

Medico-marketing between use value and exchange value

How political economy sheds light on the biography of medicines

Quentin Ravelli

Medicines usually attract public attention when they cause death: almost every decade, a new pharmaceutical scandal leads the French government to reshape its regulatory institutions. But the more fundamental dual nature of all medicines as commodities – their ever-conflicting use value and exchange value – remains invisible. Based on ninety interviews and ethnographic fieldwork in a pharmaceutical corporation, both in a factory and at the commercial head office, this article intends to shed light on the under-analysed pharmaceutical division of labour. The description of industrial, marketing and sales professional activities for a wide-spectrum antibiotic challenges the cultural anthropologists' definition of biography of medicines. Medicines are not only exchanged and consumed, they are produced and marketed. Before prescription, medical use value adapts to the exchange value.

[pharmaceutical corporation, social biography, use value, exchange value, Pristinamycin, marketing]

In France, almost in every decade since World War II, a new pharmaceutical scandal attracts media attention: Stalinon in 1957; Thalidomide in 1962; Prozac in 1991; Vioxx in 2004; and now Médiator registered for diabetes but widely prescribed to patients trying to lose weight, and suspected to be responsible for the death of one thousand persons (Frachon 2011). After each affair, the regulatory procedures of healthcare agencies are revised and sometimes, corporate representatives sent to court. The French FDA, the *Agence Française de Sécurité Sanitaire et des Produits de Santé* (Afssaps), is targeted and held accountable, along with the pharmaceutical corporations seen as having gone too far down the slippery slope of biased clinical trials and misleading advertising.

This scandal-driven aetiology reveals a mindset in which drugs may be classified between *good* and *bad*, corporations between *honest* and *dishonest* and administrations as *functional* and *dysfunctional*. Good drugs would have a clearly positive risk-efficiency balance-sheet, honest marketing would not venture beyond the line of

medical need, and serious administrations would strictly evaluate pharmaceuticals to cherry-pick the good ones. This moral separation contrasts with the Greek etymology of the *pharmakon* (Dagognet 1967: 195), implying both a poisonous and healing substance, and with the ambivalence of modern drugs that can both treat and generate addiction (Lovell 2008). It also neglects the dual nature of medicines, as industrial commodities produced by for-profit corporations.

Drawing on a case study of a common antibiotic called Pristinamycin, widely prescribed in France, this article shows that even an apparently innocuous medicine is torn between profit and health. Relying on ethnographic fieldwork and interviews conducted at the commercial head office of a large pharmaceutical corporation, and with sales representatives who visit prescribers, we will explain how these two incentives, to generate profit and to heal, are intertwined. Even a ‘good drug’ can embody an intricate healthcare issue. As with most other commodities, Pristinamycin has an *exchange value* and a *use value*, constantly interacting, converging or conflicting. Following the ‘strategic plans’ of marketers, sales representatives try to shape new use values in order to extend the exchange value of their products. In doing so, they attempt to modify the doctors’ representations of drugs: Pristinamycin should be used more often, as a first-line treatment rather than only when another antibiotic has failed, and for more therapeutic indications, such as broncho-pulmonary and not only for skin infections.

These two concepts have a long history. Aristotle referred to them in his *Politics* (1995: I, 9, 1257a), in an attempt to define and discard a commercial art called *chrematistic* that would rely too much on exchange value and therefore lack morality. Adam Smith and classical political economists used and developed this conceptual duo to explain the characteristics of capitalist commodities produced by the division of labour in manufacturing (Smith 1901: 12). It later became a base for Marxist economics of surplus value and the fetishism of commodities (Marx 1947). These two notions can both extend and challenge the biographical approach to medicines that emerged in anthropology and sociology during the 1980s. It can also help to better understand why most medicines, even when not involved in any scandal, are ambiguous commodities. After focusing on theoretical and methodological issues concerning the biographical approach, we will turn to day-to-day activities such as marketing and selling.

The concepts of ‘use value’ and ‘exchange value’ applied to biographical analysis

In his introduction to *The social life of things*, Appadurai (1986) defines commodities as “anything intended for exchange.” This is an explicit move away from what he describes as a “purist” view “routinely attributed to Marx,” according to which commodities would essentially be seen as the result of production processes. Most other articles in this book insist on cultural aspects of a wide range of commodities. For instance, in Igor Kopytoff’s article, “The cultural biography of things: Commoditization

as process,” many interesting cultural life-process are discussed, from huts among the Suku of Zaire to the sale of indulgences by the Roman Catholic Church. But in Kopytoff’s biographical approach, economic and social characteristics are subordinated to cultural features: “a culturally informed economic biography of an object would look at it as a culturally constructed entity, endowed with culturally specific meanings, and classified and reclassified into culturally constituted categories” (Kopytoff 1986: 68). For Kopytoff, “the hallmark of commoditization is exchange” (Kopytoff 1986: 85) and culture should be the main explanatory factor.

The biographical approach was then applied to the field of medicines by Van der Geest and colleagues in a state-of-the-art article on the anthropology of pharmaceuticals (Van der Geest et al. 1996). Their approach, sketching a theoretical ‘bridge’ between culture and economy, is far from rejecting the industrial production of medicines. In a more recent publication they ask why anthropologists “have not even been able to scratch the surface of the culture of manufacturing” (Whyte et al. 2002: 138). Their answer not only raises a theoretical issue, like the late and unfulfilled de-exotification of medications, but also stresses a methodological deadlock:

The near non-existence of anthropological fieldwork in the pharmaceutical industry should not come as a surprise. First, there is the reluctance of anthropologists to enter the complex and highly technical world of industrial manufacturing. Most still prefer the relatively simple and convenient arranged local community to conduct their fieldwork (...) More important, however, is the refusal by manufacturers to allow social scientists in their midst, most likely because our studies do not serve the interests of the industry. In addition, anthropologists anticipate that refusal and do not even try. Industries are defensive about their commercial aims. They practice what Goffman (1971) has called ‘impression management’. Products that are supposed to alleviate human suffering are surrounded by a ‘money taboo’ (Stein 1990). Drug advertisements, for example, will avoid every reference to price or profit; they portray the ideal image of medicine: the concern of the physician, nurse or parent for the suffering patient. Healing and earning money are kept separate as much as possible (Whyte et al. 2002: 138-39).

This self-fulfilling prophecy keeps the gate of the fieldwork closed: marketing, sales force, production, packaging, clinical as well as industrial research and development are under-analysed. The way that healing and earning, use value and exchange value, are intertwined remains in the shade, as does the corporate pharmaceutical division of labour, except for some recent research, on sales representatives (Kamat & Nichter 1987; Oldani 2009; Greffion 2011), distribution (Lomba 2009) and production (Petryna et al. 2006; Arborio 2009; Fournier 2011; Muller 2011; Subramanian 2011). The biography of medicines is seen through the consumers’ lens, close to the pharmacist, the patient and the doctor. Or it is deduced rather than directly observed.

For these two sets of theoretical and practical reasons, the biographical approach to medicines mainly focused on commodities as they are *exchanged*, constructed *culturally* and *outside* the influence of the manufacturer. Another way to look at commodities is to understand them as being *produced* and having an *economic* role defined

from *within* pharmaceutical corporations. It does not necessarily contradict a cultural approach of exchange itself. It may even, complementarily, shed light on the exchange: how the prescriber and the consumer see the use value and the exchange value is frequently determined by the manufacturer. Trying to grasp how use value and exchange value relate and conflict for a specific medicine is a way to develop this other approach on biography of medicines. Just as political economy and life science are *coproduced* in the field of biotechnologies (Rajan 2006: 4), marketing and medicine are *coproduced* in the field of pharmaceuticals. We will try to understand how this coproduction occurs within the biography of an antibiotic called Pristinamycin, based on ninety interviews – thirty-five with employees from a sales and marketing department – and two internships, one in the chemical plant producing the active ingredient, the other at the corporation's commercial head office.

The double-bind of the product marketing manager

Here, in the interests of brevity, we will focus on marketing and sales. But it is important to keep in mind that the life-cycle does not start with marketing activities. It is gestated in the laboratory, where a genetically modified bacterium, *Streptomyces pristinae spiralis*, is cultivated and sent to the chemical plant, located in a suburban area south of Rouen, in France. There, bacterial strains are developed in small fermentation tanks called 'inoculums' and then transferred to bigger fermentation tanks where bacteria, oxygenated and fed with soy and corn steep powder, produce two molecular components said to be 'synergistic'. They are 'bacteriostatic' separately, but together they become 'bactericide', i.e. they kill bacteria. In the workshops, the use value disappears behind the exchange value: the goal is to drive production costs down. Workers work in shift, day and night, every day of the year, to produce the active ingredient, and their number is steadily reduced to increase work productivity. At the other plant, where 500 mg pills are formulated and packaged, and where the productivity is also constantly increased, machines were relocated to Madrid, Spain, before the whole Spanish factory was outsourced: driving down the production costs to enhance the profit margin of the exchange value is the main incentive for frequent reorganizations of the division of labour. But later on, in the commercial head offices, the use value is carefully staged, to increase prescriptions.

At the commercial head office of the French subsidiary – a 200 meter-long, 37,000 square meters building, built in glass and metal in 2003 to instantiate clarity and transparency – a small department gathers the marketers for three therapeutic classes: antibiotic, analgesic and psychotropic medicines. It is located on the fourth floor of the building, while the medical and regulatory departments attached to it oversee its activities from the fifth floor. An informal but strong and distinctive hierarchy between departments shape the allocation of office space: Public Relations are close to the CEO's office; pharmacovigilance is on the second floor, where few people go; still experimental 'New Promotional Approaches' remain on the side of the building; supply chain employees, tucked away at the very end of a corridor, complain about the

marketing supremacy. Indeed, the marketing – even for antibiotics, painkillers and psychotropic drugs, less highly regarded than anti-cancer or anti-diabetes – is ideally situated at the beating heart of the head office. Depending on the number of interns, twenty to thirty people work in five semi-open offices where large picture windows overlook a long wooden patio at the heart of the building. There, ‘product marketing managers’ build product-oriented marketing strategies and monitor their tactical application. Relying on the data established by market analysts, product marketing managers try to increase the efficiency of sales representatives, who visit doctors all over the country.

In one of these offices works the product marketing manager for Pristinamycin. Most of her professional activity is shaped by a double-bind, or more precisely by two ‘contradictory injunctions’ as defined by Bateson (1972). On the one hand, she has to find new ways for doctors to prescribe more Pristinamycin, as her bosses, the *chef de gamme* in charge of all antibiotics and the marketing manager, remind her every day. On the other hand, she has to abide by regulatory rules as defined by the French Public Health Code and the Afssaps, limiting her advertising creativity, and by public health policies trying to reduce antibiotic consumption – “Antibiotics are not automatic,” as a widely-known public health advertising campaign read in 2005. There is sometimes such a frustration between these two injunctions that she, in retrospect, sees her career in the pharmaceutical industry as having “picked up the wrong card.” Her academic background is marketing and for this reason, her role consists in enhancing the exchange value of the antibiotic. But at the same time, the use value of the antibiotic has to respect medical and juridical standards.

Her day-to-day activity is devoted to solving this issue by shaping the use value according to the needs of the exchange value. Pristinamycin, which was prescribed mostly for skin infections and as a second-line therapy when other antibiotics had failed, should now be prescribed as a first line therapy for Chronic Obstructive Pulmonary Disease (COPD). The industrial properties – the afore-mentioned synergistic effect – should also be explained by sales representatives as limiting the risks of bacterial resistances. Here, industrial biochemical properties translate into marketing advantages to be used by sales forces. From this conflict originates the contradictory discipline of ‘medico-marketing’. The ‘trajectory’ of this antibiotic (Gaudillière 2005), although it was conceived in a lab and born in a plant, is adapted to a market. In so far as this market is guarded by general practitioners, the use value is to be oriented toward respiratory disease because, economically speaking, broncho-pulmonary infections are more rewarding than skin infections, as the market structure table shows:

Table 1 Pristinamycin market structure:

	<i>Market share (this ATB)</i>	<i>Market volume (all ATB)</i>
Broncho-pulmonary infections	20.8%	4,097,512
Skin infections	39.1%	1,794,651

Source: Marketing department database, from IMS Health, 2010

To achieve this shift, strategic plans are cast every year in January at the head office, and then confirmed in September. The 2010 strategic plan tries to target specific doctors who can potentially prescribe more Pristinamycin than they actually do:

Table 2 Target populations of prescribers:

	<i>N Small Prescriber (All ATB)</i>	<i>N Medium Prescriber (All ATB)</i>	<i>N Large Prescriber (All ATB)</i>	<i>Total</i>
Large Prescriber (Pristinamycin) N	1,038	3,218	8,061	12,317
Average prescriptions per month				
All Antibiotics (ATB)	279	520	979	1,778
Pristinamycin	91	94	104	289
Medium Prescriber (Pristinamycin) N	3,598	7,974	5,148	16,720
Average prescriptions per month				
All Antibiotics (ATB)	245	504	936	1 685
Pristinamycin	44	43	46	133
Small Prescriber (Pristinamycin) N	19,714	6,741	2,632	29,087
Average prescriptions per month				
All Antibiotics (ATB)	236	492	908	1,636
Pristinamycin	17	17	20	54
Total N	24,350	17,933	15,841	58,124

Source: Marketing department database, from IMS Health, 2010

Using this information, the plan targets doctors who prescribe many antibiotics but proportionally less Pristinamycin: for instance, the ‘Large Prescriber (All ATB), Small Prescriber (Pristinamycin)’ category. For these 2,632 large prescribers of antibiotics, only 2.2% of their total monthly antibiotic prescriptions are for Pristinamycin. In contrast the 8,061 general practitioners in the ‘Large Prescriber (All ATB), Large Prescriber (Pristinamycin)’ category, prescribe almost the same number of antibiotics per month, but 10.6% of these are for Pristinamycin. Those general practitioners prescribing proportionally less Pristinamycin could, while keeping their usual level of prescriptions at around one thousand per month, shift more of their antibiotic prescribing to Pristinamycin.

Doing this, however, also involves a shift in doctors’ prescriptive dispositions, understood here as a specialized professional *habitus* or ‘disposition’ in Lahire’s words (Lahire 2002). However, medical dispositions die hard. They are entrenched in power and knowledge, and define medical legitimacy. It is thus important for the product marketing manager to find subtle ways to implement new broncho-pulmonary dispositions. This was the task of the product marketing manager in the late 1990s. In this excerpt from an interview conducted in October 2010, the product marketing manager explains how sales representatives had to convince prescribers of a new use value of the antibiotics, for use against broncho-pulmonary infections and not only for skin infections:

Interviewer: So the idea was to use it for COPD?

Marketing product manager: You had both if you want, but if you had an ADV [*Aide de Visite*, small booklet used by the sales rep to remember the characteristics of the products] communication focused on dermatology, you climb up through sinusitis, you had an ear infection, an otitis externa, so it's very painful but it is a Staphylococcus. So doctors admitted that the antibiotic could be efficient. When you get inside the body, it was easier...

Interviewer: And how did the doctors react? Were they sceptical?

Marketing product manager: Well... Some of them said: "I'll never try! You want to take everything; you want to cast your net wide [*ratisser large*]!" You really felt like... We read the prescriptions: "If I do that, it will not be first line," despite the risks of recidivism, I'll prescribe this antibiotic just like the other ones. So when you made it [when you convinced a doctor to prescribe the product for broncho-pulmonary infections], it was a victory!

The way the product marketing manager depicts the interaction between the sales representative and the physician is interesting. The sales representative, although far less knowledgeable than the doctor, has a decisive advantage. He knows the drug well, he is even a Pristinamycin expert, but he has a shallow general medical knowledge. Somehow, he knows its use value better than the prescriber himself. Conversely, the doctor has a broad knowledge on every therapeutic field and treatment, but cannot be a specialist of each and every medicine he prescribes. This informational asymmetry paves the way for pharmaceutical corporations to influence physicians. Here, instead of scientifically discarding the physicians' pre-notions (Durkheim 1964), the sales representative relies on them, trying not to disturb what the product marketing manager calls the "physicians' conceptual drawers." 'Climbing' through '*otitis externa*', as the interviewee puts it, means to first convince the doctor that he should prescribe Pristinamycin for ear infection, and then, and only then, for broncho-pulmonary infections. It is a way to adapt to the physician's associations of ideas, following the curves of his thoughts – even though these thoughts are sometimes more based on empirical knowledge, common practice, and the human capacity for symbolic reasoning than on scientific facts. This way, thanks to his selective information, the sales representative can influence the doctor into prescribing more Pristinamycin. However, this marketing strategy, when applied by sales representatives, can be challenged by doctors, who may have a diverging representation of Pristinamycin's use value.

The hardships of the sales representative

Conceived in a rather abstract form at the head office, the strategic plan has to deal with the difficult conditions of the sales representative's professional activities. The social gap between the 'head' and the 'field', the marketing and the sales force, causes some misunderstanding, as well as distrust and grudges on both sides. In less than five minutes between two patients usually, the sales representative has to make the product

marketing manager's plan come true and convince the doctors of the use value of the drug – which is often not possible. Listening to the sales representative's rhetoric, the doctor often sees the exchange value looming beneath the surface of the use value. Here, in this excerpt from field notes written during a visit of a sales representative to the doctor, two different use values confront each other:

Sales rep: I am here for Pristinamycin, in first-line therapy, for sinusitis...
Physician starts laughing. Sales rep, taken off balance, starts laughing too.
Sales rep: No?
Doctor: No, no, no.
Sales rep: Do you prescribe it in first line therapy, for bronchitis, as a reference?
Doctor: No, not first-line therapy. Second-line.
Sales rep: OK.
Doctor: To sound patients. *Starts laughing again.* When they spit green... So, well...
Sales rep: When it's over-infected? When it's over-infected?
Doctor: Everything is all right, so later on, pretty soon, we'll have viral otitis, but yes, I mean, we have to use Pristinamycin... Among others!
Sales rep: Resistances, for the moment, there are none...
Doctor: For the moment, no resistances, but we'll get some! We are using it more and more, so automatically...
Sales rep: There is also Amox, and macrolids [major class of antibiotics]!
Doctor: Choices are very narrow because it is always the same drugs.
Sales rep: Indeed, I mean bronchitis...
Doctor: I try to limit the damages related to antibiotic consumption.
Sales rep: But we have to give some, to cure people!
Doctor: If a smoker shows up... *[with a singing, high-pitched voice]* For three days... Do I have to give him antibiotics: "Well, it didn't work, let's try some more!" No way! No way. So it's wishful thinking, I really don't know what to do. We do it for tonsillitis...
Sales rep: Now we can treat in four-days. Oflocet and Ciflox are not recommended any more because...
Both laugh nervously.
Doctor: But it was a nightmare! If we want to do basic stuff, these days, we do Augmentin.
Sales rep: Right. Back to the roots.
Doctor: Which is more easily supported...
Sales rep: Not always!
Doctor: This is what my patients...
Sales rep: But be careful with sunshine.
Doctor: I take my precautions.
Sales rep: Is it OK for antibiotherapy?
Physician shrugs her shoulders.

Here, the physician is questioning almost all aspects of the sales representative's line of arguments. The first comment even triggers laughter instead of an answer,

as though prescribing this antibiotic in first-line therapy for sinusitis were irrational. The doctor opposes second-line to first-line therapy: sound patient versus chronically ill patient, tonsillitis versus bronchitis. Her attitude during the interaction is driven by a specific conception of health care, according to which efficient antibiotics with few resistances should be kept in case of failure, and avoided in case of doubt. This attitude enters in sharp contrast to the ready-made discourse conceived from the head office at the marketing department. A conflict of use values arises, where the socially dominated delegate tries to overcome medical knowledge and medical power. Here, these two essential features of the physician's professional role, as described by Freidson (1970), are not exerted against the patient, but against another expert who will invisibly shape the patient-doctor relationship beforehand. In this example, however, instead of functionally dovetailing two professions, the division of expert labour is dysfunctional because one expert questions the legitimacy of the other. The old use value resists the new one, suspected to be only a medical translation of marketing aims.

Conclusion

Product-driven marketing and sales representatives' activities, as we have explained, help us better understand two things. First, they show how a widely prescribed medicine can be ambiguously promoted by the manufacturer, although it does not belong to the outcast category of 'killer commodities'. As McGoey phrases it when discussing the bureaucratic "will to ignorance" of the British FDA, ignoring suicidal behaviours triggered by antidepressants: "divergences from natural functionality are viewed as an anomaly, as an aberration of correct procedure, rather than endemic to the system itself. The detection of an irrational or an illogical act, such as carrying out an inquiry into a pharmaceutical drug's safety and then burying any evidence of harm, is viewed as an isolated example of dysfunction" (McGoey 2007: 218). Moreover, we could say that endemic dysfunctions occur even before regulatory institutions play their role, when exchange value starts to shape use value to extend the number and not the quality of prescriptions.

Second, the biographical approach to medicines, can fruitfully be extended to the manufacturer's inner division of labour. Industrial production, marketing and sales deeply influence the act of exchange itself. The social lives of drugs do not begin with the circulation of commodities, their prescription or their exchange on the market place. By analysing how market and medicine intertwine in corporate day-to-day activities, medical anthropology, whose useful concept of social biography stresses the cultural traits of commercial transactions, circulation and consumption, could encompass other aspects of commodities. It could include their industrial and economic characteristics, stemming from the 'unknown manufacturer' (Whyte et al. 2002: 138) who is also, in the case of pharmaceuticals, an 'invisible industrialist' defining scientific concepts (Gaudillère 1998) like the medical use value of medicines.

Note

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