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EXTERNALITIES ARE NOT ILLUSORY

Gregory M. Stein*

Professor Stefan Padfield's article, "Totalitarian Nudges, Illusory Externalities, and Utopian Benefits: Reflections on the 34th Economics Institute for Law Professors,"¹ is both interesting and thought-provoking. The article carefully describes several of the topics addressed at the 34th Economics Institute for Law Professors, in which he participated. This response will address one of the subjects Professor Padfield discusses, namely the question of whether externalities are illusory.

Externalities are the outside effects of an activity that others are forced to bear, often unwillingly. A good example might be pollution: A manufacturing company must pay for its land, its building, its raw materials, its workers, its electricity, and its water, but it may not have to pay for the costs of the pollution it emits. That is an external cost borne by others, such as neighbors who are breathing more polluted air or drinking tainted water. In effect, the polluter is taking someone else's property – here, an easement – without permission or payment.

If an economic actor does not have to pay for the full costs of its externalities, then it will engage in more of that activity, which the polluter's neighbors are unwillingly subsidizing. If the water were free, the manufacturer would gravitate to a production process that uses more water and conserves other, more costly resources. Here, instead, it will pollute more because there is no financial downside. Moreover, it will likely produce more of the good than its true cost warrants, since it is producing the good for less than its true cost. If the manufacturer had to pay for smokestack scrubbers or a pollution easement over its neighbor's property, the price of the product would increase and demand would decrease correspondingly. So the manufacturer overuses the free resource and overproduces the product, consumers purchase more of this unwillingly subsidized good, and the neighbors suffer by enduring pollution without

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¹ Stefan J. Padfield, *Totalitarian Nudges, Illusory Externalities, and Utopian Benefits: Reflections on the 34th Economics Institute for Law Professors*, 21 TENN. J. BUS. L. 269 (2020).

receiving compensation for their forced relinquishment of a pollution easement.

Economists argue that those who create externalities should be forced to internalize those costs. Once the formerly free input is priced appropriately, economic actors will no longer have unwarranted incentives to create external effects, because they now must pay for them. This is similar to the way the emitter would act if it actually owned the neighboring land, since it would now bear the cost of its own pollution. In fact, the ancient doctrine of waste seeks to treat the owner of just part of a larger parcel as though it were the sole owner of the entire parcel, in an effort to simulate how that owner would behave if it truly were the only owner.² If the product is still cost-effective even after forcing the manufacturer to pay for its negative external effects, the manufacturer will continue to produce the product at its now higher cost. If the product is no longer cost-effective, the manufacturer will recognize that production is not cost-efficient and will cease manufacturing it.³

There are several ways in which a government body – most likely the federal government in air pollution cases – can facilitate the internalizing of externalities. The government might prohibit the pollution altogether. This would force the manufacturer either to develop a pollution-free production method, to find a way to capture or cleanse the pollution it emits, or to stop manufacturing. The benefit of this approach is that it ends the externality, thereby eliminating a trespass or a nuisance while maintaining the cleanliness of the air that the neighbors breathe. The drawback to an outright ban is that it might work too well, by preventing the manufacture of a product that still could be produced efficiently. If the benefit of the manufactured item exceeds the cost of the pollution externality, the producer would be able to turn a profit even after paying the neighbors for the cost of the externality. The producer profits at a

² “A life tenant will have an incentive to maximize not the value of the property . . . but only the present value of the earnings stream obtainable during his expected lifetime. . . . The law of waste forbids this.” RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* § 3.11, at 92 (8th ed. 2011).

³ Such a product never should have been manufactured. The only reason it was is that the manufacturer was able to offload some of its manufacturing costs onto unwilling neighbors, thereby making production profitable to itself and burdensome to its neighbors.

reduced level while the neighbor is made whole. But a pollution ban eliminates this type of privately negotiated solution.⁴

Thus, the government must weigh the costs of an outright ban against the benefits. Prohibitions, as just noted, are economically inefficient in cases in which the economic benefit of the product exceeds the pollution damage. A rational government might prohibit the production of explosives in a residential neighborhood but not the manufacture of an essential antibiotic even if that process creates extremely dangerous byproducts. A product more mundane than dynamite or Cipro may be a desirable product that should be economically viable because its overall value exceeds its overall costs. But under a total prohibition, the product is banned because the manufacturer imposes an unavoidable, and proscribed, external effect on its neighbors. The government has simply decided to prohibit such activity, just as it forbids certain criminal activities.

A more flexible approach might be to tax the pollution. Now, instead of an outright ban, the government imposes an additional cost on the polluter. The manufacturer can still pollute, but it must pay the government for the privilege. It now has one more cost of doing business, just as it would if forced to purchase an easement from the neighbors, and it can decide for itself whether it is still worthwhile to proceed. This approach encourages manufacturers to engage in research and development and rewards cleaner companies. It also has the benefit of favoring the most efficient businesses – those that can produce the product with less of the harmful side effect – since they will pay a lower tax and produce at a lower price.⁵

Setting the level of the tax can be a challenge, of course: Ideally, it will reflect the actual cost of the pollution to those who suffer from it. If the good is economically warranted – that is, if its overall benefit exceeds its true costs – an appropriate tax will replicate the impact of a required

⁴ An outright ban will prevent production if it is technologically impossible to prevent or cleanse the pollution, or perhaps even if it is just extremely costly. If production of the good would still be efficient — if the manufacturer could pay the neighbors and still turn a profit — the good most likely would be produced in the absence of a prohibition. But the total ban precludes this alternative. All of this discussion assumes that the manufacturer and its neighbors have full information, are rational enough to reach an agreement by which the neighbors would be willing to sell a pollution easement to the producer, and do not have to worry about holdouts.

⁵ This assumes that the cost of attaining efficiency is lower than the cost of paying the tax. If it is higher, the producer will continue polluting and will pay the tax. Such behavior may, in turn, induce the government to increase the tax.

purchase of a pollution easement. And to be precise, such a levy is not a tax, but rather is a user fee. The government charges the polluter for its use of public air that it never had a legal entitlement to pollute. Moreover, to be entirely fair to the victims of this pollution, the government should use the tax proceeds to compensate these victims for the property rights they have been forced to relinquish. In this way, the neighbor that suffers the pollution should end up no worse off economically, though it cannot prevent the pollution from occurring.⁶ The neighbor's legal right to pollution-free air is legally protected, but by a liability rule rather than a property rule.⁷

A third option is a cap-and-trade system. Under such a system, the government determines just how much pollution the environment can bear and then imposes a pollution quota that ensures that manufacturers do not collectively emit more than this maximum safe level. This approach is really just a softer version of an outright ban, in that it imposes that ban once the total pollution output reaches the allowable maximum. If the government wants to reduce or eliminate the amount of pollution over time, it can gradually reduce the quota.

The initial pollution allowances must be allocated to existing companies, perhaps on a basis that reflects previous levels of production or pollution. In the alternative, these allowances can be auctioned on the open market, bringing revenue to the government. The "trade" portion of "cap-and-trade" allows polluters to buy and sell their quota. Companies that pollute less can recoup some of the costs of reducing their emissions by selling their unused quota, while less efficient manufacturers must incur the cost of purchasing additional quota from their competitors. If the government reduces the quota over time, the price of the tradable pollution permits will inch up, thereby providing a continuing, and gradually escalating, incentive to polluters to find alternatives to purchasing more quota. As permits become more expensive, polluters will have greater reason to invest in pollution-control processes, which will become more and more cost-effective over time.

A fourth variation – already noted in passing in connection with the discussion of the first option, above – is to assign the property right directly to the party forced to endure the externality. This alternative forces

⁶ See Gregory M. Stein, *Reverse Exactions*, 26 WM. & MARY BILL RTS. J. 1, 31–45 (2017).

⁷ See Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1106–10 (1972) (distinguishing between property rules and liability rules).

the polluter either to cease generating the externality or to buy the right to pollute from the holder of the property right. The victim of the pollution enjoys a property right, and courts will enforce this right with a property rule: Violators will be enjoined.⁸ Any polluter that wishes to continue will be forced to purchase a pollution easement from the victim of the pollution, and that victim, rather than a jury, will set the price.⁹ In other words, the polluting activity is still banned, as in the first option above, but unlike in the first option, the parties are allowed to negotiate their way around this limitation.

For some externalities, enforcement by injunction followed by negotiation among the parties is a practical alternative, especially in cases in which the number of parties involved is small and they act reasonably and with full information. Conversely, in pollution cases, the large number of potential plaintiffs might lead to collective action problems. If only one of the victims refuses to transfer its property right to the polluter, then the polluter cannot proceed even if all the other neighbors agree to convey an easement. And where large groups of neighbors are involved, as in the typical pollution case, holdouts are more likely.

In these last settings, the activity must cease unless courts protect the property right with only a liability rule. Now the activity may continue, but only if the polluter pays jury-established damages to the victim.¹⁰ Since a jury, rather than the victims of the pollution, decides whether the polluter may proceed, the holdout problem disappears. The jury allows the polluter to proceed if the polluter is willing to pay a price that the same jury establishes.

There are other possible ways of addressing the externality problem. A legislature or a court may step in and reallocate existing property rights. For example, either of these authorities might redefine trespass or nuisance law to permit an increased level of pollution, at the risk of

⁸ “[I]f we consider that ‘externalities’ are simply a manifestation of a failure to assign property rights, then, when feasible and under certain conditions, assigning property rights would allow for efficient trading.” Padfield, *supra* note 1, at 269, 280 (footnote omitted).

⁹ See Calabresi & Melamed, *supra* note 7, at 1092.

¹⁰ For an illustration of this approach adopted by the New York Court of Appeals, see *Boomer v. Atlantic Cement Co.*, 257 N.E.2d 870, 873 (N.Y. 1970) (“[T]o grant the injunction unless defendant pays plaintiffs such permanent damages as may be fixed by the court seems to do justice between the contending parties. All of the attributions of economic loss to the properties on which plaintiffs’ complaints are based will have been redressed.”).

spawning regulatory takings claims.¹¹ Or a court may replace an existing property rule with a liability rule.¹² This last option means that a jury, rather than the polluter's neighbors, decides whether the infringement may continue, and also establishes a price for the right to proceed.

What all of these possible solutions have in common is that they seek to internalize the externality that the manufacturer previously caused, or to prevent it from occurring in the first place. Instead of being permitted to harm its neighbors without cost, the manufacturer is either barred from polluting or charged for the right to do so. To fully internalize these externalities, any financial benefit received from the polluter, such as fees for pollution permits, should either be used by the government to alleviate the damage the polluter caused or distributed to the neighbors who suffer, in lieu of damages.¹³

The proceeds might, for instance, be used to pay for medical bills, property damage, or depreciation in property value caused by the pollution. In this way, the polluter is forced to pay for the pollution, and the polluter's victim receives compensation for its losses or those losses are mitigated. If the victim's property right is protected by a property rule, the victim has the ability to have the offending act enjoined, which forces the polluter to deal directly with its victim on the victim's terms. If the property right is protected only by a liability rule, the polluter may proceed by paying a cost set by a court.¹⁴

The internalizing of externalities illustrates a setting in which economic analysis provides useful techniques for solving important societal problems. Nearly everyone recognizes the hazards of polluting the air, but we also know that the manufacture of some desirable or essential products inevitably creates pollution. In seeking to balance the harms of this pollution against the benefits these manufactured products bring,

¹¹ See, e.g., *Bormann v. Bd. of Supervisors*, 584 N.W.2d 309, 319–20 (Iowa 1998) (holding that “the state cannot regulate property so as to insulate the users from potential private nuisance claims without providing just compensation to persons injured by the nuisance.”).

¹² This is what the *Boomer* dissent argued that the court's majority was doing. *Boomer*, 257 N.E.2d at 875 (Jasen, J., dissenting) (“I do not subscribe to the newly enunciated doctrine of assessment of permanent damages, in lieu of an injunction, where substantial property rights have been impaired by the creation of a nuisance.”).

¹³ See Stein, *supra* note 6, at 31–45. The neighbors might also be able to bring a tort claim for personal injury or nuisance. Such claims are often costly to bring, difficult to prove, and uncertain in outcome as to both liability and remedy.

¹⁴ *Boomer*, 257 N.E.2d at 873; see also Calabresi & Melamed, *supra* note 7, at 1092.

legislatures and administrative agencies can make good use of economic principles to achieve creative solutions. There will be legitimate political disagreements over what level of pollution is wise, how much manufacturing is desirable, and how to price pollution permits properly. But the basic concept – that the polluter should pay for the air it is sullyng and that the victim of this pollution should receive some type of compensation for the harm it is forced to bear – seems hard to dispute and accords with centuries of property law.

This discussion illustrates one of the strengths of the law and economics movement. It demonstrates how in areas such as property law and tort law, which exhibit inherently economic features to begin with, the recent upsurge in economic analysis is not a huge departure from past judicial approaches. Property law developed as it did to protect entitlements, encourage investment, and safeguard personhood, and it established common-sense baseline default rules as a starting point for subsequent negotiations. Economic analysis is descriptive to the extent it accurately predicts and reflects common law rules that judges developed long ago, and it is normative when it argues in favor of internalizing externalities as a means of protecting existing property rights going forward.

Thus, in subject areas such as property law, economic analysis is more useful, and perhaps less controversial, than it is in other areas, such as anti-discrimination law or the law of adoption. Even those who oppose the economic approach to legal analysis may grudgingly put up with its use in subjects such as property law, in which economic principles already play such a large role. It is somewhat surprising, then, that advocates for the use of economic analysis in law would criticize efforts to internalize externalities.

Professor Padfield argues in his article – or perhaps he summarizes Professor Terry Anderson, who presented at the Institute, as arguing – that externalities are illusory, because the initial entitlement can be assigned to either party. Rather than assuming the neighbors have a tort or property right to be free of pollution, we could just as easily assume that the polluter has a tort or property right to pollute at its neighbors' expense.¹⁵

We could assume this alternative assignment of property rights. But such an assumption usually is not justified, because property law is old enough that it has already allocated most of the rights with which we are

¹⁵ Padfield, *supra* note 1, at 279–82.

concerned, even if they sometimes arise in new contexts.¹⁶ For instance, judges have long ruled in favor of neighbors of polluters on tort or property law grounds, holding the pollution to be a trespass or a nuisance.¹⁷ In property law terms, the neighbor already enjoys a property or tort law entitlement to be free from the off-site effects of the polluter's activities. We need not worry about whether the property right hypothetically might have been assigned to one party or the other, because the law has long ago decided who holds it.¹⁸

The argument that externalities are illusory would be stronger if the entitlement had not already been assigned to one party or the other. As a land use teacher, I regularly return to the common example of a dentist's office located adjacent to a dance studio. Does the dance studio enjoy an unfettered right to cause vibrations, or does the dentist enjoy a right to a vibration-free office? Either answer is reasonable. But once that property right has been assigned, as so many property rights already have, to argue that it could have been assigned differently is meaningless, and also makes the law and economics movement tautologically impossible to disprove.

We could just as easily say that failure to pay for the I-beams necessary to construct a factory is not conversion or theft because the law could have assigned the right to seize them without payment to the factory owner. Or we could just as easily say that a factory building that encroaches

¹⁶ For example, even though the common law may have established when a property owner has the right to be free of the shade from a neighbor's trees, only a modern court could re-examine this issue in the context of trees that block the first owner's passive solar collectors. *See, e.g.*, *Prah v. Maretti*, 321 N.W.2d 182, 189–90 (Wis. 1982).

¹⁷ *See, e.g.*, *Rose v. Chaikin*, 453 A.2d 1378, 1382 (N.J. Super. Ct. Ch. Div. 1982) (“Sounds which are natural to this area — the sea, the shore birds, the ocean breeze — are soothing and welcome. The noise of the [neighbor's] windmill, which would be unwelcome in most neighborhoods, is particularly alien here.”); *Bie v. Ingersoll*, 135 N.W.2d 250, 253 (Wis. 1965) (“The trial court abated the plant operation only to the extent that it constituted a nuisance. If the asphalt plant can be operated in a way that odors and dust are not present to such a degree as to constitute a nuisance, then the order does not prohibit the operation of the plant.”).

¹⁸ Professor Padfield quotes Professor Anderson in referring to this as a “missing market because property rights are not defined.” Padfield, *supra* note 1, at 281 (quoting TERRY L. ANDERSON & GARY D. LIBECAP, ENVIRONMENTAL MARKETS: A PROPERTY RIGHTS APPROACH 56 (Cambridge Univ. Press 2014)). But such property rights usually are defined, and have been so established for a prolonged period. When these rights have not been defined, then the occurrence of new disputes suggests that they need to be and soon will be. Once these rights are settled, then either this assignment has created an externality or it has not, and the parties can bargain from there.

on a neighbor's lot can remain there, because the law might have assigned property rights to the first party to improve land rather than to the record titleholder. The law certainly could have done these things. But it did not. And once these property rights are assigned, those who encroach on them can be enjoined or forced to pay damages. That is one of the primary reasons we have property laws in the first place.

In short, we might, following Coase, establish a property rule that allows trains to emit sparks even though those sparks cause fires that destroy the crops of the farmer whose land abuts the tracks. Or we can assign to farmers a property right to be free from fires caused by the sparks trains generate as they pass alongside farms.¹⁹ It is largely immaterial which rule we select, as long as we select one and stick to it. This predictability allows railroads and farmers to invest in their respective businesses and negotiate accordingly. We need railroads, we need farms, they create incompatible adjacencies, and we must adopt rules to regulate the inevitable conflicts.

Cases such as these demonstrate why property law, over time, has been forced to make many difficult choices. And once it does so, those who violate these rules are causing negative external effects that the law must find ways to abate or internalize. The law has established a rule (even though it might have adopted a different one), parties then act in reliance on that rule, and violators must either cease violating or pay compensation to those they have harmed. Assigning property rights is particularly important in cases involving widespread environmental harms, for those are the cases in which collective action problems make it unlikely that a market transaction will modify the initial assignment of rights.

Those who support economic analysis should be thankful that the law allows polluters to internalize the damage they cause, because permitting polluters the option to internalize is a superior option to an outright prohibition of the pollution. Offering an internalization option allows the emitter to choose. It can continue to pollute, if it is cost-effective to pay the price to internalize the externality and make the neighbor whole.²⁰ Or it can cease operating if the internalization price is too high, thereby

¹⁹ R.H. Coase, *The Problem of Social Cost*, 3 J. L. ECON. 1, 30–34 (1960) (discussing this issue using a farm analogy).

²⁰ One could argue that the neighbor should be made more than whole. All of the voluntary participants in this transaction are better off. The polluter presumably would not proceed if this were not the case, and the workers and suppliers the polluter retained are presumably turning a profit. See Stein, *supra* note 6, at 62–63.

making the externality disappear altogether. If the overall benefits of the polluting activity exceed the now-internalized costs, we have reached a utilitarian outcome that is both efficient and fair, and if they do not, an inefficient activity will have been avoided. If courts allow emitters to internalize, that leaves the decision with the polluter, which is certainly better than a court or legislature simply telling the polluter to cease operations. Once we have established a property rule, that rule necessarily tells us what property rights are, which uses are permitted as of right, and which uses cause externalities. The law of property is well established and has already allocated these rights, which means that externalities are not illusory.

Professor Padfield concludes by stating, “The theme I have focused on here is one of questioning widely held assumptions generally understood to support government intervention in markets. . . . While not decisive, the points raised in this Essay have the potential to add useful perspectives to the on-going debate about government regulation of markets.”²¹ I agree that it is valuable to question widely held assumptions, and I do not doubt that the Institute lessons Professor Padfield describes caused Institute participants to do just that. The examples he provides, however, seem to imply a concern that government interventions run the risk of being political, and that non-intervention is a more neutral approach. It is useful to remember, however, that non-intervention inspired by economic thought is also a choice, and very much a political choice. The Institute arguments that Professor Padfield describes might be more persuasive if they acknowledged that they, too, are political. Those who support these arguments could then argue that their political position is superior to the opposing political view, allowing listeners and readers to weigh both sides of this argument and decide for themselves.

²¹ Padfield, *supra* note 1, at 286.