators (biomarkers) as quality indicators instead of final indicators (lower rates of illness or death). This now leads to increased adverse events after the testing phase when the drugs are already on the market. The material production conditions also affect the research orientation of the financing laboratories (Keel 2011): are they better off financing research to improve dietary practices or coming up with appetite suppressing drugs?

In non-hospital practice, the introduction of ROSP in 2011 illustrates the difficulties with the industrialization of healthcare. ROSP is a pay incentive scheme based on attainment of quantified healthcare quality objectives. This mechanism has been developed in France despite great skepticism of international studies about experiments of the kind. Research in this area fails to demonstrate it is worth complying with standardized norms to cut health spending or improve healthcare quality. With several years' hindsight, studies of the French case show the mechanism is ineffective (e.g., Sicsic and Franc 2017). Moreover, it seems many quality indicators are open to criticism. The medical journal *Prescrire*[10] (Prescribe) reports that of the 26

[10] See issues 352, 353, 355, 356, and 357 of volume 33 published in 2013.

indicators included in ROSP in 2011, only nine are relevant given the current state of medical knowledge.

The industrial convention is not baseless if one thinks back to the criticisms of the inspired/domestic convention. But, as against the idea of rationalization, it seems that, given the current state of knowledge, the inspired/domestic convention maintains considerable legitimacy because of its conception of healthcare as individual. These two conventions provide two organizations of the ideal-type healthcare system with their own institutions. Table 1 summarizes them.

Table 1 Inspired/Domestic and Industrial Healthcare Quality Conventions

	Inspired / Domestic Convention	Industrial Convention
Definition of illness	Qualitative break with normal state	Quantitative variation from normal state
Subject of activity	Patient-invalid pairing	Illness
Medical problem to be solved	Singularity and complexity	Heterogeneous practices
Subject of healthcare	Individual patient	Average patient
Specificity of medical knowledge	Based on experience	Based on standards
Doctor's task	To adapt to the case	To attribute the case
Definition of quality	Professional	Evidence-based medicine
Medical ethics	Paramount	Secondary
Institution of trust	Medical ethics	Certification agency

For both conventions, the starting point is the position with respect to the "right" definition of illness. The polysemy of the French word "*juste*" allows one to highlight the normative tensions on the conception of the disease. This word refers to correctness ("*justesse*"), that is to say to the true and to the false but, it also refers to justice ("*justice*"), that is to say to the good and the bad. There is therefore a double tension on the "right" conception of the disease: is it "right" because it succeeds in treating? Is it "right" because it corresponds to a just vision of the doctor-patient relationship? If there is no consensus as to fact, the orientation in the direction of one or another of the definitions determines the organization of the healthcare system.

Applying the inspired/domestic as logic, illness is a qualitative break with the normal state. This break is identified by the invalid. In this sense the invalid comes first and the subject of the healthcare activity is the patient-invalid pairing. The medical problem to be solved from the regulator's standpoint is the healthcare system's capacity to adapt to the singularity and complexity of each case to care for the individual patient. Medical knowledge must then be based on the experience of the professional who learns to adapt to each case and acts autonomously. Healthcare quality is defined by the doctor in

person: doctors ensure the quality of care they deliver. The potential for opportunism in such a setting is offset by the primacy of medical ethics. Patients' trust in their doctor and in the healthcare system as a whole makes medical ethics central to the organization of healthcare.

Conversely, under the industrial convention, illness is a quantitative and therefore measurable departure from the normal state. This means that doctors are able to say whether or not there is illness independently of the patient merely by observing a measurable deviation from the norm. The medical problem to be solved is to reduce the heterogeneity of practices with respect to a predefined standard. The professional's autonomy is the enemy. The good professional is now the professional who knows and applies standards defined elsewhere. The doctor must be in a position to identify cases and attribute them to pre-established nomenclatures of procedures and prescriptions. Quality is produced no longer in the practitioner's surgery, but in the results of evidence-based medicine. Medical ethics is therefore no longer as decisive as under the inspired/domestic convention since trust lies in the work of the certification agencies. The industrial convention effects a division of labor with, on the one side, a medical and administrative body tasked with defining quality practices and, on the other side, primary-care doctors tasked with strictly applying top-down norms.

The healthcare industrialization movement rests in part on a legitimate foundation: the multiplication of medical knowledge that is difficult for doctors to master and the crises of liberal medicine justify reflection on professional practices. Nonetheless, the state has seized on the tools of evidence-based medicine, toughening debate within medical circles. The industrialization of healthcare raises problems of two kinds relating to the epistemology of illness and the epistemology of statistics. Public policy is contributing to a rearrangement of characteristic values, which is not a neutral process.

4.2 The Rearrangement of Medical Values

By substituting the industrial healthcare quality convention for the inspired/domestic convention, the regulator's new strategy contributes to the renewal of medical ethics.

4.2.1 Hippocratic Values: The Dangerous Milk of Human Kindness

The most radical transformation the industrial convention brings to medical ethics bears on Hippocratic values. The automatic character of decision-making subsequent to application of standards drains the lifeblood from the personal relationship between doctor and patient. Under the new healthcare quality convention, Hippocratism is no longer paramount. The patient need not expect a moral quality of the doctor in the individual intercourse because application of the norm is enough to secure quality care. The change of

convention calls for a renewal of medical ethics. Doctors are no longer expected to have some moral competence about them: evaluating good and evil. Competence must be primarily technical (Jaunait 2005).

Hippocratism may even be harmful. Doctors who decide not to comply with the standard treatment out of concern for the patient may be considered a "danger for public health." In wanting to be benevolent, doctors depart from the norm, which on aggregate means lower quality and higher costs of care.

Benevolence does not disappear, though, under the industrial convention. Instead of residing in the doctor, it resides in the protocol. Trust resides no longer in the doctor personally but in the "im-personal" character of the independent agency. Protocol-based medicine challenges medical paternalism and overshadows the doctor's autonomy. The patient's trust should no longer lie in the professional alone but should be driven towards the quantified norm and the certification process. It is the paternalism of the expert that is valued.

4.2.2 Healthcare Values: The Downgrading of Doctors

The industrial convention of healthcare quality does not call the idea of health into question. In this, the infringement of characteristic values is less radical than in the case of Hippocratic values. Even so, two major changes in health as a value can be identified with a loss of status for the medical profession as their consequence.

First, the new convention is an incentive to largely put the doctor figure in proportion as a trustee of healthcare. Doctors are no longer the guardians of this precious good of health. The definition and application of quantified standards is a source of de-singularization of care for patients and doctors alike. From the patient's point of view, illness becomes something that can be detached or dis-embedded from the invalid. From the doctor's point of view, experience and judgement are of no use insofar as the standard says what should be done in all circumstances. It is no longer a particular doctor who cares for a particular invalid but a standard that applies to an illness. Once the trustee of healthcare, the doctor is now just a cog in the division of labor. Under the industrial convention, the doctor is no longer the decision-making center; health is still a value *per se* but it is promoted primarily by independent agencies that produce norms on the strength of evidence-based medicine. Patients are invited to trust in the rules and procedures surrounding the standardization of healthcare – the independent agency and not the doctor being at the apex of the pyramid. Formerly charismatic and learned, doctors are the victims of a loss of status under the new convention.

Second, the new convention highlights the conflict among several conceptions of healthcare. Whereas it might be thought that there is no conflict between healthcare at the individual (micro) level and health at the general

(macro) level, the emergence of the industrial convention contradicts this assumption. In the same way as lawyers may have to advise their clients of a possible contradiction between the (general) idea of justice and their (individual) claims (Bessis and Favereau 2010), doctors face the same type of problem when patients' interests or wishes run counter to the idea of health. So, although the industrial convention is an injunction to care for the average patient so as to minimize the variability of practices and the effectiveness of treatments, under some circumstances (distribution queues), the interests of the individual patient need to be cared for differently from the average patient. Each case involves its own dilemma between the general and the particular.[11]

The systematic application of protocols may produce situations in which doctors feel they are doing their job poorly because of conflict between the two levels of health. The view of the art is changing. Medical ethics is becoming a bureaucratic or administrative ethics: it does not matter what the cases are; it takes detachment from the patients to be able to "tick the right boxes."

4.2.3 Liberal Values: From One Category of Liberty to the Next

The industrial convention combats explicitly medical liberalism and forms an attack on the power of the profession which seeks to exclude the social state from organizing proper healthcare. Liberal-type medicine experiences the convention as an intolerable intrusion into the "doctor-patient relationship." However, while freedoms relating to medical practice are quite severely called into question, freedom of price setting and where to set up are reinforced.

As we have recalled on several occasions, the new quality convention relies on the possibility of dissolving healthcare quality in quantities. Although traditional values of the medical profession might quite easily come to terms with market liberalism developed by public policy, it seems that the industrial healthcare quality convention, by challenging doctors' autonomy more fundamentally, even threatens their status as professionals. The proliferation of production standards denies doctors their ability to practice with caution. They are no longer professionals but expendable cogs in the division of labor specific to the healthcare system. Political liberal identity crumbles to the benefit of bureaucratic rules. Doctors lose their therapeutic freedom and their freedom of prescription.

[11] Without recourse to the problems of evidence-based medicine, the question of immunization also illustrates the dilemma between the general and the particular. Individually, it may be that the vaccine is not in the patient's best medical interests but it is in the general interest that as many patients as can be should be vaccinated for the treatment to be effective. Notice, though, that the continuum between the general and the particular interest seems to be far more restricted for health than for justice.

It is from this perspective that ROSP prompts doctors to prescribe breast cancer screening to patients although the effectiveness of mammography is the subject of much controversy within the profession. Autonomy, once the corner stone of the profession's organization, is now a threat. The industrial convention orchestrates the dispossession of freedoms of choice of therapy and prescription. This is its main value from the regulator's point of view. But it is no longer for the doctor to say whether a mammography is required but instead for the norm produced by the independent agency. The bureaucratic rule alone is supposed to produce healthcare quality, and not the doctor's autonomous judgement.

The regulator's take-over of the therapeutic process gives rise to an original outcome that should be examined against the previous situation. Under the inspired/domestic convention, the gift of political freedom might be interpreted as the counter-gift for compliance with Hippocratic values. Quality care should derive from this social process. Accordingly, any questioning of medical liberalism was thought of as a threat to the quality of care – the socialization or control of spending was then necessarily contrary to patients' interests. The industrial convention reverses the logic of this criticism: doctors' criticism with respect to the state's meddling in the "doctor-patient relationship" becomes more difficult inasmuch as these two institutions flatter themselves on the quality of care. It is easier to defend the quality of care against spending controls than against the quality of care itself (industrial convention). This development in the regulation of liberal medicine disarms the criticism from the profession with respect to the state.[12]

However, it should not be imagined that the medical profession has been at a loss with respect to the second major turning point in liberal medicine. On the contrary, one should see in this a choice between freedoms that are not equivalent. By yielding ground on therapeutic freedom and freedom of prescription, the medical profession has reinforced its freedoms with respect to charges and where to set up in practice.

5. Conclusion

The confrontation between the two healthcare quality conventions set out here raises a legitimate question of how to organize the healthcare system: How can we produce quality healthcare while at the same time ensuring that the singularity of the patient is taken into account together with the standardization of practices consubstantial with a public healthcare perspective?

[12] At least initially because afterwards the criticism can and should bear on the possibility of dissolving quality in quantities.

The imposed industrialization of liberal medicine by public policy then poses a twofold problem. First, with the creation of powerful dispositives seeking to change behaviors (health agencies, good practice standards, information systems, financial incentives, etc.), it hardens an opposition between two conceptions of illness and the healthcare activity which is far more nuanced in recent work in the medical field. Not only is there no consensus about the possibility of quantifying healthcare quality but, in addition, even the most ardent defenders of this position consider that statistical methods are not enough to evaluate the quality of a practice. Second, it is necessary to take the fact that the industrialization of liberal medicine is part of a general context of commodification of the world into account in the analysis, with the healthcare sector being one example (André et al. 2016).

The commodification of the healthcare system is done by way of the surge in complementary insurance. The disengagement of the social security system organized by the regulator is opening up a market for insurers who are becoming major actors in many domains. While the proportion of healthcare spending reimbursed by the social security system remains comparatively high on average (76.6%) and while it is very high in some sectors (91.1% for hospital treatment), it is quite low in others: 69.1% of medicinal drugs sold in non-hospital practice, 43.3% of medical devices such as spectacles or hearing aids, 32.5% of dental fees. For ambulatory care as a whole, only 64.1% (€102,063 billion) of spending is covered, the remainder being footed either by complementary insurance or by households (2014 figures in DRESS, 2015).

From this viewpoint, it may be thought that industrialization is a potential accelerator of the commodification of healthcare in liberal medicine (Da Silva and Domin 2016). Commodification actually pre-exists industrialization by way of the disengagement of health insurance, but industrialization accelerates the potential for commodification via the process of homogenization and comparison of healthcare services.

For theoretical reasons, commodification presupposes the homogenization of the good (underpinning the industrial convention). Competitive logic cannot be introduced for so long as doctors are reputed to produce individual medical procedures. For competition to be possible, services must be comparable, which is made possible by generalizing quality standards. While it is hard to imagine price competition in liberal medicine, competition by comparison already operative in hospital care (with activity-based charging) seems far more plausible. In practice, there seems to be no obstacle to the ranking of liberal doctors in terms of their ROSP performance score. In the same way as we now are witnessing the growing development of hospital rankings (Pierru 2004), it would be perfectly possible to rank doctors in terms of their quality indicators.

The most serious obstacle to the circulation of such information is the past history of conflict of liberal medicine with the social security system. But this

would be forgetting that commodification also involves complementary insurers. The social security system is disengaging (it finances 66.9% of liberal medicine spending), the 2013 national interprofessional agreement institutionalizes complementary insurers for businesses and the reform of the third-party payer system implies a major role for complementary insurance in negotiations with doctors. Complementary insurers will not remain blind financers for long and healthcare quality may soon become an argument in negotiations with doctors. If one judges by what is happening with healthcare networks in other countries, complementary insurers are in a position to foster competition among doctors based on standardized quality criteria.

In the United States, for example, in some health maintenance organizations doctors have a stake in the financial results of their network. As their remuneration depends on the difference between the lump-sum contribution made by the patient and the surgery's operating expenses, doctors have a disincentive to depart from their financer's directives. As doctors are thus subordinate to their insurer, therapeutic freedom yields ground in the face of the insurers' demands for profitability. In other words, under pressure from their insurer, it is in doctors' interests to minimize services per patient (Chambaretaud and Lequet-Slama 2002).

The commodification of the health sector is based on the justifications of the market convention. For several decades, many theoretical and political currents have insisted on the superiority of the market organization, based on the pursuit of profit and on the capacity of providers to satisfy the changing preferences of the patients/consumers. In the liberal medicine sector, the inspired/domestic convention was a bulwark against commodification and a compromise with the market convention seemed out of reach. However, the emergence of the industrial convention facilitates the dissemination of the market convention. As Boltanski and Thévenot showed, the compromise between industrial and commercial worlds is particularly fruitful: "So-called Fordian or mass production systems are compromise arrangements that seek to reconcile the demands of efficient production, characterized by high productivity, with the need to satisfy a demand in the marketplace" (Boltanski and Thévenot 2006, 333). While the singularity of relationships linked to the inspired/domestic convention made it difficult to build a profitable market, the industrialization of care made it possible to define standardized products perfectly compatible with the deployment of a market world.

From this perspective, the industrialization of healthcare seemingly accelerates commodification and its corollaries in terms of market segmentation, the reorganization of work, and inequalities for patients and doctors alike.

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