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Reducing Inequality on the Cheap: When Legal Rule Design Should Incorporate Equity as Well as Efficiency

ABSTRACT. This Note develops a framework for understanding when policymakers should use equity-informed legal rules—rather than taxes—to redistribute. First, policymakers should choose the most efficient way to reduce income inequality, which may involve allocating legal entitlements to the poor, depending upon several factors described in the Note. Second, sometimes legal rules ought to account for non-income characteristics based upon which the tax system would be poorly equipped to redistribute.

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INTRODUCTION

At least since the majority in *Lochner v. New York*[1] found that bakers' hours could not be limited by the government, many scholars have argued that legal rules should not try to affect the distribution of income. What many consider the decisive argument in favor of this position is the idea of "double distortion" offered by Louis Kaplow and Steven Shavell: using legal rules to affect the distribution of income merely simulates income taxes, distorting income just like a tax but also distorting the behavior regulated by the legal rule.[2] As a result, they argue, *all* redistribution should take place through the income tax code, and none should take place through legal rules. The argument is especially sweeping given the scope of what a "legal rule" can be: regulations on bakers' hours, tort laws, methods of conducting cost-benefit analysis, or any "rules other than those that define the income tax and welfare system."[3]

Kaplow and Shavell's analysis supports what is perhaps the central tenet of law and economics, namely that legal rules should be designed based on their efficiency consequences.[4] That is, legal rules should lead to behavior that

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1. 198 U.S. 45 (1905); *see also* KATHLEEN SULLIVAN & GERALD GUNTHER, CONSTITUTIONAL LAW 385 (17th ed. 2010) (interpreting the case as concluding that redistribution was not a permissible goal).

2. Louis Kaplow & Steven Shavell, *Why the Legal System Is Less Efficient than the Income Tax in Redistributing Income*, 23 J. LEGAL STUD. 667 (1994); *see also* Steven Shavell, *A Note on Efficiency vs. Distributional Equity in Legal Rulemaking: Should Distributional Equity Matter Given Optimal Income Taxation?*, 71 AM. ECON. REV. (PAPERS & PROC.) 414 (1981); David Weisbach, *Should Legal Rules Be Used to Redistribute Income?*, 70 U. CHI. L. REV. 439 (2003). On the influence of this idea, see, for example, Ronen Avraham, David Fortus & Kyle Logue, *Revisiting the Roles of Legal Rules and Tax Rules in Income Redistribution: A Response to Kaplow & Shavell*, 89 IOWA L. REV. 1125, 1127 (2004) ("[I]n what has come to be considered a classic article, Louis Kaplow and Steven Shavell made what seemed to be a decisive argument regarding the use of redistributive legal rules."); and Tomer Blumkin & Yoram Margalioth, *On the Limits of Redistributive Taxation: Establishing a Case for Equity-Informed Legal Rules*, 25 VA. TAX REV. 1, 6 (2005) ("[Kaplow and Shavell's] argument is widely considered to be the decisive rationale against redistributive legal rules . . . .").

3. Kaplow & Shavell, *supra* note 2, at 667 n.1.

4. For commonly used textbooks taking this view, see, for example, RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 15-20 (8th ed. 2010); and STEVEN SHAVELL, FOUNDATIONS OF ECONOMIC ANALYSIS OF LAW 1 (2004). Note also that particular moral and political foundations have been offered for efficiency as a normative criterion. *See* Richard A. Posner, *The Ethical and Political Basis of the Efficiency Norm in Common Law Adjudication*, 8 HOFSTRA L. REV. 487 (1980); Richard A. Posner, *Utilitarianism, Economics, and Legal Theory*, 8 J. LEGAL STUD. 103 (1979). *But see* Jules L. Coleman, *Efficiency, Utility, and Wealth Maximization*, 8 HOFSTRA L. REV 509 (1980); Ronald M. Dworkin, *Is Wealth a Value?*, 9 J.

maximizes "wealth," the sum of individuals' willingness to pay for the externalities, goods, and services produced by an economy.[5] But traditionally, economists have sought policies that maximize not wealth but rather "social welfare," the sum of individuals' utility,[6] and utility often increases more when a resource is distributed to individuals, especially the poor, who are *not* the ones most willing to pay for it. In other words, equity, or distributing resources to individuals whose utility is most increased by receiving the resource, matters for utility too. In the classic trade-off between efficiency and equity in social welfare maximization, "distortions" to the wealth-maximizing outcome resulting from deviating from the "efficient" rule must be traded off against improvements in equity that result from the "distortion." Kaplow and Shavell's "double distortion" argument, however, eliminates this trade-off for legal rules. In their world, taxes should be the sole means of promoting equity.

Kaplow and Shavell's argument has been criticized from inside and outside of law and economics. In particular, Chris Sanchirico and others claim that equity should be taken into account when designing legal rules.[7] Kaplow and

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LEGAL STUD. 191 (1980) (questioning the moral and political foundations of the efficiency norm).

5. See RICHARD A. POSNER, THE ECONOMICS OF JUSTICE 60-96 (1983), for a helpful explanation and defense of this idea. Note that this notion of efficiency assumes that an individual's willingness to pay for items does not depend upon his income or the legal entitlements allocated to him.

6. See, for example, the long-standing standard graduate-level microeconomics textbook, ANDREU MAS-COLELL ET AL., MICROECONOMIC THEORY 817-50 (1995), which notes that this approach dates to Abram Bergson, *A Reformulation of Certain Aspects of Welfare Economics*, 52 Q. J. ECON. 310 (1938), and PAUL SAMUELSON, FOUNDATIONS OF ECONOMIC ANALYSIS (1947).

7. Chris Sanchirico, *Taxes Versus Legal Rules as Instruments for Equity: A More Equitable View*, 29 J. LEGAL STUD. 797, 805-06 (2000) [hereinafter Sanchirico, *Taxes Versus Legal Rules*] critiques Kaplow & Shavell, *supra* note 2, noting that it can be efficient to consider equity at least a little to avoid distortionary taxation. *See also* Chris Sanchirico, *Deconstructing the New Efficiency Rationale*, 86 CORNELL L. REV. 1003 (2001) [hereinafter Sanchirico, *Deconstructing*]. For a critique from outside of law and economics, see Richard S. Markovits, *Why Kaplow and Shavell's "Double-Distortion Argument" Articles Are Wrong*, 13 GEO. MASON L. REV. 511 (2005). For earlier arguments suggesting that distribution through legal rules may be as good as that through taxes, but not addressing the double-distortion argument, which post-dates them, see Bruce Ackerman, *Regulating Slum Housing Markets on Behalf of the Poor: Of Housing Codes, Housing Subsidies and Income Redistribution Policy*, 80 YALE L.J. 1093, 1121-22 (1971) (supporting subsidies for housing code enforcement over income transfers to the poor); and Duncan Kennedy, *Distributive and Paternalist Motives in Contract and Tort Law, with Special Reference to Compulsory Terms and Unequal Bargaining Power*, 41 MD. L. REV. 563, 613 (1982) ("Any *real* system of taxation will involve exactly the same kinds of waste that are involved in imposing compulsory terms.").

Shavell themselves acknowledge that their argument does not always hold, but they do relatively little to explore exactly when this is or to define the optimal policy under those circumstances. This Note seeks to map the territory between the two sides by answering two questions: (1) When exactly does the double distortion argument *not* hold? (2) What should policymakers do at such times? This Note argues that, within traditional economic understandings of welfare maximization, legal rules should consider equity for two reasons.[8] First, legal rules may be more *efficient* than income taxes at redistributing income from the rich to the poor. While this Note does not advocate for more redistribution, as income inequality increasingly becomes part of the political dialogue, finding efficient ways of reducing income inequality may be increasingly important.[9] Second, features *other than income* are often desirable bases for redistributing income, and legal rules may be institutionally better-equipped than taxes—or the only option—to redistribute based on such non-income features.

To understand why redistributing through legal rules may be desirable, the starting point is the so-called marginal cost of public funds, the cost of redistributing through taxation. That is, redistribution through legal rules may be inefficient and costly, but so is redistribution through taxation. The most-cited economics article estimating the efficiency costs of taxation shows that about a third of each marginal dollar of taxes is lost as waste. This is primarily because a tax on labor discourages working, and a tax on capital discourages investment.[10] I will call this empirical result the "one-third rule." If the

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8. Thus, the analysis in this paper is consistent with the conception of welfare articulated by Louis Kaplow and Steven Shavell. *See* LOUIS KAPLOW & STEVEN SHAVELL, FAIRNESS VERSUS WELFARE 1-13 (2002).

9. *See* Facundo Alvaredo et al., *The Top 1 Percent in International and Historical Perspective*, 27 J. ECON. PERSP. 3 (2013) (documenting the increase in income inequality); Jeremy W. Peters, *2 Parties Place Political Focus on Inequality*, N.Y. TIMES, Jan. 8, 2014, http://www.nytimes.com/2014/01/09/us/politics/republicans-move-to-reclaim-poverty-fighting-mantle.html (documenting how both political parties are increasingly emphasizing the issue of income inequality); Rebecca Riffkin, *In U.S., 67% Dissatisfied With Income, Wealth Distribution*, GALLUP, Jan. 20, 2014, http://www.gallup.com/poll/166904/dissatisfied-income-wealth-distribution.aspx (documenting the high rate of dissatisfaction with the distribution of income and wealth).

10. Charles L. Ballard et al., *General Equilibrium Computations of the Marginal Welfare Costs of Taxes in the United States*, 75 AM. ECON. REV. 128 (1985). The number cited here takes an average of the range given in the article of $0.17 to $0.56. *Id.* at 136. It is important to note that this is the *marginal*, not the average, cost of funds. Since economists generally believe that the marginal distortion from taxation increases with the size of the tax—indeed, with the *square* of the size of the tax—the average will be substantially lower. However, the

distortion from departing from the "efficient" legal rule does not exceed approximately one-third of the amount redistributed, changing the legal rule is more efficient than raising taxes.[11] As a result, even an "inefficient" legal rule could be optimal so long as it reduces the amount of taxation.

Thus, using an "inefficient" legal rule instead of taxation can be an efficient means of redistribution. As such, though a legal rule may be "efficient" viewed in isolation, it may not be efficient in the overall system of taxes and legal rules. So, before proceeding, I need to develop some terminology. I will call the rule that is efficient (i.e., wealth-maximizing based on individuals' willingness to pay) in the narrow "internal-to-legal-rule" context the "i-efficient" rule. That is, the determination of what rule is "i-efficient" ignores the tax system, imperfect private insurance, any desire to redistribute, and social welfare maximization. I will reserve "efficient" for the rule that is efficient for the overall system. The "efficient" rule maximizes wealth, but subject to the constraint that welfare maximization demands redistribution.

With this backdrop, I proceed as follows. In Part I of the Note, I use the example of a factory owned by rich individuals that is polluting on poor individuals to show how legal rules may be a more efficient means of redistribution.[12] When Kaplow and Shavell criticize equity-informed legal rules, they have in mind legal rules that would instruct courts to increase or decrease damages awarded in a case depending on the relative incomes of the *individual* plaintiff and defendant. Kaplow and Shavell rightly conclude this type of rule does not promote social welfare. However, this Note examines a type of rule that is subtly, but critically, different. Rather than altering damages, as Kaplow and Shavell and Sanchirico consider, legislatures can develop equity-informed rules that, for example, assign different standards of

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relevant consideration for comparison with legal rules is the marginal cost. Alan J. Auerbach & James R. Hines, Jr., *Taxation and Economic Efficiency*, *in* 3 HANDBOOK OF PUBLIC ECONOMICS 1347, 1384 (Alan J. Auerbach & Martin Feldstein eds., 2002).

11. It is important to emphasize that the "one-third" rule is merely a rule of thumb. As forcefully argued by Chris Sanchirico, distortions can offset each other and cannot necessarily be added together. Sanchirico, *Deconstructing*, *supra* note 7; *see also* R.G. Lipsey & Kelvin Lancaster, *The General Theory of Second Best*, 24 REV. ECON. STUD. 11 (1956) (arguing that, in the presence of one distortion, adding a second distortion does not necessarily increase the total amount of distortion).

12. For evidence of the effect of particulates on housing values, see Kenneth Y. Chay & Michael Greenstone, *Does Air Quality Matter? Evidence from the Housing Market*, 113 J. POL. ECON. 376 (2005). *See also* Jonathan M. Samet et al., *Fine Particulate Air Pollution and Mortality in 20 U.S. Cities, 1987–1994*, 343 NEW ENG. J. MED. 1742 (2000) (demonstrating adverse mortality effects of same).

liability depending on the income of litigants who typically bring a certain claim.[13] If these litigants have different levels of income, such a rule can efficiently distribute wealth to low-income groups and promote social welfare. In some cases, by not considering equity, law and economics fails to maximize not only social welfare but also efficiency. In contrast to the previous literature, I describe the distribution of legal entitlements that can entail a distortion of neither income nor the activity regulated by the legal rule—a "zero distortion."[14]

I then relax the assumptions in the main example and describe six factors that make legal rules more desirable as a method of redistribution. In particular, legal rules are more desirable when: (1) there actually are significant income differences between plaintiffs and defendants; (2) group membership is inelastic; (3) responses to a rule change are slow and the income transfers are fast; (4) the economic incidence of a policy is on the desired individuals; (5) parties can bargain at low cost; and (6) redistributing to the poor is more important than violating notions of horizontal equity.

In Part II, I introduce a second, independent reason to consider equity in the design of legal rules: the tax-and-transfer system may be poorly equipped or unable to redistribute based on *non-income* characteristics important for welfare. In other words, legal rules are *institutionally* well-equipped to redistribute where taxes cannot. I focus on two particular cases. First, individuals may be "tagged" as low-ability through the harm measured by the

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13. I build here on the work of Sanchirico. *See* Sanchirico, *Deconstructing*, *supra* note 7; Sanchirico, *Taxes Versus Legal Rules*, *supra* note 7. Sanchirico modifies Kaplow and Shavell's model for the optimal damages rule by allowing poor and rich individuals to be differentially affected by the legal rule, leading to an optimal rule which awards higher damages when plaintiffs are more likely to be poor. Kaplow and Shavell argue that Sanchirico's modification to their model is unlikely to be quantitatively important and may involve substantial uncertainty in how tort awards should be affected. Louis Kaplow & Steven Shavell, *Should Legal Rules Favor the Poor? Clarifying the Role of Legal Rules and the Income Tax in Redistributing Income*, 29 J. LEGAL STUD. 821 (2000). Sanchirico, in turn, replies by arguing that little is known about how to optimally redistribute through income taxes either, and that uncertainty does not imply that inaction is optimal. Chris Sanchirico, *Optimal Tax Policy and the Symmetries of Ignorance*, 66 TAX L. REV. 1 (2012). A key difference, though, between Sanchirico and this Note is that this Note considers altering the baseline legal rule, while Sanchirico considers altering damages.

14. This Note is in the long tradition of articles arising out of the issues raised in Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1098-99 (1972), which notes that redistributing entitlements redistributes income, but makes no claims on how they should be distributed to achieve equity ends, other than a brief discussion of "merit goods."

legal system, justifying additional redistribution. Second, when private insurance is imperfect and transfers to harmed individuals are unavailable, then the social welfare function may demand that equity be considered in the legal rule itself.

Since there are both income and non-income reasons to adopt equity-informed legal rules, the harm from *not* adopting such rules comes from two sources. First, without equity-informed legal rules, efficiency is reduced because wealth is lower. Without equity-informed legal rules, the burden on the tax system to redistribute is higher, reducing the amount that society produces, since taxes discourage work and investment. Second, equity is lower because of missed low-cost opportunities to redistribute to the poor and to other groups to which society wishes to redistribute. Thus, in the appropriate contexts, equity-informed legal rules should be adopted to produce a society that is richer and more equitable.

I wish to cabin the discussion in three ways. First, this is a Note on legal rules versus *income* taxes, not taxes on externalities or other kinds of taxes.[15] Second, I will generally stay within the economic mode of analysis, analyzing policies on the basis of their maximizing social welfare and assuming a social planner really can choose between taxes and legal rules.[16] Third, this is a Note about equity-informed legal rules versus a theoretical i-efficient rule, not versus the current law.

Section I.A explains the "zero distortion" distribution of entitlements based on group income in a baseline model. Section I.B compares this set-up with the Kaplow and Shavell model. Section I.C explains the various assumptions that affect the desirability of equity-informed legal rules. Part II argues that non-income reasons for equity are also important reasons to depart from the i-efficient rule; these factors make the legal system institutionally well-equipped to redistribute based on the harms.

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15. Potentially relevant alternative forms of taxes are those on externalities ("Pigouvian taxes") or goods and services ("commodities taxes"). For more on the choice between legal rules and Pigouvian taxes, see Steven Shavell, *Corrective Taxation Versus Liability as a Solution to the Problem of Harmful Externalities*, 54 J.L. & ECON. 249 (2011).

16. Another way in which the Note stays in standard economic analysis is the assumption of rational, fully informed individuals, in that they do not make mistakes, though the social welfare function can still take into account variables other than individual self-interest. Christine Jolls, *Behavioral Economics Analysis of Redistributive Legal Rules*, 51 VAND. L. REV. 1471 (1998), analyzes redistributive legal rules when individuals make mistakes.

I. REDISTRIBUTION BASED ON INCOME

A. Equity-Informed Distribution of Entitlements and the "Zero Distortion"

Suppose that a legislature is deciding what the liability rule should be for all polluting factories in a jurisdiction.[17] Policymakers could have a full range of options before them, including assigning a property right to particulates in the air to the factory owners or the residents. But suppose that the legislature is deciding only between a rule in which the factory is liable only for negligently inflicted damages,[18] and a strict liability rule in which the factory is liable for all harm. The policymakers know the income characteristics of the pollutees and factory owners and know that on average the factory owners are substantially richer than the pollutees. They currently use the tax system to distribute more income to the poor and are considering whether to use legal rules to do so as well.[19]

Suppose that the whole world is captured by three things: the harm to plaintiffs from pollution, the benefits to the polluter from avoiding pollution abatement costs, and the amount that individuals choose to earn.[20] Thus, as in Ronald Coase's model, individuals do not move and factories do not shut down.[21] The efficient amount of pollution is the amount at which the marginal harm to the plaintiffs from further pollution equals the marginal benefit to the polluters. I will refer to this set-up as the "baseline model." Remarkably, under this common set of assumptions, both the negligence rule and the strict liability rule are "i-efficient." To see this, consider how the factory will pollute in either case. With the negligence rule, the factory will pollute just short of the

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17. This example resembles *Waschak v. Moffat*, 109 A.2d 310 (Pa. 1954).

18. *See, e.g.*, United States v. Carroll Towing Co., 159 F.2d 169, 173 (2d Cir. 1947) (creating the so-called Learned Hand Test, whereby the defendant incurs liability when the ex ante probability of injury multiplied by the "gravity" of the injury outweighs the "burden of adequate precautions").

19. For an excellent earlier analysis of efficiency and equity concerns in nuisance law, see the work by leading law and economics scholar A. Mitchell Polinsky, *Resolving Nuisance Disputes: The Simple Economics of Injunctive and Damage Remedies*, 32 STAN. L. REV. 1075 (1980), which argues that it is unclear whether injunctive or damage remedies are more desirable. For examples of when distribution was a concern in nuisance law, see Alan David Freeman, *Give and Take: Distributing Local Environmental Control Through Land-Use Regulation*, 60 MINN. L. REV. 883, 921-22 (1976).

20. *See* POSNER, ECONOMIC ANALYSIS OF LAW, *supra* note 4, at 213-18.

21. *See* R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1, 2 (1960).

negligence standard. Beyond that point, a marginal increase in pollution will increase damages more than benefits. Likewise, with the strict liability rule, the polluter will pollute and pay damages up to the same point: the point at which his increase in damages equals the marginal benefit from avoiding abatement costs.

Although there is no difference in the behavior of the polluter, there is a difference in the *distribution* of money. In particular, under a strict liability standard, the plaintiffs receive damages equal to the amount of harm caused to them, and, under a negligence standard, the defendants receive no damages – despite being subject to the same amount of pollution. This distribution matters for social welfare. If the strict liability rule were adopted for polluters, the poor would on average have more money, since pollution tends to be located near relatively poor individuals.[22] The legislature could then redistribute less through the tax-and-transfer system, reducing the distortion to income-earning from taxes. Indeed, it would be *efficient* to do so, which is why I will refer to the results of the traditional efficiency analysis as *i-efficient* rules; they are only efficient using internal-to-legal-rule analysis based on wealth, and not considering taxes or the welfare benefits of redistributing.

One may conceptualize the shift from the negligence rule to strict liability as a transfer of an entitlement. Transferring the property right essentially leads to a free reduction in the distortion from taxation. The social planner is choosing who has the right to clean air, poor residents or rich polluters. My argument is simply that the social planner should not distribute that right to those who are already advantaged. The social planner should distribute that right to the disadvantaged. In other words, advantaging the poor in *defining* a tort is a way of transferring assets to them. This is perhaps better defined as *distribution* rather than *re*distribution – indeed, perfect, costless, equity-informed distribution. It beats the one-third rule for the distortion caused by taxes. In fact, it beats taxes infinitely, with a distortion of one-third for taxes versus no distortion for adopting the equity-informed rule described here.[23]

To my knowledge, the virtues of an equity-informed distribution of entitlements have gone unrecognized in the literature, which has previously

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22. H. Spencer Banzhaf, *The Political Economy of Environmental Justice: An Introduction*, *in* THE POLITICAL ECONOMY OF ENVIRONMENTAL JUSTICE 1, 1 (H. Spencer Banzhaf ed., 2012) (reviewing the environmental justice literature and finding that it "has consistently shown that poor and minority households systematically live in more polluted neighborhoods").

23. As discussed *infra* Section I.C, this claim requires a number of assumptions to hold, including the presence of enough actors on each side of the tort, such that any individual actor's income would have a negligible effect on the average income of his group.

focused on rules for setting damages. The potential for the distribution of legal entitlements to affect the distribution of income is great, even in the context of liability rules alone. First, at least in the context of pollution, there are systematic differences between the incomes of plaintiffs and defendants.[24] Second, the magnitude of harm caused is very large, with approximately $80 billion in damages paid to victims annually, even ignoring out-of-court settlements.[25] If liability were expanded on average, this sum would grow even larger. Legal rules include far more than torts as well. In deciding on liability rules, policymakers decide who is entitled to those tens of billions of dollars, suggesting a way to substantially reduce taxes and redistribute more efficiently.

B. Contrasting Alternative Equity-Informed Legal Rules

The equity-informed rule analyzed by Kaplow and Shavell *would* result in a "double distortion."[26] Their elegant and rigorous model shows that changing the award from the i-efficient amount only leads to greater inefficiency. Forcing the wealthier to pay larger awards exactly simulates the income tax and also distorts the regulated behavior. There are two crucial differences between my equity-informed analysis and Kaplow and Shavell's, both of which lie in the policy tools available. First, Kaplow and Shavell ask what the optimal level of damages should be. They actually assume that the liability standard is strict liability. Second, rather than setting a damages rule for everyone, they consider setting one based on the relative incomes of each set of plaintiffs and defendants. The richer the defendant and poorer the plaintiff, the larger the damages would be. Put plainly, the policy options they analyze are not relevant to the case analyzed here, where the question is the appropriate liability standard. Kaplow and Shavell are asking a different question.

If one were to ask their question, equity-informed rules would indeed lead to a double distortion, and the utility-maximizing rule would also be the i-efficient rule. To see how this reasoning works, consider two alternatives. In the first alternative, the i-efficient rule is chosen for the tort of nuisance. All

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24. *Id.*

25. Kenneth S. Abraham, *Twenty-First Century Insurance and Loss Distribution in Tort Law*, *in* EXPLORING TORT LAW 102 (M. Stuart Madden ed., 2005).

26. The first statement of this general reasoning is by Aanund Hylland & Richard Zeckhauser, *Distributional Should Affect Taxes but Not Program Choice or Design*, 81 SCANDINAVIAN J. ECON. 264 (1979). Kaplow and Shavell, *supra* note 2, were reacting to a line of articles, including the classic Ackerman, *supra* note 7.

redistribution takes place through the tax code. Second, suppose that less redistribution takes place through the tax code. Additionally, suppose judges deviate from the i-efficient rule, taking evidence on the parties' resources and increasing the award from the i-efficient amount when the plaintiff is poor and the defendant is rich and decreasing the award when the plaintiff is rich and the defendant is poor. To take this case to the extreme, suppose that the judge desires a great deal of redistribution and adds such a huge amount if the defendant is rich that the defendant would not wish to pollute anymore at all.

This legal rule adopted by the judge results in a "double distortion." The first distortion is that the polluters are charged so much for polluting that they emit far less pollution than the "efficient amount." Wealth is destroyed because they emit too little pollution. The polluters would have to spend a huge amount on curbing pollution, even if residents would benefit only a tiny amount from such quick removal. This is the distortion to the regulated behavior.

There is also a second distortion—individuals must endure this distortion *because of their income*, meaning that the system yields the same distortion as an income tax. Kaplow and Shavell's important insight is that requiring defendants to pay higher damages if they are rich is equivalent to an income tax. An income tax is merely something that reduces the amount that an individual has available to spend when that individual earns an additional dollar. A twenty percent income tax reduces the dollar of additional income to eighty cents of spending power. A damages rule like that which Kaplow and Shavell criticize would also reduce the expected spending power, because earning another dollar would both increase the expected damages the individual would have to pay as a defendant and reduce the expected damages the individual would receive as a plaintiff. In this case, everyone would be better off by switching to the first regime of an i-efficient legal rule, with all redistribution taking place through the tax code. The rich would rather pay more in taxes to avoid the significant distortion to their polluting behavior, and the poor would rather receive that greater amount of redistribution through the tax code.

By asking a different question, with different policy tools from those discussed by Kaplow and Shavell, I arrive at a different conclusion. Thus, before moving on, I pause to interpret what equity-informed legal rules accomplish in this context. There is not a double distortion when deviating from an i-efficient negligence rule to adopt a strict liability standard. Indeed, there is no distortion at all. There is no "first" distortion since the polluters pollute the same under either scenario. They pay for the harm they cause and nothing more. Additionally, there is no "second" distortion to income, because the liability standard is set for everyone. The equivalent in this Note to setting

higher damages for poorer plaintiffs in Kaplow and Shavell's model would be to have a stricter liability standard for poorer plaintiffs. No such thing happens here. The liability standard is set for the whole population, so no individual faces a higher "tax" on an extra dollar earned as a result of liability rules.

In order to achieve this *costless* distribution of wealth, the legislature can see that, as a *group*, the polluters are wealthier than the pollutees and then alter the legal rule accordingly.[27] Because the rule is established for a *group*, and no *individual* faces an effective tax rate on the basis of having more income, there is no Kaplow-Shavell-type tax, since one's taxes or costs do not go up when one receives more income. Under these assumptions, this legal rule is effectively a lump sum tax and transfer. Such taxes are completely non-distortionary.[28]

Instead of the double *distortion*, there is instead a double *benefit*—the poor receive more money and taxes on the rich go down, just for making polluters pay for the harm they cause. This seeming alchemy occurs because there is more wealth to spread around, resulting from the lower taxes on the rich. This encourages more work and more wealth creation. Yet, without the tools of equity-informed legal rule analysis, law and economics analysis would not have been able to identify this opportunity to redistribute income to the needy at low cost.

C. *Factors that Affect the Value of Equity-Informed Legal Rules*

The result that redistribution through legal rules can be more efficient than through taxes is based on a particular set of assumptions. To the extent that the real world departs from these assumptions, optimal policy may be different. This Section makes the intuitive argument that different contexts suggest different policy outcomes. As such, I go through various assumption changes, laying out how they affect the value of considering equity in legal rules.[29]

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27. Knowing the average wealth of parties leads to non-trivial measurement issues. For example, the legislature would need to decide how to measure the income of a corporation. It could perhaps use the average income of its shareholders. Depending on the availability of data, this process may involve rough approximations.

28. Alan J. Auerbach, *Excess Burden and Optimal Taxation*, *in* 1 HANDBOOK OF PUBLIC ECONOMICS 119 (Alan J. Auerbach & Martin Feldstein eds., 1985).

29. I do not mean for this to be a comprehensive list. For example, Kaplow & Shavell, *supra* note 2, note that it is also desirable to deviate from the i-efficient rule to effectively tax leisure complements.

An important factor to keep in mind is the "one-third rule": if legal rules can transfer an equivalent amount of income at less than a one-third loss in efficiency, then they are preferable to an increase in taxes.[30] Thus, there is substantial scope for distortions resulting from departures from the i-efficient legal rules to add up before the tax system is preferable. For example, even a twenty percent cost due to the distortion of attracting people to live near a polluting factory would still leave the rule over ten percent better than using taxes. When exactly such a threshold is likely to be crossed is beyond the scope of this Note. The literature on identifying the i-efficient rule is voluminous,[31] and the analysis here requires not only an understanding of what the i-efficient legal rule is but also a sense of the *magnitude* of efficiency losses from departing from the i-efficient rule.

Unless otherwise noted, in each Subsection below, I relax an assumption from the "zero-distortion" baseline model. The goal is to consider when, exactly, legal rules are likely to be less distorting than using taxes. Although this approach will not generally address interactions among changes in assumptions, it should help with clarity of exposition.

1. *How Effectively Income Can Be Redistributed Based on Group Membership*

A first key assumption in the baseline model is that income can be effectively distributed on the basis of group membership, yielding transfers of income without distorting income—thereby eliminating the Kaplow-Shavell distortion to income.[32] Three factors thus make equity concerns in legal rules

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30. This rule, however, ignores potentially important concerns of horizontal equity. *See infra* Subsection I.C.6.

31. *See, e.g.*, Ian Ayres & Eric Talley, *Distinguishing Between Consensual and Nonconsensual Advantages of Liability Rules*, 105 YALE L.J. 235 (1995); Ian Ayres & Eric Talley, *Solomonic Bargaining: Dividing a Legal Entitlement to Facilitate Coasean Trade*, 104 YALE L.J. 1027 (1995); Calabresi & Melamed, *supra* note 14; Louis Kaplow & Steven Shavell, *Do Liability Rules Facilitate Bargaining? A Reply to Ayres and Talley*, 105 YALE L.J. 221 (1995); Louis Kaplow & Steven Shavell, *Property Rules Versus Liability Rules: An Economic Analysis*, 109 HARV. L. REV. 713 (1996).

32. Analogizing the transfer of entitlements to optimal taxation theory, the technical assumption is actually that the wealthy and the poor would still act differently *even if they had the same level of income.* Emmanuel Saez, *The Desirability of Commodity Taxation Under Non-Linear Income Taxation and Heterogeneous Tastes*, 83 J. PUB. ECON. 217 (2002) (analyzing optimal commodity and income taxation while accounting for heterogeneous preferences among different groups).

relatively more valuable: (1) large groups; (2) large average income differences between groups; and (3) homogeneity of income within groups.

First, the larger the groups, the less the entitlement distribution is like a tax, all else equal. Having a large number of individuals in a group is a requirement for avoiding the income-distorting feature of entitlement distribution. Consider the limiting cases. In the first case, where each "group" consists of one individual, we are back to a Kaplow-Shavell-type income tax. Individuals know that, the more income they earn, the more they lose in entitlements. They may choose to earn less accordingly. Instead, suppose that there are an infinite number of individuals in each group. When each individual polluter chooses to earn more income, there will be no change in the probability that an entitlement is transferred, so there is no effective "income tax" because the polluter has pooled with so many others and his marginal contribution to the average income of the group is negligible. In the intermediate case where groups' members number between one and infinity, an individual may face some tax.

Second, the greater the difference in average income between polluters and pollutees, the more effective the redistribution is and the more the income tax can be reduced. But the larger the group size, the more the average income difference will tend to shrink. In other words, a more narrowly tailored rule (e.g., deciding the entitlement on the basis of town, factory, or type of pollution) increases the ability to target. For example, one town-factory combination may not have the characteristics of wealthy factory owners and poor nearby residents. Instead, it may be a worker-owned factory shedding pollution on the vacation homes of the affluent. Averaging this town-factory combination with one where the wealth of the parties is reversed would greatly diminish the ability to transfer income.

Third, greater homogeneity of income within groups makes legal rules more valuable. Consider two situations. The first is that all the pollutees are poor and the owners of the polluting factory are rich. In this case, there is no need to risk a Kaplow-Shavell-type tax in order to tailor the rule by having different rules for different types of factories. In the second situation, suppose that there are two types of factories. In one type, the pollutees are rich and the polluters are poor. For the other type, the reverse is true. Here, there is tension between the desire to have large group sizes to avoid an effective Kaplow-Shavell tax and the effectiveness of the redistribution. In particular, if horizontal equity is important, heterogeneity within groups would tend to suggest more narrowly tailored policies to avoid distributing income to the undeserving rich by virtue of their association with the poor.

These considerations suggest that an important policy choice in distributing entitlements is how narrowly to tailor the rule—in other words,

how granularly a legislature should define the class of people whose income they are analyzing. A key trade-off is that, with legal rules tailored around smaller groupings, income redistribution is better-targeted, but there is a greater risk that individuals will respond to a Kaplow-Shavell-type tax. In other words, though setting legal rules at the least narrowly tailored level does not significantly impair efficiency in the way contemplated by Kaplow and Shavell, it may be worth bearing some of the losses traceable to more narrowly tailored rules in order to redistribute more through the legal rule and less through the tax code.

2. *Elasticity of Group Membership*

A second assumption in the baseline, Kaplow-Shavell, and Sanchirico models is that group membership cannot change. For example, capital investment, ownership, and residential location are fixed. In reality, if owning a polluting factory becomes less profitable, fewer will be built. Additionally, some may shut down as they become obsolete. Similarly, knowing that they will be compensated, individuals may "move to the nuisance," choosing to live nearby a polluting factory. If this behavior is a result of a departure from an i-efficient rule, then these are distortions that count against using the legal rule as a means of income distribution. For example, suppose that an injunctive rule would distribute more to poor pollutees, but would also lead to too few factories being built. Redistribution by group effectively causes a new distortion by discouraging the activity more than would be efficient. Furthermore, once group membership is elastic, if it becomes more expensive to do something that the wealthy wish to do like own polluting factories, some may earn less income since it will no longer be worth buying factories.

Thus, an important consideration in determining the value of equity in the design of legal rules is the elasticity of the response to the deviation from the i-efficient rule.[33] If there is little change in the number of polluting factories built and almost no one moves to the nuisance, then this distortion is unimportant.[34]

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33. Note that the distortion of inducing factories to move into rich neighborhoods is not a concern, even if group membership is elastic. The reason for this is that because the legal rule is based on the *group's* income, a factory does not face a more lenient liability standard if it moves into a rich neighborhood.

34. This result is very similar to the Ramsey rule or "inverse-elasticity" rule that, in an economy with identical consumers, commodity taxes should be set in inverse proportion to the elasticity of demand for the good. *See* Auerbach & Hines, *supra* note 10, at 1368 (deriving

If there is a large behavioral response, Kaplow and Shavell's conclusion may be right. The distortion of group membership may outstrip the reduced distortion from less taxation. But, if there is little behavioral response (i.e., group membership is inelastic), then considerations of equity involve less of a trade-off with efficiency. This behavioral response is one of the empirical questions important for determining the value of equity-informed legal rules, and it should not be assumed away (as the literature implicitly does). Rather, legal rules effectively provide a "new margin" of taxation. Since the distortion from taxes is believed to rise with the square of the size of the tax,[35] taxing a little based on group membership rather than even more based on individual income, which is already subject to tax rates as high as thirty-five percent on the margin, could be an efficient means of redistributing.

As a final note, it is important to consider the types of legal rules under consideration. In particular, if the choice is between strict liability and negligence, as in the main example in this Note, then it does not particularly matter how responsive the actors are. To see this, consider the case of moving from a negligence to a strict liability standard for reasons of equity. This will make owning a polluting factory less profitable, potentially driving polluters from the market. However, forcing polluters to pay for the full amount of their pollution alone cannot cause a distortion since incentives are merely being aligned. In other words, this change in behavior is good. On the other hand, if instead the choice were between strict liability and an injunctive standard which would allow pollutees to extract more than the full cost of pollution, then indeed too few factories may be built—and this distortion would have to compete with the distortion from raising taxes.

3. Timing of Income Transfers and Behavioral Responses

A third assumption common to the baseline, Kaplow-Shavell, and Sanchirico models is that they look only at equilibrium behavior and do not look at the dynamics (i.e., changes across time), including the transition between a rule change and the equilibrium. But the good parts of the rule change (redistribution) may happen quickly, and the bad parts (distortions to behavior) may only accumulate with time as individuals have time to respond. As a result, distribution through legal rules can become more valuable because

what optimal taxes should be, when the government must raise a given amount of revenue by levying taxes on goods, or "commodities").

35. JONATHAN GRUBER, PUBLIC FINANCE AND PUBLIC POLICY 552 (2005).

the present discounted value of the benefits increases relative to the present discounted value of the costs.[36] In such a case, the less distortionary years are in the earlier years and face less of a discount. Overall, then, there may be only a kind of "half distortion" to the behavior regulated by the rule once dynamics are taken into account.

Unlike the previous two deviations from the baseline assumptions, analysis here requires changing multiple assumptions at once—adding both a dynamic setting and the earlier deviations. Since the baseline model has no distortions, the dynamics of those distortions cannot be studied simply by making the model dynamic. Assume, for the ease of argument, that a state starts with the i-efficient rule. The legislature unexpectedly finds that, given a clear government goal of equity, courts should take these concerns into account when interpreting the common law of torts based on group redistribution in which courts will look at the average income of the relevant group.

Legal changes that are retroactive, unexpected, and temporary are the clearest case in which benefits come quickly, with no distortion to behavior. In fact, virtually any retroactive change that does not change expectations for the future by leading people to expect that the same change would happen again[37] can redistribute without causing distortions. If a legislature passes a bill with retroactive effects and the change is unexpected, there cannot have been any behavioral response to it. Therefore, it is initially non-distortionary, regardless of the rule.[38] For example, if the government were to impose a one-time wealth

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36. One way to justify this discounting is that distributing more to the poor in an early year allows them to invest the proceeds so that it would be worth more in a later year.

37. One concern with a supposed "one-time" transfer is that it might lead to expectations that the transfer will happen again in the future in other contexts within the same state or in other states. For example, a Robin Hood-like expropriation of wealth from the bank accounts of the rich may feed fears of a future expropriation, even if the expropriators claim it is a one-time event. If that expropriation is on the basis of income or wealth, then the model reverts to Kaplow-Shavell-type reasoning. The difference with legal rules, though, is that once the legal right to pollute is transferred, there is no second pollution right to transfer – the transfer can only occur once since there is only one thing to hand over, unlike a wealth expropriation where there will always be more savings to expropriate. In that sense, it is like the consumption tax – once we switch over, there is no reason to expect another wealth transfer. (Another potential difference is that the transfer of a legal entitlement may be more legitimate than the expropriation of financial wealth, where ownership may be seen less as being by the grace of the government than as a right.)

38. Under *Calder v. Bull*, 3 U.S. 386 (1798), although the U.S. Constitution bars states from passing ex post facto laws, U.S. CONST. art. I, § 10, this restriction applies to criminal law only. Alternatively a court could reinterpret a law and give plaintiffs a period of time within the appropriate statute of limitations to file a cause of action.

tax on polluters based on their income, the proceeds of which were then given to pollutees, there would be no change in behavior and no distortion, even though – if such a rule were maintained – it would eventually affect behavior.

However, we are considering *permanent* changes in rules, so future distortions must be traded off against the gains in equity. I will review potential distortions in turn. First, consider the distortion to factory-building and residential location. With a legal rule that transfers income from polluters to pollutees, factory-builders will be less inclined to invest in new and old factories, as noted in the previous Subsection.[39] However, this will only happen *over time*, especially since much of the response may come as factories gradually depreciate into obsolescence. Similarly, at least in the absence of a grandfathering rule in which only existing homes are affected by the new rule, individuals may build homes nearby a polluting factory in expectation of receiving settlements compensating them for harm, but this will also happen slowly.[40] Second, to the extent that the legal change has Kaplow-Shavell-like tax elements, individuals may have a reduced incentive to earn income – for example, under a narrow-tailoring regime as described above.[41] But changing jobs takes some time, so this response is likely to be sluggish.[42] The third response, care in avoiding harm, would likely be the quickest. Downwind individuals, knowing that they are subject to a weaker liability standard, may be marginally more likely to open their windows and let in particulates. However, as the argument in the previous Subsection showed, this "care" distortion is not a factor when the parties can bargain.

Lest one think that these considerations of transition are unimportant, consider an analysis of the consumption tax, which finds that the primary benefit of switching from an income to a consumption tax comes from the

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39. *See supra* Subsection I.C.2.

40. With a fixed supply of housing, housing prices will have gone up, incorporating the increased nuisance settlement. (This also requires that all individuals are on the margin between moving and not.) With a fully elastic supply of housing, housing prices will stay the same, but many may have moved to the nuisance. For recent evidence on the extent of moving to the nuisance, see Brooks Depro, Christopher Timmins & Maggie O'Neil, White Flight and Coming to the Nuisance: Can Residential Mobility Explain Environmental Injustice?, at 1 (Feb. 11, 2013) (unpublished manuscript), http://people.virginia.edu/~sns5r/microwkshp/timmins.pdf.

41. *See supra* Subsection I.C.1.

42. Individuals may also be motivated to reduce their income by a more subtle reason: lower returns to the types of things that the wealthy like to consume.

unexpected transition.[43] As noted by Alan Auerbach, most of the efficiency gains from moving from an income to a consumption tax come not from the fact that capital income is no longer taxed, but rather from the shift to a non-distortionary lump-sum tax on existing wealth implicit in a consumption tax. In other words, the efficiency gains come from taxing a decision largely unaffected by taxes (consuming out of existing savings). This same insight applies to payments for already-committed behavior.

Finally, this dynamic analysis implies that, when policymakers design an equity-informed rule, they should front-load the benefits to the extent possible. For example, if the goal is maximizing the net transfer of wealth, legislators who change a liability standard should make past behavior (which of course cannot be changed) liable under the new standard. Additionally, as legislatures discuss new rules, they should do so quickly, to avoid the problem of behavior being distorted even before the new rule can affect income transfers.

4. Economic Incidence

The next factor that is important in evaluating the merits of incorporating considerations of equity in legal rule formulation is the true economic incidence of distributing legal entitlements versus taxes. In the baseline model, all incidence is on the owners. Even though it becomes less profitable to make the good, the price of the good and the quantity produced do not change because the *marginal* cost of pollution does not change when a law changes from allowing a polluter to receive money for not polluting to making the polluter pay to pollute.[44] However, with time, if polluting factories need to pay more than the full cost of their pollution, as could be the case with injunctive remedies, factories may gradually shut down. This extra cost to the factories

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43. Alan Auerbach, *The Choice Between Income and Consumption Taxes: A Primer*, *in* INSTITUTIONAL FOUNDATIONS OF PUBLIC FINANCE: ECONOMIC AND LEGAL PERSPECTIVES 13, 30 (Alan Auerbach & Daniel Shaviro eds., 2008). Another interesting example of a one-time expropriation is Cyprus's proposal to garnish the savings of its residents. This proposal is redistributive, since the wealthy save more than the poor, but also non-distortionary so long as it does not affect future expectations. *See* Landon Thomas, Jr., *Some Savers in Cyprus May Lose 60 Percent*, N.Y. TIMES, Mar. 29, 2013, http://www.nytimes.com/2013/03/30/business/global/some-savers-in-cyprus-may-lose-60-percent.html.

44. Note that this is the case even if the pollutee is a supplier, consumer, or worker for the factory. In a competitive market, the polluter charges the marginal cost for the goods, and this does not change with the change in legal entitlements.

then would affect not only the owners of the factory, but also employees who might lose jobs and the consumers of the good produced by the factory who would pay higher prices because of reduced supply. If these harmed actors are poorer than the pollutees, then the policy might have a perverse effect.

Several considerations indicate where the incidence is likely to "stick." First, as a general rule, the "fixed" factor tends to bear more of the incidence. That is, when comparing who bears the cost as between consumers, employees, and owners, one must compare the elasticity of demand of the consumers, the elasticity of supply of the employees, and the elasticity of supply of capital of the owners.[45] The more inelastic (i.e., the more fixed), the more of the incidence the actor will bear. One can understand this intuitively by considering that, when an actor is less flexible, he is more willing to accept price changes and not change his behavior, therefore bearing the costs.

A second consideration is whether the legal rule pertains to actors engaging in a market relationship, where the legal rule is less likely to affect incidence, or whether it pertains to an externality, where it is more likely to affect incidence. Where the legal rule affects a contractual relationship, incidence-shifting is much easier—actors can just undo the change in the legal rule by changing the price or engaging in fewer of the contracts.[46] For example, requiring

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45. Other parties, like suppliers, could also bear some of the cost, so other elasticities are also relevant.

46. That said, while generally a less favorable area, alterations to contracts that *cannot* be contracted around have potential for effective redistribution, especially where the regulation regulates the margin of adjustment (price or quantity) itself. Take the example of the minimum wage, a price regulation. Neoclassical theory has long suggested that a minimum wage will reduce the employment of the poor and then pay more to the lucky poor who are able to get jobs, while not providing at all for those who do not get jobs. (For a critique of the minimum wage as a means of redistributing to the poor, see Daniel Shaviro, *The Minimum Wage, the Earned Income Tax Credit, and Optimal Subsidy Policy*, 64 U. CHI. L. REV. 405 (1997).) However, some of the best empirical evidence suggests that this is not true. DAVID CARD & ALAN B. KRUEGER, MYTH AND MEASUREMENT: THE NEW ECONOMICS OF THE MINIMUM WAGE (1995); Arindrajit Dube, T. William Lester & Michael Reich, *Minimum Wage Effects Across State Borders: Estimates Using Contiguous Counties*, 92 REV. ECON. & STAT. 945 (2010). Additionally, recent theoretical research suggests that—even if neoclassical theory is true—the minimum wage still effectively transfers income to the poor, even in conjunction with the tax system. *See* David Lee & Emmanuel Saez, *Optimal Minimum Wage Policy in Competitive Labor Markets*, 96 J. PUB. ECON. 739 (2012). There may still be a reduction in employment, but—in some cases—not enough to outweigh the transfer to lower-income workers from their higher-income employers.

Yet another reason that redistributing entitlements in the context of contract law may not be undone by adjustments is the presence of non-rational actors, as noted in Jolls, *supra*

accommodation of disabled workers and outlawing discrimination in hiring, firing, and pay has been shown to reduce employment among the disabled, and mandating more generous workers' compensation has been shown to reduce employment and wages.[47]

In contrast, when the legal rule pertains to an externality like pollution from a factory, there is no contract to rewrite (or not write). As a result, the incidence is much more likely to stick on the intended actor. For example, suppose that the polluter harms the pollutee, but the two are in no market relationship, in that the pollutee does not consume the good produced by the polluter, supply him any goods, or work for him. Since those polluted upon do not consume the products or work at the factory, any costs passed along cannot be borne by the pollutees because there is no price or quantity adjustment that can affect them.

Finally, the incidence of the legal rule must be compared to the incidence of taxes. Though it is often assumed that statutory incidence is the same as economic incidence in the context of taxes, this assumption is neither theoretically nor empirically sound; taxes are not a tool free of incidence-shifting. For example, a careful recent study of the Earned Income Tax Credit (EITC) found that after-tax incomes increased by only seventy-three cents for every dollar of EITC tax reductions.[48] The reason is that, by subsidizing work, the EITC draws more workers into the labor force, driving down the wage. This feature of the tax-and-transfer system obtains more broadly: subsidizing employment at certain levels of income will draw in workers in that income range, driving down wages and moving the incidence elsewhere. Thus,

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note 16. Kaplow & Shavell, *supra* note 2, also note this exception. In this case, preventing certain kinds of contracts, for example, would help redistribute from the scheming rich to the duped poor.

47. Daron Acemoglu & Joshua Angrist, *Consequences of Employment Protection? The Case of the Americans with Disabilities Act*, 109 J. POL. ECON. 915 (2001); Jonathan Gruber & Alan B. Krueger, *The Incidence of Mandated Employer-Provided Insurance: Lessons from Workers' Compensation Insurance*, *in* 5 TAX POLICY & THE ECONOMY 111 (David Bradford ed., 1991). This analysis highlights an important contrast between entitlement-shifting and regulation: with entitlement distribution, the parties can bargain over the affected item directly, while they cannot with regulation. Similarly, departing from the i-efficient rule by requiring settlements in excess of the damage (as, for example, increasing negligence awards against motels in dangerous neighborhoods when motel guests are robbed) would discourage provision of the service unless individuals can opt out. Thus, regulation is less likely to be undone by contracting around the rule, but more likely to have perverse consequences.

48. Jesse Rothstein, *Is the EITC as Good as an NIT? Conditional Cash Transfers and Tax Incidence*, 2 AM ECON. J.: ECON. POL. 177 (2010).

generally it is unclear whether taxes or legal rules result in more incidence-shifting.

5. Bargaining Costs

One assumption not allowed in the baseline model, but which actually increases the value of equity-informed legal rules, is the presence of costless bargaining. With costless bargaining, injunctive remedies or damages at any level will not cause distortions. This is the basic point of the Coase theorem: though the distribution of income will be different, the initial entitlement does not matter for "efficiency," since bargaining will result in an efficient allocation.[49] Thus, with costless bargaining, the scope for equity-informed legal rules expands significantly. However, when bargaining is costly and damages are set higher than their actual level, the distortion returns, either because of transaction costs or because no bargaining takes place. As a result, the regulated behavior deviates from its i-efficient amount. It is important to emphasize, though, that if the amount that a polluter must pay in damages is equal to the actual harm caused, the equity-informed rule is efficient even with no bargaining at all. The reason is simple: forcing a polluter to pay for the true cost of its externality by definition cannot cause a distortion.

But suppose a legal rule that does force a party to pay damages greater than the harm caused. In this case, bargaining can reduce this distortion, and it is important to know when bargaining is most likely to occur. In some situations, transaction costs may be prohibitively expensive. Take the case of a car collision. In the absence of a contract allowing individuals to opt into a different legal regime, the cost of all drivers contracting with each other is effectively infinite. In the main example of localized pollution used here, though, there is good reason to think that transaction costs could be kept reasonably low. The point is most clearly seen in the prototypical Coasian case of one polluter and one pollutee. However, even with more actors, negotiation in the face of gains to trade may occur. For example, when there is one factory and many plaintiffs, the plaintiffs can use class actions. Additionally, negotiating authority could be delegated to a local government or association. More broadly, though, the no-transactions-cost world is likely to be most closely approximated in cases in which there are few actors involved and in which the legal rule covers deterministic, not probabilistic, acts—so that parties know with whom to negotiate. Relatedly, acts happening by accident (like car

49. Coase, *supra* note 21.

crashes) are much less likely to offer opportunities to bargain than ones that happen with foreknowledge (like pollution).

One implication of this analysis is that the government should help develop bargaining techniques. Technologies that reduce bargaining costs, but that do not increase other distortions like making group membership more elastic, would expand the scope for policies that use legal rules to more efficiently distribute income to the poor.

6. *Importance of Helping the Poor Versus Horizontal Equity*

A final potential concern with equity-informed legal rules is that they violate "horizontal equity," the goal of treating similarly situated individuals in similar ways.[50] In particular, one might find it problematic that only the poor "lucky" enough to be polluted upon would be receiving the compensation; those of a similar income level who are not polluted upon would not.[51] The importance of horizontal equity depends on the appropriate social welfare function. Arguing for the unimportance of horizontal equity is the idea that the government should take the opportunity to distribute an entitlement to the poor at a low efficiency cost because the poor need the money. For the poor, every bit helps; this is an opportunity to increase their income with potentially low efficiency costs—that is, without increasing income taxes on the rich, which would discourage work and reduce overall wealth. Suppose that taxes stay the same regardless of the legal rule; then criticizing aiding some of the poor but not others amounts to holding the desperately needed aid for the poor hostage to the desire to help all of the poor. However, some may believe that it is worth transferring less to the poor on average so that the poor are treated similarly; in that case, adopting an equity-informed legal rule like that developed in the baseline model would become less desirable.

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50. Note that, if the goal is maximizing efficiency, then this is an incoherent concern. With efficiency analysis, all that matters is "wealth," and the fact that some poor people benefit from a change in legal entitlements and others do not does not affect wealth. Efficiency analysis lacks even the language to discuss such an issue as arbitrariness. Thus, this critique can have no bite from the perspective of efficiency analysis. The critique itself concedes that efficiency analysis is the wrong value criterion and must make some allowance for social welfare.

51. It should also be noted that, in the context of Kaplow and Shavell's model, this point need not be discussed because they analyze expected injuries, not actual ones; from that ex ante perspective, the poor are actually the same as each other.

There is also a second reason that this is not a violation of "horizontal equity." In particular, the plaintiffs may *deserve* the compensation because they are being polluted upon. It is to this argument that there are reasons to adopt equity-informed legal rules based on non-income factors that I now turn.

II. REDISTRIBUTION BASED ON NON-INCOME FACTORS

Thus far, I have discussed the potential value of distributing entitlements to those harmed by pollution because they have comparatively low incomes. But what about distributing entitlements to those harmed by pollution *because they are harmed by pollution*? After all, there is nothing in the i-efficient rule that guarantees that any compensation at all will go to those harmed by a polluting factory that moves into a community. A second reason for considering equity in legal rules is the goal of maximizing social welfare in ways the tax-and-transfer system is unable or poorly equipped to do—in particular, when characteristics other than income are desirable bases of redistribution. In this Part, I extend the notion of equity beyond redistribution based on income and argue that legal rules can be institutionally superior to taxes in redistributing based on non-income characteristics. This is another situation where the assumptions are key to the conclusions. The Kaplow and Shavell model assumes that the only basis on which to deviate from the i-efficient legal rule is to redistribute income from high-income to low-income individuals. They are not "wrong" in not considering non-income factors; they are just asking a different question. The Kaplow-Shavell argument is a non sequitur in the context of redistribution for non-income reasons. Nevertheless, despite the fact that the very premise of Kaplow and Shavell is that taxes replicate the redistributive aspect of legal rules, their analysis has been mistakenly applied to contexts like cost-benefit analysis where such an assumption clearly does not hold.[52] In other words, the value of equity-informed legal rules depends on the

52. *See, e.g.*, Cass R. Sunstein, *Willingness to Pay vs. Welfare*, 1 HARV. L. & POL'Y REV. 303, 314-15 n.31 (2007) (citing Kaplow & Shavell, *supra* note 2, at 667, as saying "redistribution through legal rules offers no advantage over redistribution through the income tax and typically is less efficient"). The context of Sunstein's analysis is redistribution through policies decided by cost-benefit analysis. *See also* Matthew D. Adler & Eric A. Posner, *Rethinking Cost-Benefit Analysis*, 109 YALE L.J. 165, 186 (1999) (citing Kaplow & Shavell, *supra* note 2, at 667, for the proposition, again in the context of cost-benefit analysis, that "[a] line of thought does hold that when the government wants to redistribute wealth, the most cost-effective way of doing so is through taxes and transfers").

available tools; though equity-informed legal rules may cause distortions, they may be the best option available.

Legal rules are sensitive to information that is both relevant for how society wishes to redistribute income and also not captured by the tax authority. The tax system could develop an additional bureaucracy for identifying individuals who have developed asthma caused by pollution, for example, but the legal system already measures these harms and administers penalties through the actions brought by the affected parties. It is likely that the legal system will remain institutionally better-placed than the tax system to serve this function.[53] No new government monitoring bureaucracy is needed. Additionally, in many cases, the legal system does not need to administer the rule, since private bargaining with the legal rules in the background obviates the need for any administration at all. This private bargaining is unavailable when the tax collector must intermediate between the tortfeasor and the victim.

The range of non-income considerations could be very broad. For example, the social welfare function may deem certain harms especially worthy of compensation. In the pollution context, it may be the case that the polity wishes to express special disapprobation of polluting or to deem victims especially deserving of compensation.[54] In either case, the very fact that victims are polluted upon, regardless of their income, generates a deviation from the i-efficient rule. In other words, the legal system may capture features of equity that are utility-promoting that cannot be captured by the tax system for administrative reasons.

I will focus here on two illustrative types of optimal deviations from the i-efficient rule on the basis of non-income individual characteristics. First, the norm in optimal tax theory is to attempt to tax income-earning *ability*, rather than income itself. As a result, characteristics which help distinguish a low-income person who is low-ability from one who is merely "lazy" are useful inputs for taxation. In other words, the government wishes to "tag" characteristics indicating low ability in order to discourage the high-ability

53. The argument against redistribution through legal rules sometimes refers to the "tax and transfer" system rather than the tax system itself, represented by the IRS. However, the Kaplow-Shavell argument is framed only in terms of the income tax (with extension relating to the commodity tax). In this Part, I implicitly allow taxes and transfers and show that the legal rule should still take into account non-income forms of equity.

54. Again, this analysis is consistent with Kaplow & Shavell, *supra* note 2, at 667 n.2, who note on their first page that their discussion does not concern "entitlement to payment based on desert."

from "masquerading" as low-ability workers with low incomes.[55] Second, when private insurance is imperfect and transfers to harmed individuals are unavailable through either the legal rule or taxes, then compensation to harmed individuals beyond the i-efficient amount may be especially valuable. I will address each of these two situations in turn.

A. Tagging

The first non-income reason to redistribute through legal rules is the desire to tag low-ability individuals. To understand the logic of the optimal-tax reasoning, return to the pollution example. Consider an individual who develops asthma as a result of pollution, causing her income to drop from H to L. The tax code will treat her like anyone else earning L, charging taxes as if she were an average L-earner, since there is no "asthma" box to check on a tax form. The asthma-sufferer is thus pooled with some other L-earners who could earn more but are just lazy—so optimally taxes will redistribute less to them to encourage them to work more. Redistributing more through the tort "tags" the asthma-sufferer and compensates for the failure of the tax code to use all available information relevant to redistribution. It is precisely the time-consuming, labor-intensive information-collecting aspect of the legal system that allows this benefit. It may be unwise to let this information go unused.

To understand this result, it is helpful to return to the framing of the issue as one of the distribution of entitlements. If the question were one of setting the right *level* of award, this consideration would be moot. After all, a successful plaintiff is compensated for lost wages—in principle, making her whole. This distinction arises from the fact that liability rules impose penalties in an all-or-none fashion: once a liability threshold is crossed, a tortfeasor must pay; but just on the other side of the threshold, the tortfeasor pays nothing even if the harm was great. Suppose, for example, that a polluting factory moves into town but does not violate a standard of negligence defined by exceeding the i-efficient amount of pollution. Individuals get asthma as a result, but there is no award, despite their decreased labor market earnings. By the tagging logic, the rule should become more pro-plaintiff so that plaintiffs can receive their compensation.

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55. *See* George A. Akerlof, *The Economics of "Tagging" as Applied to the Optimal Income Tax, Welfare Programs, and Manpower Planning*, 68 AM. ECON. REV. 8 (1978); Albert L. Nichols & Richard J. Zeckhauser, *Targeting Transfers Through Restrictions on Recipients*, 72 AM. ECON. REV. 372 (1982).

B. When Insurance and Transfers Are Unavailable or Not I-Efficient

A second individual, non-income reason to deviate from the i-efficient rule is that private insurance and transfer payments are often unavailable. If the goal is maximizing social welfare and the tax system is unavailable to compensate victims, then the Kaplow-Shavell reasoning is simply inapplicable. In the example of the polluting factory, suppose that the i-efficient rule is for victims of pollution to be compensated for half of the harm caused to them. These pollutees may then have reduced property values due to the undesirability of living downwind of a polluting factor, increased health costs and reduced wages (e.g., from asthma), and a generally reduced quality of life. If the polity determines that these individuals deserve compensation, the tax system will be unhelpful; it does not measure these harms, while the legal system does.

The rationale for compensating individuals when they are harmed beyond what they would be willing to pay to avoid the harm themselves can come from multiple perspectives. First, such compensation can be justified by the principle of luck egalitarianism, the theory of distributive justice that seeks to redistribute based on bad luck, but not bad choices.[56] Thus, an individual who has the bad luck of a polluting factory moving in next door deserves compensation. Alternatively, individuals may simply value insurance and be unable to get it on the free market. Thus, if a polluting factory moves into town and reduces one's property value – and therefore wealth – the individual will be better off if "insured" through legal rules.

The pollutees could be made whole by a combination of damages and insurance payments. But there is nothing that dictates that the i-efficient rule requires full damages for all harms, and insurance markets are notoriously problematic.[57] Perhaps individuals could be insured against a polluting factory moving into town, reducing housing prices, quality of life, and potentially wages. However, "load factors" (i.e., the cost of obtaining actuarially fair

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56. For an early statement of luck egalitarianism, see Ronald Dworkin, *What is Equality? Part 2: Equality of Resources*, 10 PHIL. & PUB. AFF. 283, 286-88 (1981). For a recent defense of luck egalitarianism, see Daniel Markovits, *Luck Egalitarianism and Political Solidarity*, 9 THEORETICAL INQUIRIES L. 271 (2008).

57. Note, though, that the tax system itself provides some insurance through its progressivity. *See, e.g.*, Louis Kaplow, *The Income Tax as Insurance: The Casualty Loss and Medical Expense Deductions and the Exclusion of Medical Insurance Premiums*, 79 CALIF. L. REV. 1485, 1487 (1991) (arguing that § 165(c)(3) of the tax code on casualty losses functions as free, partial government insurance based on marginal tax rate).

insurance) are often substantial. Additionally, conventional issues with private insurance markets resulting from asymmetric information between the parties interfere with their effectiveness. Moral hazard, where the insured party engages in behavior that increases the likelihood of a payout because he does not bear its full cost, reduces the availability of private insurance. So does adverse selection, in which an insurance company assumes that individuals with an unobservably high chance of needing a payout are the ones likely to accept the insurance policy, prompting the insurance company to raise rates, further reducing the pool of applicants to those at high risk, and so on ad infinitum.[58] Overall, then, there are strong reasons to believe that the private insurance market may do a poor job of providing insurance, perhaps especially for relatively rare events.[59] Moreover, insurance is not free, and the poor may not be able to afford it. This relates back to the analytic framework of entitlement distribution. In particular, the ability to afford insurance may depend upon whether entitlements are allocated to the individual in the first place.

The issue of not being able to attain cost-effective insurance and facing an i-efficient legal rule that does not provide full compensation becomes even starker when institutional constraints limit not only the tax system, but also the legal system, from transferring compensation to victims. In this case, potential Pareto improvements are truly only "potential." Since the law of nuisance often does provide at least partial compensation, I will shift to a different type of legal rule in a different situation to demonstrate this dynamic. Here, suppose that the Department of Housing and Urban Development is considering whether to fund slum removal. The plan is to use eminent domain to remove a slum near downtown and replace it with luxury towers. There is no compensation in this legal rule; it just dictates whether the slum is cleared or not. This reflects the reality that regulations and decisions based on cost-

58. The issue of social insurance in the context of private insurance has been analyzed by Raj Chetty & Emmanuel Saez, *Optimal Taxation and Social Insurance with Endogenous Private Insurance*, 2 AM. ECON. J.: ECON. POL'Y 85 (2010). For a recent summary of the rationale for government provision of insurance, see Raj Chetty & Amy Finkelstein, *Social Insurance: Connecting Theory to Data*, *in* 5 HANDBOOK OF PUBLIC ECONOMICS (Alan J. Auerbach et al. eds., 2013).

59. A further, more subtle reason to shift entitlements to the poor (or to provide larger awards) is that it is likely that insurance through the legal system for the poor is more valuable. Compare a rich person injured in a car accident, who can live off her wealth, with a poor person injured in a car accident, who would go hungry in the absence of transfers. Again, Kaplow & Shavel, *supra* note 2, at 676, note this.

benefit analysis rarely include transfers to those harmed.[60] The slum is occupied solely by renters, who will have to move further away from downtown, paying higher rent and facing higher commuting costs and longer commutes. The wealthy, on the other hand, will be better off, since they will have access to luxury residences close to work that were not available before. For the reasons described in the previous paragraph, suppose there is no cost-effective insurance for renters who are evicted. Additionally suppose that, due to its large scale, this transformation of an area for the poor into one for the rich can only happen through the intervention of the federal government.

This policy may pass cost-benefit analysis if maximizing "wealth" is the goal. The wealthy may be willing to pay a large premium to avoid a commute and use the time to earn their high wages instead. The poor, on the other hand, are unable to pay for much of anything. Their willingness to pay to avoid having to move elsewhere is likely very low; after all, they have little to pay. Thus, since the wealthy are willing to pay more to move in than the poor are willing to pay to stay, the policy passes cost-benefit analysis in which the goal is "wealth" maximization.

Nevertheless, this could be a massively welfare-reducing policy if the poor are not compensated. Although the poor who are displaced may be willing to pay little to avoid the displacement, the reduction in their utility may greatly exceed the increase in the utility of the wealthy who would move into the luxury towers. The poor may be on the margin of economic survival to begin with, and the increased price of rent and reduced income from working shorter hours due to the longer commute may force the sacrifice of some real necessities in life. In contrast, the wealthy new residents will be able to earn more money and have more disposable income for luxuries.

Although I have offered an example of poor victims lacking insurance or other means of compensation, the income of the victim is not the most fundamentally important factor. Though a disparity between social welfare maximization and wealth maximization is most likely when a policy benefits wealthy individuals willing to pay a lot and harms poor individuals unable to pay much, it could also be the case that fairly well-off people are harmed by a policy. The key point is not that the harmed individuals have a low income and

60. For example, the executive order currently governing federal cost-benefit analysis makes no mention of compensating those who lose from a policy, even if the utility loss from the losers exceeds the gains from the gainers. *See* Exec. Order No. 12,866, 3 C.F.R. 638 (1994), *reprinted in* 5 U.S.C. § 601 (2012). The order does say that equity can be taken into account, though it is an open question how frequently that occurs. *See id.* § 1.

therefore the income tax can be reduced by giving larger damages, but rather that this policy is simply welfare-reducing without a tax-and-transfer system available to alleviate the harm to some of the parties.

The case of cost-benefit analysis emphasizes the importance of understanding the tools at the policymaker's disposal for deciding optimal policy. As some observers have noted, citing Kaplow and Shavell, "A line of thought does hold that when the government wants to redistribute wealth, the most cost-effective way of doing so is through taxes and transfers . . . ."[61] This claim is true enough in this example, if those who lose from the policy receive "transfers." But the tax system is very unlikely to redistribute on the basis of being evicted, so the transfers cannot be located there. Maintaining the binary of "tax versus legal rule," the transfers must be part of the legal rule then. But, while it may be Pareto optimal to transfer funds to poor people harmed by a project versus not doing the project at all, if transfers are unavailable in practice, their theoretical availability is irrelevant; as a result, the legal rule should adopt the second-best policy of taking equity directly into account in deciding whether to do the project. Implementation difficulties aside, adopting such transfers could be a valuable policy innovation, but this would not change the fact that the *legal rule* would be taking equity into account.

Finally, note how this second justification for considering equity is also a rejoinder to the haphazardness or horizontal-equity critique of the argument presented in Part I—in other words, the critique that similarly situated individuals are treated differently by the law. It may seem problematic, for example, that low-income individuals "lucky" enough to be downwind of a polluting factory receive redistribution through legal rules, but other low-income individuals do not. A case in which victims receive compensation beyond the harm may indeed raise these hackles. However, if the social welfare function dictates that an individual is a worthy recipient of compensation independent of income—just on the basis of having been polluted upon—then switching a legal rule from negligence (in which a harmed individual may not be compensated if the harm is below some threshold) to strict liability (in which harmed individuals are always compensated) is not inequitable. A poor person polluted upon but not fully compensated and one not polluted upon are not similarly situated. Concerns of horizontal equity are not implicated when a harmed person becomes more likely to collect based upon the harm caused to her. Rather, if compensation for harm is welfare-promoting independent of its

61. Adler & Posner, *supra* note 52, at 186.

income-redistributing role, then the rule is not haphazard. It is exactly what social welfare demands.[62]

In other words, from the perspective of tax law, the extent of exposure to pollution affects an individual's "Haig-Simons income"—that is, the ability to consume goods and services and to save. This is the typical object of taxation.[63] For the poor who are not polluted upon, the service of clean air is free; for those that are polluted upon, it is not. The same income does not buy the same services in different locations, so they should be treated differently. Once the poor who are polluted upon are compensated, this disjunction no longer occurs. Adopting equity-informed legal rules that use that information allows the joint system of taxes and legal rules to target redistribution to those who are most deserving.

CONCLUSION

Considering equity in legal rules does not always promote social welfare, but determining whether it does so depends on the appropriate set of policy options and assumptions about how the world works. This Note shows that, in many cases, merely finding the "efficient" rule is not a shortcut to promoting social welfare. Because taxes are distortionary, there is considerable scope for "inefficient" legal rules to promote social welfare, by distributing entitlements to the poor in ways that permit reductions in taxes. That is, legal rules can be an inexpensive way of reducing income inequality. In the central case analyzed in this Note, the equity-informed legal rule simply makes polluters pay and compensates victims, which may be desirable independent of its effect on inequality.

Thus, the Note opens up new areas for exploration—in particular, theoretical and empirical analysis to understand when, more precisely, legal rules or taxes are more efficient at achieving distributional goals. The same principles developed here could be applied to such varied topics as nuisance law, cost-benefit analysis, minimum wage laws, or hours regulations. Such research could lead to a world that is richer and has a distribution of income

62. Note that this reasoning does not address the horizontal-equity concerns resulting from a poor individual in a well-off group receiving less of an entitlement, while a poor individual in a low-income group—but who is subjected to similar harms—receives more of an entitlement.

63. *See* MICHAEL J. GRAETZ & DEBORAH H. SCHENK, FEDERAL INCOME TAXATION: PRINCIPLES AND POLICIES 83-84 (7th ed. 2013).

more in line with our values. This Note provides a framework for supplementing traditional law and economics' emphasis on efficiency in order to achieve these goals.

That said, action need not wait on empirical evidence in some cases. For example, in the motivating example of this Note—the poor being polluted upon by a factory owned by the rich—equity and efficiency may *reinforce* each other in their implications for how to change existing law.[64] In this case, to increase efficiency, as well as redistribute to the poor and compensate those who suffered injury, more compensation to those harmed by pollution may be justified in settings like those described in this Note.[65]

64. For example, Kaplow and Shavell take as their baseline example an i-efficient strict liability rule, in which a plaintiff pays for any harm he causes. *See* Kaplow & Shavell, *supra* note 2, at 677-78. Yet, in the real world, we rarely see strict liability rules in the United States; instead, we usually see negligence rules. *See, e.g.*, JAMES A. HENDERSON JR. ET AL., THE TORTS PROCESS 451 (8th ed. 2012).

65. One reason that rules may exist that are neither efficient nor equitable is that courts systematically allocated rights in the nineteenth century so as to subsidize industrialization. *See* MORTON J. HORWITZ, THE TRANSFORMATION OF AMERICAN LAW, 1780-1860, at 85-101 (1977). *But see* Gary T. Schwartz, *Tort Law and the Economy in Nineteenth-Century America: A Reinterpretation*, 90 YALE L.J. 1717 (1981) (arguing that subsidizing industry was not the primary driver in the adoption of the negligence standard).