

Public Health, Public Goods, and Market Failure

Forthcoming in *Public Health Ethics*

Penultimate draft; please cite only the published version.

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Introduction

Jonny Anomaly has proposed that public health interventions should be limited to those interventions that promote health-related public goods in the economist's sense (Anomaly, 2011: 251). To the economist, a public good is not simply a good provided by or for the public. Rather, a public good is a good that is both non-rival (meaning that one person's enjoyment of the good does not preclude another's) and non-excludable (meaning that, once provided, no one can be prevented from enjoying it). I will refer to goods with both of these properties as *pure* public goods (Dees, 2018: 20).

For Anomaly, limiting public health to the provision of health-related public goods would have the advantage of banishing many controversial issues from the domain of public health (Anomaly, 2011: 252-253); unfortunately, doing so would banish a great many non-controversial issues as well. Richard Dees has recently pointed out that classic public health measures like sanitation, clean water, and anti-smoking campaigns, are not pure public goods, yet to his mind such things clearly fall within the domain of public health (Dees, 2018: 22-24). Dees concludes that we cannot sidestep difficult normative problems by offloading them onto economists; we must engage these problems through the democratic process (Dees, 2018: 24-25).

Dees is surely correct in his broader conclusion that controversy is ineliminable from political debate, but his paper also severely underestimates the potential scope and bite of a public goods approach to public health. (To be fair, in this he merely follows Anomaly.) What is significant about pure public goods is that the market often fails to supply them efficiently; indeed, with some such goods, the market failure can be so severe that it is possible to achieve a more efficient outcome through state intervention. But pure public goods are only one class of goods that the market may fail to supply efficiently. This points to a way of broadening the public goods account to cover Dees' counter-examples, without abandoning what is distinctive and appealing about the view.

My aim in this short discussion is to outline a market failures approach to public health ethics. This approach extends Joseph Heath's market failures theory of the welfare state to public health (Heath, 2011). On this view, the role of public health is not only to supply health-related pure public goods, but more broadly to correct public health-related market failures of all kinds, so far as this is possible. The underlying moral commitment is to economic efficiency in the sense of Pareto: if we can re-arrange the allocation of goods and services in the economy to raise the welfare of some without lowering the welfare of any other, we ought to do it. As I will show, this account builds on what is appealing about Anomaly's account while avoiding some of the limitations of his view.

Pure Public Goods

It is helpful to begin with Anomaly's proposal to limit the scope of public health to the provision of health-related public goods (Anomaly, 2011: 251).¹ Many of the classic concerns of public health are pure public goods, including for example clean air or herd immunity against infectious disease. With herd immunity, if sufficiently many people in a given community are vaccinated against some infectious disease, then everyone in that community will enjoy the benefits of herd immunity. One person's enjoyment of the good does not compete with anyone else's (it is non-rival), and no one within the community can be easily prevented from enjoying the good (it is non-excludable) (Dees, 2018: 21).

¹ Two brief qualifications of Anomaly's view are necessary. First, what matters on Anomaly's view is not that a good is *fully* non-rival and non-excludable (as hardly anything is); rather, on his view, a good must be *relatively* non-rival and non-excludable (Anomaly, 2011: 255-6). Second, Anomaly's view is that public health should be limited to the provision of health-related public goods "for which there is significant demand, or *would be* significant demand if potential consumers of the good had accurate information about the likely costs and benefits (both moral and monetary) of providing the relevant public good" (Anomaly, 2011: 256). This second qualification is necessary because something could be relatively non-rival and non-excludable without being particularly valuable.

Pure public goods like these will not normally be provided in efficient quantities by the market. The reason is primarily that such goods are non-excludable (Anomaly, 2015: 109-110). A purely self-interested agent has little incentive to contribute to herd immunity voluntarily, even if she very much wants to enjoy such protection; this is because she can count instead on free-riding on the contributions of others. Moreover, even those who are disposed to contribute may reasonably demand some assurance that others will contribute as well, lest their efforts be wasted or they be taken advantage of by free-riders (Anomaly, 2015: 109-110). In principle, the coercive apparatus of the state can solve this problem rather handily, simply by making contribution mandatory in one way or another. In this way, the state facilitates the provision of a good that everyone would like to enjoy but that no one has adequate individual incentive to supply.

As Anomaly points out, this justification for public health interventions has a number of intuitive advantages. It is non-paternalistic, and it can be formulated in a way that is neutral with respect to citizens' particular conceptions of the good; moreover, it draws a clear line between interventions for the sake of public health and those for the sake of individual health (Anomaly, 2015: 252-255). However, it is important not to mistake these advantages of the justification for the justification itself. On the account just sketched, if there is a reason for state intervention to supply health-related pure public goods like herd immunity, it is simply that people *want to enjoy them* and yet the market *fails to supply them efficiently*. When the state can achieve a more efficient outcome administratively, it ought to do so; it ought to correct the market failure.

Market Failure and Efficiency

According to the principle of Pareto efficiency, the move from one social state to another constitutes an improvement if it makes at least one person better off while making no one else worse off (Gibbard, 1984: 262; Heath, 2011: 24). We should not infer from the fact that this principle is so thoroughly uncontroversial that it is therefore normatively insignificant. Inefficient arrangements are those where one person is worse off in a way that is not necessary to deliver any benefit to anyone else. Following Heath, we might therefore say that inefficient arrangements involve gratuitous suffering, and the Pareto principle enjoins that we eliminate gratuitous suffering (Heath, 2011: 24).

From this point of view, what is morally important about the market is that it tends to produce Pareto-improvements (Anomaly, 2015: 109). In fact, we know that when certain conditions are satisfied, market outcomes will be not just Pareto-*improving* but Pareto-*optimal*, meaning that it will not be *possible* to

make any one person better off without making anyone else worse off (Mas-Colell et al., 1995: 549). Among the conditions of Pareto-optimality, the most notable are that property rights must be complete, everyone must have full information, and markets must be competitive.

When these conditions are not satisfied – and in the real world, they are never satisfied – markets will fail to produce the optimal outcome. Significantly, in some cases, the market can fall so far short of optimality – it can fail so egregiously – that it will be possible to achieve a more efficient outcome by directing production in a hierarchical fashion. This is what happens, for example, within a corporation (Coase, 1937). Being voluntary associations, however, there are some serious market failures that corporations, too, will be unable to resolve. From this point of view, the significance of the state is that it is able to force people to do things, and thus it is able to address some of the more intractable sources of market failure (Heath, 2011: 25-26). The state can sometimes realize certain efficiencies that are unavailable through voluntary contracting (Anomaly, 2015: 120).²

This is what happens in the case of certain pure public goods. There, due to the absence of effective property rights (i.e. due to the fact that pure public goods are non-excludable), one of the conditions of market efficiency is not met. For that reason, the market may leave very large efficiency gains on the table, so to speak; goods that people want and would be happy to pay for go unsupplied or under-supplied. Sometimes, the state can improve everyone's situation simply by compelling contribution, thereby bringing about a more efficient outcome.

Dees is correct in his contention that an approach to public health limited to the provision of pure public goods would be unacceptably narrow (Dees, 2018: 22). Hardly anything is fully non-rival and non-excludable, and many of the most important goods of public health are not non-rival or non-excludable at all. However, these considerations do not impugn a broader market failures approach to public health ethics, as I will now show.

² To be clear, it does not follow from the mere fact that the market fails to produce a Pareto-optimal outcome that the state can thereby improve on the market outcome (or if it does follow, it follows only under highly idealized circumstances). Sometimes the government cure can be worse than the market disease. There is a growing literature on the topic of "government failure," exploring when and why state intervention may fail to correct market failure or even make such failure worse. See for example Keech and Munger (2015). According to the market failures view, the state should intervene only when the market fails so severely that intervention will in fact bring about a more efficient outcome.

Natural Monopolies

Many publicly-provided goods fall into the category of so-called “natural monopolies.” Typically, natural monopolies are found in capital-intensive industries with high fixed costs and low marginal costs. In these industries, it is often inefficient to have more than one supplier. Yet when these industries exist as monopolies, then another of the necessary conditions of market efficiency – viz., that markets are competitive – breaks down. This means there is the potential for the state to intervene to correct market failure by controlling these natural monopolies (Heath, 2011: 26).

Two of Dees’ counterexamples to Anomaly’s public goods account are clean water and proper disposal of sewage, and both plainly fall into this category; so does his non-health example, roads (Dees, 2018: 22-23). None of these is a pure public good, of course; it is quite possible to exclude people from access to any of them. From a market failures point of view, what is significant about these goods is just how wasteful it would be to organize a competitive market for them – think of the costs associated with running redundant water or sewer connections to every building in the community, or redundant roads to every conceivable destination. It is typically more efficient to have only one provider, and then use political mechanisms to limit the evils associated with monopoly power.

The most obvious evil of monopoly power is that, due to the absence of alternative providers, the monopolist is typically in a position to extract large economic rents. This is why the state typically controls the prices that providers of water, sanitation, or private toll roads may charge (Epstein, 2004: 1438). But the monopolist does not have to compete on quality any more than she has to compete on price, so there is also a legitimate worry related to public health as to whether monopoly-provided water will be sufficiently pure or whether monopoly-disposed-of sewage will be properly treated. This provides a strong efficiency-related rationale for mandating quality standards in these areas, in the name of public health.

Control of Externalities

There are many goods that are not purely *public* in the sense of being both non-rival and non-excludable, but that still have significant spillover effects to others. Economists call these spillover effects “externalities,” meaning costs or benefits to third parties that are not reflected in the price of the good. This again undermines the requirement for market efficiency that property rights be complete. As a consequence, when positive externalities are present, the market outcome will be such that the good is inefficiently under-consumed; when negative externalities exist, the market outcome will involve

inefficient over-consumption. Many important state activities involve subsidizing goods with significant positive externalities (like education or public transit), and discouraging or prohibiting goods with significant negative externalities (like pollution or alcohol abuse), in the name of correcting market failure (Heath, 2011: 26).

Dees' remaining counter-example to Anomaly is an anti-smoking campaign (Dees, 2018: 23-24). If there is a market failures rationale for such a campaign, It would fall under this heading of controlling externalities. One estimate from 2004 of the external costs of smoking – i.e. the costs of smoking borne not by the smoker herself but by others – put these costs at \$20,000 and \$35,000 USD over the lifetime of a 24-year old female or male smoker, respectively (Sloan et al., 2004: 22). (Of course, the external costs of smoking pale in comparison to the internal costs, the costs to the smoker herself; the same study put these as high as \$183,000 over the life of a male 24-year old smoker [Sloan et al., 2004: 22].) If these estimates are accurate, then there is a potential efficiency rationale for preventing them, or at least shifting them back to the smoker herself.³

Based on the cost estimates of Sloan et al., educational campaigns to prevent smoking appear to be extraordinarily cost-effective. Even considering only the external costs of smoking, MacMonegle et al. estimate that one anti-smoking campaign produced a return of over \$20 for every dollar spent (2018: 323). Moreover, if these estimates are correct, then taxes on cigarettes seem like a classic example of a Pigouvian tax, a tax meant to internalize an unpriced externality; if people are to smoke, efficiency demands that they should bear the costs that their activities impose upon others. Thus, while Dees is correct that anti-smoking measures may not provide a pure public good, they may well correct a serious market failure.

Normative Public Goods

It is worth saying something about Dees' own proposal. In light of the overly narrow scope of Anomaly's pure public goods account, Dees proposes that public health ethics should be concerned instead with the provision of *normative* public goods. In other words, Dees proposes that the scope of public health should be co-extensive with those goods that *should be* both non-rival and non-excludable, whether or

³ Of course, Sloan et al. (2004) represents only one study, and the question of how to measure the external costs of smoking is itself highly contentious. I do not mean to settle the question here of whether smoking generates externalities, nor the question of whether such externalities can efficiently be controlled by the state – that is far beyond the scope of this short discussion. I am here offering simply an illustration of the *kind of argument* that a market failures view of public health could put forward for an anti-smoking campaign such as this.

not they presently *are* (Dees, 2018: 23).⁴ The idea is that there are certain health-related goods that no member of the community should have to worry about being excluded from, or have to worry about competing with others to enjoy, and these goods are the basic stuff of public health.

While I do not disagree with the sentiment that there are certain health-related goods no one should be excluded from, I think it is worthwhile to separate the question of what health-related goods *everyone should have* from the question of what health-related goods *the state should provide*. To my mind, a theory of public health should be concerned in the first instance with the latter question, not the former. That is, to my mind, a theory of public health owes an account of the role and limits of the state in promoting public health, and not merely a laundry list of those health-related goods we think it important for all to enjoy. From this point of view, the market failures approach is superior to Dees' normative public goods account.⁵

To see what I mean, consider healthy, nutritious food. It seems to fit Dees' account of a normative public good: no one should be excluded from access to such food, nor should any person's enjoyment of such food preclude any other's. I would heartily endorse the conclusion that everyone should have access to healthy, nutritious food. But this conclusion tells us nothing about the proper role of public health officials in ensuring that citizens can access such food. Does the normative public goods account imply that we should be mandating the kinds of food citizens can buy? Or perhaps that we should be delivering healthy food directly to citizens? Or perhaps that the state should simply nationalize the entire food industry? The normative public goods view provides no clear answer that I can see.

The market failures account, by contrast, fares better. That is because it is an account of what the state should and should not be doing, rather than simply an account of what goods everyone should have. To the extent that there is market failure in the food sector, the market failures account of public health sees good reason for state involvement in order to correct that failure. This may include things like educating people about proper nutrition, laying down effective food safety standards, or setting

⁴ There are two other requirements as well, on Dees' view, for a good to qualify as a normative public good, but these are less relevant for my purposes. These are as follows: (1) the good must either require collective effort to provide or else benefit a large number of people, and (2) the good must be sufficiently important to justify the collective effort (Dees, 2018: 23).

⁵ In private correspondence, Professor Dees states that he is in fact interested in the former question rather than the latter – that is, his question is indeed what health-related goods *everyone should have*, not what health-related goods the *state should provide*. Thus perhaps my objections in this section do not touch his view. That said, I would submit that his view is incomplete without an answer to the question of the role and limits of the state in promoting public health.

minimum standards around labeling and truth in advertising; all are potential sources of market failure, and at the same time, all are the bread-and-butter stuff of public health. But when it comes to the actual production and distribution of food, plausibly we should take advantage of the superior efficiency of the market and leave that to the private sector – not because people are not owed access healthy food, but because such food is more efficiently provided by the market than by the state.

Conclusion

My aim in this discussion has been to liberate the public goods account of public health ethics from its arbitrarily narrow focus on pure public goods. The market failures approach to public health ethics inherits many of the advantages of Anomaly's public goods account, while avoiding many of its limitations. On this view, the role of public health is to correct public health-related market failures where possible, not merely to provide health-related pure public goods.

One final point is worth making in closing. Anomaly notes that, on his public goods account, interventions to ameliorate the social determinants of health fall clearly outside the scope of public health (Anomaly, 2011: 256-258). This is not necessarily so on a market failures account, at least not in every case. To the extent that things like education, employment status, working conditions, and social exclusion have unpriced costs and benefits for others – i.e. to the extent that they create positive or negative externalities – there is no reason to assume that the market allocation of these goods must be economically efficient. Indeed, as we have already seen, there may be a solid efficiency-based rationale for subsidizing education, including as it pertains to health, and there may be good reasons to tinker with other of the social determinants of health as well. It is arbitrary to exclude concern for the social determinants of health from public health simply because those determinants do not count as public goods.

Acknowledgements

The author wishes to thank both Professor Anomaly and Professor Dees for their many helpful comments on earlier versions of this paper.

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