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PHARMACEUTICALS, MONEY AND THE HEALTH CARE ORGANISATIONAL FIELD

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ABSTRACT

Using an institutional theory framework, this article discusses the place of the pharmaceutical industry within the health care organizational field, and the wide-ranging effects the industry has on the other organizations in the field. It then provides a snapshot of the discourse that has emerged about the pharmaceutical industry, and about commercialization and marketization of the health care more generally. This paints a picture of deep ambivalence towards the pharmaceutical industry, both within and between stakeholder groups. The article ends with an effort to explain this ambivalence as the effect of competing institutional logics. This, in turn, points to some suggestions as to how the pharmaceutical industry might be better accommodated within the health care organizational field, without losing sight of the need for ongoing critique of industry behavior.

KEYWORDS

Pharmaceutical industry, institutional theory, organizational field, institutional logic, commercialization, marketization

HEALTH CARE AS A SOCIAL INSTITUTION

There are many different ways of conceptualizing health care organizations and their roles in society. One view is that health care is first and foremost a "social institution"—that is, an institution that exists to fulfill "collective goods." These are goods that are intrinsically desirable (as opposed to simply being desired) and that are generated and maintained by institutional role occupants, who in turn have an institutionally derived "right" to the goods (Miller 2009). In the case of health care, these collective goods consist of those that promote survival by extending lives that would otherwise be cut short; those that promote ontological security by restoring and maintaining basic physical and social functioning, and those that promote human flourishing by ensuring quality of life (Little, Lipworth et al. 2012, Montgomery and Lipworth 2014).

Like all social institutions, the institution of health care is “normative” in the sense that it generates institutional rights and duties (deontic properties), and corresponding social norms. These, in turn, attach to specific institutional roles, and morally constrain the activities of institutional role occupants (Miller 2009). The rights, duties and norms that characterize a social institution are expressed through, and exert their force through, the institution’s “logic”—that is, the “taken-for-granted” belief and meaning systems that are evident in institutional patterns of activity, discourse and policy (Scott 2014).

In its idealized form, the health care social institution is dominated by health care practitioners who adhere to a “professional” institutional logic. According to such a logic, clinical practitioners are given the resources they need to practice, either from governments or from private insurers, and they are allowed considerable autonomy over their education, credentialing, quality assurance and pricing. In return, they are expected to behave as disinterested "others" and to prioritize the collective goods they produce over purely commercial considerations (Miller 2009, Reay and Hinings 2009, Goodrick and Reay 2011, Scott 2014).

There are also a number of other occupational groups within the health care organizational field, each of which adheres to its own characteristic institutional logic. These groups include health researchers in academic institutions, with their “scientific” and “academic” logics (Owen-Smith 2003, Nelson 2005, Miller 2009), health service administrators, with their “managerial” logics (Meyer and Hammerschmid 2006, Goodrick and Reay 2011), and health policymakers, with their “government”, “bureaucratic “ or “administrative” logics (Meyer and Hammerschmid 2006, Miller 2009, Goodrick and Reay 2011). While the rights, duties and norms of these groups are not identical to the those of professionals engaged in direct patient care, these occupational groups are also expected to prioritize the collective goods they produce over purely commercial considerations.

THE COMMERCIALISATION OF THE HEALTH CARE ORGANISATIONAL FIELD

While the institution of health care is often viewed idealistically as one in which commerce is a means to an end rather than an end in itself, the fact is that the logic of the health care organizational field is, and always has been, in part a “market logic”—that is a logic characterized by the promotion of free and unregulated competition and the use of financial criteria and consumer satisfaction to judge success (Glynn and Lounsbury 2005, Scott 2008, Goodrick and Reay 2011, Pache and Santos 2011).

Many believe that the health care institution is becoming increasingly tolerant of market structures, values and norms. This has been attributed to, among other things, the privatization of health care services (Janssen and Vandermade 1990, Collyer and White 2011), and the increasing tendency for clinicians to emphasize their "technical expertise" as validated by the market and measured through metrics such as “cost effectiveness” and “consumer satisfaction” (Reay and Hinings 2009,

Scott 2014). Similar trends have been observed in academic settings, where biomedical scientists race to commercialize their discoveries (with some of them leaving academia to become "entrepreneurs"), and with the increasing focus of government funding bodies and academic organizations on commercial measures of productivity (Shapin 2008, Smith 2012).

Alongside this "marketization" of clinical and academic organizations, there has been an enormous growth in the size and power of several "for profit" industries within the health care organizational field. These include the pharmaceutical industry, the biotechnology industry, medical devices and diagnostics industries, as well as industries dedicated to the production of health foods and complementary and alternative medicines.

In the remainder of this chapter, I will map the contemporary health care organizational field, with a particular emphasis on the pharmaceutical industry and the organizational forms with which pharmaceutical companies interact. I will then describe the various ways in which stakeholders have responded the rise of the pharmaceutical industry within the health care organizational field. This will be followed by some suggestions as to how tensions between and within stakeholder groups might be conceptualized, and how actors within the health care organizational field might better accommodate the presence of the pharmaceutical industry without completely sacrificing their commitment to their professional, academic or administrative values and norms.

MAPPING THE HEALTH CARE ORGANISATIONAL FIELD

THE RISE OF THE PHARMACEUTICAL INDUSTRY

Many of the pharmaceutical companies we know today began their lives in the late 19th and early 20th century when apothecaries began manufacturing drugs such as morphine, quinine, and strychnine, and dye and chemical companies began to discover medical applications for their products. Several pharmaceutical companies whose names persist to this day, such as Merck, Schering, Roche, Smith Kline, Parke-Davis, Bayer, Ciba, Geigy, and Sandoz first emerged at this time (Daemmrich and Bowden 2005).

The "modern" pharmaceutical industry came into its own between 1930 and 1960, with the development of an array of revolutionary medicines including immunosuppressants, antibiotics, antimalarials, synthetic vitamins, hormones, antihistamines and anesthetic agents. During the 1970s and 1980s, new techniques for targeting therapies against physiological processes enabled the development of (among others) antihypertensives, cholesterol reducing drugs, tranquilizers, antidepressants, anti-inflammatory drugs, contraceptives and cancer therapies. Since the 1980s, developments in molecular biology, genomics, biotechnology and

information technology have contributed to further therapeutic breakthroughs (Le Fanu 2000, Daemmrich and Bowden 2005).

Today, the pharmaceutical industry is facing a number of challenges including decreasing productivity, increasing research and development costs, growing competition from manufacturers of generic medicines, threats to global intellectual property regimes, and increasing demands from those who pay for medicines that companies demonstrate not only the safety and efficacy of new medicines but also genuine "innovation" and value for money (Kaitin 2010, Munos and Chin 2011, Khanna 2012).

Pharmaceutical companies have begun to respond to these challenges by outsourcing much of their research, development and manufacture to countries such as Brazil, Russia, India and China (George, Selvarajan et al. 2013, Rafols, Hopkins et al. 2014); by relying less on discovering "blockbuster drugs" and more on developing "personalized medicines" (Paul, Mytelka et al. 2010, Zuckerman and Milne 2012); by joining with other companies and with universities in various kinds of "open innovation" initiatives and research and development (R&D) "partnerships" (Hunter and Stephens 2010, Bianchi, Cavaliere et al. 2011); by leveraging the "big data" that can be generated and analyzed through new biological, information, and computational technologies (Allarakhia and Steven 2011, Lesko 2012, Menius and Rousculp 2014); and by tailoring their R&D to the mandates of consumers, clinicians and funding bodies (Epstein 2012, Basch 2013).

Despite the challenges it faces, the pharmaceutical industry is enormously profitable and powerful, with global sales of over $1 trillion. The growing global burden of both infectious and chronic disease, together with international trade liberalization, bode well for the future of the industry, and it has been projected that the global pharmaceutical market could be worth more than $1.6 trillion by 2020 (PWC 2012). The health care organizational field is therefore likely to remain highly commercialized, and the pharmaceutical industry is likely to remain a central force in this institutional trend.

ORGANIZATIONAL FORMS THAT INTERACT WITH PHARMACEUTICAL COMPANIES

This growth of the pharmaceutical industry has had far-reaching effects on other organizational forms within the health care organizational field. In some cases, these organizational forms owe their existence—or at least their prominence—to the pharmaceutical industries, while in other cases pre-existing organizational forms have been changed in profound ways by the existence of the pharmaceutical industry.

Organizations that are supported by the pharmaceutical industry

There are a number of organizational forms within the health care organizational field that rely heavily on the pharmaceutical industry to fund their core activities or to provide them with other kinds of support. These include academic researchers,

clinicians, biomedical journals, and patient advocacy organizations.

Academic basic scientists are encouraged by both universities and funding organizations to commercialize their discoveries, and this often entails them joining with pharmaceutical companies various kinds of "public-private" partnerships (Jakobsen, Wang et al. 2011, Goldman, Compton et al. 2013). Similarly, almost all clinical trials internationally are now funded by the pharmaceutical industry (Buchkowsky and Jewesson 2004, DeMets and Califf 2011).

Practicing clinicians rely heavily on the pharmaceutical industry not only to produce the medicines they prescribe, but also to "educate" them about these medicines. A significant proportion of formal continuing medical education programs are funded by the pharmaceutical industry, and many clinicians rely on pharmaceutical representatives ("drug reps") for information about new medicines (Holmer 2001, Rodwin 2010). Professional medical associations also often rely on industry funding for their conferences, journals, patient educational materials, advocacy activities, research grant programs and clinical practice guidelines (Rothman, McDonald et al. 2009, Dalsing 2011).

Biomedical journals gain much of their prestige and their "impact factors" from publishing the results of "pivotal" clinical trials. They therefore rely on their relationships with the authors of pharmaceutical industry-funded clinical trials in order to attract these publications. Journals also derive much of their income from the pharmaceutical industry in the form of advertising, purchase of article reprints (which are precious marketing materials for pharmaceutical companies) and sponsorship of special issues and supplements (Hopkins, Galligher et al. 1999, Fugh-Berman, Alladin et al. 2006, Fugh-Berman 2010).

Finally, most patient advocacy organizations derive their income from pharmaceutical companies, who then work closely with these groups to advocate for access to medicines that might otherwise not be registered for marketing or funded as part of public or private insurance schemes (Rothman, Raveis et al. 2011, Rose 2013).

Medicines policymaking organizations

Many medicines policymaking organizations owe their very existence—or at least their prominence—to the pharmaceutical industry. These include drug regulatory agencies, such as the US Food and Drugs Administration (FDA), and the European Medicines Agency (EMA) that assess the safety and efficacy of new and existing medicines (Annas and Elias 1999, Daemmrich and Bowden 2005). They also include public and private organizations devoted to conducting "health technology assessments" of new medicines, making resource allocation decisions, and producing clinical practice guidelines (Stevens, Milne et al. 2003, Volmink, Siegfried et al. 2004, Steinbrook 2008). In some cases, these regulatory and funding organizations are supported financially by industry, deriving their operating budgets from hefty "submission fees" from the companies who want to have their medicines registered or subsidized (Salkeld 2011, Wolfe 2014).

Related commercial organisations

A new commercial organizational form that has emerged as a direct result of the growth of the pharmaceutical industry is that of the "contract research organization" (CRO). These organizations have emerged as a result of the increasing cost and complexity of drug development, regulation, funding and marketing, and pharmaceutical companies now have the option of outsourcing almost any of their functions to CROs (Mirowski and Van Horn 2005, Kaitin 2010). CROs now number in the thousands globally and, together with other similar organizations such as medical writing companies, have functions as specialized as generating pathology reports for toxicology analyses (Rovira, Foley et al. 2011), accessing crowd-sourced cohorts for clinical research studies (Swan 2012), and writing clinical research articles and regulatory documents (Leventhal 2013).

Another group of commercial organizations that interact frequently with the pharmaceutical industry are the venture capital organizations that provide start-up funds for small pharmaceutical or biotechnology companies (Guston 1999, Samila and Sorenson 2010, Ratcliffe 2011, Sanberg, Gharib et al. 2014). Pharmaceutical and biotechnology companies might also seek capital support at the later stages of drug development from new kinds of organizations such as 'no research, development only' (NRDO) companies, which license compounds in or beyond the clinical development phase (Thiel 2004, Herson 2006).

There are, therefore, many different organizational forms within the health care organizational field that interact "frequently and fatefully" (Scott, Reuf et al. 2000 p13) with the pharmaceutical industry, and that would not exist at all, or would not exist in a form that we would recognize today—if the pharmaceutical industry was not as influential as it is.

RESPONSES TO THE PHARMACEUTICAL INDUSTRY

The rise of the pharmaceutical industry within the health care organizational field has provoked passionate responses from many institutional actors, generating major controversies within academic, political and public debates. As Santoro notes:

> "Perhaps no business engages the worlds of science, medicine, economics, health, human rights, government, and social welfare as much as the pharmaceutical industry. As the twenty-first century begins, however, there is growing controversy and even hostility in the relationship between the pharmaceutical industry and the public" (Santoro and Gorrie 2006 p1).

These responses can be grouped into three broad categories: criticism of the pharmaceutical industry, support for the pharmaceutical industry, and uncertainty about the pharmaceutical industry.

Critics of the pharmaceutical industry

Many social and political scientists, economists, journalists, bioethicists and other commentators are intensely critical of the pharmaceutical industry. These criticisms are broad ranging, focusing on (among other things) pharmaceutical companies' history of developing drugs for commercial gain rather than to address genuine unmet global health needs; creating new "diseases" or expanding disease definitions to enlarge their markets; exploiting research participants; distorting the design, analysis and publication of research; abusing tax breaks and intellectual property laws; overstating their role in, and the cost of, drug development and therefore over-pricing medicines; providing incomplete or misleading information to regulatory and funding agencies; interfering with policymaking processes; failing to monitor the safety and effectiveness of their products once they are on the market; continuing to promote products that they know to be ineffective or harmful; and engaging in aggressive, misleading, manipulative, and sometimes illegal, marketing, advertising, and medical "education."

An entire genre of literature has emerged in which the industry is condemned for these and other misdeeds. This quotation from Marcia Angell, a strong critic of the industry who was once editor of the prestigious *New England Journal of Medicine,* is typical:

> "contrary to its public relations, the industry discovers few genuinely innovative drugs, spends less than half as much on research and development (R&D) as on marketing and administration,…put(s) most of their efforts into turning out higher-priced versions of existing medicines and persuading us to take more of them…(and) uses its immense wealth and power to co-opt nearly every institution that might stand in its way" (Angell 2004 pxvi).

At times, these behaviors are viewed as evidence of outright corruption on the part of the pharmaceutical industry. Angell, for example, highlights evidence of companies "rigging prices", "offering kickbacks," engaging in anticompetitive practices, and attempting to cover up these activities (Angell 2004 p230).

Others view industry misbehavior less as outright corruption than as the expected, but nonetheless corrosive, effects of a commercial imperative playing itself out within the health care organizational field. In his book, evocatively entitled "Pharmageddon," David Healy captures this view in his claim that:

> "Pharmaceutical companies … have no interest in what molecules might reveal about how humans work. Molecules are only interesting insofar as they can be used to capture market niches" (Healy 2012 pX).

In the book "White Coat Black Hat", the bioethicist Carl Elliott argues similarly that:

> "if more academics think like businesspeople now, it is partly because the world in which drugs are tested, developed and marketed is so completely ruled by business" (Elliott 2010 pxii).

And in "Powerful Medicines", Jerry Avorn, a Harvard physician and pharmaco-epidemiologist claims that:

> "[t]he scent of economic incentive is everywhere in medicine, occasionally rising to the level of stench" (Avorn 2005 p401).

According to these critics, the pharmaceutical industry's attempts to justify its actions are unconvincing. Avorn, for example, takes issue with the industry's claim that high drug prices are a fair and necessary reward for investment in drug development. He describes this as a "Research Ultimatum" and argues that while industry's claims are:

> "pregnant with portent for the future of medicine … for many scientists, its logic just leaves stretch marks on our credulity, and fails to deliver on most of the policy implications it implies" (Avorn 2005 p199).

Similarly, critics of the pharmaceutical industry are skeptical about the industry's willingness to reform itself. As Angell argues:

> "Sadly, there is little sign that the pharmaceutical industry is responding to its current difficulties by changing its behavior. It continues to make me-too drugs as its major product, to use its massive marketing muscle to promote them relentlessly, to charge prices as high as it can get away with, and to act as if it puts short-term profits ahead of everything" (Angell 2004 pxxi).

The pharmaceutical industry is seen to be not only immoral in its own right, but also to have a corrosive influence on the other institutional actors and organizations with which it interacts in the health care organizational. Healy, for example, argues that doctors are:

> "Locked into the distribution channel for prescription-only drugs, hemmed in by their science, … (and thus) increasingly resemble the employees of the occupational health department of a factory that in the course of business exposes its workers to disability-inducing aerosols" (Healy 2014).

Hardly a week goes by without a report in a medical journal about a newly discovered "conflict of interest" involving health care practitioners, academic researchers, journal editors or policymakers. The view is that these once independent endeavors are now "for sale" (Angell 2000). Those who benefit financially or otherwise from interactions with industry are seen to be "easily fooled" (Elliott 2010 pxiv) and to lose their capacity and/or willingness to be objective in fulfilling their primary obligations to patients or the public. Discussing industry support of medical education, Avorn cautions that:

> "The more that medical schools and their teaching hospitals become dependent on support from industry to fund their research and educational activities, the easier it is for their faculties to become convinced that what's good for those companies is good for their institutions" (Avorn 2005 p214).

The capacity for industry wrongdoing to taint the reputations of other organizational

forms is also evident in the suspicion that arises when these organizations fail to detect or respond to industry wrongdoing. For example, when several pharmaceutical companies were found to have obscured evidence about the link between anti-depressants and suicide in adolescents and children, this also revealed what was seen to be a "culture of denial" within regulatory bodies such as the US Food and Drug Administration (Avorn 2005). The case of the anti-inflammatory drug "Vioxx" is also illustrative: when it emerged that the manufacturer (Merck) had known about, and hidden, information about an increased risk of heart attacks, the academic researchers who had been involved in Vioxx trials, and had authored journal articles, were taken to task for not disclosing all that they knew, and were forced to defend themselves publicly against these accusations (Curfman, Morrissey et al. 2005, Bombardier, Laine et al. 2006).

Supporters of the pharmaceutical industry

While the discourse about the pharmaceutical industry is dominated the voices of critics, these voices are balanced to some degree by the those who focus on the ways in which the pharmaceutical industry has "revolutionized" health and medicine over the past century and on its promise for the future.

Not surprisingly, those who work within the pharmaceutical industry emphasize the many life-saving health technologies that exist only because of the industry, and the risks that pharmaceutical companies take to develop these medicines. This statement from the International Federation of Pharmaceutical Manufacturers and Associations (IFPMA) is typical:

> "The research-based pharmaceutical industry plays a unique role in developing new medicines and vaccines to prevent and treat diseases, and improve the lives of patients. Its key contribution to medical progress is turning fundamental research into innovative treatments … Despite challenging business conditions, the industry undertakes investments that are considerably more risky than those in other high-technology sectors. By investing billions of dollars and thousands of scientist-hours, it pushes the limits of science, improves global health and contributes to the prosperity of society" (International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) 2011 p11).

The industry also defends the roles it plays in policymaking, advocacy and continuing medical education, seeing no conflict in the goals of industry and those of other stakeholders:

> "Just as it leads in biomedical innovation, the pharmaceutical industry is proud to play a leading role in sponsoring continuing medical education (CME) for physicians—an effort that serves the overriding mutual interest to ensure that patients receive the most up-to-date and appropriate care" (Holmer 2001 p2012).

Support for the pharmaceutical industry also comes from outside the industry from people who emphasize the important roles that industry plays in developing and

manufacturing medicines and supporting biomedical research, policymaking and medical education. These supporters of industry may attempt to defend the industry against what they see as unwarranted attacks. Barton and Stossel, for example, deride the "movement" that has emerged to address financial conflicts of interest as follows:

> "The [financial conflict of interest] narrative has buried its opposition in an avalanche of one-sided rhetoric, forming what behavioral economists call an 'availability cascade' of industry vilification and unsubstantiated accusations" (Barton, Stossel et al. 2014 p666).

De George acknowledges that the pharmaceutical companies sometimes misbehave, but pleads for a more nuanced view of industry's failings, noting that:

> "those who are a party to the dispute focus on the period of [patent] protection and often forget the long-term benefits to all that follow when the protection expires" (De George 2009 p170).

More generally, Santoro complains about the well-rehearsed platitudes and taken-for-granted axioms that characterize criticisms of the pharmaceutical industry, arguing that "among observers outside the industry, the greed and moral failings of the industry approach the state of a truism" (Santoro and Gorrie 2006 p3).

Uncertainty about the pharmaceutical industry

While the literature on the pharmaceutical industry is dominated by strongly negative and, to a lesser extent, strongly positive claims, there is also evidence that some organizational field actors are uncertain about the moral status of the industry and those who interact with it.

In a qualitative interview study of Australian medical specialists, for example, Doran *et al* found that while some doctors feel confident about engaging with industry as researchers and prescribers, and others avoid industry altogether, a significant proportion fit into a group they referred to as "ambivalent engagers." These doctors recognized, for example, that the profit motive simultaneously drives pharmaceutical innovation, which they support, and underpins industry misconduct, which worries them (Doran, Kerridge et al. 2006). Other studies have revealed similar ambivalence among clinicians, researchers and policymakers about the industry and their interactions with it (Prosser, Almond et al. 2003, Glaser and Bero 2005, Morgan, Dana et al. 2006).

Uncertainty about the pharmaceutical industry is also evident at the organizational level in the tendency for universities, teaching hospitals and governments to demand that biomedical researchers engage with industry and commercialize their discoveries, while at the same time expecting these interactions to be limited, disclosed and defended (Zinner, DesRoches et al. 2010, Chapman, Morrell et al. 2012). Similarly, policymaking committees, such as those making regulatory or funding decisions, or producing clinical practice guidelines, are expected to include people with high levels of expertise—many of whom are employees of industry or academic "key opinion leaders" who have close ties to industry—while at the same

time ensuring that decision-making is free of industry influence (Rockey and Collins 2010, Norris, Holmer et al. 2012).

UNDERSTANDING AMBIVALENCE

The discourse about the pharmaceutical industry and those who interact is clearly shaped by a deep ambivalence about the industry. This ambivalence manifests itself at two levels: in debates between those who are wholeheartedly "for" industry and those who are "against" it, and in the inner conflicts of those who appreciate and rely on industry but distrust it at the same time.

The ambivalence towards the pharmaceutical industry has been explained in a variety of ways, which can be categorized broadly as socio-political, moral, intersubjective and "logical." Taking a socio-political view, Santoro views ambivalence as: "the unraveling of a 'grand bargain' between the pharmaceutical industry and society. This grand bargain, he argues:

> "was a complex, implicit social contract that allowed the modern global pharmaceutical industry to emerge in the second half of the twentieth century" and that was beneficial to industry and society alike.

Today, however, "this grand bargain is in tatters and public mistrust and resentment of the industry run feverishly high" (Santoro and Gorrie 2006 p1).

The creation and subsequent breakdown of this social contract has likely been hastened by the fact that the governments and courts worldwide have intervened in numerous ways over the years to "protect the pharmaceutical industry from the downsides of drug development work" (Avorn 2005 p202) through tax breaks and intellectual property protections that are not offered to other kinds of companies. This has, in turn, created expectations of the pharmaceutical industry that might not be applied to other corporate entities, and that have been unfulfilled, leading to a sense of betrayal.

Taking a more moral view, De George attributes the tension between the pharmaceutical industry and its critics to "an apparent conflict of two rights" in which:

> "On the one hand (there) is the right of for-profit corporations to make a profit within the bounds set by law and ethics…In this respect there are no special rules for corporations in the health care industries. On the other hand (there) are the human rights of all people to life, and so to health care, which seems to impose obligations on those able to provide such care. These are obligations not placed on other corporations" (De George 2009 pp171-2).

The ambivalence about the pharmaceutical industry therefore stems from the sense that the pharmaceutical industry has failed to fulfill its obligations to those with a right to health care.

De George goes on to note, however, that the positive right to health care in fact rests primarily with governments, and not with corporations. Insofar as pharmaceutical companies do have obligations, these are limited to producing the life-saving drugs they develop in sufficient quantities, and doing their "fair share", along with governments to rescue those in need. Matters are complicated further by the idea that the pharmaceutical industry as a whole might have obligations that are not held by individual companies (De George 2009). Ambivalence towards the pharmaceutical industry is therefore exacerbated by different stakeholders having different ideas as to what obligations rest with government, the industry as a whole, and individual pharmaceutical companies.

Elliott interprets ambivalence towards the pharmaceutical industry intersubjectively in terms of trust. He likens commercialized medicine to the Internet, which has been "transformed by commerce" and which has, in turn, "opened a window for deception" (Elliott 2010 pxv). Yet, unlike the Internet, which "does not operate on trust anymore" medicine still "operates by the old rules":

> "Medical journals still trust authors; patients still trust doctors; researchers trust subjects; and subjects trust researchers. Nobody wants to admit that the world has changed. Nobody is willing to concede that trust may no longer be warranted" (Elliott 2010 pxv).

This ongoing need and desire to trust in an entity that is not fully trustworthy is therefore a compelling explanation for the ambivalence that people feel towards the pharmaceutical industry.

A fourth way of understanding the ambivalence towards the pharmaceutical industry is that it stems from the ways in which organizational field actors respond to instances in which there are conflicting or competing institutional logics. As explained previously, the rights, duties and norms that characterize a social institution are expressed through, and exert their force through, the institution's "logic"—that is, the "taken-for-granted" belief and meaning systems that are evident in institutional patterns of activity, discourse and policy (Scott 2014).

These logics are often multiple and may compete or conflict, and researchers have identified a number of strategies that institutional actors use to navigate competing logics. These include continued efforts to ensure that one logic prevails and another is extinguished. They also include a variety of methods of accommodating more than one logic, including: compartmentalization, in which actors selectively accept some parts of a new logic which rejecting others; ceremonial compliance, where actors reject all or some of an undesirable logic, but do so covertly while pretending to be accepting of the new logic; pragmatic collaboration, where actors "agree to disagree" in order to be able to work together on shared tasks and common goals; and balancing, where actors embrace two logics simultaneously and either try to find some kind of "middle ground" or embrace one logic at some times, and another logic at other times (Kitchener 2002, Nelson 2005, Meyer and Hammerschmid 2006, Thornton and Ocasio 2008, Reay and Hinings 2009, Pache and Santos 2011). This latter group of strategies might result in a "hybrid" logic (Montgomery and Oliver 1996, Glynn and Lounsbury 2005).

It is possible that some of those who are unequivocal in their criticism or defense of the pharmaceutical industry have "chosen" either to embrace or fully reject the existence of a market logic within the health care organizational field and are determined to either rid the organizational field of the industry altogether or allow the field to become one that is dominated by the industry and its market logic. This would be consistent with the first strategy described above: that of competition aimed at achieving complete dominance in a "zero sum game."

On closer inspection, however, it seems that even the strongest critics of the pharmaceutical industry accept the need for the industry in one form or another and are more concerned with addressing market *failure* than with ridding the organizational field of the market itself. In this regard it is noteworthy that some of the strongest critics of the pharmaceutical industry explicitly make the distinction between the evils of markets *per se,* and the problem of market failure. Angell, for example, argues that the "profitability of the pharmaceutical industry and the poor access to drugs in many parts of the world" has "thrived under conditions of characterized by enormous asymmetry of information between buyers and sellers" and is a "classic case of market failure" (Angell 2004 px). Avorn places the blame for market failure firmly on the pharmaceutical industry, arguing that:

> "Although the industry extols the virtues of unfettered markets, several companies have developed creative strategies to disable these very markets" (Avorn 2005 p225).

If we accept that most institutional actors—including those who are most critical of industry—have not rejected the pharmaceutical industry completely, then the question arises as to what strategies they are using to accommodate the market logic within the health care organizational field.

The main strategy used to accommodate the industry and its market logic seems to be that of compartmentalization (also referred to as loose coupling, bricolage, segmentation or selection), in which actors explicitly embrace some parts of the market logic, while explicitly rejecting others. This approach is most clearly evident in calls to "distance" or "disentangle" science, medicine, publishing, policymaking and consumer from the pharmaceutical industry so that the influence of industry is more limited

The idea that it is both desirable and possible to compartmentalize the market logic is obvious in the almost endless debates about exactly what kinds of interactions with industry are, and are not acceptable, and which of these interactions need to be disclosed to other stakeholders. Rules for interactions with the pharmaceutical industry almost always allow some kinds of interactions, reject others, and insist that certain kinds of interactions are disclosed in the public domain. Importantly, every set of rules and guidelines is unique with respect to where it draws these lines.

A second strategy used by institutional actors to manage the tension between the market logic and other logics is that of "decoupling." This is evident in the approaches (described above) of many clinical, research, publishing and policymaking organizations to conflicts of interest On the one hand, these

organizations behave as if reliance on industry is a necessary and even desirable part of everyday business, and they expect and encourage their employees to engage with industry. But at the same time, they expect these same employees to declare and be able to defend all interactions with industry. It is likely that individual institutional actors also engage in a kind of decoupling process in order to cope with the cognitive dissonance that must arise when they are put in these ambiguous situations.

A third strategy that is evident is that of "balancing." Here institutional actors try to find a "middle ground" or "sweet spot" where the primary goals of industry and those of researchers, clinicians, policymakers and journal editors can *all* be satisfied. This approach is evident when people argue that companies and patients both benefit from adequately rewarded pharmaceutical innovation, even if this means that the price of patented medicines places them out of some people's reach. The idea that there is a "middle ground" is also evident in claims that both the industry and other stakeholders can benefit from properly controlled industry involvement in research, policymaking, publishing, education and consumer advocacy. This strategy might also entail "reframing" commercial values, norms, goals and activities so that they sound more compatible with those of other stakeholders.

Another approach to balancing is not to attempt to find a middle ground, but rather to fully embrace the entirety of one logic in some circumstances, and fully embrace another, competing, logic at other times. This "dialectical" strategy is evident, for example, in the attitudes of those who want there to be no limits at all on the commercialization of biomedical research, but who simultaneously believe that no commercial influence should be allowed when it comes to policymaking or medical education.

There are, therefore, at least four different strategies that actors within the health care organizational field use to manage the ambivalence that arises from tensions between the market logic of the pharmaceutical industry, and the professional, scientific or administrative logics that have, at least in theory, traditionally dominated the field.

ADDRESSING AMBIVALENCE

It is highly unlikely that ambivalence towards the pharmaceutical will ever be overcome. As Santoro notes:

> "Given the divergent ends of a for-profit industry and a product with immense public health implications, there will always be some tension in the relationship between the pharmaceutical industry and society" (Santoro and Gorrie 2006 p2).

Put another way, it seems highly unlikely that a "hybrid logic" will ever be created that will comfortably accommodate both market and professional logics and in

which the pharmaceutical industry will sit comfortably within the health care organizational field.

This is not necessarily a bad thing—after all, ongoing ambivalence ensures that the necessary checks and balances will always be in place so that any one institutional logic does not come to completely overpower the organizational field. We would not want critics to stop pointing out industry wrongdoing. Nor would we want the industry to stop defending itself and reminding us of all the ways it contributes to our survival, security and flourishing.

In a sense, the strong pro- and anti-pharma positions reflect opposite poles of a "dialectic." The existence of this dialectic reflects the fact that the health-care organizational field, like all complex psycho-social realities, inevitably contains within it potentially polarized elements (Bhaskar, Archer et al. 1998). The best way to deal with these kinds of social realities is through dialectical forms of reasoning and debate, which involve explicit thinking in terms of contradictions (Flak, Nordheim et al. 2008), and which challenge the idea that apparent contradictions about the nature of social reality are necessarily reflective of a poor grasp of what is "really" going on. If people have apparently opposing views about the nature of social reality, then dialectic provides a way of *making sense* of these apparently "oppositional, and nonreducible" aspects of psycho-social reality (Linehan 1993 p33).

But while we do not want to (and could not in any case) do away with ambivalence about the pharmaceutical industry, we would be well served if people could be given a deeper understanding of *why* there is so much conflict between stakeholder groups, and why they may feel confused about their own stances. This would help to reduce the cognitive dissonance that is so evident in the current discourse about the pharmaceutical industry, and that likely impairs people's ability to think about problems in nuanced ways. As a start, people might be helped to understand that the pharmaceutical industry is part of a social institution that exists to promote survival, security and human flourishing, but may not always be successful in doing so. In this way people might feel less pressure to adopt a strong pro- or anti-industry stance.

It would also be helpful if the ambivalence about the pharmaceutical industry could rendered somewhat less "vitriolic" (Santoro and Gorrie 2006 p4). This is not (only) because a declining public image is "a bitter pill" for those who work within or collaborate with the pharmaceutical industry, and do so with the best intentions (Santoro and Gorrie 2006 p4), but rather because polemic of the kind illustrated above has the potential to over-simplify issues, prevent interchange and cooperation between industry and other stakeholders, and obscure potentially creative solutions to problems.

These creative solutions will almost always need to be multi-faceted, consisting of a mixture of external regulation, internal regulation, incentives, punishment, transparency, and disengagement. The appropriate mix of strategies will depend on the nature of the problem. For some kinds of problems, it will be absolutely necessary to insist on strong external regulation, mandated transparency and/or punishment of those who transgress. There should be no leeway, for example, when

it comes to obvious abuses of clinical trial participants, burying of safety data, or bribing of policymakers or clinicians.

In other cases, a "softer" and more collaborative approach may be warranted. For example, there are differing views as to the harms and benefits of direct-to-consumer advertising, off-label promotion, and the expansion of "treatable" disease categories, and these debates would benefit from greater engagement between critics of the industry and those within it. Scholars have begun to call for such dialogue and cooperation (Fisher 2007). Empirical research shows that those within the pharmaceutical industry apply moral principles that are very similar to those of clinicians and researchers. Like clinicians and researchers, industry employees (at least those in medical and regulatory departments) are concerned about doing good, not doing harm and achieving justice, both for their companies and for the general public (Lipworth and Little 2014). They also have a variety of sophisticated ways of working through competing commercial and medical or scientific goals (Lipworth, Montgomery et al. 2013). This suggests that there would be ways for those with concerns about the pharmaceutical industry to engage more with employees of pharmaceutical companies. However, this collaboration should not occur at the expense of a robust, external discourse in which serious and unquestionable wrongdoing can be detected and addressed.

None of these strategies will ever completely resolve the tensions between market and other logics within the health care organizational field, nor would we want them to for the reasons given above. But the approaches outlined here might help to overcome the "hostile interdependence" and cognitive dissonance that unsettle actors in the increasingly commercialized health care organizational field.

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