Pricing Medicine Fairly

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Recently, several pharmaceutical companies have used monopoly power, which resulted from drug patents and other government-imposed barriers to entry, to raise drug prices in the United States dramatically. From 2007 to 2016, Mylan increased the price for a package of two of its EpiPen epinephrine autoinjectors from $100 to $600. Responding to public outrage, CEO Heather Bresch claimed in Congressional testimony that the company raised the price partly "to enhance the product and make it more available." She admitted, however, that "the overwhelming majority" of the company's investment in the product went to marketing and lobbying, not to product improvements (Popken 2016). In 2015, Valeant raised prices of its prescription drugs an average of 66 percent. The price increases provoked outrage from patients, many of whom faced large increases in out-of-pocket costs for medicines they needed (Pollack and Tavernise 2015). In the same year, Turing Pharmaceuticals CEO Martin Shkreli raised the price on Daraprim, a drug that treats a parasitic infection, from $13.50 a tablet to $750. At his 2017 trial for unrelated charges of fraud, prospective jurors who had heard about the price increase called Shkreli a "snake," "the face of corporate greed," and "the most hated man in America" (Clifford 2017).

Large pharmaceutical price increases raise questions both about how pharmaceutical firms should be regulated and about how pharmaceutical executives ethically ought to make pricing decisions. Most of the normative literature on pharmaceutical pricing has focused on

government policy. Should pharmaceutical companies be legally free to raise prices as they please, or should pharmaceutical prices be regulated? There is a distinct question how pharmaceutical firms ethically should act. Where pharmaceutical companies are legally free to raise prices, is it ethical to raise drug prices whenever doing so would benefit the firm financially? This ethical question remains largely unaddressed.[1]

This ethical issue is not unique to the United States. It arises in any country where pharmaceutical companies control their own prices and where individual patients pay at least part of the cost of the drugs they need. The issue is especially serious in countries where insurance coverage for pharmaceuticals is not universal. The United States, which lacks universal health insurance, is one such country. Canada is another, as its universal health insurance plan does not cover prescription drugs. Approximately one in ten Canadians leave prescriptions unfilled because of cost considerations (Brandt, Shearer, and Morgan 2018). In most low- and middle-income countries, outpatient prescription drugs are paid for primarily out-of-pocket (Nguyen et al. 2015). The ethical issue also arises in countries like China where health

[1] An exception is Spinello (1992), who argues for an ethical duty of justice to price "truly essential" drugs so as to make them widely available. Spinello's argument relies on Rawls's theory of justice, which is a normative political theory, not a theory of individual or corporate ethics, so it is unclear whether Spinello's reasoning supports a conclusion about ethics or about what law should be. Hemphill (2010) argues that large price increases for orphan drugs are unethical if these price increases prevent people from getting access to the drug. He does not address the question whether price increases are ethical if assistance programs make the drugs available to patients at prices they can pay at the cost of financial ruin. There has been some discussion of the narrower question whether pharmaceutical companies have an ethical obligation to make drugs available to poor people in developing countries. See, e.g., Werhane and Gorman (2005).

insurance covers prescription drugs but requires patients to pay a percentage of the cost of some drugs.[2]

The ethical question how firms should price drugs cannot be settled by appeal to the alleged principle that executives' primary obligations are to their firms' shareholders. Any reasonable shareholder theory acknowledges some ethical constraints on the pursuit of returns to shareholders.[3] Milton Friedman's (1970) version of shareholder theory held that the pursuit of value for shareholders should be constrained by "law and ethical custom." Public outrage at sharp pharmaceutical price increases raises the question whether these price increases are in line with "ethical custom." That said, only a thoroughly relativist view of ethics would endorse popular opinion about this issue without critical examination. A plausible account of the ethics of drug pricing must consider the costs and risks of developing new drugs and medical devices. For the financial risks of investing in experimental drugs to be worthwhile, pharmaceutical companies need the prospect of high revenues from a successful drug.

This paper draws on Kantian ethical theory to provide a principled justification for outrage at sharp pharmaceutical price increases. Kantian ethics definitely condemns the most aggressive pricing practices by pharmaceutical companies. Kantian ethics permits pharmaceutical companies to establish pricing policies necessary to have a reasonable expectation of financial returns from promising candidate drugs. I aim to show that Kantianism

[2] In China, drugs on "List A" are completely covered by insurance, while drugs on "List B" require patients to cover about twenty percent of the cost out of pocket. Many innovative drugs are not included on either list and must be paid for out of pocket. (Liu, Luo, and Zhao 2017).

[3] As a stark example, even if there were no generally recognized international law, it would be wrong to provide financial returns to shareholders by committing piracy on the high seas.

provides a plausible and helpful account of the ethics of drug pricing, one that is appropriately sensitive to empirical facts without being silent in the face of empirical uncertainty.

Section I explains the difference between defending the legality of sharp pharmaceutical price increases and defending their moral permissibility. It argues that neither the existing literature on pharmaceutical pricing nor the literature on just price squarely addresses the question what pricing practices are morally or ethically permissible. Section II presents a Kantian account of just price, based on the Formula of Humanity. On this account, it is wrong to choose to structure a transaction in a way that makes it impossible for a party to the transaction to have at least minimally effective agency during or after the transaction. Section III uses this account to argue that to the extent possible, pharmaceutical companies should avoid putting patient-customers in the position of having to choose between illness and financial ruin. In determining what pricing policies are possible, executives may consider the need to recoup research costs and the need to provide a risk-adjusted market-rate return to investors who made a venture possible. They may not simply maximize financial returns. Section IV discusses the implications of the Kantian framework for regulation. It argues that some form of government involvement in the pharmaceutical industry is required to prevent an objectionable form of private domination, but that a wide range of regulatory approaches are ethically acceptable.

I. The divergence of ethics and regulation

The ethics of pharmaceutical pricing is an under-theorized topic. Much has been written about how pharmaceutical pricing ought to be regulated. This question is distinct from the question how pharmaceutical companies should price their drugs in the absence of regulatory constraints. There is also a large literature about the broader ethical concept of just price, but

markets for medically necessary drugs have distinctive features that make it difficult to apply standard theories of just price.

Discussions of the regulation of drug price have often focused on the effects of regulation on investment. Developing new drugs is expensive and risky. According to one recent estimate, the average out-of-pocket cost per new approved medical compound is $1395 million (DiMasi, Grabowski, and Hansen 2016). Several ethicists have offered consequentialist defenses of pricing practices in the pharmaceutical industry, including largely unrestricted price increases (Balotsky 2009; Maitland 2002; Sonderholm, 2009; see also De George 2005).[4] These consequentialist defenses of pricing practices generally focus on the question whether there should be legal restrictions on pharmaceutical prices.[5] Maitland (2002), for instance, argues that regulating drug prices will reduce the prospect for financial gain from investment in pharmaceutical research, and investors will thus put less money into drug development.[6] The long-run consequence of regulation will be a reduction in the quality of health care for everybody, including the economically less well-off. Rosenberg (2004) makes this point vivid in the context of a particular proposal for regulation, namely, abridging patent rights in life-saving drugs such as AZT to make these drugs available to sick people in low- and middle-income countries. The humanitarian benefits of abridging patent rights may be great in the short term. But if abridging patent rights

[4] Others have criticized the current regulatory arrangement. See, e.g., Gagnon (2013).

[5] Huebner (2014) takes a different approach. He distinguishes moral obligations from justified legal obligations and argues that a moral obligation to provide medicine at low prices could not be grounded on a duty of easy rescue. Huebner does not offer a positive ethical argument in favor of pharmaceutical companies' practices.

[6] Vernon (2005) presents an economic model which suggests that imposition of price regulation in the U.S. pharmaceutical industry would reduce research and development expenditures by between 23.4 and 32.7%.

reduces the long-term rate of investment in new medicines even slightly, the long-term harm to human welfare (over several generations) will eventually outweigh the short-term gain.

It is unclear how, if at all, these regulatory arguments bear on the question how pharmaceutical companies ought to price medically necessary drugs in the absence of regulation. A governmental decision to abridge patent rights or severely to limit pricing decisions by holders of pharmaceutical patents might have long-term effects on pharmaceutical investment. Even if the policy were reversed, investors might fear its reinstatement. By contrast, it is less clear how a pharmaceutical company's decision not to price its drugs aggressively would affect long-term investment in the pharmaceutical industry. The company's pricing decision will likely only affect investment in that company's research (including investment in research from retained earnings as well as investments from loans and new stock issues), and the effect is likely to be short term, measured in years, not generations. In a consequentialist assessment of a firm's decision to limit prices voluntarily, the effects of a short-run reduction in the company's research budget must be weighed against the benefits of more patients having access to medically necessary drugs and of financially struggling patients keeping more of their money.[7] It is also necessary to consider how a pharmaceutical firm's pricing decisions might affect morale among researchers and public support for research. Public support is crucial for the success of medical research, in part because of the need to recruit human research subjects for drug trials (London 2012, pp. 392-393; Wendler and Rid 2017, pp. 84-85).

[7] If a transfer from patients to a pharmaceutical company has no effects other than the transfer of wealth, and if patients are on average less wealthy than the firm's shareholders, the transfer will reduce aggregate welfare. Wealth has diminishing marginal utility: a gain of 1,000 ducats or 1,000 dollars typically improves the welfare of a poor person more than it improves the welfare of a rich person (Bernoulli 1954 [1738]).

Maitland (2002) and Elegido (2009) also make a fairness-based argument against regulation of pharmaceutical prices. Granted that people who lack health insurance should be able to obtain life-saving drugs without having to sacrifice their houses. Why should the burden of enabling people to pay for these drugs fall on pharmaceutical companies and their investors? It would be more just to distribute the burden of paying for life-saving drugs throughout society. This argument may be correct, but if it is, it only speaks to justice in regulatory policy. It does not address the ethical situation that many pharmaceutical executives face. If government will not pay for some people's life-saving drugs, how should the pharmaceutical company set the price?

There is a large literature on the ethics of pricing in contexts other than the pharmaceutical industry. General accounts of just price typically struggle with the case of pharmaceutical pricing, in part because pharmaceutical companies clearly ought to make *some* use of the market power that patents give them. Consider first Wertheimer's account of wrongful exploitation (1996). According to Wertheimer, a transaction or relationship is (objectionably) exploitative if one of the parties to the transaction or relationship benefits unfairly in relation to the other. A mutually beneficial, consensual transaction can be wrongfully exploitative if there is a range of prices at which a transaction would benefit both parties, and some price points in that range distribute the benefit of the transaction unfairly. Wertheimer's account leaves open the question when the benefits of a transaction are unfairly distributed. Wertheimer rightly rejects some simple proposals, e.g. that the welfare surplus generated by a transaction should always be divided equally between buyer and seller.[8] He tentatively proposes that in a wide range of cases,

[8] Consider an off-duty doctor who discovers a wealthy person alone and facing a potentially deadly medical

the just price is the price that would be paid in a hypothetical competitive market. In the case of a market with a monopoly seller, the hypothetical competitive price is the price at which the quantity demanded equals the marginal cost of producing the good or service. Though the hypothetical competitive price may be the just price in some contexts, it would be unfair to demand that innovative producers charge the hypothetical market price. A producer who did this would be unable to profit from an innovative product or even to recoup the costs of developing the product (Elegido 2015). In the hypothetical competitive market for a newly introduced drug, for example, the firm that introduced the drug has no patent protection. Both the firm that introduced the drug and its competitors would charge only the marginal cost of producing pills, and there would thus be no incentive to innovate.

Valdman's (2009) account of just price faces a related problem. On this account, a transaction is wrongfully exploitative if one party cannot reasonably refuse an offer and the other party extracts excessive benefit from the first party's inability to refuse. On Valdman's view, a party to a transaction benefits excessively if this party gains more than he would if the other party were well-informed and had acceptable "non-transaction costs." Valdman's account has an advantage over Wertheimer's. His account, unlike Wertheimer's, would allow the developer of a new baldness drug to charge a premium over the marginal cost of producing the drug, and thus to have a reasonable chance of making a profit on the investment in developing the drug. The non-transaction cost of choosing not to buy a baldness drug, namely allowing baldness to progress

emergency. The doctor can save this person via a simple procedure that will cost the doctor nothing but a few minutes of her time. The doctor offers to save the person for ten percent of the patient's wealth. The patient gains far more from this transaction than the doctor does, yet it is the doctor who exploits the patient. For similar examples, see Meyers (2004); Wertheimer (1996 p. 223).

untreated, is reasonable. Valdman can also explain why it is unfair for a retailer of a life-saving drug to take advantage of a temporary, local monopoly to charge far more than the normal market price. To consider one of Valdman's examples, the account can explain why it is wrong for the seller of an antidote to take advantage of a poisoning victim's need to obtain the antidote without delay (p. 3). The seller should not charge more than the seller would be able to charge if, hypothetically, the buyer could comparison shop without risking death. Valdman's account has nothing to say about how the manufacturer of a patented, medically necessary drug should price it. There is no market price distinct from the price the manufacturer sets. What price would people pay for a medically necessary drug if, hypothetically, the cost of not paying for this drug was acceptable? This question has no answer. The point of taking a medically necessary drug is to avoid unacceptable health consequences. So Valdman's account is silent about this case.

Other accounts of just price also struggle to provide guidance for pharmaceutical pricing. Elegido (2015) explicitly states that his account of just price as the price obtainable in an "open market" does not apply to natural or legal monopolies. It thus does not apply to any market for a patented product, since a patent is a legal monopoly, or to markets for "orphan drugs," since these markets are natural monopolies. The Thomistic account of Koehn and Wilbratte (2012) holds that the just price in any transaction is "the price to which a just buyer and just seller would commit as part of a voluntary exchange conducted with a reasoned awareness of each other's good and the good of the larger community" (505). Koehn and Wilbratte take this principle to entail two requirements for the prices of necessities, such as food, shelter, and health care. (They do not mention medicine specifically.) First, sellers may charge only for "legitimate costs of supplying the good or service," which may include a "normal profit" and may consider the risks

of supplying the good or service. Second, justice sometimes requires price discrimination, as prices should not be set so as to exclude anyone from true necessities. As Koehn and Wilbratte acknowledge, the standard they defend is most easily applied in a tight-knit society, in which buyers and sellers know each other and are aware of each other's needs. Fairly and efficiently pricing necessities in proportion to ability to pay is challenging in a large society. An account of just price for the pharmaceutical context must provide guidance in non-ideal contexts in which a private firm cannot make necessary medicine available to *everyone* who needs it at prices they can afford. The obstacles to doing this may include inadequate information about patient-customers' ability to pay and obstacles to price discrimination in the pharmaceutical market.

The ethics of pharmaceutical pricing is an under-explored topic, then. The question how pharmaceutical companies ethically ought to price their drugs, in the absence of price regulation, has not been squarely addressed. One way of approaching an unanswered question in applied ethics is to consider what a general moral theory implies about people's duties in this context. The merits of the answer this approach yields will of course depend on the merits of the theory used. This paper develops a Kantian account of the ethics of pharmaceutical pricing. I shall not attempt to defend the merits of Kantian ethical theory. Others have done so ably. It is one of the major theoretical approaches used in business ethics (see Bowie, 1999; Smith & Dubbink, 2011). My aim here is to show that Kantian ethics can give a clear and plausible answer to the ethical question how pharmaceutical executives should make pricing decisions.

II. A Kantian account of just price

I begin by offering a general Kantian account of the ethics of pricing, based on the Formula of Humanity. It is inspired by Sample's (2003) account of exploitation, but it differs in

that it avoids reliance on the controversial concept of degradation. The Formula of Humanity is one of several formulations of the categorical imperative, the central principle of the Kantian ethical framework.[9] The Formula of Humanity calls for all human beings (including executives and managers) to refrain from treating the humanity of other human beings (including customers) "merely as a means" (Kant 1996 [1785]: 80, Ak. 4:429). There is controversy about what is required to avoid treating people's humanity merely as a means (Sample 2003). On one attractive interpretation, "humanity" refers to those aspects of our human powers that involve rationality and the capacity to set ends (Hill 1980; Korsgaard 1996; Wood 1999).[10] Clearly there is nothing wrong with using someone else's rationality as a means. We use others' rationality as a means any time we ask someone's advice, hire someone for a task (intellectual or otherwise), or seek someone else's help in any other way. The Formula of Humanity only objects to treating someone's rational capacities *merely* as a means. That would involve using someone's rational capacities while failing to treat those capacities with respect.

There are several ways of treating someone's rational capacities merely as a means. One way is to destroy someone's rational capacities as a means to one's ends, e.g. to kill someone or to lobotomize someone as a means of achieving a purpose of one's own (Hill 1980). Another way of treating someone's rational capacities merely as a means would be to influence someone's behavior through manipulation or deception rather than through rational persuasion (Hill 1980;

[9] Whether the formulations are equivalent is controversial. Kant thought that they are (Kant 1996 [1785]: Ak. 4:435), and I agree.

[10] The power to set ends via reason includes the power to set ends that are not rationally mandatory, but that instead are influenced by (animal and other) desires. Ordering at a restaurant is a reason-involving activity. See Korsgaard (1996) and Wood (1999) on this point.

Korsgaard 1996; O'Neill 1985). But the “mere means” principle demands more than refraining from deception and wrongful violence. It also requires respect for the prerequisites for *effective* exercise of the capacity for rational choice.[11] To exercise agency effectively, people need several resources.[12] Two are salient here. First, effective agency requires a reasonably well-functioning body. People can exercise rational agency while in poor health, but a serious illness limits a person's ability to exercise agency effectively. Second, in a society like ours, in which one needs money to do most things, effective agency requires at least some money or a means of getting money. Moreover, one needs access to at least some money one can use for discretionary purposes. A life dedicated entirely to the satisfaction of basic needs is a life in which one's agency has limited effectiveness.

Respect for others' rational agency requires one to act consistently with their having access to the necessary means for effective agency. The two halves of the Formula of Humanity impose different requirements here. The requirement to treat others' humanity as an end entails a duty of beneficence, a general duty to help people in need. Since an individual cannot help everyone who has unmet needs, one has discretion about how to fulfill the duty of beneficence (O'Neill 1980). The “mere means” principle, by contrast, imposes specific duties in one's interactions with specific other people. It prohibits involving others in one's plans in ways that are inherently incompatible with their having the necessary means for effective agency.[13] The

[11] To be able to set ends via rational choice, one needs a realistic hope of achieving them (Ripstein 2009). I cannot set the end of jumping over a ten-story building, because I know that I cannot do this.

[12] Other resources required for effective agency include physical liberty (Hughes 2018) and some claim to use land or other physical space free from interference (Essert 2016).

[13] There is an exception to the prohibition: one may undermine the *effectiveness* of a person's agency in order to preserve the *existence* of a person's rational agency. So, for instance, if someone is having a stroke, and the only

"mere means" principle thus prohibits people from pursuing their ends by actively depriving people of resources they need. One way of actively depriving people of needed resources is to steal from them. There are at least two ways of depriving people of access to needed resources without depriving them of anything they legally own.

One way of depriving people of needed resources is to obstruct their access to a resource that had previously been available to everyone in common. For example, if someone were to enclose the only water source in a desert, they would thereby obstruct access to a necessary means of agency. What if someone has to dig a well to make the water source physically accessible? Enclosing the water source and charging access would be permissible if doing so was necessary to pay for digging the well. But suppose the well-digger charges a price that is higher than necessary to make the source accessible, and suppose that some people are unable to get the water they need as a result. Then by enclosing the water source, the well-digger actively deprives these people of a resource they need. Others are denied the option of digging a well in the same location (the only possible location) and charging a lower price that everyone can afford. The well-digger's purpose for setting a high price and excluding people is presumably to maximize profit. Maximizing profit by excluding people from a previously common resource—even one that required development—violates the "mere means" principle. If it is impossible to price a previously common resource so that everyone who needs it can use it, and if the resource must be developed to be made useful, the developer must price access so as to minimize the number of people who are excluded from using it.

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way to get this person to a doctor is to steal a car, stealing a car is morally permissible. (Of course, one must return the stolen car after the emergency is over.)

The “mere means” principle imposes a further ethical restriction on pricing. If one chooses to structure a transaction in a way that is by nature incompatible with one of the parties’ having adequate means for effective agency, though one could have structured the transaction in a way that is compatible with this person having effective agency while still benefiting, one uses this person merely as a means.[14] One uses this person as a means because the person is a party to a transaction from which one benefits. One uses the person *merely* as a means because one chooses to structure the transaction in a way that is incompatible with the person’s having effective agency during or after the transaction. Structuring a transaction in this way, despite having the ability to structure the transaction in a way that preserves all parties’ continued agency, is wrongfully exploitative.

As an illustration, consider a wealthy person's decision to hire a gardener for full-time work at the employer's residence. Suppose that the market wage for gardeners is not a living wage. That is, people who work full-time as a gardener at the market wage will not obtain enough money to meet their basic needs (including but not limited to biological needs) while retaining enough discretionary money to be able to set ends other than the end of personal survival. Suppose further that the homeowner would obtain a consumer surplus from hiring the gardener, and that this surplus is greater than the difference between the market wage and the living wage. The homeowner would thus prefer hiring the gardener at a living wage to not hiring a gardener at all. Then the homeowner, being wealthy, *could* hire the gardener for a living wage

[14] Pallikkathayil (2010) argues that in a well-governed society, the duty not to treat others merely as means has two components: to refrain from violating people’s legal rights, and to avoid treating people in ways that show contempt for their status as equal persons. This is an incomplete analysis of the “mere means” principle for societies that do not take adequate public measures to protect people from private domination.

while still benefiting from the employment relationship. Hiring at the market wage rather than the living wage is a *choice*. It is a choice that actively prevents the gardener from satisfying basic needs, as full-time gardening work precludes other wage-earning labor. Under these circumstances, choosing to hire a gardener for full-time work at the market wage would be choosing to structure an employment relationship in a way that is incompatible with the gardener's having the prerequisites for effective agency. The homeowner would be treating the gardener merely as a means. To avoid wrongful exploitation, the homeowner should pay the gardener a living wage.[15]

One might try to deny that the homeowner actively prevents the gardener from earning enough money to meet basic needs. After all, the gardener would have made the same wage, the market wage, had this homeowner not extended an offer. One should not conclude from this that the homeowner's choices are causally irrelevant. The gardener's poverty has multiple causes. The low wage offered by other employers is one cause; the homeowner's decision to employ the gardener at the market wage, despite being able to pay a living wage, is another cause. When a bad state or event has two causes, either of which would be sufficient to bring about the bad state or event, a person who is responsible for only one of the two causes can be blameworthy for the bad effect.[16]

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[15] This account aligns with Sample's (2003) account in that it allows for the possibility of wrongful exploitation in a perfectly competitive labor market.

[16] Compare: if two people attempt to kill the same victim, one with poison at seven o'clock and one with a pistol at eight, we do not excuse the shooter by saying that the bullet made no difference. The murderer's bullet causes the victim's death, even though the victim would have died anyway. Likewise, the stingy homeowner's decision to pay only the market wage causes the gardener's poverty, even though the gardener would have been poor if the homeowner had made no offer.

So the Kantian account of just price has two requirements. First, there is a duty not to profit by actively excluding people from a necessary resource that had previously been a common resource. Second, if one can structure a transaction so that all parties benefit and all parties can meet their needs, it would be wrong to structure the transaction so that one party benefits and another is prevented from meeting their needs. These duties are not duties of charity; they are perfect duties. Yet these duties are sensitive to facts about what market participants can do. If one genuinely cannot transact at a wage or a price that would be more favorable to workers or customers than the market wage or the market price, it is morally permissible to transact at the market wage or price. Small business owners who are not making a living wage themselves are justified in paying employees less than a living wage. Since they cannot pay employees more, they do not *choose* to structure a transaction in a way that prevents employees from meeting their needs. One must interpret the word "cannot" carefully. People sometimes say that they "cannot" do something when they really mean they do not want to. Whether one wants to deviate from market prices is irrelevant to the ethical permissibility of transacting at market prices.

III. Wrongfully exploitative drug pricing

This Kantian account of just price has clear implications for the ethics of pharmaceutical pricing, but the ethical analysis of pricing by a pharmaceutical company is more complex than the ethical analysis of hiring household labor. Among the complications are the need to cover the costs of research and the pressures of competition for investment capital. A further complication is the presence of insurance. Here I shall focus on the first two complications. To set aside the third, I shall limit my discussion here to markets in which either (a) there is no universal

insurance coverage for prescription drugs, or (b) insurance covers only part of the cost of prescription drugs, and the required patient contribution is not capped. When pharmaceutical companies raise drug prices in markets of either type, price increases are not simply passed on to insurance companies. Patients bear part or all of the cost.

Recall that the Kantian account of just price has two parts. First, if an entrepreneur claims exclusive control over a previously common resource—even one that required development—the entrepreneur must charge prices that allow everyone who truly needs the resource to get access, to the extent this is possible. This component of the Kantian account of just price applies to patented drugs and devices. Undiscovered ideas are part of the commons; anyone is permitted to use them if they can. Ideas that have been discovered but not patented are likewise part of the commons. In the absence of patent law, everyone would be free to manufacture drugs and medical devices using whatever physical materials they own and whatever knowledge they have access to. By obtaining and enforcing a patent, a pharmaceutical company actively prevents others from manufacturing a drug or device they would otherwise have been morally and legally permitted to make.

To be sure, others might not be able to make a drug *knowing* it to be a safe and effective drug until some organization or other finances the relevant research. In this way, the pharmaceutical company is like a firm that digs a well at the only water source in a desert and builds a fence around it. The well digger is entitled to pursue compensation for digging the well. Because the fence excludes others from digging a well, and because water is a necessary resource, the well digger is ethically required to price water in a way that enables everyone to drink from the well. (This may involve price discrimination.) If the well digger charges a

uniform high price, one not affordable to everyone, and the firm could have charged a lower price, the firm actively excludes people from a needed resource as a means to higher revenue. Doing so violates the mere means principle. Likewise, if a drug company prices a patented, medically necessary drug so that some patients who need it cannot get it, and the drug company's motivation is to maximize profit or revenue (not merely to make the drug available), the company actively excludes people from a needed resource as a means to its financial ends. This violates the mere means principle. Pricing a drug so some patients cannot get it is permissible only if this is the only way to make the drug available at all.

The first component of the Kantian account of just price concerned a duty to set prices so that transaction is possible. The second component of the account concerns a duty to set prices so that transactions are compatible with parties' having effective agency (in general, not only in the transaction itself). Recall that effective agency requires a reasonably well-functioning body; serious illness compromises effective agency. In a market society, effective agency also requires at least some opportunity to spend money on things other than basic needs; financial ruin compromises effective agency. A pricing scheme for a medically necessary drug might not altogether exclude some patients from getting the drug, but it might nonetheless force them to choose between financial ruin and ill health. Either choice will severely limit the effectiveness of their agency. According to the Kantian account of exploitation, it is wrong for a pharmaceutical company to make patient-customers choose between financial ruin and ill health if it could have priced its drugs so that patient-customers could afford them without financial ruin.

So the Kantian account of just price has two implications for just pricing of pharmaceuticals. First, if a pharmaceutical company can price its patented drugs and devices so

that everyone who truly needs them can get them, the company must do so. Second, if a pharmaceutical company can price its medically necessary drugs and devices so that people who need them can obtain them without financial ruin, the company must do so. For these general norms to yield concrete ethical conclusions, we need to know when a pharmaceutical company can price its drugs so that patient-customers could afford them.

To answer this question, we must first set aside a mistaken view about what companies can and cannot do. One might think that pharmaceutical companies must maximize financial returns, and that they therefore cannot adopt any pricing scheme other than the pricing scheme that will maximize financial returns in the long run. This is an elementary mistake. It is debatable whether corporations or other firms have either an ethical or a legal obligation to maximize returns to shareholders.[17] But on any plausible shareholder theory of business ethics, the obligation to maximize returns to shareholders is subject to ethical side constraints. Whether there is an ethical side constraint on prices is the question at issue. Pointing to a qualified obligation to maximize returns to shareholders does not answer the question what the qualifications on that obligation are.

The ability to continue operations is a genuine constraint on pharmaceutical companies' pricing. Pharmaceutical companies could not be ethically required to price drugs in a way that would force them to go out of business and to stop making medically necessary drugs. They thus need to be able to able to charge prices that are high enough to make up for the fixed costs of starting the manufacture of a drug. For companies starting production of a generic, these costs

[17] For argument that American corporate law, including Delaware law, does not require shareholder value maximization, see Stout (2008).

may include the costs of regulatory approval. For companies introducing new drugs, these costs will include the costs of medical research. Since most experimental drugs are not ultimately approved, pharmaceutical companies must be able to charge prices for new drugs that cover not only the direct costs of producing those new drugs, but also the costs associated with some of their unsuccessful trials. Furthermore, a pharmaceutical company cannot develop drugs without capital. To attract enough capital to develop a new drug, it must adopt a pricing policy that allows for the possibility of profit. Assuming that it is morally permissible to invest in pharmaceuticals without a charitable motive, a pharmaceutical company may adopt a general pricing policy calculated to yield a risk-adjusted rate of return equal to the rate available on the market from other ethically permissible investments.[18] I will refer to this rate as a "risk-adjusted, market rate" on the assumption that many ethically permissible investments are available and that these investments are competitive.[19]

The constraints imposed by the need to recoup research costs and the need to obtain capital do not always entail that pharmaceutical companies are justified in pricing drugs in a way that maximizes long-run financial returns. To obtain sufficient capital to operate and to pursue

[18] Strudler (2017) argues that in all corporations, executives' obligation to shareholders is to provide a reasonable return, not to maximize profits. Though I am sympathetic to his reasoning, I do not rely on his argument. My conclusion here differs from Strudler's in that it only applies to the pharmaceutical industry, but it does not only apply to pharmaceutical corporations. Pharmaceutical companies with other legal structures, e.g. partnerships or worker cooperatives, would be morally permitted to seek a reasonable rate of return on investment, but not to seek a maximal return at the expense of patient-customers.

[19] In an economy with radical moral failures, in which it is morally wrong to invest in most companies, the analysis of ethical pricing will have to be more complex. It will be necessary to address the difficult question whether it is permissible to raise prices on desperate customers to compete for capital from investors who are indifferent to the permissibility of their investments, or whether ethical firms must instead seek capital from investors who are willing to accept a lower rate of return to avoid wrongdoing.

promising candidate drugs, a for-profit pharmaceutical company may need to promise a market rate of risk-adjusted return, but it does not have to promise more than that. In particular, it does not have to promise to maximize financial returns without observing any limits on pricing for medically necessary drugs. If a company could charge a low price for a drug and still make a market-rate profit (perhaps because a very large number of people will buy the drug), then it can set its price so that patient-customers could afford the drug. If a company needs to charge some patient-customers a high price to recoup the costs of research and make a market-rate profit, but it can price discriminate effectively, it may be able to adopt a pricing policy that enables all potential patient-customers to obtain the drug without financial ruin. The Kantian Formula of Humanity entails that if a pharmaceutical company can price medically necessary drugs so that everyone who needs the drug can get it, the company must do so. If it can price the drug so that all patients can get it without financial ruin, the company ethically must do that, too. Moreover, it must clearly advertise the availability of reduced pricing for financially needy patients, and it must refrain from imposing undue administrative requirements designed to prevent eligible patients from applying.[20]

Matters are more difficult if a company must charge at least some patient-customers a high price (to recoup fixed costs and to provide a market-rate profit) and if it cannot price-discriminate effectively. In this scenario, there will inevitably be some patient-customers who cannot pay for the drug without financial ruin (e.g. selling their homes or going deep into debt, with the consequence that they have little if any opportunity to spend discretionary money).

[20] Some financial assistance programs are arguably deceptive public relations schemes. The paperwork burdens they impose on both patients and pharmacists greatly reduce the number of patients who successfully apply (Parker-Lue, Santoro, & Koski 2015, p. 195).

There may be patients who cannot get the drug at all. What is ethically required of a company that cannot make medically necessary drugs affordable to *all* patients who need them? That the company cannot provide a drug to everyone at an affordable price does not entail that it has no ethical obligations with respect to pricing. Its pricing policies could affect whether more or fewer people are able to afford a drug. A drug company could respond to this fact in two ways. First, it could price the drug so as to make the drug as widely available as possible; that is, it could minimize the number of people who can obtain the drug only at the cost of financial ruin or who cannot obtain the drug at all. The second possibility is to aim at maximizing aggregate patient welfare in the long term. This might involve pricing the drug so as to extract as much money as possible from patient-customers now in order to fund research on drugs that will save lives in the future.

The Kantian ethical framework implies that the second approach, maximizing aggregate patient welfare, is objectionable. It involves using the humanity of current patient-customers as mere means. The Formula of Humanity holds that one may completely or almost completely deprive someone of an all-purpose means (i.e. a resource usable for many possible purposes and necessary for effective agency) only if doing this would fulfill a moral duty that is both strong and determinate. There is a duty of beneficence to help other people in need. This duty, in addition to the profit motive, gives pharmaceutical companies a reason to invest in new drugs. But the duty of beneficence is not a determinate duty. On the Kantian framework, beneficence does not require any private person (whether an individual or a corporation) to maximize the number of lives saved by that person's actions. The duty of beneficence is imperfect; people have discretion about how to fulfill it. The duties regarding just price are more determinate. One

should not deliberately involve people in one's plans in a way that prevents them from exercising agency effectively. Thus, one must not exclude people from an intellectual or physical resource they truly need if one's motive is to maximize profit. If one cannot develop a resource (e.g. a patented medicine) and make it available to everyone, one may still develop the resource and charge a price some cannot afford. But one must set the price to maximize the availability of the resource to those who truly need it.[21] One should also avoid pricing strategies that cause patient-customers financial ruin (unless they choose not to become customers and thereby to suffer ill health). If there is no way to operate a business without putting some customers in a position that forces them to choose between ill health and financial ruin, and if shutting down the business would benefit no one, one may operate the business. One should minimize the number of customers who face this situation.

Kantian ethics gives pharmaceutical executives clear directives. If they can price a drug so that everyone who needs it can afford it, they should do so. They should clearly advertise any discounts for financially needy patients, and they should refrain from imposing undue administrative requirements for financial assistance. Sometimes, any possible pricing policy that made a medically necessary drug affordable to all patients would be incompatible with the company's continuing operation or with returning the market-rate profit that was required to raise capital for the introduction of a drug. Then pharmaceutical executives may institute a pricing policy that is not affordable to all patients, but they must minimize the number of patient-

[21] Do not read the word "maximize" and think, "This is consequentialism!" Non-consequentialist ethical theories can consider the consequences of actions and can even call for maximizing some good consequence in a specific context. What distinguishes consequentialism from non-consequentialist ethics is an *exclusive* focus on consequences.

customers who face a choice between financial ruin and ill health or who cannot get a necessary medicine at all.

Though the Kantian approach gives executives a clear ethical directive, it may often be difficult for third parties to assess whether pharmaceutical executives have fulfilled their ethical obligations with respect to pricing. Often, outsiders may not have the information necessary to judge whether a high drug price is necessary to recoup the costs of pharmaceutical research or to provide a risk-adjusted market rate return to investors who funded the research. Sometimes, however, it will be clear that executives are not merely providing a reasonable return to shareholders while ensuring the long-term viability of the firm and the long-term availability of the medicines it produces. The recent pharmaceutical pricing scandals in the United States became scandals because it was obvious that pharmaceutical executives were maximizing profits at patients' expense. Kantian ethics supports public outrage in cases like these.

IV. Non-domination and the regulation of drug pricing

I now turn to the separate question whether regulation of pharmaceutical prices is justified. The Kantian analysis suggests that it is often impossible for outsiders to a pharmaceutical company (including regulators) to assess whether executives are setting prices ethically. Only in the most egregious cases will it be clear to third parties that executives are pursuing an unethical profit-maximization strategy. This argument suggests that government should not attempt to enforce all the ethical requirements relevant to drug prices. There is nonetheless an ethical consideration that speaks in favor of some form of government involvement in the pharmaceutical industry. The debate about regulating pharmaceutical prices has focused on the consequences of regulation for human health: what policy best enables people to get the medicine they need now while ensuring

that beneficial new drugs continue to be developed and made available? There is a non-welfarist consideration that the debate has neglected. That is the value of non-domination.

The value of non-domination plays a central role in two major schools of political philosophy, civic republicanism and Kantianism.[22] One person dominates another if the latter's ability to exercise agency effectively depends on the former's legally and socially discretionary good will. Likewise, a person is dominated by a group of people if that person's ability to exercise agency effectively depends on members of the group showing good will (individually or collectively). Domination is a political or social relationship. It does not always involve ill will or wrongdoing by individuals in dominant roles. For example, if a society has no laws against domestic violence, and if there is no other social recognition of the (universally valid) moral prohibition on domestic violence, the physically stronger members of a household will *thereby* dominate the physically weaker members of the household. Physically weaker people's bodily integrity—an important aspect of effective agency—will depend on whether physically stronger members of the household choose to refrain from violence. Physically weaker people will be vulnerable to violence whether or not they become victims of violence. It is the vulnerability to violence, here, that constitutes the relationship of domination.

Domination can also take an economic form. The ability to exercise agency effectively requires resources to meet one's basic needs (e.g. food and shelter or money with which to buy these things). In a society with wealth inequalities and no public support for those who cannot support themselves through work, the indigent are dominated by the better-off. Their ability to

[22] For a contemporary defense of the civic republican view, see Pettit (1997). For a contemporary explanation and defense of Kantian political philosophy, see Ripstein (2009).

satisfy their basic needs, and thus to go on exercising effective agency, legally depends on whether better-off people offer them legally discretionary help (Gilabert 2010; Ripstein 2009; Weinrib 2003). The domination of the poor by the better-off is a failure of the legal system, not an ethical failure of any individual member of society. Better-off people dominate the poor whether or not they choose to offer help. The social and legal relationship of domination creates opportunities for ethically wrongful behavior that would not otherwise be possible. For example, the domination of the poor by the better-off creates opportunities for wrongful exploitation (e.g. exploitative labor contracts) that would not be possible if the legal system prevented people from becoming poor involuntarily.

Kantian and civic republican political philosophers have argued that the state has a duty to protect its citizens from domination. I agree with this principle, but here, I rely on a more modest claim: government should not *itself*, through its laws or regulations, make some citizens subject to other citizens' discretionary good will. What justifies this principle (if it is not intuitively appealing enough)? Here is the briefest sketch of an argument for it. A law is a good law only if it would be fair to demand that people obey it. It is fair to demand that people obey a law only if people could make a morally valid promise to do what it says. But one cannot make a morally valid promise to constrain one's behavior in a way that will effectively give others discretionary control over one's ability to exercise agency effectively.[23]

[23] Indeed, one cannot make such a promise even if doing so would be to one's material advantage. If desert rescuers were to demand that rescued people promise to become indentured servants in exchange for being rescued, these promises would be morally invalid. The non-domination principle does not derive its force from the likelihood that non-domination will improve people's welfare.

When a drug company has a monopoly because of a patent, it is the law that prevents citizens from acquiring the drug more cheaply from another source. One might argue to the contrary that patent law protects a natural right for inventors to have the opportunity to benefit financially from their work. Even if there is a natural right to be able to benefit financially from one's intellectual work, it is far from clear that this right must be realized via a temporary monopoly (Shiffrin 2007). It is very implausible to think that inventors have a natural right to benefit from their work on the particular terms that patent law currently gives them. The duration of patents is a social decision that does not track a universal, rationally mandatory moral norm. Though government may have good reasons for imposing the restrictions on people's freedom that patent law imposes, government is undeniably the agent of these restrictions. Likewise, when a drug company has a monopoly because of legal barriers to entry into the market (e.g. because the introduction of a generic requires costly regulatory approval), it is government that prevents citizens from making the drug more cheaply or from buying the drug more cheaply from another source.

Now, if the monopoly producer of a life-saving drug has the power to set the price, and if there is no public guarantee that everyone who needs the drug will get it, then the firm and executives can make discretionary life-and-death decisions for others. By raising the price of a drug that people need to live, the manufacturer can price less well-off people out of a drug they need to live. The firm and its decision-making executives thereby dominate those who need the drug and who may not be able to pay for it if the price changes. The non-domination principle prohibits government from imposing legal restrictions on people's conduct that enable private citizens to dominate others. So if government establishes drug monopolies, either through patent

law or by introducing other legal barriers to entry, government must ensure that patients' lives and health do not depend on discretionary pricing choices by pharmaceutical executives. In other words, government should prevent pharmaceutical executives from facing the ethical question the earlier sections of this article raised.

There are two ways in which government could establish drug monopolies without thereby making some citizens' lives or health subject to the discretionary pricing decisions of pharmaceutical executives. One way is to subsidize the purchase of expensive, life-saving drugs for those who could not otherwise afford them. The other is to regulate pharmaceutical pricing. The non-domination principle does not say which of these two policy choices is preferable. To answer the question which policy would be the better way of preventing pharmaceutical firms and their agents from dominating other citizens, we would need a measure of public well-being, which neither republican theory nor Kantian theory aims to give us. We would also need results from economics.[24] If government gives pharmaceutical companies monopoly power, it must limit these companies' ability to impose large price increases on patients.

V. Conclusion

A Kantian analysis of the ethics of pharmaceutical pricing supports the popular judgment that the most aggressive pricing practices in this industry are objectionable. It is not wrong for a

[24] A relevant consideration is that both regulation of pharmaceutical pricing and government funding of drug purchases can have unintended consequences. As an example of the former, price ceilings on cancer drugs have prevented some FDA-approved drugs from being marketed in some European countries, possibly resulting in lower survival rates from some cancers. As an example of the latter, the US Medicare and Medicaid policy of reimbursing the cost of a drug plus 6% for practice expenses has given medical practices an incentive to use costlier brand-name drugs instead of generics (Parker-Lue, Santoro, & Koski 2015).

pharmaceutical company to set a pricing policy that enables it to recoup the costs of research and to provide a reasonable rate of return to investors—i.e., the rate investors could have gotten from other ethically permissible, comparably risky investments. But it is wrong for pharmaceutical companies to use their market power to increase profits beyond this point. It is wrong even if the motive for doing so is to fund future research. This ethical analysis of pharmaceutical pricing suggests that government should not attempt to enforce all the relevant ethical demands. It is nonetheless important to have some public involvement in the pharmaceutical industry to prevent pharmaceutical executives' control over prices from creating relationships of domination. This government involvement could take the form either of regulation or of public subsidy.[25]

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