AIMSTER AND OPTIMAL TARGETING

Daryl J. Levinson[*]

INTRODUCTION

Deeply embedded in the conventional legal mindset is a common law model of adjudication and liability premised on the ideal of bilateral corrective justice. The model begins with a harm suffered by a victim and inflicted by a wrongdoing injurer. Liability attaches to the injurer, who is then required to repair the harm to the extent possible, which usually means compensating the victim for her loss. The result, ideally, is the restoration of the status quo ante for the victim (if not for the injurer).

From an economic perspective, every element of this model is dubious. At least since Coase, we have understood that bi- (or multi-) lateral causation, and capacity to reduce costs, makes normatively loaded categories like injurer and victim misleading.[1] Adjudication and liability need not be retrospective to harm; in a number of different contexts, prospective and probabilistic liability may be more efficient.[2] Backward-looking compensation is not in itself a goal, and the efficient level of compensation from an instrumental perspective will not necessarily, or even usually, be measured by the amount of harm.[3] Finally — and the focus of this Commentary — liability need not be directly targeted at the "injurer" or "wrongdoer," the primary or proximate causer of harm. Courts (and even economic theorists) often fail to recognize that the optimal target of liability is not the wrongdoing injurer but rather some other individual, institution, or group that is well situated to monitor and control the wrongdoer's behavior and can be motivated to do so by the threat of "indirect" liability.

This Commentary uses Judge Posner's opinion in *In re Aimster Copyright Litigation*[4] to highlight the gap between the theoretically optimal scope of indirect liability and the much more limited willingness of courts to depart from the traditional model. *Aimster* held that a peer-to-peer file-swapping service could be held indirectly liable for its

[*] Professor of Law, Harvard Law School.

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

[2] *See, e.g.*, Steven Shavell, *Liability for Harm Versus Regulation of Safety*, 13 J. LEGAL STUD. 357, 365 (1984).

[3] *See* Richard Craswell, *Instrumental Theories of Compensation: A Survey*, 40 SAN DIEGO L. REV. 1135, 1139 (2003).

[4] 334 F.3d 643 (7th Cir. 2003).

role in facilitating the copyright infringements of its users.[5] Stretching beyond the traditional model, Judge Posner applied the economic theory of vicarious and gatekeeper liability to recognize that Aimster was a more efficient target of liability than its users, the direct infringers. A subsequent decision by the Supreme Court in a similar case, *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*,[6] illustrates the difficulty most courts would have in following Judge Posner away from the direct liability premise of the traditional common law model. But even Judge Posner's relatively progressive approach in *Aimster* only goes some of the distance toward a full economic analysis of the optimal target of liability. The deeply intuitive assumption that liability should be aimed directly at primary or proximate wrongdoers makes it difficult to recognize the full potential of indirect liability strategies in law and elsewhere.

I. *AIMSTER* AND INDIRECT LIABILITY

Following in the footsteps of Napster's initial success and ultimate legal failure, Aimster was a company that distributed software that enabled its users to swap electronic files on the Internet.[7] Most of these files contained copyrighted music, making most, if not all, of the users guilty of copyright infringement.[8] The copyright holders were free to sue the individual infringers, and occasionally did, but that was not a promising tactic from the music industry's perspective. The users of services like Napster and Aimster are too numerous, anonymous, and impecunious for individual lawsuits against them to do much good (not to mention the music industry's reluctance to litigate against its most avid customers). In light of such recurring obstacles to holding individual infringers liable, copyright law offers copyright holders the alternative of suing an intermediary — a person or entity that does not itself infringe but that facilitates the infringement of others — for "contributory" infringement.[9] For example, Universal City Studios famously (and unsuccessfully) sued Sony under this theory, arguing that Sony's VCR-precursor Betamax machine facilitated copyright infringement by users who taped television broadcasts.[10]

Indirect liability strategies of this kind tend to arise in legal contexts where direct liability is clearly ineffective and there is a salient third party possessing contractual or technological leverage over the primary wrongdoer. The paradigmatic example is the vicarious liabil-

---

[5] *See id.* at 653.
[6] 125 S. Ct. 2764 (2005).
[7] *Aimster*, 334 F.3d at 646.
[8] *See id.* at 647.
[9] *Id.* at 645–46.
[10] Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 456 (1984).

ity of employers for torts committed by employees within the scope of their employment. The functional case for vicarious liability in this context emphasizes the frequent insolvency or invisibility of individual employee-tortfeasors. Redirecting liability toward employers holds out the hope of reducing accident costs by encouraging employers to hire safer workers, take precautions, or scale back activity levels.[11] Indirect liability is thus understood as a second-best strategy, useful when direct liability against primary wrongdoers breaks down.

This line of argument has been used to justify or advocate the indirect liability of managed care organizations (MCOs) for the malpractice of affiliated physicians, employers for workplace sexual harassment, bartenders and social hosts for damages inflicted by their intoxicated customers and guests, and gun manufacturers for shooting deaths. In some of these settings, the target of indirect liability is charged with some independent wrongdoing of its own. For instance, lawyers who knowingly assist in fraudulent securities transactions can be held liable for their own wrongdoing.[12] In other settings, liability is purely vicarious, requiring no showing of fault on the part of the target. In the classic case of respondeat superior liability, the employer can be held liable for its employees' torts irrespective of whether it exercised due care in hiring, training, monitoring, and the like. What unites all of these cases — formally fault-based and faultless liability alike — is the potential efficiency of motivating a well-situated third party to police and prevent wrongdoing.

For indirect liability to be efficient, two conditions must hold. First, and most obviously, the target of indirect liability must be capable of controlling wrongdoing in some cost-effective way. Predictably, targets of indirect liability routinely argue that they lack any control over primary wrongdoers. MCOs, for instance, have responded to the threat of indirect liability by emphasizing their lack of control over the treatment decisions of physicians. To the extent this argument is based merely on present arrangements, it is a non sequitur; the relevant question is how much control MCOs *could* exercise, at reasonable cost, if they were properly motivated. It is the target's *capacity* for control that determines the efficient scope of indirect liability. Vicarious liability for employers is limited to the work-related activities of employees,

---

[11] *See* Lewis A. Kornhauser, *An Economic Analysis of the Choice Between Enterprise and Personal Liability for Accidents*, 70 CAL. L. REV. 1345, 1380 (1982); Alan O. Sykes, *The Economics of Vicarious Liability*, 93 YALE L.J. 1231, 1280 (1984).

[12] *See* Reinier H. Kraakman, *Gatekeepers: The Anatomy of a Third-Party Enforcement Strategy*, 2 J.L. ECON. & ORG. 53 (1986).

which, presumably, employers are in a better position to monitor and control than nonwork activities.[13]

Second, the subsidiary costs of indirect liability must not be too high. These costs can take many different forms but often stem from the problem of spillover or excess control. MCOs threatened with liability for physician malpractice will have an incentive to be more aggressive in screening and regulating their affiliated physicians. This may lead to better patient care, but it may also threaten the professionalism of physicians by subjecting them to corporate micromanagement.

This is the framework of analysis that Judge Posner applied in *Aimster*. The opinion first recognized that direct liability was unworkable, owing to "the impracticability or futility of a copyright owner's suing a multitude of individual infringers."[14] Judge Posner proceeded to weigh the costs and benefits of imposing indirect liability on Aimster, analogizing the company to the owner of a massage parlor whose employees are selling sex in the massage rooms.[15] Aimster's claim that it lacked actual knowledge of the content of its users' encrypted exchanges[16] was no more persuasive or relevant than the massage parlor owner's claim that he has no idea what happens behind his closed doors. What mattered was not how Aimster had, in fact, arranged its operation — intentionally disabling its monitoring capacity in order to distance itself from liability for copyright infringement — but its *potential* ability to reduce the amount of infringement.[17] If Aimster could restructure its technology to screen or block illegal file transfers at reasonable cost, it should be required to do so.

If not, the alternative scenario is that Aimster must shut down entirely. In assessing this possibility, the resulting spillover costs, incurred by current and future *legal* users of Aimster's software, must be balanced against the benefits of suppressing illegal uses of the software.[18] For Judge Posner, the balance was clear. Illegal uses of Aimster swamped legal ones. Moreover, just as the few legitimate massage parlor customers could easily substitute other providers, legal file-swappers would lose little by switching to other exchange mechanisms.

---

[13] *See* Alan O. Sykes, *The Boundaries of Vicarious Liability: An Economic Analysis of the Scope of Employment Rule and Related Legal Doctrines*, 101 HARV. L. REV. 563, 565 (1988).

[14] *Aimster*, 334 F.3d at 645.

[15] *See id.* at 651.

[16] The encryption prevented Aimster as well as others from discerning the contents of the files. *See id.* at 650.

[17] *See id.*

[18] Judge Posner rightly ridiculed Aimster's argument, offered as an interpretation of the *Sony* precedent, that the existence of some small number of legal users was sufficient to immunize the company from liability. The massage parlor owner would not be immunized from liability just because his employees provided the occasional therapeutic massage. *See id.* at 651.

Judge Posner thus concluded that Aimster, like the massage parlor owner, could be held indirectly liable. In instructive contrast, Judge Posner explained that a seller of slinky dresses who counts prostitutes among his customers probably should not be held liable for aiding and abetting prostitution, given the high cost to him of distinguishing legal and illegal uses, the high spillover costs of preventing lots of perfectly legitimate dress sales, and his limited impact on the overall costs of prostitution.[19]

II. *GROKSTER* AND THE GRAVITATIONAL PULL OF DIRECT LIABILITY

Judge Posner's application of indirect liability in *Aimster* is a relatively modest, respectably precedented step away from the traditional model's automatic attribution of liability to the intuitively primary wrongdoer. But it is a step that has proven difficult for other courts to take. Hearing a similar case two years later, the Supreme Court ultimately reached the same result as in *Aimster*, but labored unconvincingly to recharacterize its finding of indirect liability as continuous with conventional direct liability. That case, *Grokster*, is a telling indication of the very limited distance from the traditional model that most courts will be willing to stray.

Like Aimster, Grokster distributed software that allowed users to share electronic files through peer-to-peer transfers.[20] A Ninth Circuit panel held that Grokster was not contributorily liable, reasoning that the company had done nothing more than distribute software that could be used for legal as well as illegal activity, and emphasizing that Grokster lacked actual knowledge of what its users did with the software once it was in their hands[21] — much like Sony's relationship to the Betamax and its users. The Supreme Court unanimously reversed, holding that Grokster, like Aimster, could be held liable for contributory copyright infringement.[22]

The Court's analysis, however, is very different from Judge Posner's in *Aimster*. Justice Souter's opinion for the Court paid no heed to the instrumental efficacy of indirect liability. In the Court's view, even if it were clear that forcing Grokster to redesign its software to allow it to block illegal uses or to shut itself down entirely was a more efficient way of preventing copyright violations than targeting individual infringers, that would not be a sufficient basis for imposing indirect liability. Instead, Grokster had to be cast not just as a well-

---

[19] *See id.*

[20] Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd., 125 S. Ct. 2764, 2770 (2005).

[21] *See id.* at 2774–75.

[22] *See id.* at 2782.

situated problem solver, but as a wrongdoer in its own right. The Court found that Grokster was guilty of purposefully "inducing" its users to infringe copyrights by taking "active steps" to encourage them, such as marketing to former users of Napster, a target audience of known recidivist infringers.[23] Thus, the Court reassured, holding Grokster liable for infringement was consistent with the traditional model of direct liability imposed upon an independent wrongdoer.

Converting indirect liability to direct by rebranding the target of indirect liability as an independent wrongdoer is a common move in legal analysis, one that obscures the analytic distinction, mentioned earlier, between fault-based and purely vicarious forms of indirect liability. Courts' inclination to recharacterize indirect liability as direct reflects the pull of the traditional model and concomitant discomfort with the notion of punishing an "innocent" third party, even when the instrumental benefits of doing so are readily apparent. Fortunately, the rhetorical transformation of an "innocent," yet efficient, target of indirect liability into an independent wrongdoer is easy enough to accomplish in either of two ways.

First, the defendant can be blamed for allowing the relevant harm to occur. In any case where indirect liability makes sense, by hypothesis, the target will be the least cost avoider of the harm yet will have failed to prevent it. To be sure, the target's causal relationship to the harm may look like a mere omission to intervene ("failure to prevent"), as opposed to the kind of affirmative conduct to which moral blame and legal liability more readily attach, but this is hardly an insurmountable obstacle. Advantageously situated targets might simply be described as possessing a moral and legal "duty" to act, warranting blame and liability for default. Alternatively, the causal contribution of the target to the ultimate harm can be artfully redescribed in active and purposeful terminology like "aiding and abetting" (as in *Aimster*)[24] or intentional "inducement" (as in *Grokster*).[25] Certainly in a case like *Aimster* or *Grokster*, where the business model of the defendant depends on copyright infringement by its users, the distinction between inducing or encouraging infringement on the one hand, and merely marketing a product that facilitates infringement and declining to intervene to prevent it on the other, is vanishingly thin — and, of course, functionally irrelevant.

Second, the "innocence" of the target can be undermined by emphasizing its relationship with the primary wrongdoer. Courts and commentators tend to justify strict vicarious liability by pointing to the

---

[23] *Id.* at 2772–73.
[24] *Aimster*, 334 F.3d at 651.
[25] *Grokster*, 125 S. Ct. at 2780–82.

target's profit from the primary wrongdoer's illegal activities or the target's consent to liability, implicit in its contractual relationship with the primary wrongdoer. Thus, it is deemed fair to hold employers vicariously liable for the torts of their employees because employers profit from their employees' activities and because they contractually consent to the employment relationship. This strategy, too, was on display in *Grokster*, where the Court bolstered its theory of inducement by emphasizing that Grokster's revenues, derived from advertising, increased with the volume of (mostly illegal) use.[26] Once Grokster was pinned with its own wrongdoing — whether actively encouraging infringement or tainted profiteering — traditional liability could follow.

III. Optimal Targeting

Economic theorists and sophisticated judges like Posner have no stake in legitimating indirect liability by redescribing it as directly targeting an additional wrongdoer. Nonetheless, they have for the most part acquiesced in the conventional wisdom that indirect liability is appropriate only in the limited set of cases in which direct liability is clearly impractical and an alternative target capable of exercising formal control over the primary wrongdoer, through a contractual or otherwise profitable relationship, is readily available.[27] We should recognize, however, that the possibility of targeting sanctions away from the primary wrongdoer potentially poses a much more systematic challenge to the traditional model.

For one thing, indirect liability need not be conceived merely as a second-best solution to a discrete set of problems with direct liability. When some easily identifiable third party is better positioned to monitor and control the behavior of the primary wrongdoer than a court or other government regulator, indirect liability will be more efficient than even perfectly functioning direct liability. And there is good reason to expect that some such third party often will be available. Courts and other regulators tend to confront high information costs and have at their disposal only a limited set of tools for shaping behavior. Private actors engaged in ongoing relationships with the primary wrongdoers will often possess both better information and lower-cost, more effective mechanisms of control. In the classic case of vicarious employer liability, for instance, properly motivated employers may be able to reduce the risk of employee-inflicted harm more effectively and at lower cost than a court. Employers tend to have better knowledge

---

[26] *See id.* at 2781–82.

[27] *See, e.g.*, Alan O. Sykes, *Vicarious Liability*, *in* 3 THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 673 (Peter Newman ed., 1998).

of risks and risk avoidance techniques than even the most highly motivated individual employee, and they can implement systematic precautions, including careful screening of hires, training, and promotion incentives. Shifting liability onto employers may therefore be efficient even in cases where wrongdoing employees are fully solvent and are identifiable to plaintiffs and courts.[28]

Moreover, applications of indirect liability need not be limited to contractual relationships. Consider the array of indirect liability strategies currently being deployed by the United States and other countries against terrorist organizations. Israel has launched attacks upon Lebanon in retaliation for the acts of Hezbollah fighters operating from within Lebanese borders. Likewise, the United States invaded Afghanistan to depose a government that permitted terrorist groups to operate with impunity within its borders, and it then invaded Iraq to preempt the threat that weapons of mass destruction Saddam Hussein was thought to possess would fall into the hands of terrorists (among other reasons). Occupying U.S. soldiers in Iraq have been accused of resorting to collective reprisals against Iraqi civilians for insurgent attacks, and the Israeli military has bulldozed the homes and villages of Palestinian attackers in the occupied territories. On the home front, the U.S. government threatens to prosecute or deport anyone who provides "material support" to terrorist organizations.[29] In all of these settings, the case can be made that indirect liability is more effective than the direct alternatives, given the great difficulty of identifying and reaching the individual terrorists who are the ultimate targets.

Further, the target of indirect liability need not be limited to a single individual or entity. Legal liability or other types of sanctions are often efficiently aimed at some collectivity or group. For example, legal systems routinely impose collective liability on shareholders for the torts and crimes of corporations, on co-conspirators for one another's criminal acts, and on polluters for the costs of cleaning up toxic waste. Outside of formal legal settings, governments impose economic and military sanctions on the populations of other nations in order to motivate them to change the policies (or identities) of their leaders, and voters collectively sanction political parties for the failures of a President. Mobilizing groups as monitors and regulators of their members' conduct is often an efficient strategy. Compared with an outside sanctioner like a court, groups tend to have more information about their members' activities and access to a wider array of low-cost yet highly

[28] High transaction costs may prevent employers and employees from realizing these efficiency gains by shifting liability contractually.

[29] 18 U.S.C. § 2339B (2000 & Supp. IV 2004).

effective internal regulatory strategies. When a teacher punishes the entire class because a student shot a spitball when his back was turned, he is leveraging both the students' superior information and their ability to translate official sanctions into effective deterrence. The students know who did it, and they may have at their disposal a variety of informal social sanctions that are much more effective than the official threat of detention.[30]

Families are another common target of indirect liability. Since ancient times, social sanctions have been directed against families for the misbehavior of individual members (and social rewards bestowed for virtuous behavior). Especially in traditional societies where family reputation heavily influences an individual's opportunities, including marital and employment prospects, a person who brings social opprobrium upon his family by committing a crime or otherwise misbehaving will inflict heavy costs upon his relatives. It is easy to see how targeting rewards and punishments at families can serve as an effective tool of social control. Concern for their collective reputation provides families with strong incentives to monitor and control the behavior of their members. Because families tend to be highly solidary — and to become more so in societies that subject them to collective punishments and rewards — they can often do so cheaply and effectively.[31] Operating on the same principles, a number of legal regimes formally punish family members for their relatives' crimes.[32] The U.S. Supreme Court recently construed a federal statute to allow public housing officials to evict entire families when any relative living in the household is convicted of a drug-related crime, regardless of whether the family actually knew about the drug use.[33] In a setting where direct liability threatened against drug dealers and users has proven especially ineffective, mobilizing family members to police one another's criminal behavior may be a worthwhile experiment.

The Israeli Supreme Court recently heard an even more compelling case for indirect, familial liability.[34] The Israeli military had deported three family members of Palestinian terrorists from the West Bank to the Gaza Strip.[35] The Court recognized the compelling functional justification for deporting relatives: prospective suicide bombers who

---

[30] *See generally* Daryl J. Levinson, *Collective Sanctions*, 56 STAN. L. REV. 345, 378–86 (2003).

[31] Sometimes, unfortunately, *too* effectively. In some cultures, "honor" killings of females by their fathers or brothers in order to expunge the familial shame of socially proscribed sexual associations are a common occurrence. This is a setting in which the cost of "excess" control is tragically high.

[32] Many more, of course, impose de facto punishments — for example, by imprisoning the family's primary wage earner or childcare provider.

[33] *See* Dep't of Hous. & Urban Dev. v. Rucker, 535 U.S. 125, 130 (2002).

[34] *See* HCJ 7015/02 Ajuri v. IDF Commander [2002] IsrSC 56(6) 352.

[35] *Id.* para. 7.

cannot be deterred by the threat of individual punishment might be influenced by some combination of altruistic regard for their relatives and susceptibility to their relatives' sanction-motivated pressure not to act.[36] Nevertheless, the Court concluded that punishing "innocent" relatives was morally and legally impermissible. "From our Jewish Heritage," President Barak admonished, "we have learned that 'Fathers shall not be put to death because of their sons, and sons shall not be put to death because of their fathers; a person shall be put to death for his own wrongdoing.'"[37]

This is a Biblical lesson that courts and theorists in the U.S. legal system may have learned all too well. The full potential, and indeed reality, of indirect liability as a legal and nonlegal regulatory strategy may have been masked by moralistic and legalistic aversions to deviations from the direct liability norm of sanctioning the intuitively primary wrongdoer. Certainly our presumption in favor of imposing direct liability and against displacing sanctions to "innocent" third parties is, from an efficiency perspective, too strong, blinding us to efficient targets of indirect liability outside of the conventional patterns. If the Old Testament is to be our guide, the passage cited by President Barak should be given no more weight than an accompanying passage from *Deuteronomy* holding the elders of the nearest town accountable for an unsolved homicide in the surrounding fields[38] — one of many Biblical examples of arguably efficient indirect liability.

IV. *AIMSTER*'S AIM

File-swapping software cases like *Aimster* and *Grokster* have been framed as a choice between direct liability against the users of the software and contributory liability against the software's distributors — quasi-contractual intermediaries of the sort conventionally targeted when direct liability seems clearly inadequate, as in these cases. We should recognize, however, that users and distributors are not the only actors in a position to reduce copyright infringement at reasonable cost. There are a number of other promising targets of liability (or their functional equivalents) in these cases.

One is the music industry. As Justice Breyer's concurring opinion in *Grokster* discussed, there are several strategies the music industry might pursue if left to its own devices to discourage copyright infringement.[39] Technological possibilities include encoding "fingerprints" within digital files to make it easier to identify infringers or en-

---

[36] *See id.* para. 5.

[37] *Id.* para. 24 (quoting *Deuteronomy* 24:16).

[38] *See Deuteronomy* 21:1–9.

[39] *See* 125 S. Ct. 2764, 2794–95 (2005) (Breyer, J., concurring).

crypting files in such a way as to prevent digital copying.[40] At the same time, the music industry might reduce the relative benefits of illegal file-swapping by continuing its efforts to make lawful downloading an attractive alternative.[41] The history of successful innovation by copyright holders, and by the music industry in particular, to lower the transaction costs of contractual licensing suggests reason for optimism on this score.[42] A holding of no contributory copyright infringement in a case like *Aimster* or *Grokster* would create strong incentives for the music industry to pursue one or more of these options.

Another possible consequence of cutting off contributory liability is a federal regulatory solution. As Justice Breyer observed in *Grokster*, "[c]ourts are less well suited than Congress to the task of 'accommodat[ing] fully the varied permutations of competing interests that are inevitably implicated by such new technology.'"[43] As we have seen, the cost-benefit analysis of contributory liability in cases like *Aimster* and *Grokster* turns on empirical questions about the technological possibilities and costs of blocking illegal uses while permitting legal ones, or — if the only option is shutting down the software providers — the costs of foregone legal uses, including presently unforeseen and unpredictable future uses of the technology. There is reason to question whether courts should be in the business of setting market-entry policy for new technologies.[44] Even if Congress lacks significantly better information, it has a broader range of solutions available, including such "joint care" possibilities as requiring the music industry to tag copyrighted files and providing a corresponding safe harbor from contributory liability for software producers who block the copying of files bearing such tags.[45] Of course, courts would also be setting policy by refusing to find contributory liability in these cases — but perhaps only provisionally. We should expect that judicial decisions imposing costs on the music industry, a cohesive and powerful political lobbying force, would more effectively prompt congressional action than judicial decisions shifting these costs to the nascent peer-to-peer software industry and its outlaw users.[46]

---

[40] *See id.* at 2795.

[41] *See id.*

[42] *See* Robert P. Merges, *Contracting into Liability Rules: Intellectual Property Rights and Collective Rights Organizations*, 84 CAL. L. REV. 1293, 1299 (1996).

[43] 125 S. Ct. at 2796 (Breyer, J., concurring) (second alteration in original) (quoting Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 431 (1984)).

[44] *See* Tim Wu, *The Copyright Paradox*, 2005 SUP. CT. REV. 229, 231.

[45] Judge Posner suggested this solution himself in a blog post responding to *Grokster*. Posting of Richard Posner to The Becker-Posner Blog, http://www.becker-posner-blog.com/archives/2005/07/ (July 3, 2005, 22:15 EST).

[46] *See* Tim Wu, *When Code Isn't Law*, 89 VA. L. REV. 679, 739–40 (2003).

Stepping outside of the frame of the *Aimster* and *Grokster* cases, we can identify further potential targets of indirect liability. Universities are one possibility. Some significant fraction of illegal file-swapping takes place among college students through university networks and could be prevented if the universities were motivated by the threat of liability to intervene. The Motion Picture Association of America sent up a trial balloon for this strategy by complaining to Harvard University about copyright infringement by a student connected to the university's network, leading Harvard to threaten sanctions against the student.[47] Other possibilities include the set of intermediaries in the electronic chain connecting file-swapping users: internet service providers (ISPs) at various levels of the network (such as cable, DSL, and phone companies), Microsoft and other operating system designers, and even computer manufacturers. So long as these entities have the technological capacity to change their operations in such a way as to screen or block illegal file transfers, or to make it easier for others to do so, they should be considered as promising targets of indirect liability as well.[48]

Other potentially efficient targets may be less intuitive. Here is a modest proposal: sue Bill Gates. Gates is the richest person in the world. He is the Chairman of Microsoft. He must be very clever. There is every reason to expect that Gates, if properly motivated by the threat of liability, could do a better and more cost-effective job of dealing with copyright infringement on the Internet than anyone else, including the U.S. government. Of course, we mere mortals have no idea exactly how Gates might go about it, and therefore we can only make the wildest guesses about the costs and benefits of using him as a target of indirect liability. But like other uses of strict liability to harness private information or technological innovation, all that is required is some reason to believe in the relatively greater capacity of one potential problem solver over another. The ignorant-but-smart money may be on Gates.

Needless to say, without knowing more, we can only guess whether the most efficient solution to the problem of copyright infringement on the Internet might come from directing the costs, and the concomitant incentive to reduce them, onto software producers, the music industry, Congress, universities, ISPs, or some other target. That is the point. A complete analysis of the optimal location of liability would start from a position of agnosticism among the full set of plausible alternatives. Policymakers should recognize that there is always a choice to

---

[47] *See* Jonathan Zittrain, *Internet Points of Control*, 44 B.C. L. REV. 653, 668 (2003).

[48] *See* JACK GOLDSMITH & TIM WU, WHO CONTROLS THE INTERNET? 65–85 (2006) (identifying these intermediaries and other potential targets).

be made about where to aim legal (and nonlegal) sanctions, and that the optimal target will not necessarily be the individual whose behavior the sanctioner ultimately hopes to affect. Judge Posner's approach to indirect liability in *Aimster* is a step in the right direction. But the distance left to cover from an efficiency perspective, combined with the reluctance of the Supreme Court to follow Judge Posner's lead, provides one of many examples of the persistent gap between economic analysis of law and law.