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Regulating quack medicine

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Abstract
Quack medicines were prepackaged, commercially marketed medicinal concoctions brewed from "secret recipes" that often contained powerful drugs. Governmental regulation of them in late nineteenth-century England is heralded as a landmark of public health policy. We argue that it's instead a landmark of medicinal rent-seeking. We develop a theory of quack medicine regulation in Victorian England according to which health professionals faced growing competition from close substitutes: quack medicine vendors. To protect their rents, health professionals organized, lobbied, and won laws granting them a monopoly over the sale of "poisonous" medicaments, most notably, quack medicines.

Keywords Quack medicine · Patent medicine · Proprietary medicine · Regulation · Pharmacy Act · Poison · Rent-seeking

1 Introduction

Before 1850, English law permitted anyone to brew any concoction they liked and sell it as medicine to anyone who liked to buy it.[1] When such concoctions were prepackaged, marketed commercially, and brewed from "secret recipes" that often contained opium, chloroform, strychnine or other powerful drugs, they were called quack medicines. The laissez-faire marketplace in which they were bought and sold has been called "medical anarchy" (Johns 2009, p. 108).

In the late nineteenth century, that marketplace was repressed by legislation and associated judicial rulings that restricted the sale of scheduled "poisons" to licensed doctors and

[1] However, under the Medicine Stamp Act, the seller had to pay a tax: an annual fee and an ad valorem duty on the medicine. See Stebbings (2013).

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pharmacists. Today, that regulation is heralded as a landmark of public health policy. We argue that it's instead a landmark of medicinal rent-seeking.

We develop a theory of quack medicine regulation in Victorian England according to which health professionals faced growing competition from close substitutes: quack medicine vendors. To protect their rents, health professionals organized, lobbied, and won laws granting them a monopoly over the sale of powerful drugs and medicines that contained them, most notably, quack medicines. Our theory explains key features of the regulation that public interest theory does not.

Our analysis contributes to the study of the predatory state broadly (see, e.g., Brennan and Buchanan 1980; Vahabi 2016) and regulatory capture narrowly (see, e.g., Stigler 1971; Tollison 1991). Those literatures aren't linked often, but they should be. Predatory government may be "active", such as when the state suppresses political competitors or expropriates citizens' property. More common in the Western world, however, predatory government may also be "passive", the state serving as a vehicle for private parties' designs on one another—the suppression of their marketplace competitors or diversion of fellow citizens' incomes to themselves.[2] Food, drug, and health regulation has proved fertile ground for passive state predation (see, e.g., Temin 1979; High and Coppin 1988; Kamath 1989; Tollison and Wagner 1991; Libecap 1992; Shughart 1997; Thomas and Leeson 2012; Poelmans et al. 2018). We examine a manifestation of the phenomenon previously neglected by economists: the regulation of quack medicine in Victorian England.

2 Medicine in nineteenth-century England

Professional healthcare in early modern England had three divisions: university-educated physicians, who diagnosed patients and prescribed treatments; apprentice-trained surgeons, who treated "external" conditions, for instance dressing wounds and setting bones; and apprentice-trained apothecaries, who compounded and dispensed physician-prescribed medicines.

In theory, the prerogatives of each division were defended by the College of Physicians, the Surgeons Company, and the Society of Apothecaries.[3] In practice, maintaining the divisions was problematic. Outside London, where populations were thin, a single person unavoidably served as physician-surgeon-apothecary rolled into one. Inside London, apothecaries routinely prescribed to their shop patrons and, from 1704, they were permitted to do so legally, nearly erasing the distinction between their practice and that of physicians.

In the eighteenth century, divisional erosion led increasingly to the appearance of the "surgeon-apothecary", and in the nineteenth century, to the now familiar "general practitioner". The physician persisted but became more of a consultant, called on when the general practitioner was at a loss. The surgeon persisted too but now specialized in performing operations when the general practitioner wasn't up to the task. The apothecary virtually vanished in all but name, having become the general practitioner. Those three—physician, surgeon, and most important, general practitioner—were nineteenth-century England's professional doctors. After 1858, a "legally qualified" doctor required a license, which he

[2] The relationship between active versus passive state predation and "state capacity" depends on what, precisely, is meant by "state capacity"—a troublesome term used in various ways, including in the literature on "state capacity." For a critical review of that literature, see Piano (2019).

[3] The Surgeons Company formerly was the Barber Surgeons Company and later the College of Surgeons.

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obtained by passing an exam administered by the General Medical Council, "the parliamentary sanctioned official watchdog of medicine", whose "members came mainly from within the profession" (Porter 1995, p. 49).

Apothecaries' transition from dispensing medicine to practicing it created an opening in the healthcare market. Doctors could and often did dispense their own medicines, but the demand for shopkeepers who specialized in drugs and filling prescriptions remained. It was satisfied by the chemist and druggist. Mere tradesmen in the eighteenth century, "Chemists and druggists were one of the few medical groups to emerge during the nineteenth century who could lay claim to some form of professional standing": pharmacists (Marland 2006, p. 82). The other group comprised doctors, whom pharmacists joined as the second pillar of professional healthcare. After 1868, anyone calling himself "pharmacist", "chemist and druggist", or the like required a license, which he obtained by passing an exam administered by the Pharmaceutical Society of Great Britain, the chief professional organization of English pharmacists.[4]

Nineteenth-century English healthcare was professionalized. But it was not advanced. With few exceptions, health professionals knew neither what caused sickness nor how to treat it properly. How could they? The germ theory of disease wasn't articulated until the mid-1870s. English medical opinion about that theory remained unsettled for another 20 years. And viruses weren't discovered until 1892.

Instead, illnesses were defined by their symptoms, and therapeutics were directed at reducing them. Ideas among health professionals varied, but the general approach was to induce the patient to it "excrete it out", "vomit it out" or "sweat it out", to "vivify his system" or lower it, "correcting imbalance" (Bynum 1994, p. 18). If that sounds reminiscent of the Ancient's humoral thinking, that's because it is. In many ways, disease theory in nineteenth-century England had not progressed far beyond its state in the Age of Pericles.[5]

Medicaments therefore were dominated by purgatives, emetics, and sudorifics, stimulants and depressants—in other words, symptom suppressants and palliatives.[6] Many were dangerous: "some of the drugs in constant use" included "arsenic, prussic acid, strychnine, all poisonous vegetable alkaloids and their salts, aconite, corrosive sublimate, belladonna, and cantharides. Every one of these drugs entered into the prescriptions of physicians" (Pharmacy and Poison Laws 1892, p. 115).

But none more often than opium. "The professional journals were replete with articles expounding the virtues of opium, and suggesting its employment for almost every known disease" from coughing to cholera (Lomax 1973, pp. 167–168). "Opium was" not only "widely prescribed by doctors" (Anderson 2006, p. 108). It also took pride of place in the medicinal arsenal of pharmacists: "One of the best illustrations of the involvement of chemists in the retail of drugs directly to the public was the massive over-the-counter sale of opium preparations" (Marland 2006, p. 94).

Yet neither doctor nor pharmacist was needed to procure opium—or any other drug for that matter. Powerful drugs and medicines that contained them could be purchased from

[4] Registered pharmacists acquired exclusive right to use the title "pharmaceutical chemist" in 1852. They acquired exclusive right to use an encompassing list of related of titles in 1868.

[5] This is not to trivialize the stethoscope, anesthesia, sterilization, or x-rays, each of which was invented/discovered in the nineteenth century (see Bynum 1994). But they did not particularly advance disease theory or therapeutics. Smallpox inoculation, discovered in the late eighteenth century, is an important exception.

[6] Bloodletting, whose therapeutic popularity waned over time, also was still used occasionally in the late nineteenth century.

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innumerable retailers who were *not* health professionals: quack medicine vendors. Quack medicines were prepackaged medicines, marketed commercially and distributed for retail to shopkeepers. Quack medicine vendors were shopkeepers who retailed such medicines but whose primary business was non-medicinal: "stationers, newspaper proprietors, grocers, butchers, hairdressers and publicans, to name but a few" (Marland 2006, p. 99). They sold medicaments as a sideline, which was easy to do since lumps of opium and quack medicines were ready to go "off the shelf", no preparation required.

Quack medicines had two politer names—"proprietary medicines" and "nostrums"—and one misleading one: "patent medicines". Misleading because few actually were patented (Mackintosh 2018). Patenting a medicine required disclosing the particulars of its composition and manufacture, which "patent medicine" producers, fearful their special blends might be appropriated, were reluctant to do. Instead of seeking letters patent, most relied on trade secrecy to protect their intellectual property rights, just as Coca-Cola—first offered as a "patent medicine" containing coca-leaf extract, incidentally—does today.

Health professionals used the "secret" composition of patent medicines to charge them with quackery. In truth, just as the basic ingredients of Coca-Cola are well known, so were those of popular quack medicines. "Many were ultimately incorporated into the official pharmacopoeia, as was, for example, Daffy's 'Elixir Salutis'", whose key ingredients also were printed in home-remedy recipe books (Burnby 1997, p. 47).

Quack medicines' "composition closely resembled that of the official preparations used by the regular practitioners" (Brown 1987, p. 217). In particular, "They shared the same active ingredients such as opium" (Holloway 1991, p. 56). Thus, alongside quack medicine vendors, health professionals also traded in quack medicines—despite denouncing their quackery. "Victorian chemists' and druggists' shops were crammed with a profusion of proprietary pills, powders, and potions" (Porter 1989, p. 228). And "doctors themselves often prescribed patent and proprietary medicines" (Porter 1989, p. 141). Why not? Mixed by a pharmacist, dispensed by a doctor, or as was increasingly the case in the nineteenth century, got off a grocer's shelf in a bottle branded "W. Sutton and Co.'s Original Bateman's Drops", a tincture of opium was an opium tincture all the same.

3 A rent-seeking theory of quack medicine regulation

Our theory of quack medicine regulation in Victorian England is based on a simple but crucial observation: the less that health professionals understand about sickness and therapeutics, the less difference it makes to the sick whether professionals treat them or they treat themselves. When medical understanding is very limited, the range of potentially useful medicaments is too. So are differences of opinion between laymen and experts about the appropriate medicaments to use, the former's ideas about what relieves pain and suppresses symptoms being about as good as the latter's.

Consider England in the nineteenth century. "Opium was one of the few effective therapeutic agents then available" (Lomax 1973, p. 167). It was considered appropriate for treating nearly every sickness by doctors, pharmacists, and laymen alike. And the particular preparation mattered little to its therapeutic effect. Opium is an extreme example, but the situation was similar for other powerful drugs used in nineteenth-century English medicine. As a result, "what the doctor ordered often differed little from what common sense dictated" (Porter 1995, p. 62). And widespread availability of what he would order often meant that healthcare could be had without going to him or the pharmacist. "Ordinary

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people thought, with good reason, that they could understand illness and treat it just as effectively" (Holloway 1991, p. 57).

The implication for nineteenth-century English health professionals was straightforward: the grocer was a close substitute for their services—and so was the butcher, the chandler, the cobbler, the draper, the whole litany of shopkeepers who were not health professionals but sold drugs like opium and medicines that contained them. Quack medicine vendors weren't perfect substitutes for doctors and pharmacists, of course. The chandler didn't give smallpox inoculations. The butcher couldn't perform operations. And the draper's medicament section wouldn't run very deep. Still, for less specialized healthcare needs, the health professional's expertise added little value and the grocer would do just fine.

In other words, quack medicine vendors threatened health professionals' rents. "If eery miserable grocer, every contriver of a quack nostrum, or any common artisan who can read and write, and buy a few pots and bottles and rent a shop, may legally practice Pharmacy", one health professional complained, "many will follow that art for the barest living; and… they will succeed. The educated classes of the Pharmaceutic profession are thus grievously injured" (Pharmaceutical Journal and Transactions 1855, p. 309).

As the nineteenth century advanced, so did the injury's grievousness. "The period of rapid expansion" for quack medicine sales and retailers "was during the second half of the nineteenth century" (Anderson 2006, p. 125). Between 1850 and 1900, the former increased eight-fold, and between 1874 and 1895, the number of retailers offering quack medicines climbed from 12,000 to 20,000 (Marland 2006, p. 102; Berridge and Edwards 1987, p. 125).

Intensified competition from quack medicine vendors had several causes. "The 'retailing revolution' of the nineteenth century" saw an explosion of retailing in general, including medicines (Marland 2006, p. 102). In 1875, the government reduced the annual duty it charged sellers of quack medicines. Also "During the 1870s, a number of limited companies, including…leading department stores such as Harrods, had started selling drugs and medicines" (Anderson 2006, p. 126). They bought quack medicines in bulk at a discount and passed the savings on to consumers, which independent doctors and pharmacists couldn't afford to do. The result "was a great deal of competition from grocers, the emergent multiple drug stores…and many other retail outlets.… All over the country, companies were cutting the price of proprietary medicines" (Horman et al. 2007, p. 6).

The plague of competition from quack medicine vendors had an obvious antidote: monopolize the sale of powerful medicaments used for self-treatment, most importantly, quack medicines. Requiring consumers to go through doctors and pharmacists to get those medicaments would return the imperiled segment of the healthcare market to health professionals, and with it, their rents.[7] There were, however, two difficulties. One was how to create and maintain a monopoly when so many quack medicine vendors abounded. The solution to this difficulty was to have government establish and enforce a medicinal monopoly on health professionals' behalf. The other difficulty was convincing government to do that, and its solution had to come first: health professionals needed to organize to apply pressure

[7] Our theory of health-professional rents turns the conventional theory on its head. In the latter, professionals' expertise gives them an informational advantage over consumers, which professionals can exploit. State intervention in the healthcare market prevents health professionals from earning rents. In our theory, health professionals have no real expertise, no important informational advantage over consumers to exploit. State intervention in the healthcare market *enables* health professionals to earn rents.

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politically. Victorian health professionals did both, resulting in governmental regulation of quack medicine.

4 Regulating medicine in nineteenth-century England

4.1 Organized professional healthcare

As long as laissez-faire prevailed in England's medicinal marketplace, health professionals might not. In part to remedy that situation, in the nineteenth century, health professionals organized. "The Colleges of Physicians and Surgeons remained, as did the Society of Apothecaries; but they were little more than ghosts of past glories" (Porter 1995, p. 49). New bodies were needed, and ones that better reflected professional healthcare's makeup of "doctors" and "pharmacists". The result was the British Medical Association and the Pharmaceutical Society of Great Britain.[8]

In 1832, physicians, surgeons, and general practitioners founded the British Medical Association to "unite the scattered members of our profession into one body" (Brown 2007, p. 239). "Central to this vision was the claim that its members should exercise dominion over all aspects of public health, something which demanded the elimination of other forms of health care provision," especially self-treatment procured from quack medicine vendors (Brown 2007, p. 240). To promote its agenda scientifically and politically, the Association launched the *British Medical Journal*.

Nine years later, pharmacists founded the Pharmaceutical Society "to promote the interests of the chemists and druggists" (Anderson 2006, p. 107). Like the British Medical Association, the Pharmaceutical Society had "a strong desire to restrict trade in the interests of its members" (Berridge and Edwards 1987, p. 114). Also like the British Medical Association, the Pharmaceutical Society created a publication to aid its cause: the *Pharmaceutical Journal*.[9] The Society, however, was the better organized group, perhaps from better practice.

In the earlier part of the nineteenth century, chemists and druggists combined on an ad hoc basis to defend their interests politically. "The response of the pharmacists to threats was like a reflex action. Advertisements in the press, well-attended meetings, resolutions passed unanimously, lobbies organised, counsel briefed, and subscriptions collected…the hallmarks of political organisation" (Holloway 1987, p. 131). The "personal influence of the leading druggists with members of the government" also was helpful (Holloway 1987, p. 132). Such was the legacy that helped render the Pharmaceutical Society "so able to pressure the government effectively" in the late nineteenth century (Lomax 1973, p. 175).[10]

[8] The former originally was called the Provincial Medical and Surgical Association.

[9] Formerly, the *Pharmaceutical Journal and Transactions* and *Pharmaceutical Transactions*.

[10] Organized professional healthcare shared common cause when it came to quack medicine vendors. But relations between the British Medical Association and the Pharmaceutical Society, and doctors and pharmacists more generally, were not always, or perhaps even often, harmonious. The reason is that their interests, though overlapping, were distinct and not infrequently opposed. Just as both groups of health professionals competed with quack medicine vendors, they competed with each other. Pharmacists were wont to "counter prescribe", poaching on doctors' advising privilege, much as the old apothecaries had done, but also on doctors' dispensing practice, which, while diminishing in the nineteenth century, remained an important source of income. Doctors were eager to exclude chemists and druggists from such activity—if possible, to require their prescriptions for pharmacists to supply drugs and medicine. Within each healthcare profession, members' interests likewise could diverge. Conflicts between pharmacists, for example, led temporarily to

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4.2 The Pharmacy Act of 1868

The crowning achievement of that pressure was "An Act to Regulate the Sale of Poisons", or the Pharmacy Act of 1868, amended for clarity in 1869.[11] With respect to medicines, it accomplished three things. First, the Pharmacy Act designated a schedule of "poisons" for legal control. Part one of the schedule contained ten drugs, including strychnine and emetic tartar. Part two contained five drugs, among them, chloroform and "Opium and all preparations of opium or poppies" (Pharmacy and Poison Laws 1892, p. 63).[12] New poisons could be added to the schedule by the Pharmaceutical Society with approval from the government's Privy Council. Morphine, for example, was added in 1869, as was red iodide of mercury.

Second, the Act required that all scheduled poisons be labeled "poison"—the article's name, the seller's name, and his address labeled too. Drugs contained in part one of the schedule were subject additionally to the requirement that the seller had to know the buyer (or an intermediary who knew him) and to record the buyer's name and address along with his reason for purchase.[13]

Third, the Act conferred on health professionals exclusive right to sell scheduled poisons: "From here and after…it shall be unlawful for any person to sell or keep open shop for retailing, dispensing, or compounding poisons…unless that person shall be a pharmaceutical chemist, or a chemist and druggist" or "a legally qualified medical practitioner" (Pharmacy and Poison Laws 1892, pp. 54–55 and 69).

We have not covered quack medicines. Neither did the monopoly bestowed on health professionals by the Pharmacy Act. "Nothing hereinbefore contained", it averred, "shall extend to or interfere with…the making or dealing in patent medicines"; only the labeling requirement applied to them (Pharmacy and Poison Laws 1892, p. 59). That provision was a serious area for the lobbying efforts of organized professional healthcare to have come up short, since "the inclusion of patent medicines within poison legislation had been one aim of both medical and pharmaceutical professions since the 1850s" (Berridge and Edwards 1987, p. 123).

Footnote 10 (continued)
the creation of a rival professional organization, the United Society of Chemists and Druggists. Even still, disagreements could be, and at critical junctures were, set aside to address a common problem: quack medicine vendors.

[11] An earlier, though very modest, achievement that touched on medicine—but just barely—was the Arsenic Act of 1851. Another earlier, modest achievement was the Pharmacy Act of 1852, which gave persons registered under that Act exclusive right to the title "pharmaceutical chemist".

[12] Pharmacists were divided on the inclusion of opium—an example of divergent interests within that healthcare profession. On the one hand, opium was the poisonous medicament most likely to be resorted to for self-treatment. Thus, for many pharmacists, a monopoly would be extremely valuable. On the other hand, the Pharmacy Act imposed costly requirements on the drugs it covered: labeling and, for those in the first part of the schedule, recordkeeping, which might also drive some consumers away. For pharmacists located in places with few other medicinal retailers, the benefit of the monopoly could be outweighed by the cost of the Act's other requirements. That observation may explain why the first iteration of the Pharmacy Act included opium but a subsequent iteration did not, the drug having "been removed from…the poison schedule…to placate Lincolnshire, Cambridgeshire and Norfolkshire chemists", who feared "that the original requirements would have seriously interfered with their business—opium being one of their chief articles of trade" (Lomax 1973, p. 175). Opium reappeared in the Act's final version, though on the second, less restrictive part of its schedule.

[13] Medicines supplied by licensed doctors or dispensed by licensed pharmacists that contained scheduled poisons largely were exempted from these requirements, including the use of a "poison" label.

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That aim was frustrated by counter-lobbyists. Not the quack medicine vendors: they were too numerous and diverse in trades to organize effectively, and their interest was too small. Unlike health professionals, for whom the sale of medicaments was a primary source of income, for quack medicine vendors it was but a sideline. In contrast, quack medicine manufacturers—the medicines' owners—had a major financial stake in the availability of quack medicines and were a much smaller group, putting them in an excellent position to mobilize politically, the result of which in 1868 was the Pharmacy Act's "patent medicine" exemption.[14]

In the 1880s, health professionals made new attempts to bring the sale of poisonous quack medicines under their exclusive control through parliamentary action. A bill advanced by the Pharmaceutical Society in 1881 proposed mandatory labeling of poisonous quack medicines and to restrict their sale to licensed pharmacists (Pharmacy and Poison Laws 1892, p. 104). It was defeated. A bill proposed by the Pharmaceutical Society in 1884 attempted the same (Holloway 1991, p. 247). It also was unsuccessful.

Difficulty in securing a monopoly through parliament prompted organized professional healthcare to try a different tack—or rather, branch of government. In 1890, chair of the British Medical Association's Parliamentary Bills Committee and editor of the *British Medical Journal*, Ernest Hart, approached the government's Treasury Solicitor—then Director of Public Prosecutions—and "urged that Government prosecutions should be instituted to prevent the continued sale of…secret preparations without being labelled poison" (British Medical Journal 1893, p. 367). Hart's ploy was to make the case before the judiciary that poisonous quack medicines rightfully were subject to the Pharmacy Act's regulations controlling other poisonous medicaments.

It worked. In 1892, the Treasury Solicitor prosecuted a retailer of "Dr. J. Collis Browne's chlorodyne", a quack medicine whose principal ingredients were tincture of opium (laudanum) and chloroform, both scheduled poisons under the Pharmacy Act. That retailer was J.T. Davenport, and while Davenport sold quack medicine, he was not a quack medicine vendor but a chemist. However, he also was a quack medicine manufacturer—the owner of Browne's chlorodyne—which may explain why organized professional healthcare chose one of its own for test prosecution instead of, say, a stationer or a grocer. Whatever the reason, the fact that it did meant that the Pharmacy Act violation of which Davenport stood accused was failure to label his quack medicine "poison" rather than selling it at all. Editor of the *Pharmaceutical Journal*, Dr. B.H. Paul, provided expert testimony for the prosecution (Holloway 1991, p. 247).

The idea to take organized professional healthcare's cause out of the parliamentary ring, where counter-lobbying presented problems, and into the judicial one was a stroke of genius. Predictably, the defense would argue that the Pharmacy Act didn't apply, since it exempted "patent medicines".[15] Enabling the court to find that, actually, it did, since the medicines in question were not in fact patented—few "patent medicines", recall, had letters patent. And so it unfolded in *Treasury v. Davenport*.

Following its judicial victory, the Pharmaceutical Society published an announcement "for the purposes of reference in the future", broadcasting the court's decision: "Proprietary

[14] The tax revenue generated from quack medicines perhaps also gave their manufacturers some political clout. See, for instance, King (1844).

[15] Such was the defense offered by a seller of a poisonous quack medicine in a previous, though less far-reaching, case, who was prosecuted successfully in 1882 for violating the Pharmacy Act's labeling requirements.

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Preparations containing poisons…are not exempt from the restrictions and conditions, as to sale by retail, imposed by" the Pharmacy Act (Chemist and Druggist 1892, p. 289). "The new policy was vigorously prosecuted and the council of the Pharmaceutical Society took action against offending dealers" (Berridge and Edwards 1987, p. 130).

In a lawsuit it brought against a grocer selling quack medicine the following year, Judge Francis Henry Bacon also found in the prosecution's favor on the "patent medicine" question. It could not have hurt that Judge Bacon was cousin to Dr. B.H. Paul—the same Dr. Paul who edited the *Pharmaceutical Journal* and provided expert testimony for the prosecution in *Treasury v. Davenport* (Chemist and Druggist 1911, p. 41). In 1894, an appellate court affirmed Bacon's interpretation of the Pharmacy Act: selling poisonous medicaments—quack medicines included—was the exclusive province of licensed doctors and pharmacists. Health professionals' victory was complete.

5 Our theory versus public interest theory

The Pharmacy Act did not, in word or deed, seek to rid medicines of poisonous, potentially lethal substances such as chloroform, strychnine, and mercury—let alone opium. In the nineteenth century, those substances *were* medicines. Nevertheless, what are today considered orthodox consumer-protection arguments for governmental regulation of medicinal markets also were the ostensible grounds for the medicinal regulations imposed under the Pharmacy Act.

On the one hand, health professionals argued, a hazard was posed by dangerous (albeit necessary) drugs: to prevent accidental and intentional poisonings, the public had to be safeguarded. On the other hand, they suggested, there was an information asymmetry: health professionals' special education, training, and expert knowledge required that they be installed as the guardians—exclusive dealers of poisonous medicaments to an ignorant public. Thus, the Pharmacy Act declared consumer protection as its remit: "Whereas it is expedient for the safety of the public that persons keeping open shop for the retailing, dispensing, or compounding of poisons…should possess a competent practical knowledge of their business…" (Pharmacy and Poison Laws 1892, p. 54).[16]

Public interest theory regards that declaration as explanatory of Victorian quack medicine regulation. Our theory regards it as palaver and instead explains Victorian quack medicine regulation as the product of rent-seeking by health professionals. Adjudicating between the two theories is not as simple considering the substances brought under the law's control or even the rules it imposed, for those can be accounted for both by consumer-protection concerns and by rent-seeking.[17]

To wit: the medicaments whose sale the regulation monopolized for health professionals, such as chloroform, emetic tartar, and especially opium, were indeed dangerous and responsible for deaths—both as a consequence of seller mishandling and of consumer

[16] The Arsenic Act of 1851 also declared public safety its purpose, albeit of a different kind: "Whereas the unrestricted sale of arsenic facilitates the commission of crime…" (Pharmacy and Poison Laws 1892, p. 21).

[17] Nor is considering the timing of the regulation very helpful for this purpose. On the one hand, in the second half of the nineteenth century, multiple "poisoning scares" arose, which reflected public concern with dangerous substances. On the other hand, in the second half of the nineteenth century, the competition that health professionals faced from quack medicine vendors intensified dramatically.

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misuse or abuse. Yet they also were officially recognized and recommended medicaments, commonly used for self-treatment in the form of quack medicines in particular and sold by health professionals' competitors: quack medicine vendors.[18] Similarly, while labeling requirements for poisonous medicaments and a health-professional monopoly on their sale could help prevent poisonings, the latter also protected health professionals' rents by denying their competitors access to a key segment of the healthcare market.[19]

Taken alone, then, these facts of Victorian quack medicine regulation do not clearly recommend one theory over the other. However, other facts relating to that regulation do. Those facts are, at the very least, uncomfortable for the public interest theory of Victorian quack medicine regulation. In contrast, they are accounted for readily by our theory.

In the years before the Pharmacy Act's passage, professional pharmacists fought and blocked no fewer than four legislative attempts to regulate the sale of poisonous medicaments. Those proposals offered to inform consumers about what poisonous substances they were buying and consuming; to make seller's and consumer's errors that caused accidental poisonings less likely; to make it more cumbersome for consumers to buy dangerous and easily abused drugs, such as opium; and to require competency to sell poisonous medicaments. In other words, pharmacists opposed regulations promoting the very consumer protections envisioned by public interest theory. Pharmacists opposed them because of what those regulations did not protect: health professionals' rents from the competition of quack medicine vendors.

In 1819, parliament introduced "A Bill for establishing Regulations for the Sale of Poisonous Drugs". The bill proposed to require sellers to label poisonous medicaments, preventing "dangerous and fatal accidents [that] frequently occur, from certain Poisonous Drugs and Medicines being mistaken and sold for those of a useful and harmless quality" (Carlisle 1819, p. 3). But it did not propose to restrict who could sell poisonous medicaments. The result: "a battery of opposition opened from an unexpected quarter—from the whole combined force of the trading body of the chemists and druggists" (Carlisle 1819, p. 17). Pharmacists "procured copies of the bill…and met to consider its provisions, some of which appearing to them 'likely to embarrass the dispensing of medicines, and not calculated to effect the object intended,' they prepared a petition to that effect, which was presented to the House of Commons", and "the bill was shortly after withdrawn" (Bell and Redwood 1880, p. 70).

Decades later, in 1857, the government proposed another "Bill to restrict and regulate the Sale of Poisons" (Pharmacy and Poison Laws 1892, p. 35):

> No poison was to be sold to anyone other than a person of full age; a witness knowing the purchaser was to be present; and the purchaser was to produce a certificate signed either by the clergyman of the parish or district, by a legally qualified medical

[18] Moreover, at least one contemporary claimed that the Pharmacy Act's schedule of poisons "omitted mention of many substances more harmful than those it contained" (Pharmacy and Poison Laws 1892, p. 117). The problem of opium poisonings featured prominently in the rhetoric of Victorian health reformers. And, in fact, "Opium poisoning was a commonplace matter" (Berridge and Edwards 1987, p. 79). "As a group", however, "the pharmacists were unconcerned with the dangers of drug abuse" (Lomax 1973, p. 175). And doctors scarcely more so: "even medical prescriptions ordering opiates and anodynes are frequently presented for dispensing an indefinite number of times with the cognisance of the prescribers" (British Medical Journal 1890, p. 974).

[19] Further, it's telling that the Pharmacy Act's monopoly extended to all currently practicing pharmacists—without any requirement that they pass a competency exam—but required all future pharmacists to pass such an exam.

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> practitioner, or by a Justice of the Peace for the county or place, stating that the purchaser was known to the person signing such certificate, and might be trusted with the poison. A full entry of the sale was to be made. Packets containing poisons were to be wrapped in tinfoil as well as in paper, and bottles were to have the word "Poison" moulded upon them….Vendors of poisons were to keep them under lock and key, and in certain vessels.

Packaging requirements. Restrictions on consumer purchase. Seller safe-storage regulations. Nearly everything a faithful servant of public health could want. But not what the Pharmaceutical Society wanted: a monopoly on the sale of poisonous medicaments. As Jacob Bell, founder of the Pharmaceutical Society, complained: "The security of the public would be better effected by an attention to the intelligence and qualification of the vendor than by any arbitrary regulations with regard to the shape of bottles, or to the obtaining of certificates…or those various regulations which have been proposed in the bill before the House of Lords" (Holloway 1991, p. 224). Oddly, he regarded it as one or the other.

An amended version of the bill was introduced, which offered to restrict the sale of poisons to "medical practitioners" and "licensed vendors". Unfortunately for pharmacists, anyone who satisfied a board of six examiners, only one of whom was to be a representative of the Pharmaceutical Society, could become a licensed vendor—including quack medicine vendors. And no one who did not satisfy the examiners could retail poisons—including pharmacists. "The Society wanted restriction of sale of poison", which this regulation would have achieved, "but only on its own terms", which this regulation would not (Berridge and Edwards 1987, p. 114). As one Society member put it, regulation "must do something towards protecting them from the infringements of the trade by grocers, who took away the bulk of business" (Berridge and Edwards 1987, p. 114; Pharmaceutical Journal and Transactions 1857, p. 598).

Another version of the same bill was proposed in 1858, and from the perspective of pharmacists it was much improved. "The new Bill proposed to recognise medical practitioners and pharmaceutical chemists as vendors of poisons, but would have required all other dealers to submit to a special examination", this time administered by a board of three, including a member of the Pharmaceutical Society. Still, it was not improved enough: "all other dealers" easily could end up being many dealers, a large number of quack medicine vendors. Against "the protests of the Pharmaceutical Society", the bill went to the House of Lords, "But when it reached the Commons…there was such a storm of opposition from chemists all over the country that the Home Secretary had to speedily withdraw it" (Pharmacy and Poison Laws 1892, p. 36).

In 1859, the Home Secretary introduced yet another bill attempting to regulate the sale of poisons. "Provisions for labelling vessels or packets containing" poisons "in stock, and when sold, and entry of sales, were the features of this Bill" (Pharmacy and Poison Laws 1892, pp. 37–38). Provisions for monopolizing the sale of poisons in the hands of health professionals were not, so the Pharmaceutical Society opposed the bill and it was withdrawn. As Pharmaceutical Society president George Sanford would later bristle, "a mere Poison Bill, fettering us with registration of sales and attendance of witnesses, prescribing a particular form of bottle in which poisons might be kept and sold, and a particular corner of our shops in which they should be placed, would be only an encumbrance" (Pharmaceutical Journal and Transactions 1866, p. 538). Pharmacists didn't want regulation that protected consumers; they wanted regulation that protected their rents.

Finally, a bill was proposed in 1863, which, among other things, would have required "that no patent or proprietary medicine should be sold unless a sworn certificate of its

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composition be lodged with the Registrar of the General Council, and a copy thereof kept open for inspection into the shop or place in which such medicine is sold" (Lancet 1864, p. 215). Here was a regulation to bring consumer-informing transparency to the sale of quack medicines so often maligned by health professionals for their "secrecy". Yet the Pharmaceutical Society "raised rather unreasonable clamour against" the proposal and thwarted it (Lancet 1864, p. 215).[20] Although this bill offered licensed pharmacists exclusive right to compound doctors' prescriptions, it did not offer health professionals exclusive right to sell poisonous medicaments. And "What militates against our interests", a pharmacist bemoaned in the *Pharmaceutical Journal*, is "that nearly or quite every grocer sells drugs" (Pharmaceutical Journal and Transactions 1864, p. 610).

Two further facts relating to Victorian quack medicine regulation are hard to reconcile with consumer-protection logic but are accounted for easily by our rent-seeking logic. The first parallels the Pharmaceutical Society's stance toward the foregoing law, which proposed to require that retailers of quack medicines post those medicines' ingredients publicly. Recall that in the 1890s, the Pharmacy Act's regulations came to cover poisonous "patent medicines"—unless they actually were patented, in which case the "patent medicine" exemption applied. The courts reaching that decision found that since patenting a quack medicine required disclosing its composition, patented quack medicines did not pose the health dangers of their unpatented counterparts. Hence, poisonous quack medicines with letters patent could be sold safely even by retailers who were not health professionals, while those without letters patent could not.

That decision enlarged the benefit to quack medicine manufacturers of securing letters patent for their medicines. So, manufacturers began seeking patents for more of them, even though, if secured, their "secrets" would be made public. Rather than encouraging this transparency-enhancing development, health professionals did the opposite: they torpedoed every new quack medicine application for letters patent they could, ensuring its composition would remain "secret" (Holloway 1991, p. 248). Plainly, such action is inconsistent with consumer protection. Perhaps less plainly, it's consistent with rent-seeking. The more poisonous quack medicines that secured patents, the more of them would be exempt from the regulations of the Pharmacy Act—thus, the more competition that health professionals would continue to face from quack medicine vendors, who would be able to carry those medicines.

The final fact to consider is the Pharmaceutical Society's stance toward safety regulations for how poisons should be stored, compounded, and dispensed. The first section of the Pharmacy Act charged the Society with developing a set of rules to govern pharmacists' storefront handling of dangerous substances. The Privy Council was to see that it did. Curiously for health professionals concerned about safeguarding the public from mishandled poison, the pharmacists demurred. After badgering from the Privy Council, in 1869, a council of the Pharmaceutical Society proposed a set of rules—cautionary labels for poisons, distinctive storage containers, separate cupboards for keeping them. But "As soon as these regulations were published, strenuous opposition emerged to their adoption" from the pharmacists. "Member after member voiced his opposition. The correspondence columns of the *Pharmaceutical Journal* filled with letters of protest" (Holloway 1991, p. 252). The proposed safety rules were withdrawn.

[20] Doctors, however, took a more positive view—an example of divergent interests between the healthcare professions. The 1863 proposal was put forward by the General Medical Council, the legal examination and registration body for English doctors created by the Medical Act of 1858.

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For the next 3 years an exasperated Privy Council tried repeatedly to induce the Pharmaceutical Society to adopt poison-handling rules that would protect public health, but to no avail. "The members of the Pharmaceutical Society had not only blocked their [own] Council's attempt to introduce regulations for the storage and dispensing of poisons but had also secured the election of Council members specifically committed to resisting the introduction of such regulations" (Holloway 1991, p. 255). Such behavior is peculiar for guardians of consumer health. It is predictable for rent-seeking health professionals: With a poisonous-medicament monopoly in hand, why impose costly consumer-protecting regulations on oneself?

6 Conclusion

As if to anticipate our study, two historians of English public health warn: "it is important to see the role of the [Victorian health] profession…not simply as one of conspiratorial plotting, out to grab control…for self-interested ends. The situation was more complex than this" (Berridge and Edwards 1987, p. 76). Perhaps it was, but our analysis suggests not much.

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