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The economic behaviour of doctors:  
medical altruism without an ethic?

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# **The economic behaviour of doctors: medical altruism without an ethic?**

**Philippe Batifoulier and Nicolas Da Silva**

There have been two key moments in the development of the microeconomics of health: Arrow's highlighting of the role of uncertainty (1963), and the debate sparked by Evans (1973) over the existence of supply-induced demand. These major works recognise and make explicit use of the existence of values, summed up under the generic term "ethics", confirming that the "moral" dimension is not absent from economic theory.

Considered the founding article of health economics, Arrow's work (1963)<sup>1</sup> questions the efficiency of the health market in the presence of uncertainty. Patients are uncertain about the quality of the health service provided and cannot insure themselves against poor diagnosis. However, this market does not function like a business market. The existence of social obligations prevents us from considering the doctor as a simple salesperson or a "barber" (p. 949). The professional ethics component of the service provided by the doctor and the "institution of trust" are then appropriate responses to that uncertainty.

The concept of induced demand is particularly relevant to health economics. In most cases of treatment, the doctor is both producer and consumer, since he translates the patient's illness or injury into medical consumption (by prescribing the treatment). Consequently, the demand is not independent; it reflects the supply both quantitatively and qualitatively. There should therefore be a positive correlation between density and medical consumption: a higher number of doctors, in a given geographical area, should increase health spending rather than lower it – as would be the case, theoretically, in a perfect market – and the total fees charged should also be higher. However, this capacity for induction is moderated by the existence of

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<sup>1</sup> K. Arrow, who never considered himself a health economist, was invited to write this article by the Ford Foundation, which wanted to promote exchange between economists and other professions in three domains: health, education and welfare. The introduction to the special issue of the *Journal of Health Politics, Policy and Law* (vol. 26, n° 5 of 2001) devoted to Arrow's article notes that it is one of the most-often cited, including in disciplines other than economics and more so now than in the past.

an ethic that limits the power to create demand. Here again, the social obligations of the doctor, to which theorists of demand induction refer almost systematically, are a response to this original power of the doctor.

The theories of medical uncertainty and induced demand are certainly not theories of values in health economics. Ethics only enters into them as a secondary by-product. What really matters lies elsewhere. These works are known, recognised and used to analyse the asymmetry of information between different agents: between the patient and the doctor, between the insured and the insurer, etc.

Indeed, the economy of health is very largely an economy of information. If the market functions imperfectly in the field of health, it is because there is an asymmetry of information between the doctor and the patient, in favour of the doctor. The power of the doctor over the patient (or of the insured over the insurer) is related to the knowledge possessed by the former, inaccessible *a priori* to the latter, which allows the doctor to manipulate the medical relationship.

Medical uncertainty is taken into account by recognising asymmetries of knowledge between agents, and the problems involved in the microeconomics of health are consistently analysed through the lens of information. Thus induced demand, approached from a more informational perspective (Rice, 1983), is usually associated with the existence of a “moral hazard” of doctors (Rochaix, 1995), but which can also be defined in terms of “anti-selection”, if one focuses on the lack of information about quality (Bardey, 2002). By distinguishing between the two stages of the medical activity, one can associate a problem of anti-selection with the diagnosis and a problem of moral hazard with the treatment (Rochaix, 1998).

The trajectory followed by health economics is in line with the overall development of economics, where strategic behaviour has been increasingly considered in terms of informational dividends. The originality of health economics lies in its slowness to adopt this approach, compared to other disciplines like public economics or labour economics (Rochaix, 1997). Although it is often said that health economics is a recent discipline, it would be more accurate to say that it has been slow to develop.

This slowness is partly due to the existence of ethical considerations, which are difficult to combine with an emphasis on opportunistic behaviour. If Arrow's article is now considered authoritative, and if the debate over induced demand has engulfed the microeconomics of health, this is because they allow development of an "extended standard theory" (Favereau, 1989) that analyses market imperfections in terms of information.

And yet such an analysis does no more than indicate a difference between the information possessed by one agent (generally the doctor) and another (the patient, for example). It stresses the unwarranted nature of this informational advantage. The asymmetry of information is then considered the driving force behind opportunism.

So what is at stake, with the theory of induced demand, is not the restoration of "Say's law", according to which supply creates demand. The shift in demand results from the doctor exercising a discretionary power. The creation of demand must therefore be arbitrary and in bad faith. It comes from a manipulative doctor<sup>2</sup>. Induced medical acts are unnecessary or unsuitable. Consequently, the concept of induced demand conveys a view of the economic attitude of the doctor that is at odds with the usual definition of an ethic, because it "refers more to medical behaviour that is not concerned with the real interests of the patients... The impression that the discretionary power of doctors had been underestimated then becomes a firm conviction" (Darbon and Letourmy, 1983 pp. 46 and 47, translated from the French).

There then remains very little of Arrow's efforts to promote the role of ethics. By highlighting the fact that the existence of an ethic counteracts self-interest and increases collective welfare, Arrow appeared to give a certain amount of credit to the existence of an altruistic ethic. This did not prevent him from recognising that the deontology can be subverted for self-interested purposes and can even be used as a long-term marketing strategy to accumulate reputation effects. Today, the clear ambiguity of Arrow's position no longer exists: only the negative aspects of professional ethics are mentioned. As Bloche (2001) put it, the "rising tide of scepticism" has undermined the idea that an ethical norm might improve welfare, except by pure coincidence. Arrow's position on the positive effects of an ethic is considered naïve and somewhat outdated. *"Health economists admire Arrow's article for its path-breaking analysis of market failure resulting from information asymmetry, uncertainty and moral hazard. But*

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<sup>2</sup> This manipulation can take different forms: persuasion, inhibiting the patient's deliberation, rationing, etc. (Lien et al., 2004).

*his suggestion that anticompetitive professional norms can compensate for the market failures is at odds with economists' more typical treatment of professional norms as monopolistic constraints on contractual possibility"* (Bloche, 2001, p. 1100).

So the development of health economics has not been favourable to any consideration of ethics beyond its manipulation for self-interested ends. Nevertheless, the preoccupations of health economics are not disconnected from the problems raised and faced by the medical world. For this reason, ethics cannot be excluded from health economics; it is an indispensable factor of coordination. The problem is then to introduce the presence of values within the frontiers demarcated by economic rationality. The analysis of ethics, considered as a means and not as an end, provides the subject matter of this article. We shall comment on the way economic theory incorporates "values" into the coordination.

Section 1 draws on the approaches to ethics in health defined in terms of medical altruism. This concept is intended to take into account the values of doctors by assuming that the paradigm of *homo economicus* is sufficient (although it may have to be modified). These values are incorporated through the concept of utility. The individual is endowed with "classic" individual preferences (in the context of the work-leisure trade-off, for example) to which are added "social" preferences. Our work seeks to highlight the advantages (from the perspective of economic theory) and the contradictions (in terms of the formalisation of behaviour distinct from that of *homo economicus*) of the exogenous status of social preferences.

The second section follows a fundamental trend in health economics, whereby the patient is treated as an active participant. The ethical preferences of the doctor are then no longer exogenous but endogenous to the doctor-patient interaction. We show that a large section of this literature impoverishes the consideration of values in the analysis by using more traditional explanatory categories (market, competition) that can be stripped of all reference to values. By focusing on information asymmetry, the reference to values is no longer necessary and there is no longer any need to reconcile calculus and values. But this reduction of values to self-interest is no longer possible when the assumption of informational advantage is dropped. Challenging the informational power of the doctor then allows values to be brought back into the economic analysis.

## **1. Medical altruism. The difficult combination of rational calculus and moral values**

In the world of health, both doctors and patients use the word “ethics” to signify the presence of values in medical behaviour. Economics prefers the word “altruism”, more prudent because it is considered to involve means rather than ends and is therefore less charged with value. Health economics holds a singular position: it freely uses the term “ethics” (and more precisely professional or medical ethics), because that term has semantic authority in the medical world, but it models the idea in the form of altruism. And although economic altruism does present a conception of otherness, it nevertheless remains a product of calculus. Under these conditions, for a science that has no intention to dirty its hands with the problem of values, formalising the ethics of doctors presents no insurmountable problem (Hausman and McPherson, 1993). Drawing on the traditional definition of altruism in economics, medical altruism can be defined as the inclusion of the patient’s welfare in the doctor’s utility function.

The health economist then writes “ethics” for “medical altruism”. Thus the word “ethics” derives its legitimacy from the fact that it is used by the participants themselves, not because it refers to ethics in the standard sense of the term. A question such as “Is the ethics (of doctors) ethical?” is then less paradoxical than might at first appear.

The economic theory of altruism was imported into health economics to solve certain theoretical problems raised by the concept of induced demand. The thesis we defend is that the incorporation of a professional ethics into the doctor’s utility function is not only an advance in economic analysis but also vital to the credibility of the theory of rational choice when it seeks to capture the figure of the doctor. By avoiding any discontinuity between rationality and value, this incorporation of ethics allows to make the economic calculus operative (1.1). But there is a heavy price to pay, because the ethics of doctors is reduced to a selfish, instrumental interest. The doctor is altruistic when it is in his interest to take the patient’s interest into account. This altruism is then quite similar to a taste. Consequently, it describes doctors who have no reflective capacity. Giving moral motivations the same status as other motivations amounts to purging doctors’ ethics of any reference to values. This raises

certain problems of economic theory and economic policy, which weakens an approach based on the ethical preference of the doctor (1.2).

### **1.1. The ethical preference of the doctor and rational calculus**

The atypical position of the doctor in the “health market” leads certain liberties being taken with the language of microeconomics. If the professional is identified with a producer, he is formalised as a supplier of labour rather than a supplier of a product. As a result, he maximises utility rather than profit. Not only is this more favourable to a consideration of ethics, but it actually makes it necessary.

This is because the doctor’s utility function  $U_M = U_M (Y_M, W_P)$  includes both the classic arguments  $Y_M$  (in terms of income, working hours, etc.) and the more unusual arguments  $W_P$ , reflecting the doctor’s social preferences and likely to include ethical arguments in one form or another. The doctor’s utility thus incorporates the patient’s welfare and allows to explain medical behaviour as regards price and quantity. The utility measures the satisfaction of preferences, including the doctor’s “ethical preference”.

The ethical sensibility of the doctor is identified with an exogenous preference or taste, the origins of which are not considered relevant: *de gustibus non est disputandum*. Like other individuals, doctors are not responsible for the formation of their preferences. This ethical preference that is given *a priori* can appear in the utility function in one of two generic forms.

In the first case, emphasis is placed on the discretionary power of the doctor, and ethics is used to take into account the disutility of exercising such power. Some induction models operate in this form:  $W_P = I$  with  $U'_I < 0$  (for example Woodward and Warren-Boulton, 1984; Wilensky and Rossiter 1984). The utility of induction ( $I$ ) is positive but decreasing and ethics is invoked to justify this decrease. It is described as a limit to the power of creating demand. For reasons of altruism, the doctor curbs the exercise of his discretionary power. He refrains from over-prescribing or over-charging the patient (through either high fees or unnecessary consultations), because this “maximal medicine” is costly to him on a psychological level (Domenighetti 1995). The doctor is modelled as maximising utility under self-imposed



constraints<sup>3</sup>. Here, medical altruism is identified with a preference that corrects the other preferences of the doctor. It acts as a constraint on self-interest and subordinates the other arguments of the utility function to respect of this constraint, which reduces the doctor's sovereignty of choice (McGuire, 2000).

The second case, which takes into positive consideration the doctor's wish to act in the patient's interest, is more in line with the economic theory of altruism. The ethics is explicitly taken into account in the utility function ( $W_p = E^4$ ), reflecting the fact that the doctor is concerned with the welfare, health or demands of a representative patient. In this case, the doctor's utility increases with such an ethic  $U'_E > 0$ . The concept of patient can be presented in different forms, depending on the modeller's imagination and what he is seeking to explain. The doctor may be concerned with the welfare of the ordinary, average patient (for example Richardson, 1981<sup>5</sup>). He may be more sensitive towards particular types, such as poorer patients. Models of price discrimination are then developed in which the doctor's satisfaction depends on the income of his patient. Segmentation of the clientele leads the doctor to charge different fees depending on the patients. This "discriminatory ethics" conflicts with the injunctions of the code of deontology (Ruffin and Leigh, 1973)<sup>6</sup>. The doctor may be more sensitive to patients who are interesting from a clinical perspective, because he prefers medicine that is more intellectually attractive or prestigious. The ethics may then be expressed as a function of the gravity of the disease (for example, Zweifel, 1981). The ethical cursor thus moves up and down according to diverse characteristics of the patients.

The ethics thus formalised centres on concern for others. It is applied to the case of doctors but it is not exclusive to them. Beneficence and altruism are generic behaviours that can be found in any individual; they are not specific to doctors. Medical altruism is then identified with a generic altruism exercised within a particular environment. The doctor does not have his own specific depth (Batifoulier et al. 2011; Davis and McMaster, 2007, 2013), while the specificity of medicine lies in the existence of a well-founded professional ethos (Hodgson, 2009). This medical altruism bears a "family resemblance" to various concepts developed in

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<sup>3</sup> These constraints can be said to be Kantian when it is in everybody's interest to respect them.

<sup>4</sup> E can also be no more than an element of  $W_p$

<sup>5</sup> The different models of ethics in health are presented and developed by Rochaix (1986), Gadreau (1992), Béjean and Gadreau (1992, 1996) and Béjean (1994).

<sup>6</sup> In France, the opening-up of "sector 2" health care, where doctors are free to set their fees, has given this model particular relevance.

very different contexts. The literature proposes other terms instead of altruism to describe the doctor's behaviour. The doctor's "concern" for his patient is similar to that which can be observed in the family, for collective goods or in certain configurations of industrial economics.

Whatever the words used and the form of the formalisation of professional ethics as altruism, the aim is to reject the idea of the full exercise of discretionary power. Assuming that this power is not constrained leads to an absurd result whereby the doctor is simply an economic agent like any other<sup>7</sup>. At the other extreme, a maximal ethic denies the existence of maximising behaviour. In the former case, traditional microeconomics is sufficient to explain medical behaviour, and there is no need for the specificities of health economics. In the latter case, there is no need for microeconomics at all.

Taking ethics into account is therefore indispensable to formalisation. It is even exploited in this sense, because it allows to perform the traditional economic calculus – in a domain that was not *a priori* receptive to such calculus – within transforming the doctor into a businessman. The ethical argument is more tractable, friendlier and ultimately more orthodox than a hypothesis of target income<sup>8</sup>, for example, which argues that maximising rationality should be abandoned in favour of Simonian rationality. Consequently, analysis of the economic rationality of the doctor almost systematically includes consideration of an ethic that does not (always) call for comment. It is part of the modeller's toolbox. In that sense, this microeconomics of health is also inevitably a microeconomics of ethics. Ethics formalised in this way is therefore far from anomalous. However, this pressing need for ethics raises certain problems.

## **1.2. Altruism without values: problems of economic theory and economic policy**

This conception has implications for the understanding of medical behaviour. The existence of an ethical preference leading the doctor to impose limits on his own discretionary power

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<sup>7</sup> De Jaegher and Jegers (2000), for example, following other works, show the absurdity of a "no limit" strategy from a microeconomic point of view.

<sup>8</sup> This hypothesis is used notably by Evans as a factor explaining the limits of induction. See also Sweeney (1982).

calls medical altruism into question. Why should an otherwise perfectly rational doctor choose, of his own free will, not to take advantage of his informational advantage?

This medical masochism is problematical, and the status of ethics in health economics remains mysterious. We can identify several levels of problems raised by this medical altruism. The first series of difficulties is theoretical: the ethic as exogenous preference has no need of justification other than that of allowing testable hypotheses. But this reasoning can seem rather *ad hoc* if, to justify the absence of maximal exercise of discretionary power, one postulates the existence of a “vaguely defined<sup>9</sup>” altruism, the role of which is precisely to restrict such opportunistic behaviour. The second series of problems lies in the domain of economic policy. In this case, the criticism is shifted onto a central regulator seeking to regulate an altruistic doctor. Such regulation is difficult because the doctor’s altruism is never pure. Indeed, the formalisations seek to exclude the totally altruistic or totally selfish doctor<sup>10</sup>. Following the ground-breaking work by Harsanyi (1955), models consider a doctor who is both selfish and altruistic, and these two components can be observed in the utility function. The central regulator must therefore deal with an individual whose behaviour is located “somewhere” between the extremes of altruism and selfishness.

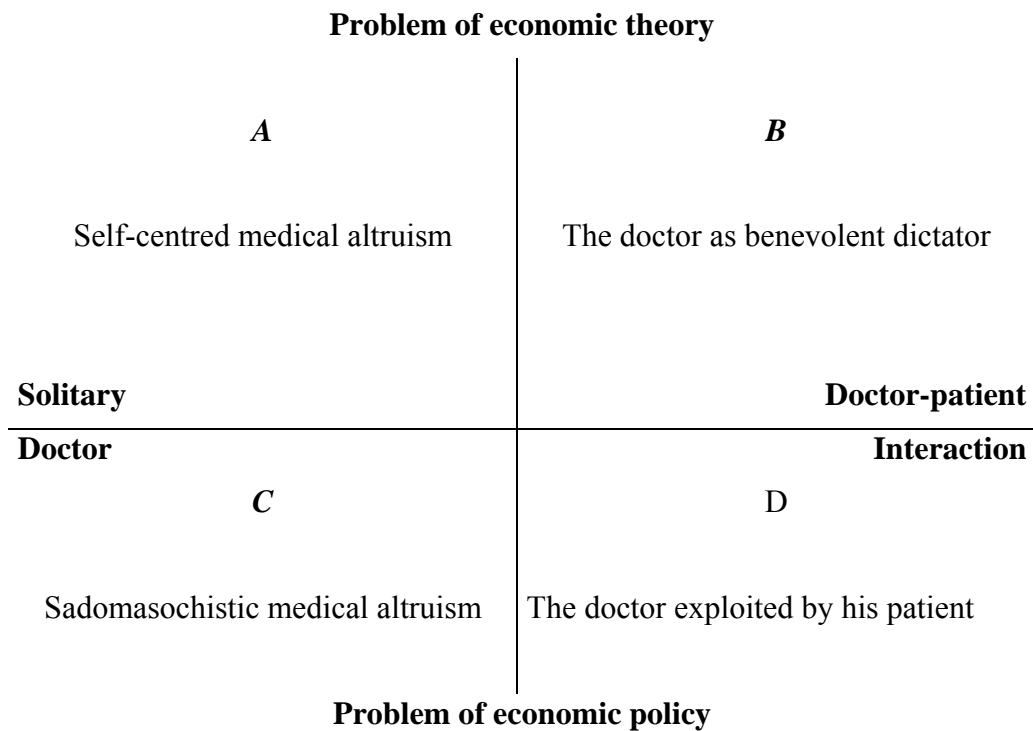
The following diagram summarises these different levels of criticism, while also distinguishing between the criticisms according to whether they adopt a point of view focused on the doctor or on the impact of the doctor’s altruism on the patient’s behaviour. The former case leads to the development of a theory of the doctor, the latter to a theory of the doctor-patient interaction.

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<sup>9</sup> To quote Stano (1987, p. 229).

<sup>10</sup> “The main lesson to be drawn from this review of the literature [on induced demand] is that the care supplier is by nature neither totally self-interested nor totally altruistic” (Rochaix and Jacobzone, 1997, p. 33, translated from the French).

**Figure 1 Diversity of criticisms of altruism without value**



**Moral virtues generated by self-interest: calculated charity**

The first criticism of medical altruism (quadrant A) is that which is levelled at the economic theory of altruism in general. The professional ethic, incorporated into a utility function, has no intrinsic value (Batifoulier, 2004). It is simply an instrument used to achieve a given end. The end justifies the means and the ethical means (or disutility of induction) is justified solely by the end that is sought after: not to treat the doctor as an unrestrained maximiser.

The arguments of the utility function, which lend themselves to the same type of calculus, are then interchangeable as regards their consequences in terms of the doctor's satisfaction. The strength of this modelling of medical altruism is that it reduces the advantages and disadvantages of respecting a norm like medical ethics with one sole homogeneous measure – utility – by incorporating the values into a cost-benefit analysis. This strength is also a weakness, because it amounts to defining the ethic by default and dissolving the moral judgement in the calculus (Batifoulier and Thévenon, 2003; Hausmann and McPherson, 1993; Ben-Her and Putterman, 1998; Lopes, 2005). The analysis makes all the arguments of the utility function commensurate, and it is always possible to make a trade off between the different arguments. However, using the same currency to count preferences of different

orders can lead to contradictory results. Thus, in the individual component of the utility function, the doctor's effort is counted negatively (disutility of effort), but in the social component it becomes positive, because the doctor is concerned about the patient's welfare, devoting time and energy to it. The private effort that generates a disutility and the social effort underlying recognition of the patient are not at the same level<sup>11</sup>.

Unlike "altercentric" altruism (Khalil, 2003), this medical altruism is egocentric, because it is "good" from a personal point of view and not intrinsically. The doctor maximises his welfare by seeking the patient's welfare. The moral virtues are only generated from self-interest. Sympathy for the other is judged on the basis of the benefits it generates. The agents always start by maximising their own utility, not that of others. Good remains irreducibly attached to subjective welfare. One can therefore refuse the label "altruism" to describe this conception (Rose-Ackerman, 1996, p. 713) or prefer the term "commitment" (Sen, 1977) to transcend the context of simple sympathy<sup>12</sup> and interdependence between utilities in such a way as to give a moral dimension to altruism. Truly altruistic commitment leads one to prefer an action that might reduce one's utility, while another possible action could increase that utility.

### **From medical paternalism to professional self-regulation**

This egocentric altruism leads to paternalistic altruism (quadrant B) where the doctor takes responsibility for the patient's health because he is concerned for his welfare. He gives up his advantages in order to express the needs of the patient. In line with Beckerian tradition, the doctor is seen as a benevolent dictator who knows what is good for the patient (like the "good father"). Each party gains from the situation, because the "happiness" of the doctor is achieved through the "happiness" of the patient. In return, the doctor obtains a return on his ethical investment if the patient behaves like a coddled child: he will remain cooperative and loyal to the doctor.

This conception of medical altruism is in tune with that of private practice. Medical paternalism is a doctrine of the medical profession which, like the health economist, stresses the inequalities of position between the patient and the doctor. The patient must put himself in

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<sup>11</sup> To resolve these contradictions leads one to adopt another approach to preferences (meta-preferences or reflexivity of preferences) which departs from the axiomatics of rational choice.

<sup>12</sup> With the conception of altruism as sympathy, there is no need to resort to the sort of arguments based on moral obligations or dispositions that are used in sociology (Merchiers, 2004).

the hands of the knowledgeable person, whose judgement is not clouded by suffering. The right to intervene ensues naturally from the inequality of position. Thus, paternalism is justified by the lucidity and rationality of the doctor treating a patient whose safety requires submission (see the analysis of Jaunait, 2005, notably based on the writings of Louis Portes, the first chairman of the French Medical Board). So the medical profession does indeed have power, but this power is voluntarily channelled by the sense of responsibility developed in doctors, who seek the welfare of their patients. It is in these terms that ethics is defined in the report “*Éthique et Profession de Santé*” (Ethics and Health Professions): “*We understand ethics to mean the questioning of power and authority by the sense of responsibility for others... In other words, it is a matter of power being examined by duty*” (Cordier, 2003, p.18, translated from the French).

The conclusions for economic policy are immediate: giving credit to the idea of professional ethic within this paternalist context amounts to giving a “blank cheque” to doctors, the only ones capable of knowing what is good for the health of the patient and naturally oriented towards beneficence. It is then necessary to acquire the tools to reinforce the freedom and autonomy of the doctor. If it is part of the doctor’s calling to adopt the principle of “the patient comes first”, then economic policy, the aim of which is to defend the patient’s interests in the name of the common good that is health, need only step aside and let professional self- regulation do the job.

### **Doctors who are altruistic for sadomasochistic reasons?**

At different levels of analysis, the medical approach and economic formalisation both relate medical altruism to the fact of taking the patient into account. However, there is nothing to ensure that the doctor will be naturally beneficent, and the modelling of altruism based on the interdependence of utility functions is insufficient to guarantee this beneficence. It reduces altruism to a sort of “otherism” without values (Mahieu, 1998).

The presence of the patient in the doctor’s utility function is no more than an extension of individual rationality to the presence of the other. The act of looking after someone is like an externality (a “caring externality”) that can be positive or negative. There is no need to bring into play a social norm when a partial identification with the other’s welfare is sufficient. This altruism is *a priori* neutral and only produces economic utilities where the action is judged in

terms of the gains it generates for the doer. If we simplify the doctor's utility function  $U_M = U_M(Y_M, W_P)$ , then the egoist is someone who is insensible to the other:  $\partial U_M / \partial W_P = 0$ . In the case of the altruist, the reverse is true:  $\partial U_M / \partial W_P \neq 0$ . Envy, jealousy and malevolence are then forms of this altruism ( $\partial U_M / \partial W_P < 0$ ) producing negative utilities. An additional step is then needed to postulate a beneficent doctor ( $\partial U_M / \partial W_P > 0$ ). In this case, the doctor gains from caring about the patient.

However, when it is formalised in this way, this care for the other conveys a very particular conception of otherness. It can suggest the existence of sadomasochistic medical behaviour (quadrant C): as he can obtain utility by acting in the interest of the patient, the doctor can have an interest in the suffering of the patient that leads this latter to consult him and seek his beneficence (McMaster, 2007). This beneficent doctor gains from investing in the therapeutic process. He therefore needs the existence of the disease in order to extract benefit from his interaction with the patient. The patient's disease serves to valorize the lucrative interest of the doctor.

It is through the suffering of the patient that the doctor is concerned with the interests of his patient. Here, the suffering is the driving force behind the interested action. This strips the medical relationship of its sense. A doctor who profits from the suffering of his patient is hardly friendly. He awakens the suspicion of the patient, who has no interest in trusting him. Medical confidence is impossible, and the therapeutic relationship is inexistent. This type of configuration, intensifying the logic of instrumental and selfish interest, leads to prisoner's dilemma-type situations where any cooperation is rationally impossible, even if it is reasonable.

### **Medical altruism: a trap exploited by the patient**

The analysis of medical altruism is also vulnerable to "egocentric bias", highlighted by the psycho-economic literature, which describes the tendency of individuals to believe that others would do the same thing in their place (Levy Garboua et al., 2006). Thus, on the basis of his own position, a beneficent doctor might infer the beneficence of his patient. This projection can be dangerous (quadrant D). In the formalisation of altruism in the form of the doctor's preference, nothing is known about the patient. The way the patient reacts to the ethical commitment of the doctor is assumed to be positive. And yet there is nothing to prevent him

from taking advantage of the doctor's naivety. The altruism of one can even stimulate the opportunism of the other. This paradox of unilateral altruism has been developed by Marciano (1998, 2005) from an extension of Becker's "rotten kid theorem". If the patient is not assumed to have the same ethical "values" as the doctor, he may behave as a "rotten kid" and the "return on ethical investment" expected by the doctor will be inexistent. We then find ourselves in a "Samaritan's dilemma" context where the doctor gains from being altruistic while knowing that the patient will exploit the situation. The doctor concerned about the patient's welfare is then a naïve doctor and his beneficence is counter-productive. It is just as if a frustrated maximiser was considerably weakened by a pure maximiser.

Under these conditions, the central regulator must protect the doctor from his unconditional altruism. This latter is costly and counter-productive because it activates moral hazard-type behaviour in the patient, which is a source of increased expenditure. The supervisory authority may then be led to tax this excessive altruism. The doctor himself cannot react to an opportunistic patient because his hands are tied by his altruism. He must delegate the sanctions to a third party (the supervisory authority) who will oblige the patient to be altruistic in return. This situation where medical altruism becomes a problem for the regulator can be ascribed to a failure in confidence and reciprocity. The formalisation of values in terms of interdependent utility functions makes medical beneficence perverse.

Utilitarian calculus prohibits consideration of the normative character of a professional ethic. By placing ethical motivations and personal motivations on the same level, it is impossible to consider the ethic as a social norm where the doctor can give "something for nothing" without expecting anything return. And yet, as Elster showed, (1998)<sup>13</sup>, if social norms were counted like economic utilities, they would have no effect. Most norms, the desired effect is obtained by seeking another objective. When applied to the behaviour of the doctor, this reasoning brings out the fact that it is, paradoxically, only by showing his insensibility to the patient's gratitude or social approval, and more generally by adopting ethical behaviour in a disinterested manner, that the doctor will meet with social approval or reciprocal commitment from his patient. In developing a professional ethic, the doctor expects a return from the

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<sup>13</sup> Elster's example of the pill that reduces guilty feelings can be adapted to the case of the doctor to show that nobody can escape from a "bad conscience" by buying this pill, because wanting to be immoral is already being immoral: to think of the pill, one must already be feeling guilty. The moral problem is therefore not strictly reducible to a problem of cost, which would draw equivalence between behaviours with highly contrasting moral qualities.



patient. There is therefore no free ethic. But the quality of this ethic resides in the fact that it requires no return. The ethic can only require payment on condition that it has not been practised to that end, as the language and sociology of the gift suggest (Caillé, 2005; Chaniel, 2008).

Reducing ethics to cost-benefit analysis or a system of *quid pro quo* obscures this fundamental dimension. It is therefore counter-productive to attempt to combine moral values and calculus, because it is precisely by liberating themselves from the calculation of self-interest that individuals demonstrate their moral values. Calculated charity is stymied by the complexity of medical behaviour. If it is impossible to reconcile self-interest and medical ethic, one solution is to look for the self-interest behind the social norm and to sacrifice values on the altar of calculus. This was the approach adopted by health economics when it captured the doctor-patient interaction in terms of an agency relationship. In so doing, it gave substance to the patient, which had been lacking from previous analyses.

## **2. The economics of information and the disappearance of values**

Do we really need a theory of values if medical altruism can be imposed by the supervisory authority or the patient? There is no need to try to define the ethical preference of the doctor if it can be induced by an appropriate environment. Medical honesty is then no longer the property of the doctor. It must be guaranteed by well-chosen rules.

This radical change in the status of medical ethics is a consequence of the attention focused on the behaviour of the patient. In the previous section, the patient only existed in the doctor's utility function. He only intervened in the medical relationship through the voice and acts of the doctor. He did not exist as an autonomous individual. Today, this conception of the absent patient seems to be disappearing. The underlying trend in all the social sciences of health is to take the patient into consideration as an autonomous agent who can react and question or direct the doctor's choices.

The concept of "client control" (Freidson, 1960), developed in the sociology of professions and challenging the monopolist power of the doctor has recently been extended to take into account a real critical sense among patients. A new figure has appeared, the "active patient", seeking recognition of a human, psycho-social dimension in the therapeutic relationship and

particularly visible in the domain of chronic diseases (Bardot and Dodier, 2000; Dodier, 2003). The redistribution of skills between doctor and patient and the concept of “shared decision” argue in favour of the existence of a “community health model” (Domin, 2004). This trend has been officially recognised by the legislators with their emphasis on “patient rights” (development of the concept of “informed consent” and the law of 4 March 2002, aiming to create a legal status for the patient), which have now penetrated the medical code of deontology (Jaunait, 2005).

Economics is not impervious to this trend. It preceded it, insofar as taking the patient into consideration as a protagonist is a way of rehabilitating the concept of market that has been mistreated by the theory of induced demand<sup>14</sup>. The existence of a sovereign consumer, capable of making autonomous choices and of influencing the medical decision allows to identify a demand. This neo-classical restoration has no need to postulate the existence of an ethical argument, deemed to be a cumbersome, ambiguous hybrid. On the other hand, it does need the consumer-patient to be well-informed, to fight effectively against an opportunistic doctor. The ethic is simply the consequence of a market constraint (2.1). Now, if the patient has evolved considerably over several decades of health economics, the doctor has remained at the elementary stage of an agent with largely discretionary power. The emphasis on information has not led to the restoration of values to the analysis. On the contrary, it has eclipsed them. That is the argument we shall put forward (2.2). Consequently, it is necessary to amend the conception of information asymmetry between patient and doctor and put it into perspective in order to incorporate the role of values into the medical coordination. The revival of health economics, in the aftermath of the issue of “perfect” agency, is more conducive to such a restoration, by bringing to light concepts such as emotion and communication, which convey the values of individuals (2.3)

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<sup>14</sup> This has, however, never been definitively proved, despite the quality of the work devoted to it and the progress made in econometric methods (Rochaix and Jacobzone, 1997). It is difficult to provide empirical proof of an induction effect assimilated to an effect of medical consumption *ceteris paribus* that cannot be explained by control variables such as the patient’s health and characteristics, prices, incomes, etc.

### **1.3. Market constraint and experience good: reducing ethics to a problem of anti-selection**

Faced with the informational power of the doctor, the patient has one powerful weapon of his own: he can “vote with his feet”. A dishonest doctor who abuses his power is punished by the patient who goes to consult another. The threat of an “exit strategy” obliges the doctor to respect the ethic, because it weighs on his income.

The problem with threats is that they must be credible. From this point of view, it must be possible for the patient to change doctor. There must therefore exist at least one other doctor within a reasonable perimeter. The credibility of the threat of disloyalty therefore depends on the degree of monopoly enjoyed by the doctor (Pauly and Satterthwaite, 1981). Above all, the patient must be well-informed and able to obtain information about the competence, honesty and reputation of the doctor. Here again, the configuration of the local health market plays a significant role in this acquisition of information. The patient can only fight the abusive exercise of discretionary power if the costs of searching for information or acquiring reputation are not prohibitive. The constraint imposed on the doctor by the patient is therefore a market constraint and health is perceived as an information search good, following the pioneering work of L. Rochaix (1986, 1989).

This conception of the doctor’s honesty has no need to refer to values. It is his well-understood self-interest that leads the doctor to renounce (some of) his discretionary power. He adopts “ethical” behaviour under constraint from a patient who has decided to exploit the competition.

The aim is to counter the information asymmetry by searching for information and ultimately by playing information against information. The problem of monitoring the doctor is a problem of information cost, which can be solved by a well-informed consumer on a competitive market.

This approach is based on a conception of health as an experience good. The patient, in the position of evaluator, must obtain *ex ante* information about the doctor so that he can judge him and if necessary switch to another. Doctors have a different propensity to ethical behaviour (and honesty). Looking for an honest and competent doctor is then simply a

problem of anti-selection. Punishing a dishonest doctor depends on the patient's ability to obtain hidden information.

If health is an experience good, then one can learn from one's own past experience. However, in certain cases (the most important ones?), the medical act is unique and the patient has no personal experience of it. For these "credence goods", one must rely on the advice of third parties (the experience of other patients). The patient then adapts his beliefs according to the information obtained from different sources. This "Bayesian" patient is assumed to be a good epidemiologist, capable of appreciating the complex medical information obtained from his networks, judging the medical diagnosis and possibly refusing the treatment and seeking a second opinion<sup>15</sup>.

#### **1.4. Agency theory: the values dissolved in the calculus**

The possession of information is essential for monitoring the doctor. Capturing the doctor-patient relationship with the language of the agency model strengthens this point of view. The balance of power is redistributed by treated the medical relationship as a form of delegation, in which the patient is attributed the role of principal and the doctor plays the role of agent.

##### **Partial shaping of the doctor-patient interaction**

This microeconomics of bilateral relations provides a general definition of power whereby a principal, reputedly honest, is dispossessed of legitimate power by an agent capable of strategic behaviour. This conception of power through the possession of information develops a non-neutral view of the interaction, reversing the usual conception of power. It is typically the case in the firm, where the employee is considered to have an advantage over the employer because he possesses information about his effort or skills. It is also the case for the doctor-patient interaction, where the information asymmetry in the doctor's favour constitutes the template of economic analysis.

This framing of the problem is questionable, and it goes against the standard conceptions adopted in the other social sciences. Information asymmetry is considered inescapable in economics, but there is nothing natural about it, and it is highly relativized in other

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<sup>15</sup> Which may constitute medical nomadism.

disciplines. Thus, the philosophy of health stresses the vulnerability of the doctor vis-à-vis the patient, to such a degree that one can equally well argue that the patient is the agent and the doctor is the principal, because the doctor is beholden to the patient. He is “taken hostage” (Ricoeur, 1996 and Folscheid, 2005, based in particular on a reading of Levinas). The problem is no different in the case of a doctor treating a very well-informed patient, another doctor, for example. The “regime of compassion” in sociology (Corcuff, 1996) shares the same approach of inverting the hierarchical relations between two categories of protagonists.

Attributing the status of principal to the patient runs counter to the common intuition whereby the doctor decides and the patient submits to his decisions, because only one of them is ill. However, he who knows remains highly dependent on he who is ill and who describes his illness, as is amply demonstrated in the first-hand accounts of doctors collected by G. Bloy (2000, 2002, 2005).

The construction of the medical relationship in terms of an agency relation in economics has shaped the type of problems to be solved and the range of solutions that can be brought to them. It leads to an emphasis on incentives to buy the rectitude of the doctor. In the canonical version of the agency relation, the principal induces the agent to be honest by means of a contract, based on an incentive mechanism that compensates the agent financially for the disutility inherent in suspension of his discretionary power. The agent (the doctor) accepts and respects the contract because it is in his interest. It is therefore desirable to increase the doctor’s income, and this enrichment should then benefit everybody.

Agency theory is held to be generally applicable, and the doctor is just an agent like any other. That explains why incentive techniques based on variable pay and bonuses are also recommended to “motivate” chief executives and managers, for example. The financial crisis of 2009 revealed that increasing the frequency and scale of variable pay does not automatically lead to more honesty. On the contrary, it can lead “agents” to distort the truth. Today, the benefits of bonus policies appear to be clearly imaginary. Restraining the allegedly natural opportunism of agents by appealing to their taste for lucre now seems largely illusory.

To this general observation, now widely-accepted, we must add the specificities of the health sector. Because of the fragmentation of responsibilities in the health care system, we can identify several overlapping agency relations, in which different participants may play the role

of principal vis-à-vis the doctor-as-agent, and define optimal contracts concerning different dimensions of medical activity (Rochaix, 1997, 2004). Despite the difficulty in isolating each bilateral relationship and in defining the contracts in concrete terms, we can define a “standard contract” involving three protagonists:

- The supervisory authority or payer (sometimes called the regulator) which fixes the terms of the contract. This contract covers the type of payment the doctor receives (fee for service, capitation, fee sector, etc.) and the ingredients of the payment (fixed/variable parts, pure or mixed system, etc.) needed to ensure a good quality medical service. It must deal with the strategic behaviour of both the doctor and the patient (“double moral hazard”). The contract defines the type of incentives deployed on the supply side but also possibly on the demand side (policy mix).
- The doctor, who derives discretionary power from the information asymmetry. For the optimal allocation of resources, the doctor must behave as a perfect agent of both the supervisory authority and the patient. But if the doctor is a “double agent”, he remains an ambiguous agent, in keeping with the perspective drawn by the induced demand approach.
- The patient, whose recognition as a protagonist gives him a strategic power that can be attributed to his possession of information unknown to the insurer. Like the doctor, the patient can cheat and, in particular, adopt moral hazard-type behaviour or demand induced by free care provision or social insurance.

### **What incentives for an altruistic doctor?**

In formalising the doctor’s behaviour, the great majority of this literature takes into consideration the existence of altruism. This is only justified by the desire not to model the doctor as a simple businessman. From induced demand to contract theory, medical altruism is a required mention, because it would appear careless or even counterproductive to ignore the issue.

In contract theory, as in the context of induced demand, altruism moderates the discretionary power, without offsetting it completely. Just as it contradicted the existence of an induction effect, total altruism negates the utility of an incentive contract. It amounts to assuming the

existence of a perfect agency relationship, which strips the issue of agency of all scientific interest. The economist would have no need to construct extrinsic incentives to honesty of the existence of intrinsic motivations already played that role.

The easy answer would be to reject ethics or to consider it as a troublesome constraint. It is more difficult to work with ethics in a contractual context. A purely opportunistic doctor is totally sensitive to financial incentives and so the contract is easy to draw up. But what to do with a doctor concerned with respecting a professional ethic?

One approach consists in recognising the ethic... as a contract. It simply reflects the contract that the parties would have signed if they had had the opportunity. By imposing this ethic, one relieves the protagonists while respecting their individual wills. One prepares for them what they would have negotiated on their own anyway. By adopting this “turn-key” governance structure, they save time and money (Rebérioux and Bien, 2002).

The second approach consists in modulating the contract according to the characteristics of the doctor. A doctor who is uniquely sensitive to his own private interest is easier to direct towards the choices of the public authorities. He simply needs to be compensated for the disutility of his effort. But if the doctor is altruistic, even to a limited extent, this policy can be difficult to implement, because the moral hazard to be countered is no longer certain, only possible. One must therefore distinguish between doctors according to their degree of altruism (Bardey, 2002). A doctor concerned about the state of health of his patients produces “good quality” without any incentive. However, the supervisory authority does not know whether the doctor is honest or not. The contract must therefore start by revealing the type of doctor (Bien, 2001). A doctor who is already altruistic will need less incentive than a totally selfish one. From this point of view, the altruist is penalised, because he will receive less financial compensation from the supervisory authority. In that case, what is the interest in being altruistic, especially if altruism is no more than an instrument at the service of self-interest?

Thus, it is possible that altruistic doctors react badly to significant compensation differences, and so much more if these differences are made by selfishness premiums. This problem is particularly relevant in the French health care system where certain doctors can practice free prices while others doctors cannot (Batifoulier 2012; Batifoulier et al., 2011; Delattre and Dormont, 2003). Two classes of physicians are then made with different levels of

remuneration. This situation, initially considered unproblematic, is now a major issue since the less paid doctors' seek to reduce compensation differences considered illegitimate and unfair.

This problem has led to an extensive literature in economics through the study of intrinsic and extrinsic motivation (Frey, 1997). According to this view, individuals are extrinsically motivated when the action is performed in the context of receiving a reward or avoid a punishment. The action is instrumental. Individuals may also be subject to intrinsic motivation. In this case, the action has no purpose other than itself. The individual acts for the pleasure inherent to the action.

A doctor can remove utility directly by his work (if he is altruist for example) and/or indirectly by the income associated with this work. The main interest of this theory comes from the assumption of crowding-out effect. Under certain conditions, the introduction of extrinsic motivation while the action was previously intrinsically motivated may cause the eviction of the latter. Indeed, incentives (extrinsic motivation) may challenge the need for autonomy or the need for recognition, both at the basis of intrinsic motivation. Paradoxically, paying physicians can dissuade them (Da Silva, 2013). It reinforces the difficulties linked to the regulation of altruists (Mannion and Davies, 2008).

This reformulation of motivation theory is problematic (Ballet et al., 2005; Da Silva, 2011, 2012). Beyond the issue already raised of the selfishness premium, there is a problem to want to integrate the concept of intrinsic motivation into the utility function. Intrinsic motivation is defined as a motivation triggered by inherent pleasure in performing a task. But, it is impossible to translate this kind of motivation into the utility function's language. Intrinsic motivation is an anti utilitarian motivation. There is a paradox to consider altruism as an intrinsic motivation insofar as it does serve a purpose outside: a utility that we do not know what purpose it serves.

An altruistic doctor may also suffer from the attitude of the patient in whose interest it is to divert the supervisory authority away from a co-payment policy that would require him to make a financial contribution (Bardey and Lesur, 2006). Shared belief in systematic medical selfishness is then a good way to shift the focus of public policy onto the supply side and



spare the patient. It therefore suits the patient to have selfish doctors who draw upon themselves the constraining measures of economic policy.

When the incentive contract has to deal with medical altruism, it can generate negative side-effects and destabilise the frame of analysis.

### **1.5. The restoration of an active patient by questioning the asymmetry of information**

It is therefore difficult to incorporate the existence of values (even in the form of a coefficient of altruism) into this conceptual framework that considers the doctor as an immoral protagonist. That is why, with the penetration of the agency paradigm, health economics has lost, in terms of reflecting on ethics and values, what it has gained in the consideration of information and strategic behaviour. The existence of self-interested behaviour in the medical world cannot be doubted, except by lapsing into naïve optimism. But focusing on individuals who are assumed to exploit systematically any advantageous informational position and who are therefore potential cheats and profiteers appears awkward in the case of health. It leads to an increase in power being paid for by an increase in indignity in one's relations with others (Favereau, 2004).

#### **An immoral doctor facing an amoral patient**

If the theory of information asymmetry is coherent, the doctor is necessarily the paragon of the possibility of cheating, cunning, trickery and opportunism and he is situated at the top end of the scale of potential deceit. More than any other protagonist in a bilateral relationship, the doctor possesses extensive information that can be literally vital. The information asymmetry is therefore substantial in both quantity and quality. The neutralisation of an ethic is the negative (in the photographic sense) of this radical information asymmetry.

This reduction of values to self-interest is based on quite an impoverished conception of the protagonists and especially of the patient, despite the fact that the intention is to restore this latter's autonomy. The patient is a protagonist, but actually relatively inactive. Abandoning and criticising the conception of the inexistent patient in the theory of induced demand, the microeconomics of health attempts a balancing act by endowing the patient with a capacity of

leader on the health care market. From the status of controller (*ex post*), exercising a threat (*ex ante*), the patient becomes the organiser of the “medical agreement”. He is the order-giver. However, this re-allocation of decision-making powers does not diminish the hierarchical conception of the interaction: the patient remains structurally below the doctor because he does not possess the information confiscated by the doctor. The patient remains a party despoiled.

This view of the patient in an inferior position is a consequence of the over-importance attached to the possession of information in the definition of power. If the doctor is assumed to be naturally opportunistic, the patient is neutral with regard to values. It is an a-moral patient who must counter the power of an im-moral doctor. The asymmetry of the position is also an asymmetry in the capacity to adopt strategic behaviour. And yet the doctor’s behaviour can be constructed by the situation and by his relationship with the patient. To the contrary of the postulate of natural selfishness (or altruism) of the doctor, one can defend the hypothesis that his behaviour is influenced by the patient’s attitude.

A non-impoverished view of otherness must take into account the atmosphere in which the medical relationship unfolds. The remote and impersonal altruism (or selfishness) of a doctor towards his patient does not take into consideration the social configuration and the relation to the other. What is valid for every doctor and patient, interchangeably, does not take into consideration the social embeddedness of medical behaviour. In particular, the autonomous patient, capable of reacting to the doctors, is absent from the analysis. And yet this new status of the patient is a necessary condition for incorporating values into the analysis.

Taking into account the patient’s system of values does more than restore power to the patient; it also modifies the conception that we have of the doctor. It is in this sense that one can interpret the numerous works that relativize the importance of the informational advantage by questioning the opportunistic use that may be made of it.

## **The redistribution of roles between patient and doctor: taking into account the patient's values**

These works continue to use an agency framework, considered as a descriptive tool rather than an analytical corpus<sup>16</sup>. However, they challenge the idea that information is the yardstick by which to measure the difficulties of the medical relationship. It is not relevant to focus on the information asymmetry in favour of the doctor if that asymmetry is accepted or even encouraged by the patient. In that case, the informational advantage is not unwarranted and raises far fewer problems than postulated by the classical agency approach.

The point of departure consists in taking seriously the fact that the agency relationship can be perfect instead of postulating that the doctor is opportunistic by nature (Mooney and Ryan, 1993; Ryan, 1994). If the doctor acts in the patient's interest, then we must considerably relativize the strategic impact of the doctor's informational advantage (Labelle, Stoddart and Rice, 1994). Even if the doctor plays the role of an expert, possessing a strategic position concerning information and the possibility of inducing demand, there is no guarantee that he will do so. The problems of information asymmetry and their consequences are thus postulated rather than proved. Endowing the patient with more substance and taking his expectations into consideration gives a certain amount of credit to this conception by highlighting the fact that the doctor can only manipulate the patient's wishes if those wishes are known (Davis and McMaster, 2007). Very often, however, the patient does not know his own preferences. He may reject the information or favour one particular form of information. Equally, he may voluntarily leave the decision to the doctor, etc. If it remains an established fact that the doctor knows more than his patient, the strategic use of this advantage is questionable not so much because the doctor refrains from using this power but because the patient can give his blessing to its use. The tradition of the gift underlines the fact that the imbalance between two protagonists can be intentional and a source of efficiency (Mossé, 1997). Doctors are then all the more disposed to reveal information when that information is demanded by the patients. On the strength of his dominant position, the doctor formulates the demand and determines the medical treatment, but that is precisely what the patient expects

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<sup>16</sup> “Agency in health economics seems very much a descriptive technique rather than an analytical tool. It remains (oddly) a black box, recognized as central but analytically largely empty” (Mooney, 2001, p. 44.)

(de Jaegher and Jegers, 2000). It may even be what gives more satisfaction to patients (Carlsen and Grytten, 2000).

By challenging the idea that the informational advantage automatically and naturally leads to the exercising of discretionary power, this theoretical and empirical literature undermines both induction and agency theory.

These conceptions of the doctor-patient interaction distance themselves from the agent-principal model by rehabilitating the notion of the doctor as sole decision-maker (paternalism), by finding a form of medical decision where the doctor acts in the patient's interest (perfect agency), by refusing to attribute the role of agent to the doctor when he volunteers information (for the patient decision-maker) or, lastly, by conceptualising a form of beneficent doctor, who plays "midwife" (in the maieutic sense) to the patient's preferences (shared decision). This challenging of the canonical agency model, relativizing the link between discretionary power and possession of information, provides a first avenue for re-establishing the role of values in the medical coordination.

Opening the "black box" of the doctor-patient interaction allows to give a more active role to the patient and to take into account his desires, hopes, fears and aspirations. The doctor's behaviour is influenced by the patient's values. Under these circumstances, opportunism is not absent from the doctor's behaviour, but it is neither systematic nor natural; it is constructed by the relationship. This perspective opens up two paths of research which, by giving the patient a voice, allow the beginning of a reintroduction of ethics into the field of medical decision. The first of these paths focuses on communication; the second on emotions. What these two "nomadic" categories have in common is that they both reveal the values to which individuals are attached.

To incorporate values into the medical coordination, we must therefore take otherness into account. But the figure of the other cannot be reduced simply to the patient. The ethical attitude of the doctor can also be shaped by peer judgement, generating social approval or disapproval. Thus, the individual ethics is underpinned by professional norms and sanctions that have been ignored by previous approaches. It is also supported by a wider collective made up of all the rules of the healthcare system.

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