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COLLECTIVE MYOPIA

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COLLECTIVE MYOPIA

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Collective myopia is a widespread but poorly understood problem that causes classes of similarly situated investors to underinvest in prospectively efficient improvements like education, capital, and preventive medical care. We introduce the concept of collective myopia, describe it, offer several solutions to it, and identify and discuss the real-world conditions that affect these solutions’ relative desirability. We apply our analysis to health insurance, prescribing a mandatory-membership clearinghouse, to be created by federal legislation, that, when an insured switches from one insurer member to another after the original insurer covers a prospectively efficient treatment identified by vote of the insurer members, would require the subsequent insurer to compensate the original one. One specific impact of our proposal would be to induce insurers to cover bariatric surgery, which is the only effective and efficient treatment for morbid obesity, a condition that affects 1 in 20 adults in the United States and accounted for 5.5% of United States medical expenditures, or $63.2 billion, in 2004.

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Collective myopia is a widespread but poorly understood problem that causes classes of similarly situated investors to underinvest in prospectively efficient improvements to third parties. This happens when investors can invest to improve third parties related to them in a way that generates value over time, but each third party can expropriate this value from the original investor by switching to a subsequent investor from the class. In health insurance, for example, insurers underinvest in covering various types of efficient preventive care because covering these types of care is cost-effective only after more than three years, while insureds switch insurers on average every three years. When an insured switches insurers, the subsequent insurer begins enjoying the benefit of the efficient preventive care that the original insurer paid for. So, for example, even if a particular type of preventive care generates enough benefits to pay for its costs after five years, and is therefore efficient, no insurer will cover that treatment because no insurer expects to enjoy more than three years of its benefits. This result is inefficient and socially irrational. By inducing insurers to cover efficient preventive care despite their collective myopia, society could...
achieve the same or even a higher level of health while also reducing total medical expenses. Collective myopia in health insurance is an even more important problem from perspectives other than maximizing economic efficiency, since the value at stake, health, is a precondition to almost everything else that people take to be valuable.

Collective myopia appears in many areas of human interaction other than the market for health insurance. For example, collective myopia affects workplace education and foreign direct investment. As Gary Becker has argued, employers underinvest in workplace education that makes employees more productive in the long run because employees switch employers regularly. And, as Andrew Guzman has argued, foreign investors as a class underinvest in long-run improvements like fixed capital in developing countries because, since property rights in those countries are unstable, each foreign investor expects ownership of the capital she buys to switch to subsequent investors in the future. Collective myopia is a foundational concept that explains decision making in these and many other areas, but that has not been identified, much less systematically studied, in the literature.

In this Article, we identify and describe collective myopia and potential solutions to it. We first offer a general theoretical framework for analyzing collective myopia and assessing solutions. We then apply this framework to the market for health insurance, arguing that collective myopia leads health insurers to underinvest in prospectively efficient medical treatments. We argue that the best solution to collective myopia in health insurance is a mandatory-membership clearinghouse among health insurers. The theoretical part of our article contributes to a literature in the law reviews that identifies and analyzes the basic structures of human interaction and constructs formulas for prescribing solutions to the problems that these structures of interaction present across many different areas of law. Such general analyses include Guido Calabresi and A. Douglas Melamed’s analysis of property, liability, and inalienability rules; Louis Brandeis’s analysis of jurisdictional competition as a race to the bottom or race to the top; Garrett Hardin’s analysis of the tragedy of the commons; Susan Rose-
Ackerman’s analysis of efficient harm prevention and strategic negligence;⁶ and Stephen Breyer’s analysis of alternative approaches to economic regulation.⁷ The application to health insurance demonstrates that our theoretical analysis is actually useful.

Part I describes collective myopia in more detail and distinguishes it from two related problems: the general problem of expropriation, in which an investor has too small an incentive to make an efficient investment in creating something because she expects an expropriator to take that thing after it is created;⁸ and the general problem of public-goods provision, in which many beneficiaries of a public good decline to contribute to its provision in the hope of free-riding on the contributions of others.⁹ While collective myopia described on its own may seem strange and esoteric, we show how it emerges as a combination of these two familiar problems. We also show how this combination makes collective myopia different from and more difficult to solve than either the problem of expropriation or the problem of public-goods provision considered alone.

Part II develops a theoretical framework for solving collective-myopia problems. Specifically, this Part describes solutions to collective myopia and the real-world conditions that affect their relative desirability. We propose three types of solutions: mandating investments; internalizing the cost and total social value of investments to the original investor or the third party; and instating a governance regime among the investors that would require them to make specified investments and compensate each other in specified amounts for switches.

Part III applies our analysis of collective myopia to health insurance.

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⁶ Susan Rose-Ackerman, Dikes, Dams, and Vicious Hogs: Entitlement and Efficiency in Tort Law, 18 J. LEG. STUD. 25, 27-33 (1989) (discussing reimbursement for investments in efficient precautions as a way to solving the risk of strategic negligence).


⁸ See, e.g., RICHARD A. POSNER, LAW AND ECONOMICS 32 (6th ed. 2003) (“Imagine a society in which all property rights have been abolished. A farmer plants corn, fertilizes it, and erects scarecrows, but when the corn is ripe his neighbor reaps it and takes it away for his own use. . . . [A]fter a few such incidents the cultivation of land will be abandoned and society will shift to methods of subsistence (such as hunting) that involve less preparatory investment.”).

One example of a treatment that insurers do not cover because of collective myopia is bariatric surgery.10 Bariatric surgery costs $25,000 to perform and produces about $5,000 of benefits per year after the surgery. Insurers do not cover it even though it is the only effective and efficient treatment for morbid obesity because it is cost-effective for insurers only after about five years, while insureds switch insurers on average every three years. Bariatric surgery is only one example of a treatment that insurers do not cover because of collective myopia. Smoking cessation, alcohol cessation, and other types of preventive care may be others. After applying the theoretical framework that we present in Part II to describe and analyze the relative desirability of various possible solutions, we conclude that the best solution to collective myopia in health insurance is a mandatory-membership clearinghouse that would require its insurer members to compensate each other when an insured switches from one insurer to another after the original insurer covers a prospectively efficient treatment.

I. COLLECTIVE MYOPIA

The problem of collective myopia11 has two aspects. First, it is a form

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10 We describe our own empirical study of bariatric surgery’s effectiveness and make the case that collective myopia is what causes insurers not to cover it in Ronen Avraham, Collective Myopia in the Provision of Bariatric Surgery (working paper 2006).

11 Others have used collective myopia before, but not in the sense in which we use it here. The most common prior use is just a use of the two words together in their ordinary English sense of “many people acting shortsightedly” without any sustained analysis. See, e.g., Jeffrey Rudd, Restructuring America’s Government to Create Sustainable Development, 30 WM. & MARY ENV’T L. & POL. REV. 371, 424 (2006) (“Congress recognized that government action is necessary to overcome free-market consumption patterns that ‘may have long-term, world transforming effects reflect[ing] a kind of collective myopia in the form of emphasis on short-term considerations at the expense of the future.”) (quoting CASS R. SUNSTEIN, AFTER THE RIGHTS REVOLUTION: RECONCEIVING THE REGULATORY STATE 59 (1990)). Another prior use is a use of the two words in their ordinary English sense of “many people focusing on what is nearby rather than far away.” See, e.g., Juan Charles Kunich, Losing Nemo: The Mass Extinction Now Threatening the World’s Ocean Hotspots, 30 COLUM. J. ENV’T L. 1, 102 (2005) (“Collective myopia must be at or near the top of the list” of “formidable barricades to the international law solution” to “the current mass extinction in our oceans.” “Individual nations, and their leaders and citizens, are usually very near-sighted when it comes to seeing the forest for the trees, or the ocean for the kelp. They do not see the extraordinary importance of remote marine hotspots to the world as a whole, or to themselves. If the aphorism, ‘out of sight, out of mind,’ is true, then nothing could be more beyond the consciousness of most people than undiscovered life forms in the ocean’s midnight zone.”); Carol M. Rose, Left Brain, Right Brain and History in the New Law and Economics of Property, 79 OREG. L. REV. 479, 487 (2000) (“Our collective myopia about certain forms of common property – our insistence until recently that those forms of property were either tragic or non-existent – is a part of a larger narrative about who we are as a nation. There are some forms of property that we just did not want to notice.”); Michael L. Seigel, A Pragmatic Critique of Modern
of the general problem of expropriation, in which an investor declines to invest because she expects someone else to expropriate her investment and hence expects not to enjoy the value that her investment generates. Second, it is a form of the general problem of public-goods provision, in which no member of a class of beneficiaries of a good is willing to contribute to the cost of providing that good unless enough others also contribute and in which each beneficiary seeks to contribute as little as is consistent with the good being provided. We will begin by building up a general description of collective myopia. Then we will compare collective myopia to the general problems of expropriation and public-goods provision to highlight those features of collective myopia that make it importantly different.

It is sometimes cumbersome to express aspects of collective myopia in English rather than math because what can be denoted by a few letters in math often requires several words in English. On the other hand, writing

Evidence Scholarship, 88 NW. U. L. REV. 995, 996–97 (1994) (“As a shared ideology, rationalism has caused the evidence community to suffer from what might be termed ‘collective myopia.’ As a result of their rationalist orientation to the processes of adjudication, evidence scholars have generally failed to see any application of postmodern jurisprudential perspectives, such as csls or plps – or feminism or critical race theory, for that matter – to their intellectual domain. In this respect, evidence thought has been stagnant.”); Steven Shiffrin, The First Amendment and Economic Regulation: Away from a General Theory of the First Amendment, 78 NW. U. L. REV. 1212, 1217 (1983) (“Each commercial speech case the Court has considered has involved advertising or the proposal of a commercial transaction, and almost all of the commentators have looked at the ‘commercial speech’ problem through the lens of commercial advertising. The collective myopia has distorted something quite important: the commercial speech that has been beneath the protection of the first amendment for all these years has not been confined to commercial advertising.”).

In a line of Japanese work, the use of collective myopia to refer to a focus on what is close at hand rather than distant is said to involve “Habermasian and Foucaultian positions.” Nobuyuki Chikudate, Collective Myopia and Defective Higher Educations Behind the Scenes of Ethically Bankrupted Economic Systems: A Reflexive Note from a Japanese University and Taking a Step Toward Transcultural Dialogues, 38 J. BUS. ETHICS 205, 205, 212 (2002) (“This study adopts Chikudate’s (1999a) concept, collective myopia, which describes the conditions of extinct reflexivity and intensive normalization. Japanese business communities are interned into the state of collective myopia which describes the situation in which the members of certain communities or organizations are able to make sense and give sense in each context in which they live, but are not able to monitor the emerging order or pattern as a whole created by themselves.”) (citing Nobuyuki Chikudate, The State of Collective Myopia in Japanese Business Communities: A Phenomenological Study for Exploring Blocking Mechanisms for Change, 36 J. MGMT. STUD. 69 (1999)); see also, e.g., May M.L. Wong, Organizational Learning via Expatriate Managers: Collective Myopia as Blocking Mechanism, 26 ORG. STUD. 325 (2005); Nobuyuki Chikudate, Collective Myopia and Disciplinary Powewr Behind the Scenes of Unethical Practices: A Diagnostic Theory on Japanese Organization, 39 J. MGMT. STUD. 289 (2002). We are not that flexible.

12 In Alfred Marshall’s view, this was the only excuse for writing mathematics to
in math might obscure what we mean, since it would require readers to translate the math back into English. It might also give the impression that our analysis is technically more sophisticated than it is. Our compromise has been to provide concise mathematical statements in the footnotes and use math in the Figures, but to keep the main text in English. We give definitions of mathematical expressions in Figure 1 and as we go.

A. General Form of Collective Myopia

We will now describe and analyze collective myopia. In section 1, we present a simple interaction between a class of similarly situated investors, one of whom is the original investor and another of whom will become the subsequent investor, and a third party. Collective myopia is already visible in this simple interaction, which we analyze in sections 2 and 3. In section 2, we explain how this interaction allows the third party and the subsequent investor to expropriate part of the value of the original investor’s investment. In section 3, we explain how the original investor’s investment is a public good that benefits all the potential subsequent investors. In section 4, we generalize the simple interaction we present in section 1 to accommodate real-world situations with many investors, many third parties, uncertainty about when third parties will switch, and differences among the investors in the rates at which third parties switch to them from other investors and from them to other investors. In section 5, we summarize.

1. Basic Interaction

In this section, we present the basic interaction that gives rise to collective myopia and which we will analyze in sections 2 and 3. The basic interaction that gives rise to collective myopia involves two members of a class of similarly situated investors and a third party.13 The third party starts off in a relationship with one of the two investors, who we call the original investor, but later dissolves that relationship and forms a new one with the other investor, who we call the subsequent investor. The original

13 See infra Pt. III.A for a concrete application to the insurance coverage for bariatric surgery.
investor can decide whether to invest to improve\textsuperscript{14} the third party at some cost. This improvement generates value over some period, and this value flows, as it is generated, to whichever investor is then related to the improved third party. Figure 1 illustrates:

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure1.png}
\caption{Basic Interaction of Collective Myopia}
\end{figure}

2. Expropriation Aspect

In this section, we show how the basic interaction of section 1 and Figure 1 already displays collective myopia’s expropriation aspect. In the basic interaction, the original investor bears the full cost of investing to improve the third party, but enjoys only that part of the total value that the improvement generates before the third party switches to the subsequent investor. The rest of the total value goes to the subsequent investor.\textsuperscript{15} If the part of the total value of the improvement that the original investor enjoys before the third party switches investors is less than the cost to her of investing, then she will not invest. But if the total value of the improvement, before and after the switch, is more than the cost to the original investor of investing, then the improvement is socially desirable.\textsuperscript{16}

\textsuperscript{14} We will use \textit{improvement} to refer to the actual improvement, for example, bariatric surgery, and \textit{investment} to refer to the cost of making the improvement.

\textsuperscript{15} The bidirectional arrow between $I_1$ and $3P$ indicates $I_1$’s investment and the value the improved $3P$ generates for $I_1$ before switching to $I_2$. The unidirectional arrow between $I_2$ and $3P$ indicates the value $3P$ generates for $I_2$ after switching. That arrow is not bidirectional since $I_2$ does not invest in improving $3P$.

\textsuperscript{16} In combination with the assumption that there are no same-time externalities, which is discussed in the next paragraph in the main text, this assumes that the social value of the investment is its total private value. Whether this assumption is reasonable depends on the situation in which collective myopia arises: it seems more likely to be appropriate in analyzing collective myopia in the provision of workplace education than in analyzing collective myopia in the provision of health or foreign investment necessary to third-world
When both these things are true, the Figure 1 interaction leads the original investor not to invest in an improvement that is socially desirable; she acts myopically in that she ignores value that the improvement generates too far in the future, namely, after the time at which she expects the third party to switch investors. This privately rational but socially wasteful behavior is what makes collective myopia a problem.\textsuperscript{17}

This analysis assumes that there are no same-time positive externalities, that is, that at every point in time all the value the improvement generates goes to the investor to whom the third party is related. This assumption is, in general, unrealistic.\textsuperscript{18} In the bariatric-surgery context, for example, the value that a bariatric surgery generates is split between the insurer, the patient, the patient’s employer, and others. The relative legal entitlements of the parties, including those constructed by contract and hence determined by market forces and relative bargaining power, determine who enjoys these benefits. For example, a morbidly obese patient should be able to negotiate lower premiums for the same coverage after bariatric surgery since bariatric surgery reduces her expected medical costs.\textsuperscript{19} Such a renegotiation would

\textsuperscript{17}The original investor invests in the improvement if $V^i(x,0,t_x) > c(x)$, but the improvement is socially desirable if $V^i(x,0,t_x) + V(x,t_x,T_x) = TSV(x) > c(x)$, where $TSV(x)$ is the total social value of improvement $x$. This creates an underinvestment problem if and only if $V^i(x,0,t_x) < c^i(x) < TSV(x)$.

We assume $\forall i,i''$, $V_{i}^i(x;\cdot;\cdot) = V_{i'}^i(x;\cdot;\cdot)$ and $c_i^i(\cdot) = c_i^{i'}(\cdot)$ so we can drop the subscripts on $V$ and $c$. This assumption is justified because many differences among the investors in the value of improved third parties or in the cost per third party of the investment obscure the public-goods aspect of collective myopia because they introduce a distinct question about who should produce and “consume” the improvement or suggest that the improvement is really different for each investor because it is bundled with some other feature of that investor that affects the improvement’s cost or value. Moreover, in the real world, it is easy to confuse differences in the value of improved third parties or in the cost per third party of the investment with same-time externalities: one investor may appear to benefit less than another from improved third parties because it is splitting those benefits with others on less generous terms. We set aside the problem of this sort of heterogeneity as already well understood, although, like same-time externalities, it will be relevant to setting the payments involved in some types of solutions to collective myopia.

\textsuperscript{18}It is more realistic in some areas than in others. The evidence suggests, for example, that employers capture much more of the benefit of general training than one might expect: “the effect of an hour of training on productivity growth is about five times as large as the effect on wage growth.” Mark A. Lowenstein & James R. Spletzer, *Dividing the Costs and Returns to General Training*, 16 J. LABOR ECON. 142, 142 (1998) (collecting citations to empirical studies).

\textsuperscript{19}In practice, such renegotiation is unlikely in the health-insurance context since most
shift some of the value that the bariatric surgery generates from the insurer to the insured, creating a same-time positive externality. Similarly, a morbidly obese employee should be able to negotiate a higher wage for the same job after bariatric surgery since it reduces the employer’s expected medical costs and absenteeism.\(^{20}\) Same-time positive externalities, like the third party’s switching investors, reduce the share of the total value of an improvement that the original investor enjoys, and so reduce the original investor’s incentive to invest. They thus compound the problem created by the expropriation aspect of collective myopia. Nonetheless, maintaining the assumption that there are no same-time positive externalities is appropriate because the problem that such externalities pose is already well understood\(^{21}\) and considering it here would obscure the new and interesting features of collective myopia. The effect of this assumption is that the sum of the value that flows to the original and subsequent investors is the total private value of the improvement in which the original investor invests.

The Figure 1 interaction would pose only a trivial problem if the original investor and the subsequent investor could contract for the subsequent investor to pay the original investor enough to induce her to invest. The subsequent investor would be willing to pay up to the value the improved third party would generate for her after switching, and the original investor would be willing to accept in exchange for investing anything greater than the cost to her of investing less the value the improved third party would generate for her before switching. Whenever the improvement is socially desirable, the subsequent investor is willing to pay more than the original investor is willing to accept.\(^{22}\) It is essential to this

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20 See Avraham supra note XXX at XX.


22 Let r be the payment. Then the original investor invests if 
\[ V^i(x,0,t_i) + r > c^i(x), \] so the original investor is willing to accept 
\[ r > c^i(x) - V^i(c,0,t_i), \] and the subsequent investor is willing to pay if 
\[ V^i(x,t_s,T_x) - r > 0, \] so the subsequent investor is willing to pay 
\[ r < V^i(x,t_s,T_x). \] The range of acceptable payments is nonempty if 
\[ c^i(x) - V^i(x,0,t_s) < V(x,t_s,T_x), \] which is true if and only if
solution that the original investor will invest if and only if the subsequent investor makes the payment. This is because, in the Figure 1 interaction, it is impossible to exclude the subsequent investor from benefiting from the investment once it is made – for example, by preventing the third party from switching to her or preventing her from accepting the switching third party. Given this, if the original investor will invest even without the subsequent investor’s payment, then the subsequent investor’s payment can get her nothing and so she will be unwilling to make it; in other words, the subsequent investor can free ride on the original investor’s investment. In the next section, we will see how the multiplicity of potential subsequent investors means that any particular subsequent investor does not know that her contribution to a payment to the original investor is necessary to induce the original investor to invest, with the consequence that all the subsequent investors are unwilling to contribute. This is another way of saying that the payment to the original investor is a public good from the perspective of the potential subsequent investors.

3. Public-Goods Aspect

In this section, we show how the basic interaction of section 1 and Figure 1 gives rise not only to the expropriation problem discussed in the last section, but also to a problem of public-goods provision. The public-goods aspect of collective myopia arises from the fact that the subsequent investor in the Figure 1 interaction is drawn from a class of similarly situated investors, none of whom knows at the time the original investor decides whether to invest to which of them the third party will switch. This has two effects. First, each of the potential subsequent investors, before she knows whether the third party will actually switch to her, is willing to pay at most only the value the improved third party would generate for her after switching, discounted by the probability that the third party will actually switch to her. Second, each of the possible subsequent investors may not be willing to pay even this much because it is no longer clear that the original investor will not invest unless each of them pays: if the other possible subsequent investors, or enough of them, pay the original investor enough to make it worth her while to invest, then she will invest whether any of the other individual subsequent investors pays or not.²³

This collective-action effect grows as the gap between the improvement’s total value to the original and subsequent investors and its cost to the original investor increases. All else equal, as the improvement’s

\[ c^I(x) < V^I(x,0,t_i) + V^I(x,t_i,T_i) = TSV, \]

in which case \( x \) is socially desirable.

total value grows, the original investor must enjoy less of that value in order to be willing to invest, and so there are more ways in which the potential subsequent investors can pay the original investor to invest without any particular potential subsequent investor contributing to the payment. The situation in which the subsequent investor is drawn from a class of similarly situated investors is analogous to the situation in which there is a single subsequent investor but that investor is a cooperative that has many members and no settled rule for allocating costs, such as the payment to the original investor, among them. The cooperative should pay the original investor to invest, but might not do so because its members suffer from the fractional-value and free-rider effects just described. Figure 2 illustrates:

Figure 2 is similar to Figure 1, except that in Figure 2 we portray the subsequent investor as a cooperative of potential investors. As Figure 2 shows, the cooperative would pay the original investor an amount between, on one hand, the value the improved third party would generate for it after switching and, on the other hand, the original investor’s cost of investing less the value the improved third party would generate for her before

24 See id. at 68.
26 Let Pr(n) be the probability an improved third party switches to investor n. Then the analysis is just as in n. 44, supra, except that a payment can only be made if sufficiently many of the potential subsequent investors agree to contribute to it. Each potential subsequent investor is willing to contribute \( f_r \) defined as fractions of the maximum payment the subsequent investors as a whole are willing to make, for all n in the contributing group such that \( f_1 + \ldots + f_n \) works, but results in the maximum payment; any smaller payment results in a surplus that the investors must divide amongst themselves by bargaining.
switching. This point is important because the fact that there is a range of possible payments, rather than only a single possible payment, means that there is some room for error in deciding what the payment will be. So long as the payment falls within the range, the original investor will invest in the efficient improvement. This simplifies the burden of determining the payment to the original investor. We will come back to this point when we explain the possible solution to collective myopia in health insurance.

It is not enough to solve this problem that there is one potential subsequent investor who is almost certain to be the actual subsequent investor, for example, in the health-insurance context, an insurer with very large market share. To demonstrate this point, we can further distinguish two aspects of the collective-action effect by considering a special case of Figure 2 in which one of the potential subsequent investors is almost certain to be the one to whom the third party will eventually switch. In particular, assume that the value of an improved third party to the two other potential subsequent investors discounted by the very small probability that the investor will switch to either of them is so small that even if they agreed to pay all of that value to the original investor, it would not be enough to induce the original investor to invest. Then the free-rider aspect of the collective-action effect disappears with respect to the potential subsequent investor who is almost certain to be the actual subsequent investor: some contribution from him is necessary to induce the original investor to invest. But a distinct bargaining aspect of the collective-action effect remains. Although some contribution from the almost-certain subsequent investor is necessary to induce the original investor to invest, a range of such contributions would be sufficient, with those at the low end supplemented by contributions from the other two investors.

Despite the presence of the “large” subsequent investor, if there is not a settled rule for allocating costs among the potential subsequent investors, the potential subsequent investors as a whole may fail to make the payment

\[ \forall n \neq n^*, \Pr(n^*) \gg \Pr(n), \text{ where } n^* \text{ is the potential subsequent investor who is almost certain to be the actual subsequent investor, and } n \text{ are all the other investors.} \]

\[ \sum_{n \neq n^*} \Pr(n)V^i(x, t, T_x) < c(x) - V^i(x, 0, t). \]

\[ \text{Cf. Olson, The Logic of Collective Action, supra n. XXX, at 22–29, 33–34. This arrangement can lead to what Olson called the “systematic tendency for ‘exploitation’ of the great by the small,” id. at 29 (emphasis removed), in which the subsequent investors most likely to receive switching insureds pay the full cost of inducing the original investor to invest, even though this benefits the subsequent investors less likely to receive switching insureds too.} \]

\[ \text{The range of contributions for investor } n^* \text{ is } (c^i(x) - V^i(x, 0, t_x) - \sum_{n \neq n^*} \Pr(n)V(x, t_x, T_x), \Pr(n^*)V(x, t_x, T_x). \]
necessary to induce the original investor to invest.

4. Generalization

In this section, we generalize the basic interaction of section 1 and Figure 1 so that it describes real-world instances of collective myopia. In the real world, collective myopia usually arises in contexts in which all the investors are making investment decisions and third parties are constantly switching among them, that is, contexts in which every investor is always in the position of the Figure 1 or Figure 2 original investor with respect to some third parties and in the position of the Figure 1 subsequent investor or the Figure 2 potential subsequent investors with respect to other third parties. We can use Figures 1 and 2 to build a picture of this more realistic situation by eliminating some simplifying assumptions.

First, in our discussion of the basic interaction in Figure 1, we took the third party to be an individual. We now take the third party to be a class of third parties and the investment decision to be a decision that applies to all members of that class. The members of a class need not be identical. We will see that a main administrative cost involved in several of the solutions to collective myopia is the cost of determining what the class of third parties should be for purposes of selecting a type of solution and then for purposes of applying that solution to real-world conduct. The definition of the class can affect whether the improvement is socially desirable; importantly, it can also affect the size of the payments necessary to induce investors to invest in the improvement.

Second, in Figures 1 and 2, we took the time at which the third party switches as given, so that the value of the improved third party to both investors was simply, respectively, the value generated by the improved third party for the original investor up to that time and the value generated by the improved third party for the subsequent investor from that time until the end of the improvement’s productive life. We now take the time at which the third party switches to be unknown when the original investor decides whether to invest; instead, we take the original investor to know a distribution of possible switching times. From the distribution of possible switching times and the value generated by an improved third party over any given time, the original investor can calculate the value that it can

\[ V^I(x, 0, t_s). \]

\[ V^I(x, t_s, T_s). \]

\[ V^I(x, T_s, T_2). \]

We take the probability of never switching to be within this distribution, so that the outflow in Figure 3 below, \( V^I(x, f_{OUT}). \), represents all third parties who began with the investor, not just those third parties who began with the investor but eventually leave.
expect to receive if it invests.\textsuperscript{34} This suffices to describe the outflow of improved third parties.

Third, in Figures 1 and 2, we use the subsequent investor and the potential subsequent investors, respectively, to represent the inflow of improved third parties. We now take each of the investors to have both an outflow of third parties and inflows of third parties from each of the other investors. The value of an investor’s outflow depends on whether it invests. The value of an investor’s inflows depends on whether the other investors invest. Again, to calculate the expected value of an inflow from a particular other investor, we need the distribution of possible switching times from that investor to this investor and the value generated for this investor by improved third parties who switch at those times.\textsuperscript{35} Figure 3 illustrates:

\begin{figure}[h]
\centering
\includegraphics[width=0.8\textwidth]{inflows_outflows.png}
\caption{Inflows and Outflows}
\end{figure}

The expropriation and public-goods aspects of collective myopia both appear in Figure 3. Expropriation is present because each investor enjoys only a part of the total social value of the improvement.\textsuperscript{36} The public-goods aspect is present because it is in the interest of the investors as a whole to

\textsuperscript{34} For example, if each improved third party switches with probability 0.2 at the end of years 1, 2, 3, 4, and 5 and the cumulative value generated by an improved third party that switches at the end of these years is 200, 500, 900, 1400, and 2000 respectively, then the expected switching time is at the end of 3 years and the expected value of an improved third party is the probability-weighted average of the cumulative values, or $0.2 \cdot 200 + (0.2)500 + (0.2)900 + (0.2)1400 + (0.2)2000 = 1000$. Notice that it is not sufficient to know the average switching time and the cumulative value for that time, as it is in Figure 1, with a known switching time. Using just those two pieces of information and treating the average switching time as a known switching time would lead to an expected value of 900, the cumulative value after the average switching time of 3 years.

\textsuperscript{35} We now represent that information as, for every investor, $f_{\text{OUT}}$ and $f_{\text{INn}}$, with $n$ ranging across all the other investors, and we amend $V_{i}(\cdot,\cdot,\cdot)$ to $V_{i}(\cdot,\cdot)$ where the new $V$ takes an improvement and a flow and returns the value of that flow, thus abstracting from how this is calculated. Note that $f_{\text{OUT}}$ includes information about third parties who don’t switch within the period under consideration.

\textsuperscript{36} Here it is useful to retain the subscripts to make clear which flows we are talking about. Investor $n$ enjoys $V_{n}(x,f_{\text{OUT}})$ rather than $V_{n}(x,f_{\text{OUT}}) + \sum_{n \neq n} V_{n}(x,f_{\text{INn}})$, where the summation is over all the inflows to other investors from investor $n$. 
compel each one of them to invest, but the free-rider and bargaining problems can prevent them from doing this.

The nature of the flows of third parties among the investors is central to collective myopia because inflows of improved third parties can be a substitute for payment for investment. In the special case with no flows, collective myopia disappears entirely, since it is flows that create collective myopia’s expropriation aspect. In the special case with flows but never any net flows, that is, in which outflows equal inflows in both magnitude and timing for all investors (and with the assumption that the value of improved parties and the cost of the investment per improved party is the same across investors), the investors would collectively prefer to require each other to invest even without compensation for investment or switches, since the value lost in each outflow equals the value gained in one of the inflows and the total value generated by the investment exceeds its cost.

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37 Each subsequent investor \( n' \neq n \) is willing to pay \( r \) to original investor \( n \) to induce her to invest if \( V_{n'}^I(x, f_{Ina}) - r > 0 \), so each subsequent investor is willing to pay \( r < V_{n'}^I(x, f_{Ina}) \). Investor \( n \) is willing to invest if \( V_n^I(x, f_{OUT}) + r > c_n^I(x) \), so investor \( n \) is willing to accept \( r > c_n^I(x) - V_n^I(x, f_{OUT}) \). The payment range is nonempty if \( c_n^I(x) - V_n^I(x, f_{OUT}) < \sum_{n' \neq n} V_{n'}^I(x, f_{Ina}) \), which is true if and only if

\[
V_n^I(x, f_{OUT}) + \sum_{n' \neq n} V_{n'}^I(x, f_{Ina}) > c_n^I(x),
\]

that is, if \( x \) is socially desirable.

38 This is the case in which \( \forall n, n', V_n^I(x, f_{Ina}) = 0 \). By the assumptions that all value is private value and there are no same-time externalities, \( TSV = V_n^I(x, f_{OUT}) + \sum_{n' \neq n} V_{n'}^I(x, f_{Ina}) \), and by the statement of the case the second term is zero, so \( TSV = V_n^I(x, f_{OUT}) \). Investor \( n \) invests if

\[
V_n^I(x, f_{OUT}) + \sum_{n' \neq n} V_{n'}^I(x, f_{Ina}) > c_n^I(x).
\]

By the statement of the case, the second term on the left hand side is zero, so we have that \( n \) invests if \( V_n^I(x, f_{OUT}) = TSV > c_n^I(x) \), which is the socially desirable result.

39 \( TSV = V_n^I(x, f_{OUT}) + \sum_{n' \neq n} V_{n'}^I(x, f_{Ina}) \) and investor \( n \) enjoys

\[
V_n^I(x, f_{OUT}) + \sum_{n' \neq n} V_{n'}^I(x, f_{Ina}).
\]

But when inflows equal outflows for all investors at all times, \( \forall n', n, V_n^I(x, f_{Ina'}) = V_n^I(x, f_{Ina}) \), so \( \sum_{n' \neq n} V_{n'}^I(x, f_{Ina}) = \sum_{n' \neq n} V_n^I(x, f_{Ina'}) \), so investor \( n \) enjoys TSV and invests if and only if \( TSV > c_n^I(x) \), which is the socially desirable result.
Figure 4 illustrates:

Even in this special case, however, the free-rider and bargaining aspects of the problem might prevent the investors from agreeing on even a simple mutual mandate. In general, to make mandatory investment in the interest of each investor, each investor must be paid an amount at least equal to the cost of the investments the mandate requires her to make minus the value she expects to realize from the original third parties in whom the mandate requires her to invest before they switch plus the value she expects to realize from inflows of third parties in whom the mandate requires other investors to invest.\(^\text{40}\) Whenever the improvement is socially desirable, it is possible to muster these payments from other investors: for investors with net inflows, the just-described payment will be negative, making it a maximum tax they can be required to pay rather than a minimum payment they must receive under a mandate for the mandate to be collectively preferred. If payments are mandated and are within the range that makes investing in the interest of each investor, then it is not necessary to mandate the actual investment, since each investor will invest whether or not investment is mandatory. Further, using a payment mandate rather than an investment mandate has the advantage of allowing an investor who faces idiosyncratically high costs of investing with respect to a particular improvement to not invest without upsetting the investment decisions of others.

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\(^{40}\) Investor \(n\) must be paid \(r\) such that

\[
V_n^I(x, f_{OUT}) + \sum_{n \neq n} V_n^I(x, f_{INo}) + r > c_n^I(x),
\]

that is, \(r > c_n^I(x) - V_n^I(x, f_{OUT}) + \sum_{n \neq n} V_n^I(x, f_{INo}).\)
5. Summary

In this section, we summarize our description of collective myopia so far. Collective myopia is a problem that arises out of multiple interactions like that in Figure 1 among a class of similarly situated investors. It is a problem of myopia because investors discount value that an improvement generates too far in the future since they expect that value to flow to the subsequent investor to whom the improved third party switches. Each investor’s conduct is individually rational, but results in a collective decision that is myopic and hence wasteful for the class of investors as a whole. Collective myopia is a collective-action problem because the investors do not know which of them will be the subsequent investor for any particular third party at the time the original investor decides whether to invest. They must therefore act collectively to pay the original investor (in the form of an immediate payment or a commitment to pay on switching), but may fail to do so because of the free-rider and bargaining problems if they lack some well-established rule for dividing the cost of the payment among them. The result is that the investors do not invest in socially beneficial improvements. Moreover, the collective-action problem means that the fact that the investors collectively prefer a mandatory-investment regime to the collective-myopia status quo is insufficient for that regime to solve collective myopia. Importantly, it is also unnecessary for a mandatory-investment regime to be collectively preferred for the regime to solve collective myopia. The regime need only require the right investments. But making a mandatory-investment regime collectively preferred can be useful in eliciting information from the investors about what improvements are socially desirable.

B. Collective Myopia as a Combination of Expropriation and Public-Goods Provision

It is instructive to consider the general problems of expropriation and public-goods provision, the two problems of which collective myopia is a species, because doing so highlights what is distinct about collective myopia and points the way to solving it. We call these general problems


42 See, e.g., Harold Demsetz, The Exchange and Enforcement of Property Rights, 7 J. L. & Econ. 11 (1964).

43 See, e.g., POSNER, LAW AND ECONOMICS, supra n. XXX, at 32.

aspects of collective myopia because which comes to the fore depends on how you look at switching. If you look at switching as a decision on the part of third parties and subsequent investors, the situation looks like one of expropriation, but if you look at switching as a natural phenomenon, the situation looks like one of mustering contributions for a public good. In real-life conduct, collective myopia has aspects of both problems, which makes it different from either one of them independently considered.

1. Expropriation

In the general problem of expropriation, an investor can decide whether to invest to create something socially desirable, but decides not to invest because she expects an expropriator to take what she creates and hence not to benefit from her costly investment.45 Figure 5 illustrates:

There are several known ways to solve this problem. Property in land solves an expropriation problem, known as tragedy of the commons, that causes landholders to invest too little in developing land for fear that others will take it after they have invested.46 Prizes for inventions solve an expropriation problem that causes would-be inventors not to invent or not to disclose inventions for fear that others will copy or use the invention and so deny them part of its benefit.47 Collective myopia is a species of the expropriation problem because outflows of improved third parties deny investors part of the benefit of the improvements they invest in and it is investors’ expectation of outflows that causes them not to invest in socially desirable improvements.

45 See, e.g., POSNER, LAW AND ECONOMICS, supra n. XXX, at 32.
Solving an expropriation problem requires inducing the investor to invest. This can often be done without government intervention. For example, the expropriator might be able to retaliate against the investor for not investing, or the investor might be able to retaliate against the expropriator for taking after she has invested.\(^{48}\) The expropriator’s retaliation might take the form of defenestration, while the investor’s retaliation might be refusing to deal in the future with an expropriator who takes now. Third parties can also create the necessary incentives, most often incentives to maintain some sort of reputation.\(^{49}\) For example, the expropriator may want a reputation for not taking because he knows that reputation will assist him in dealings with other investors.\(^{50}\) Moreover, even if retaliation and reputation do not result in the socially desirable outcome, government adjustments to one of them may be sufficient. For example, an advisory court that disseminates credible information about takings could increase the effect of a taking on an expropriator’s reputation.\(^{51}\) The difference between such adjustments and traditional state intervention is one of degree: letting the investor employ a sheriff in retaliating against an expropriator who takes can be seen as bolstering retaliation or as state intervention.

One traditional legal solution to expropriation is to mandate conduct absolutely. In Figure 5, this would mean mandating investing or not investing and taking or not taking. Another solution is to attach a positive or negative sanction to conduct with the intent that private actors will take that sanction into account when deciding what to do. In Figure 5, this would mean rewarding or punishing investing, for example, by giving prizes to investors who create, or rewarding or punishing taking, for example, by making taking tortious. Still another solution is to mandate conduct, but allow one party to wave the mandate. In Figure 5, this might mean giving the investor property in what she creates, that is, mandating

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\(^{48}\) The international setting, in which there is no centralized enforcement mechanism, makes clear the effectiveness of retaliation and other private enforcement mechanisms. See, e.g., K.A.D. Camara, \textit{Costs of Sovereignty}, 107 W. VA. L. REV. 385 (2005).

\(^{49}\) Reputation has become a popular enforcement mechanism among students of international law. See, e.g., Andrew Guzman, \textit{A Compliance-Based Theory of International Law}, 90 CAL. L. REV. 1823 (2002).

\(^{50}\) See, e.g., Lisa Bernstein, \textit{Private Commercial Law in the Cotton Industry: Creating Cooperation Through Rules, Norms, and Institutions}, 99 MICH. L. REV. 1724, 1737–39 (2001) (“when mills do not comply with arbitration awards, their noncompliance quickly becomes known throughout the merchant and banking communities, and the mill typically finds itself either unable to purchase cotton, or able to purchase it only at a relatively high price or for cash prior to delivery”).

\(^{51}\) See, e.g., Andrew T. Guzman, \textit{International Tribunals: An Economic Analysis} (working paper 2006) (arguing that international tribunals are mainly effective in providing information that facilitates retaliation or reputation updating).
that the expropriator not take what the investor creates, but allowing the
investor to waive this mandate for a price of her choice. Which of these is
best depends on the relative information, incentives, and capacity of the
state and private decision-makers to identify the socially desirable outcome
and the costs of administration and private transacting involved in the
solution. We discuss solutions to collective myopia in the next section, so
here it is enough to make some general observations that give the flavor of
the analysis to come. If the state knows the socially desirable outcome, its
decision-makers have appropriate incentives to pursue that outcome, and
the administrative costs of absolute mandates are relatively low, then
absolute mandates are desirable. If there is private information about the
socially desirable outcome, private parties are competent decision-makers,
the socially desirable outcome is close to the outcome that maximizes the
satisfaction of private preferences, and transaction costs are low, then
waivable absolute mandates are desirable. If there is private information
and private parties are competent decision-makers, but the socially desirable
outcome diverges from that which maximizes the satisfaction of private
preferences or transaction costs are high, then sanctions are desirable. All
this is well understood.

The most important difference between collective myopia and the
general expropriation problem is that collective myopia involves joint
expropriation by the third party and the subsequent investor. This is
relevant in three ways. First, it means that there are two expropriators who
can be acted upon and either of whom can prevent expropriation. Even if
the third party is judgment proof, so that sanctions do not affect her and she
cannot transact for a property right vested in the original investor, the
subsequent investor may not be, and so these solutions may still work.
Second, and more importantly, it means the third party can act as a bridge in
time allowing the original investor to bargain implicitly with the subsequent
investor without knowing who the subsequent investor will be. For
example, if the original investor can create an obligation on the part of the
third party to repay the costs of the investment not yet recovered when she
switches investors, the subsequent investor can discharge this obligation to
facilitate a switch. This kind of implicit bargaining evades the collective-
action problem involved in agreements between the investors made at the
time the original investor decides whether to invest. Third, joint
expropriation is a likely source of positive same-time externalities, which
exacerbate the underinvestment that collective myopia causes. In order to
induce improved third parties to switch to them, potential subsequent

52 These correspond to Calabresi and Melamed’s inalienability, liability, and property
rules, respectively. See Guido Calabresi & A. Douglas Melamed, Property Rules, Liability
investors are likely to share some part of the benefit generated by an improved third party with her. Less important differences are that collective myopia involves a class of similarly situated investors, which opens up collective-action alternatives to the traditional solutions to expropriation, and that collective myopia involves only partial expropriation, which means that some socially desirable improvements may be made even though the investors are affected by collective myopia.

2. Public Goods

In the general public-goods problem, there is some good that is socially desirable but that unavoidably benefits a large population once it is created. The problem is to get this population to identify and contribute to paying the cost of investing in this public good despite each member of the population’s incentive to free ride on the contributions of others and seek to contribute as small a share as possible. The standard solution is some kind of governance mechanism through which a subset of the population can reach a decision binding on the whole. In designing the governance mechanism, the ultimate goal is that the collective investment and mandated contributions be a socially beneficial package. One way of ensuring this is by designing the governance mechanism so that the package is mutually preferred. If social value is the sum of private value and investors assess private value correctly, then mutual preference ensures social desirability.

A unanimity rule assures that the outcome is mutually preferred, but is undesirable because it does nothing to solve the free-rider and bargaining problems that justify a governance mechanism in the first place. As the

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54 As Buchanan & Tullock put it:

As unanimity is approached, dramatic increases in expected decision-making costs may be predicted. In fact, when unanimity is approached, the situation becomes radically different from that existing through the range of less inclusive rules. At the lower levels there is apt to be little real bargaining. If one member of a potential agreement asks for exorbitant terms, the other members will simply turn to someone else. As unanimity is approached, however, this expedient becomes more and more difficult. Individual investment in strategic bargaining becomes highly rational, and the costs imposed by such bargaining are likely to be high.

With the most inclusive decision rule, unanimity, each voter is a necessary party to any agreement. Since each voter, then, has a monopoly of an essential resource (that is, his consent), each person can aim at obtaining the entire benefit of agreement for himself. Bargaining, in the sense of attempts to maneuver people into accepting lower returns, is the only recourse under these circumstances, and it seems highly likely that agreement would normally be almost impossible.
voting rule is relaxed from unanimity, however, it becomes possible for the majority or supermajority to use the governance mechanism to benefit itself at the expense of the minority, which is no longer able to block collective action. This does not necessarily mean that the outcome is not socially desirable, since an outcome can be socially desirable without being mutually preferred, but it removes the guarantee of social desirability that a unanimity rule provides. The trick is to find a substitute for unanimity that causes members of the population to vote for a package if and only if it is mutually preferable.

For a majority or supermajority to take advantage of a minority, it must be able to treat that minority differently. Substantive universality rules are a way of preventing this. A substantive universality rule is a rule that restricts the outcome of the governance mechanism to rules that apply consistently to all members of the population in some respect, including members of the minority. For example, a substantive universality rule in the collective-myopia context might be that payments mandated by a governance mechanism must be calculated by the same formula for each insurer. Compensation is another substitute for unanimity. Compensation avoids the free-rider and bargaining problems by replacing the minority’s private valuation of what it is giving up with an official one. For example, a compensation rule in the collective-myopia context might be that any losses as a result of mandated investments, as measured by a court, be made good.

Whether a successful governance mechanism can be designed to solve a situation of collective myopia depends on more facts about the situation than are present in the general description of collective myopia we have considered so far. Governance mechanisms are more likely to be effective when the investors are very similar to each other since in such cases it will be easier to design rules and pick voting thresholds that prevent a majority of them from taking advantage of a minority. Governance mechanisms are also more likely to be effective when there is an easily applied formula for compensation that can be put in place as a mandatory rule to cut short bargaining on compensation and that ensures that mandatory investment in socially desirable improvements is mutually beneficial. Finally, the need for collective action to solve collective myopia arises only if expropriation by switching is taken as given; legal rules that prevent expropriation by switching obviate the need for collective action since they independently induce investment in socially desirable improvements. The next section discusses alternative solutions to collective myopia in more detail.

_BUCHANAN & TULLOCK, THE CALCULUS OF CONSENT, supra n. XXX, at 68–69._
II. SOLUTIONS TO COLLECTIVE MYOPIA

A solution to collective myopia must identify socially desirable improvements that are not being made because of collective myopia and then induce investors to invest in those improvements, while minimizing behavioral distortions and administrative and transaction costs. We begin by identifying several potential solutions: government-mandated investments; banning switching; banning switching without the consent of the original investor; allowing the original investor and the third party to contract for the original investor’s investing in exchange for the third party’s promise to compensate the original investor when she switches; making the third party’s switching or the subsequent investor’s accepting a switch tortious; providing government rewards or punishments for investments in the amount of this tort liability; allowing the third party to make the investment decision and then contract with an investor to invest in exchange for a payment; and a governance regime under which the investors would be bound to make certain investments and to compensate each other in certain amounts for switches. We then identify the real-world circumstances, like private information about the social desirability of improvements, public-choice problems, transaction costs, and the like that make some of these solutions better than others.

A. Types of Solutions

We organize our discussion of solutions into three parts. The first deals with solutions that target the investment decision directly, inducing investors to invest despite the prospect of uncompensated switches. The second deals with solutions that target the expropriation problem by internalizing the benefits of improvements to the party making the investment decision. The third deals with solutions that target the collective-action problem among investors. The second approach focuses on collective myopia’s expropriation aspect, while the third focuses on its public-goods aspect.

1. Mandating Investments

One solution is for the government to determine what improvements are socially desirable and then directly induce investors to invest in these improvements by rewarding investment or punishing failures to invest. The main drawback of this solution is that it requires the government to determine what improvements are socially desirable. Assessing an instance of this solution requires assessing the governmental processes that are used to make this decision. In particular, it is important to know how that process can be influenced by investors, third parties, or others with a private interest in what improvements are eventually mandated, for example,
people whose goods or services are used in creating a particular improvement. The range of possible governmental processes is wide. For example, the process need not be administrative – rather than have an expert body at the NIH decide on health-coverage mandates, a court might decide whether an improvement is socially desirable after an adversarial proceeding brought by one investor against another. The design of governmental processes to deal with particular situations of collective myopia depends very much on the particulars of the situation, such as what processes are already in use and the types and power of lobbying groups, and so is not amenable to general analysis. But, in the next Part, we will discuss the prospect of government mandates in health insurance in the course of applying our theory, and this will be an example of the analysis.

Another concern with mandates is their administration. A reward system may be difficult to finance depending on the size and frequency of the rewards necessary to induce investment. Moreover, it may be difficult to determine the conditions under which rewards are to be paid and punishments imposed, since, in a regime of rewards and punishments, investors have an incentive to fake what is rewarded and disguise what is punished. It may be cheaper for the government simply to make the investments itself than to attempt to induce private parties to do so.

2. Internalizing Costs and Benefits to the Original Investor or Third Party

The next type of solution is to internalize the costs and benefits of an improvement in one party who then makes the investment decision. The obvious candidate for this internalization is the original investor, since she is the party who makes the investment decision in Figure 1. But we can also think of shifting the investment decision to the third party or to the pool of potential subsequent investors. We cannot shift the decision to the actual subsequent investor since no one knows who the subsequent investor will be at the time the investment decision is made. And we set aside shifting the decision to the pool of potential subsequent investors for the moment, since that raises collective-action problems that we will take up in the next section. This leaves us with the original investor or the third party as subjects of our internalization scheme.

If she invests, the original investor bears the cost of investing and enjoys that part of the value of an improved third party that the third party generates before switching. Getting the original investor to invest in, and only in, socially desirable improvements requires a transfer to her of, on one hand, more than the cost of the investment to her less that part of the value of the improved third party that she already enjoys, but, on the other hand, less than the total social value of the investment less that part of the value of
the improved third party that she already enjoys.\footnote{A transfer \( r \) such that \( c'_1(x) - V'_1(x, f_{OUT}) < r < TSV(x) - V'_1(x, f_{OUT}) \).} A transfer below this range will be insufficient to induce the original investor to invest in socially desirable improvements, while a transfer above this range will induce the original investor to invest even in socially undesirable improvements. Transferring the total social value less that part the original investor already enjoys, that is, fully internalizing to the original investor the benefits of the improvement, is effective, but is at the maximum of the range. When the total social value of an improvement is much larger than its cost, substantially smaller transfers will suffice. Again, that the payment required to induce efficient investment falls within a range simplifies the burden on the entity making the decision about the proper payment.

Banning switching internalizes to the original investor the total social value of an improvement since it eliminates the possibility of expropriation. If switching is not banned, then there has to be a transfer of the sort just described to make the original investor invest despite the prospect of the third party’s switching. The possible rules differ in who provides this payment and who decides the amount of the payment, and familiar principles from the design of private law guide the selection between them.

Giving the original investor a property right in the improvement so that switching is banned unless the original investor consents is a way of extracting a transfer from the third party, the subsequent investor, or both. With a property right, the original investor will not invest unless the value he would enjoy by not allowing the third party to switch or the value he could obtain from the third party and the subsequent investor in exchange for allowing a switch exceeds the cost of the investment. Since the third party and the subsequent investor have no interest in paying more than the private value of the investment to them, they will never pay the original investor enough to induce her to invest in socially undesirable improvements. But the property right enables the original investor to hold out for a price near the top of the range of acceptable transfers, since, in the absence of a deal, the original investor can keep the improved third party forever.

Allowing the original investor to make a contract with the third party before investing under which the original investor invests in exchange for the third party’s promise to pay the original investor upon switching has a similar effect, but will result in a lower transfer if investors must compete for third parties. In a sense, the property regime allows the original investor to be an officious intermeddler, improving the third party and then charging what he will for the improvement, whereas the contract regime requires the original investor to bargain with the third party over the price of the
improvement before investing in making it. That the contract is with the third party does not prevent the transfer from coming from the subsequent investor in order to facilitate the third party’s switching, so there is no difference from the property regime in this respect. A contract with the subsequent investor is impossible because, at the time the original investor must make her investment decision, she does not know who the subsequent investor will be.

Tort rules can provide the necessary transfer by making the third party, the subsequent investor, or both pay some governmentally determined price in order to switch. The government itself can also provide this transfer by rewarding or punishing investments. Whether a tort solution is desirable depends on whether the government is more likely to arrive at a transfer within the efficient range than the decision-makers in the property and contract solutions and on the costs of administering the tort system relative to the costs of the private parties’ transacting.

If the third party can make the investment herself, then the challenge is to make a transfer to her within a range analogous to that for the original investor. For the third party, the range is at least the cost to her of the investment less the part of the value generated by the improvement that she already enjoys to at most the total social value of the investment less the part of the value generated by the improvement that she already enjoys. In our general discussion of collective myopia, we focused on the situation in which there are no same-time positive externalities, so that the third party enjoys none of the value generated by the improvement. But this was an unrealistic assumption made only to distinguish the problem of internalizing same-time positive externalities from the problem of collective myopia. In the real world, the third party will almost always enjoy some part of the value generated by an improvement to her. A transfer within the range can be negotiated from the investors in exchange for some of the value the improvement generates for them or secured through a tort rule from the third parties or the government in an amount decided by the government.

3. Collective Action by the Investors

The third type of solution targets collective myopia’s collective-action aspect, which prevents investors from agreeing to pay each other enough to make it in each investor’s interest to invest in socially desirable improvements, by allowing a subset of investors to bind all the investors according to a set of governance rules. Without such rules, it is difficult for the investors to reach an agreement that solves their collective myopia because each investor is always better off not joining such an agreement and thereby enjoying the benefit of improved third parties who switch to her without contributing to the cost of improving them. The governance rules
must be mandatory because, if investors could opt out of them, they would, since by doing so they again can enjoy the benefit of improved third parties who switch to them without contributing to the cost of improving those third parties. Finally, the governance rules must have a voting threshold somewhat less than unanimity, since governance rules that require unanimity simply replicate the bargaining problems of coming to an agreement in the absence of governance rules. When the voting threshold is somewhat less than unanimity, no individual investor can realistically expect to free ride on the contributions of other investors by withholding her consent to a collective decision that does not specially favor her, since, if she withholds her consent, another investor’s consent will do just as well. A rule that requires less than unanimity for collective decisions makes investors compete to be part of the decision-making coalition, and so drives down the price, in terms of favorable terms, that the coalition must pay for their votes.

The goal of the governance rules is to minimize the sum of the social loss from socially desirable improvements that the investors do not make because of collective myopia and the socially undesirable improvements that the investors do make because the governance rules permit a subset of them to require or induce those improvements. One possibility is for the governance rules to enable the investors to agree on a schedule of transfer payments that an investor to whom an improved third party switches would make to the investor from whom that third party switches. The schedule would specify payments for each type of improvement and for switches of third parties with that improvement at each point in time. Another possibility is for the governance rules to enable the investors to agree on improvements in which each of them must invest in place of or in addition to a schedule of transfer payments. Either type of mandate can induce socially desirable behavior: investment mandates do so directly; and transfer-payment mandates do so by making it in each investor’s interest to invest in socially desirable improvements in light of the transfer payments.

56 With low-threshold voting rules, Buchanan and Tullock argue, “there is apt to be little real bargaining. If one member of a potential agreement asks for exorbitant terms, the other members will simply turn to someone else.” Id. at 68.

57 In contrast, under a unanimity rule, “each voter is a necessary party to any agreement. Since each voter, then, has a monopoly of an essential resource (that is, his consent), each person can aim at obtaining the entire benefit of the agreement for himself.” Id. at 69.

58 Buchanan and Tullock capture this idea in their “external-costs function,” which relates “the costs that [an individual] expects to endure as a result of the actions of others to the number of individuals who are required to agree before a final . . . decision is taken for the group.” Id. at 63–67. More generally, this is a function of the whole set of rules and the nature of the decision-makers.
she expects to receive should third parties that she improves later switch to a subsequent investor. But limiting the governance rules to one type of mandate rather than another can be advantageous because of its effect on how likely the insurers are to enact socially desirable mandates rather than socially undesirable ones.

Limiting the governance rules to transfer-payment mandates is usually better for two main reasons. First, if there are investors who face idiosyncratically high costs of investing in a particular improvement, they can decide not to invest in that improvement, but will not upset other investors’ investment decision by doing so because they will still be obliged to compensate other investors for according to the transfer-payment schedule. Second, limiting the governance rules to transfer-payment mandates prevents investors who expect to have few third parties to whom an inefficient mandate would apply from passing that mandate in order to impose a cost on investors who have many such third parties, and in this way obtain a competitive benefit as against those investors. In other words, limiting the governance rules to transfer-payment mandates rules out one way in which investors can use the governance rules to tax each other rather than to induce efficient investments. On the other hand, investment mandates may be better than transfer-payment mandates because the administrative costs of executing transfers is high, because deliberation over transfer payments is more expensive than deliberation over mandates, or because some insurers do not correctly identify situations in which an improvement’s value plus the expected transfer payment exceeds the cost to them of investing in it.

The governance rules, in addition to being mandatory and providing for a voting threshold somewhat less than unanimity, should include two provisions that restrict investors’ ability to enact socially undesirable mandates. First, the rules should require that mandates be uniform across investors in the sense that what an investor is required to invest in or pay under the mandate can depend only on characteristics of the third party, not on characteristics of the investor. This prevents naked expropriation of the “you invest, we don’t” sort. Second, the rules should require that any transfer payments required by a mandate be a fixed sum attached to flows of third parties who have been improved in a specified way. Together, these provisions make it harder for investors to use the governance rules to enact taxes and transfers unrelated to solving collective myopia because such taxes and transfers would have to use expected flows of third parties as a proxy for the characteristic to which the enacting investors want to attach taxes or transfers.

Governance rules of this sort divide the investors into two camps with respect to potential mandates, and the rules should condition the enactment
of mandates on the concurrent support of these camps. The first camp is composed of investors who expect a net inflow of improved third parties. These investors want transfer payments that are as small as possible. The second camp is composed of investors who expect a net outflow of improved third parties. These investors want transfer payments that are as high as possible. The inflow camp will be better off under a mandate than under the status quo so long as the transfer payments are small enough that the extra value they receive from the improvement exceeds the payments, while the outflow camp will be willing to vote for a proposal so long as the transfer payments are large enough to cover the cost of investing in the improvement less the value of the improvement to them before the third parties are expected to switch. The range of transfer payments under which both camps would be better off, and hence which could obtain a concurrent majority of both camps, is therefore the payments that are, on one hand, no less than the cost of investing in the improvement less the value the improvement generates before a switch and, on the other hand, no more than the value the improvement generates after a switch. This range is nonempty only if the total value of the improvement exceeds its cost, that is, only if the improvement is socially desirable. Thus, concurrent support by the outflow camp and the inflow camp guarantees that mandates will be socially desirable. It is not necessary to go through this division-into-camps procedure if investors are sufficiently uncertain about which camp they will fall into that they vote as though they had neither net inflows nor net outflows.

One way in which the investors can undermine governance rules that have these characteristics is by paying each other for votes other than by adjusting the terms of proposed mandates. One form of such vote buying is vote trading across the two camps, possibly across decisions on different mandates: if $A$ is in the inflow camp for improvement $x$ and has no interest or only a small outflow interest in improvement $y$, while $B$ is in the outflow camp for improvement $y$ but has no interest or only a small inflow interest in improvement $x$, then they may both be willing to agree that $A$ will support a mandate for $y$ with high transfer payments in exchange for $B$ supporting a mandate for $x$ with no transfer payments. This can result in investment in $x$ and $y$ being required even if they are socially undesirable.\(^{59}\)

\(^{59}\) In some contexts, vote buying is good because it allows the voting system to reflect the relative intensity of voters’ preferences. Prices in a regime of transferable private property present an example of desirable vote buying, since the requirement that property owners consent to transfers can be understood as a unanimity voting rule for transfers. Cross-camp vote buying is an example of undesirable vote buying, however, because it not only allows investors to express the relative intensity of their preferences, but also allows them to undo the requirement of a concurrent majority of camps constructed to have preferences about transfer payments such that only mandates that induce investment in
This problem can be contained by having high voting thresholds in each camp, for example, a majority or supermajority decision rule; attempting to police and punish such agreements; and disenfranchising investors whose interest in a particular investment decision is relatively small. vote buying can also happen entirely outside the governance rules: $A$ just pays $B$ for her vote. The same solutions apply to this problem. Moreover, disenfranchising investors with small net flows will be particularly useful here in combination with policing and punishing vote buying, since larger purchases are easier to police than smaller ones.

Two other aspects of the rules should be explicitly considered: the voting rule within classes; and the scope of membership. Vote buying is a reason not to use a very low voting threshold, and holdouts are a reason not to use a very high threshold. Other reasons people might vote for a socially undesirable improvement or against a socially desirable one are that they are idiosyncratic in the cost or value to them of an improvement; have incorrect information about the cost, value, or flow rates for an improvement; or make a mistake. If there is no reason to think these errors are more likely in one direction than in another, it is natural to use a voting rule that has no bias in favor of any particular outcome. The only such voting rule is majority rule. With respect to the scope of membership, the ideal scope is every investor to whom or from whom switching is possible. There is a problem, however, with investors who have high outflows out of the system; this constitutes an idiosyncratic cost of investing for them, since they cannot expect a transfer payment for those investors. The more outflows out of the system an investor has, the higher the transfer payments he will want on inflows from within the system, as a type of insurance premium. This extra demand will not affect the voting outcome when the range of acceptable transfer payments is sufficiently large, but in close cases or for an investor with very large net outflows out of the system, disenfranchisement may be a better alternative.

**B. Conditions that Affect the Relative Desirability of Solutions**

The relative desirability of these solutions depends on several identifiable features of the real-world situations in which they are to be applied. Same-time positive externalities and non-private value make government valuation more desirable than private valuation; private information and public-choice problems make private valuation more
desirable than government valuation; judgment-proof parties make solutions that impose liability on those parties infeasible; the value of competition among investors for relationships with third parties make solutions that lock third parties in to particular relationships bad; high innovation that changes what improvements are socially desirable makes flexibility more important; and administrative and transaction costs are always important. Much of the discussion has assumed and will assume the existence of a government capable of implementing, for example, a liability or property mechanism or mandatory governance rules. The role of the government can be played by any agency which is capable of doing this, for example, a standards-setting body or any other de facto authority. The analysis of many of the conditions we identify is familiar. What we do here is mainly to flag them for consideration when one is applying our framework to a real-world instance of collective myopia.

1. Same-Time Positive Externalities
   The greater the same-time positive externalities that cannot be eliminated or that it would be too costly to eliminate are, the less of the total social value the insurers capture, and so the lower is their incentive to invest. For all solutions, this means a larger reward is needed to get investors to invest. For the solutions that rely on other investors to provide this reward, same-time positive externalities are more of a problem because they also decrease the amount these other investors will be willing to contribute. High same-time positive externalities are an argument for solutions in which the government rather than the investors assigns a value to improvements.

2. Private Information
   Investors may have private information about the cost of investments, the private value generated by improvements, or the rate of flows among investors. The solutions differ in the amount of information the government needs to implement them. Mandates require the government to know what treatments are socially desirable, which requires knowing the relationship between the value generated by each improvement and its cost. Internalization through liability rules requires the government to know the size of the externality that is being internalized. For internalization to the original investor, this means knowing the schedule of value each improvement generates and the flow rates for the original investor. For internalization to the subsequent investors, this means knowing the schedule of value each improvement generates and the cost of investment. The collective-action solution requires the government to know the flows between the insurers. Whenever the government has to know flows, but the
reward attached to a flow is uniform across investors, as in the collective-action solutions we recommend, then the government need only know net flows periodically. In general, private information counsels in favor of solutions in which the government has less of a role relative to investors in assigning values to improvements.

3. Non-Private Value

Similar to same-time positive externalities in their effect is non-private value that an investment generates or destroys, by which we mean simply aspects of an investment that make it more or less socially desirable but do not affect the private value that people derive from the investment to the same degree. For all solutions, this means the socially desirable behavior is induced by a larger or smaller reward, larger to take account of positive non-private value, smaller to take account of negative non-private value. And, again, non-private value is particularly problematic for solutions that rely on private valuations to determine the size of the reward, since these private valuations will not take into account the non-private value. Substantial non-private value in either direction is an argument for solutions in which the government rather than the investors assigns a value to improvements.

4. Public-Choice Problems

Public-choice problems are the flipside of non-private value: for the same reason the government is free to pursue non-private value, it may do a bad job at pursuing private value. Investors with net inflows or net outflows are examples of groups with an incentive to cause government to overvalue or undervalue treatments. People whose products or services are used in the process of investment are another such group. The identity, interest, and relative influence of potential lobbyists are very situation specific and must be identified with care in any application of our framework.

5. Judgment Proof Parties

Judgment proof investors or third parties make solutions that depend on their liability infeasible. A related problem is with mechanisms that require a judgment-proof (or, more generally, liquidity-constrained) party to pay an up-front cost that the mechanism later returns. One example is a collective-action solution in which payments do not happen in real time as switches take place, but only periodically. A party in this position may not be able to get financing for the up-front cost unless that financing can be secured by the stream of future value. In general, the ability of parties to pay whatever transfers a mechanism requires of them is important and not always present.
6. Value of Competition

One obvious solution that is sometimes feasible is simply preventing third parties from switching among investors. In most cases, however, there is reason to permit third parties to do this – for example, the investment relationship between the investors and the third party may be bundled with other relationships, and competition among investors for relationships with third parties along the dimensions of these other relationships may be desirable. The greater the value of this sort of competition, the less desirable are solutions that lock third parties in to particular investors.

7. Innovation

Improvements that once were inefficient may become efficient, ones that were efficient may become inefficient, and wholly new improvements may be invented. The rate at which this happens and the size of the impact of the changes on what is socially desirable affect how important it is that a solution to collective myopia be flexible in the improvements in which it induces investment. What mechanism adjusts most quickly will also be situation dependent. Private contracts might be thought to adjust quite quickly, but if the contracts are mostly group contracts, as in the case of health insurance, adjustment in them may come quite slowly. Similarly, the speed at which administrative mandates adjust depends on the particular governmental process used to generate them. So the degree of innovation has more to say about the design of particular solutions rather than the relative desirability of solution types.

8. Administrative and Transaction Costs

A final consideration is the cost of carrying out a solution, which is usually called administrative cost for a governmental solution and transaction cost for a private solution. Administrative costs are largely a function of the design of the governmental solution. One general factor, however, is the frequency of the transactions: setting up an elaborate governmental process for investments that happen once every few years is likely to be less efficient than setting up such a process for investments that happen many times per day, since the fixed cost of the process can be allocated over more investments. This is particularly true if there are economies of scale in processing investments, for example, if information gained in evaluating one set of investments is useful in evaluating others. With respect to transaction costs, the primary considerations are how many transactions need to be made and how easy it is for the transacting parties to bargain with each other. For example, in a situation with few third parties and many investors, solutions that require bargaining with the third parties rather than among the investors likely involve lower transaction costs,
whereas in a situation with many third parties and few investors, the reverse is likely to be true.

III. APPLICATION TO HEALTH INSURANCE

Health insurance is one area in which collective myopia is a real-world problem. Bariatric surgery is one example of a prospectively efficient treatment that health insurers often fail to cover because of collective myopia. We begin by discussing insurers’ failure to cover bariatric surgery and use it to highlight several features of the market for health insurance that explain why collective myopia has persisted in it despite being a serious problem. Our focus is on demonstrating how the theoretical framework can be applied, rather than in providing a comprehensive analysis of bariatric surgery. We then consider several solutions, including administratively mandated coverage, injunctions to cover, locking insureds in after an insurer covers a bariatric surgery, making switching insurers or accepting a switching insured without compensating the original investor for a bariatric surgery it has performed tortious, and a rebate system under which insureds pay for bariatric surgery up front and receive annual rebates from their current insurer. We ultimately endorse a mandatory-membership clearinghouse that would require its insurer members to compensate each other for insureds who switch insurers after receiving treatments identified by insurer vote according to a schedule of transfer payments also adopted by vote. Because the treatments that our solution would induce insurers to cover are efficient, we expect that our solution would both increase health and reduce total medical costs.

A. The Problematic Status Quo

Obesity is associated with heart disease, certain types of cancer, type 2 diabetes, stroke, arthritis, breathing problems, and psychological disorders such as depression. It reduces life expectancy by about 20 years. More than 5% of adults in the United States are morbidly obese, with a body mass index (BMI) greater than 40. The proportion of morbidly obese people in the population is increasing, and at an increasing rate: in 1986, 1:200 people were morbidly obese; in 2000, 1:50; in 2002, 1:20. Obesity is associated

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61 But see Avraham, Collective Myopia in the Provision of Bariatric Surgery, supra n. XXX (doing just that).
with a 37% increase in average annual medical spending.\textsuperscript{65} Direct medical expenses attributed to obesity accounted for 5.5% of United States medical expenditures, or $63.2 billion, in 2004,\textsuperscript{66} of which Medicaid and Medicare paid about half.\textsuperscript{67} And the number nearly doubles when you include the indirect costs of obesity, like lost income, restricted activity, and absenteeism: \textsuperscript{68} The Office of the Surgeon General estimated the total economic cost of obesity in the United States at $117 billion in 2000;\textsuperscript{69} others estimated it at $132 billion in 2002.\textsuperscript{70}

Bariatric surgery is the only effective treatment for morbid obesity. Behavioral interventions like diet and exercise produce, at best, some short-term weight loss, but have no long-term effect.\textsuperscript{71} Pharmaceutical therapy is also ineffective. A recent meta-analysis revealed that, after 12 months, various drugs helped patients lose 3-4 kg, whereas bariatric surgery helped patients lose 40 kg.\textsuperscript{72} Another meta-analysis concludes that “there are currently no truly effective pharmaceutical agents to treat obesity.”\textsuperscript{73} And


\textsuperscript{66} See Wolf and Colditz, Current Estimates of the Economic Cost of Obesity, 6 OBESITY RES. 97 (1998); Finkelstein et al., National Medical Spending Attributable to Overweight and Obesity, supra n. XXX.

\textsuperscript{67} See Finkelstein et al., National Medical Spending Attributable to Overweight and Obesity, supra n. XXX. People covered by Medicaid and Medicare require the largest obesity-related expenditures: the elderly, because the treatments they require are more costly; and the poor, because they are more likely to engage in activities that complicate obesity treatment, like smoking and drinking. \textit{Id.}


\textsuperscript{70} Hogan et al, infra n. XXX.

\textsuperscript{71} See, e.g., Jeffery et al, Strengthening Behavioral Interventions for Weight Loss: A Randomized Trial of Food Provision and Monetary Incentives, 61 J. COUNSELING & CLINICAL PSYCH. 1038 (1993)

\textsuperscript{72} See Maglione, Margaret et al, Meta-Analysis: Pharmacologic Treatment of Obesity, 142 ANNALS INT. MED. 532 (2006). See also Buchwald, supra n. XXX, at 1729.

\textsuperscript{73} See Buchwald, Avidor, et al, supra at 1724.
the American College of Physicians’s April 2005 guidelines for treating obesity say, “After taking a weight loss drug for 6 to 12 months, patients lost about 11 lbs or less,” whereas with bariatric surgery, “patients can lose 44 to 67 lbs and keep it off for up to 10 years.” Bariatric surgery is also efficient. It costs about $25,000 to perform and generates about $5,000 in benefits per year after the surgery.

Nonetheless, many insurers fail to cover bariatric surgery, and the evidence suggests that they do so out of collective myopia. First, insurers who cover bariatric surgery often do so with conditions that help select insureds who are less likely to switch insurers for a lower premium after the surgery. Some require insureds to document six months of alternative weight-reduction efforts or to have been a year or two at work before being eligible for coverage. Second, Medicare, which has a lower turnover rate than Medicaid but is run by the same administrative body, the Centers for Medicare and Medicaid, covers bariatric surgery, while

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74 Treating Obesity with Drugs and Surgery: A Clinical Practice Guideline from the American College of Physicians, 142 ANNALS OF INT. MED. 1 (2005).

75 We muster the empirical evidence that bariatric surgery is a prospectively efficient treatment for morbid obesity and that insurers are failing to cover it because of collective myopia in a separate paper. See Ronen Avraham, Collective Myopia in the Provision of Bariatric Surgery, supra n. XXX.


78 Medicaid is a joint federal and state program that helps with medical costs for some people with low incomes and limited resources. In each state, people may go in and out of Medicaid, depending whether they are employed or not, as well on various other conditions. On average the turnover rate is between 20% and 40% a year. For 1995, see http://aspe.hhs.gov/health/reports/welfareleavers/table%2010.htm. Medicare, in contrast, is a federal health insurance program for all people 65 years old and older. No matter in what state the insured leaves she will always be covered under Medicare. Given that average life expectancy is 75.5, Medicare knows it will recoup its investment. Indeed, starting in 2005, as part of the Medicare Modernization Act, Medicare has started to offer few other preventive care services such as: diabetes screening test, cardiovascular screening blood test. See Medicare & You 2005, available at www.medicare.gov/publications/pubs/pdf/10050.pdf. It is worth mentioning that there might be another reason, still consistent with the myopic theory, for why Medicare covers bariatric surgery whereas Medicaid does not. This has to do with the costs of obesity that Medicare faces versus the costs of obesity that Medicaid faces. Finkelstein et al reports that annual obesity related costs for Medicare population is $1,486 whereas annual obesity related costs for Medicaid is only $864 (both in 1998 dollars). Thus, that relative savings for Medicare from bariatric surgery are not only guaranteed (due to no turnover) but also larger. Finkelstein et al, supra note… at W3-222.

Medicaid does not, and this in spite of the fact that Medicare deals with much older people. Third, insurers with larger market share are more likely to cover bariatric surgery, including branches in different states of the same insurance company, because switches outside the insurer are less likely. For example, Blue Cross Blue Shield (BCBS) of Massachusetts, with a 45% market share, BCBS of North Carolina, with a 38% market share, and BCBS of Michigan, with a 47% market share, cover bariatric surgery, while BCBS of Florida, with a 20% market share, BCBS of Nebraska, with a 31% market share, and BCBS of Tennessee, with a 35% market share, do not cover bariatric surgery.

Insurers can decline to cover obesity treatments under their contracts because obesity is not classified as a “disease,” but rather as a “condition.”

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85 Whether obesity is a disease is still under debate. The World Health Organization, National Institute of Health, Food and Drug Administration, Center for Disease Control and Prevention, Federal Trade Commission, Social Security Administration and the Internal Revenue Services have all defined obesity as a disease. Yet, the American Medical Association has taken the view that obesity is a “complex disorder with a variety of comorbid conditions.” Joel D Hyatt, Future of Obesity and Chronic-Disease Management in Health Care: The HMO Perspective, Obesity Research Vol 10 supplement 1, 79s, (2002). The Health Care Financing Administration (better known as Medicaid) up until recently did not recognize obesity as a disease, but will cover obesity when it causes other medical problems (it therefore covered surgery for morbid obesity). Aron Primack, Future of Obesity and Chronic-Disease Management in Health Care: The Government Perspective, Obesity Research Vol 10 supplement 1, 82s, (2002). Yet, effective October 1st, 2004, Medicare has erased the sentence “Obesity itself cannot be considered an illness” from its guidelines. However, this did not directly affect current Medicare coverage. See [http://www.cms.hhs.gov/mcd/viewncd.asp?ncd_id=40.5&ncd_version=2&basket=ncd%3A40%2E3%3A2%3ATreatment+of+Obesity](http://www.cms.hhs.gov/mcd/viewncd.asp?ncd_id=40.5&ncd_version=2&basket=ncd%3A40%2E3%3A2%3ATreatment+of+Obesity). Whether or not to cover bariatric surgery is
and so treatments for it cannot be “medical necessities,” a classification that usually entails coverage.\footnote{Not that the definition itself is clear or uniform. See Stanford study.} It is difficult to negotiate individual exceptions to insurance contracts because most such contracts provide for group insurance, so that the actual negotiator is the insured’s employer, rather than the insured. Moreover, many insureds are judgment proof for the amount necessary to finance bariatric surgery through special contracts with insurers. Finally, a strong interest group in general and the dominant interest in the National Institute of Health are internists, who expect to lose revenue from diabetics who undergo bariatric surgery. They have mobilized to block government mandates that insurers cover bariatric surgery when these have been proposed. Together, these facts explain why insurers have failed to cover bariatric surgery and why that failure has gone unaddressed despite the gravity of the morbid-obesity problem.

B. Less Desirable Solutions

Before we analyze specific solutions to collective myopia in health insurance, we will highlight several general theoretical principles. Mandating coverage\footnote{See infra, Part III.B.1–2 (administrative mandates and injunctions to cover).} and internalizing the costs and benefits of coverage decisions through alterations in private-law rules,\footnote{See infra, Part III.B.3–5 (damages for switching, lock-in contracts, and rebates).} the first two categories of solutions in the typology developed in Part II, are less desirable than facilitating collective-action among the insurers. First, insurers have substantial private information about the costs and benefits of treatments because they collect this information in the ordinary course of business to make coverage decisions and have a financial incentive to do this well. It is difficult for the government, whether an administrative body\footnote{See infra, Part III.B.1.} or a court,\footnote{See infra, Part III.B.2.} to verify this information without a larger, better-incentivized staff than it has. This makes solutions that require the government to have information about the costs and benefits of treatments less desirable than those, like facilitating collective action, that do not. Second, government decision-making in health care is afflicted by serious public-choice problems because doctors and other health care providers have a strong incentive to lobby and have in fact lobbied in their own economic interest rather than necessarily according to the best medical judgment. This also makes governmental solutions undesirable, although more so with respect to administrative solutions than with respect to judicial ones. Third, many insureds are currently under review. See http://www.cms.hhs.gov/mcd/viewnc.asp?from=basket&nca_id=160&basket=nca:00250R:160:Bariatric+Surgery+for+the+Treatment+of+Morbid+Obesity:Open:1st+Recon:4.
judgment proof. This makes solutions that require insureds to contract with insurers for coverage\(^ {91}\) or that depend on transfers from them exacted in tort\(^ {92}\) infeasible. Fourth, most insurance is group insurance. This also makes contractual solutions between insureds and insurers\(^ {93}\) difficult, since they often must bargain through an intermediary, usually an employer. Fifth, competition among insurers is valuable for the ordinary reasons that competition in providing a service is valuable. This makes solutions that lock insureds in to particular insurers\(^ {94}\) undesirable since insurers face less competitive pressure with respect to locked-in insureds.

1. Administratively Mandated Coverage

One way to solve collective myopia is by having government mandate coverage of prospectively efficient medical treatments such as bariatric surgery.\(^ {95}\) There are already thousands of state-mandated coverage provisions in the United States, and mandates are the dominant solution in Europe and Canada. For example, forty-six state legislatures have mandated that health insurers cover supplies, services, medication, and equipment for diabetes as part of their basic coverage, without increasing premiums.\(^ {96}\) Georgia, Indiana, Maryland, and Virginia have mandated coverage for obesity treatments, and Louisiana, Illinois, and Ohio are considering doing the same.\(^ {97}\) Insurers who already cover a certain treatment will support mandatory coverage of it. Since they are already covering it, the mandate costs nothing and gains them the value of the resulting inflows of healthier insureds. It also prevents employees from strategically switching to the covering insurers, or to the employers to

\(^{91}\) See infra, Part III.B.4–5.

\(^{92}\) See infra, Part III.B.3.

\(^{93}\) See infra, Part III.B.4–5.

\(^{94}\) See infra, Part III.B.4–5.

\(^{95}\) Another solution is national health insurance. We set this proposal aside because it has already been widely discussed and is well understood. Among the downsides of national health insurance are that it eliminates competition, product variety and flexibility. Some of the solutions we propose – in particular, the clearinghouse, which is the solution we endorse – can be regarded as a form of selective nationalization. Private information and public-choice problems of the sort discussed in the text provide a reason for not going all the way.


\(^{97}\) Georgia, Indiana, Maryland, and Virginia have such mandates. West Virginia, Louisiana, Illinois and Ohio have been considering it as well. See ibid at note ...... In contrast, Iowa has explicitly restricted insurance coverage for treatment of obesity. IA ADC 191-75.10(513C)
whom they provide group coverage, in order to get the coverage.98

There are at least three problems with administrative mandates. First, most of the existing mandates are state-level mandates, but state-level mandates affect only about 50% of insureds because ERISA preempts state-level mandates for self-insured employers.99 This could be solved by a federal mandate or by a federal change to ERISA. Second, administrative mandates are likely to be inefficient because insurers have private information about the costs and benefits of treatments, particularly newly developed or improved treatments. No government agency has the time, resources, will, or personnel to perform a detailed study of the thousands of proposed mandates that make their way to state legislatures each year.100 Insurers are in a better position and have better incentives to determine what treatments are socially desirable because they use this information in making coverage decisions in the ordinary course of business. Success here is what keeps actuaries off the streets. A partial remedy to this private-information problem is to allow insurers to lobby government for mandates, as the Noerr-Pennington doctrine allows them to do collectively, notwithstanding the antitrust laws.101 Third, however, administrative decision-making in health insurance is subject to substantial public-choice problems because there are strong interest groups who would oppose efficient mandates and favor inefficient ones, and also interest groups in other areas who are good at distracting legislatures from actually pressing issues, like healthcare.102 A recent study of state coverage mandates concludes that, “There is no particular logic or pattern to the mandated benefits . . ., other than that they address the restrictions in coverage that have arisen most recently.”103 Internists in the NIH, for example, might have mobilized to oppose mandates of bariatric surgery for fear of losing revenue from cured diabetics.104 It is well known and empirically

98 Pauly, Kunreuther and Hirth at 154.
99 See ERISA.
100 Indeed, one may argue that the current states’ mandates for treatments for diabetes, which do not include bariatric surgeries, the more efficient cure, prove this point. The strong diabetes lobby was able to secure coverage mandates, perhaps to their own long-term detriment.
101 Moreover, it is widely believed among antitrust scholars that the Department of Justice does not monitor this type of behavior even if it deviates from the written case law.
102 See Sloan and Hall arguing that state mandates may “respond only to private interests of providers or advocacy groups.” supra note CC at 97.
103 Sloan and Hall, supra note XX at 195.
104 Against surgeons’ accusations that internists frustrate the provision of bariatric surgeries, internists might argue that surgeons risk their patients’ health with scientifically unfounded treatments for their own self-interest. See next footnote.

documented that physicians in general lobby in their own interest\textsuperscript{105} and make treatment decisions based in part on the economic consequences to them rather than solely on the medical consequences for patients.\textsuperscript{106} In the presence of these large and organized interest groups, it is unlikely that administrative mandates would systematically result in and only in socially desirable mandates.

2. Injunctions to Cover

If courts can identify through the adversary process prospectively efficient treatments, then they can enjoin insurers to cover them. Allowing such injunctions would require legislation to create a new tort, “denial of coverage.” Insurers who want inflows of healthier patients or insureds who want a treatment to be covered (more probably, classes of such insureds) would be willing to act as plaintiffs. Restricting the class of plaintiffs to insurers is desirable since they are more sophisticated and are likely to have more information about the costs and benefits of treatments, and hence are less likely to bring losing claims. Moreover, restricting the class of plaintiff-insurers to insurers who already cover the treatment is desirable since this is evidence that the insurer thinks the treatment is efficient. Insurers who don’t cover the treatment might seek an injunction to cover an inefficient treatment because they have net inflows. Even if the injunction served as a precedent for a reciprocal injunction against such an investor, it might want the injunction since the losses from covering its outflow might be more than offset by the gains from its inflow.

The main trouble with this proposal is that courts are unlikely to do well at identifying socially desirable treatments, for many of the same reasons that other branches of government are unlikely to do this well. Insurers have better staffs for collecting and analyzing information about treatments and better incentives to do so well and this private information will be difficult for a court to verify without a similar expert staff of its own.

\textsuperscript{105} An example in the context of bariatric surgeries is a study on the cost and benefits of the treatment of obesity where the authors (a group of informed researchers-physicians) explicitly admitted that “physician groups will be fighting among themselves to keep reimbursements rates for the specialist services as high as possible.” Martin et al, \textit{Cost-Benefit Analysis for the Treatment of Severe Obesity}, World J. Surg. 22, 1008, (1998). Other examples are at hand. For years surgeons tried to prevent chiropractors from getting licenses despite the medical evidence about the effectiveness of such treatments.

\textsuperscript{106} Consider for example what Dr. David Hillis, an interventional cardiologist at the University of Texas Southwestern Medical Center in Dallas, explains: "If you're an invasive cardiologist and Joe Smith, the local internist, is sending you patients, and if you tell them they don't need the procedure, pretty soon Joe Smith doesn't send patients anymore. Sometimes you can talk yourself into doing it even though in your heart of hearts you don't think it's right." Gina Kolata, \textit{New Heart Studies Question the Value Of Opening Arteries}, The New York Times (March 21, 2004)
Judicial decision-making is probably an improvement over administrative decision-making, however, in that courts are generally less susceptible to pressure from interest groups like those involved in health insurance, although this may be less true of state courts, the members of which are often elected. Costs of litigation, even among sophisticated parties who anticipate likely rulings and make decisions in early stages of litigation accordingly, are also not negligible, although they are likely to be small relative to the costs of not covering treatments like bariatric surgery. Finally, it may be necessary to create the new tort through federal legislation or obtain a federal legislative exemption from ERISA in order to avoid ERISA preemption. ERISA generally preempts states’ ability to regulate private employer-sponsored health plans. For example, the Supreme Courts ruled recently that ERISA preempts a denial-of-coverage claim brought by plaintiffs who were beneficiaries of an ERISA-regulated plan, but had sued under a Texas state-law cause of action. Preemption may not apply to a denial-of-coverage suit between insurers, however: ERISA’s language is not clear on whether preemption is limited to suits between plan beneficiaries and administrators, or includes suits between insurers too. If state-level torts were preempted by ERISA, about 31% of employees would be unaffected by the reform.

3. Damages for Switching

Judicially determined damage awards to an original insurer who covers a prospectively efficient treatment for an insured who then switches to a subsequent insurer could be a solution. These damages could come from either the insured or the subsequent insurer, but it would be better to require the suit to be against the subsequent insurer for the same reasons it was better in the injunction context to restrict plaintiffs to insurers, namely, that insurers are more sophisticated and better informed. As we explained above, to work, the damages would have to be no less than the cost of the treatment to the original insurer less the value of the healthier insured it enjoys before the insured switches and no more than the value of the

107 ERISA Preemption Primer, supra note 220 at page 8. There is only one precedent for a state (Hawaii) getting an exemption from ERISA.


109 "A civil action may be brought--(1) by a participant or beneficiary--... (B) to recover benefits due to him under the terms of his plan, to enforce his rights under the terms of the plan, or to clarify his rights to future benefits under the terms of the plan." 29 U.S.C. § 1132(a)(1)(B).

110 About 31% of employees are covered by ERISA Self-Insured plans and 41% by ERISA Insured plans. About 13% are state/local government employees, 5% federal employees, and the remaining 10% are individually insured. See ERISA Preemption Primer supra note 220 at page 4.
healthier insured to the subsequent insurer. This is the same range as for transfer payments in the context of collective-action solutions to collective myopia. If damages are below this range, collective myopia will persist, although it will be lessened, and if damages are above this range, insureds will be unable to switch insurers, although the original insurer will make the correct investment decision.

Damages like those we propose here are used in some other contexts. One context that is like collective myopia is that in which an investor underinvests in risk reduction because it anticipates that the harm will eventually be borne by someone else. Under the free-public-services doctrine, a government generally may not recover from a tortfeasor the costs of public services occasioned by the tortfeasor’s wrongdoing. But the government can sometimes recover reasonable risk-reduction costs from an individual who creates a risk. For example, New Jersey imposes statutory liability for cleanup costs on those who discharge hazardous substances into waters within the state. Similarily, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) allows parties that invest in efficient risk-reduction measures for sites containing hazardous material to file for restitution for the investments they made that benefited other liable parties. And in asbestos claims, some courts have approved building owners’ causes of action seeking restitution from manufacturers for the “maintenance, removal and replacement” of asbestos. Each of these examples can be understood as an attempt to induce investment in prospectively efficient risk-reduction measures.

The main problem with this approach is, again, private information: courts are not likely to get the damage calculations correct, in particular, they are less likely to get these calculations correct than are the insurers themselves acting collectively under governance rules such as those we propose. However, as we noted above, for the efficient investment to occur it is enough for these damages to fall within a defined range that may be quite large.

4. Lock-In Contracts

Insurers could cover prospectively efficient treatments in exchange for a

112 See the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq.
114 For the development of similar ideas in different contexts see Alon Harel & Assaf Jacob, An Economic Rationale for the Legal Treatment of Omissions in Tort Law: The Principle of Salience, 3 THEORETICAL INQ. L. 413, 448-449 (2002); Ehud Guttel, Strategic Precautions (on file with author).
commitment from the insured to pay a penalty if she switches insurers during the period it takes for the insurer’s investment in the treatment to become profitable. The penalty would be equal to the part of the investment not yet recovered. One problem with this approach is that insureds often switch insurers for decisions not solely related to coverage in general and to coverage of the treatment in particular, for example, because they switch jobs, relocate, marry, or divorce, and lock-in contracts would attach a penalty to such decisions. This problem is mitigated in that insureds should be able to contract with their subsequent insurer for reduced premiums, since the subsequent insurer will enjoy the health benefits that previously flowed to the original insurer. But because most health insurance is group insurance, insureds may have a hard time negotiating for these concessions. They may also have hard time negotiating for increased wages. Indeed, lock-in contracts may be undesirable because of a first-mover problem: until insurers provide for receiving insureds subject to lock-in contracts by paying off the contract, lock-in contracts are very undesirable to insureds because they function as penalties on the decisions we described, so insurers do not offer them; but because insurers do not offer them, insurers never have a pressing reason to provide for receiving insureds subject to lock-in contracts. Another problem is that the cost of enforcing lock-in contracts through litigation is likely to be high since the relationships are with insureds, of which there are many, rather than with other insurers, of which there are relatively few.

5. Rebates

Another possible solution is to have insureds pay for efficient treatments up front, but then receive rebates from insurers as the cost savings from those treatments accrue.115 With respect to bariatric surgery, for example, insureds could pay $25,000 for the surgery up front, then in each of the following years the insurers could issue them a $5,000 annual rebate. This is functionally the same as giving insureds who have undergone bariatric surgery a lower premium, and, when such lower premiums are possible, they are a handy way of making the rebates transferable across insurers. Rebates can be implemented in a variety of ways, some of which involve governmental action, while others depend on private contracting. On the governmental-action side, rebates could be administratively mandated or they could be the result of a new tort in which insureds who treat themselves sue insurers for the benefits of those treatments. Governmental

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115 This is analogous to having employees pay up front for general training, which increases her productivity to other employers as well as to this one, and then receive a higher wage thereafter. See Gary Becker, Investment in Human Capital: A Theoretical Analysis, 70(2) J. Pol. Econ. 9, 13 (1962) (now a well-accepted result in labor economics).
solutions suffer from the same private-information and public-choice problems we discussed in the context of administrative mandates and injunctions to cover, so we will restrict attention here to private contractual rebates, where the insured and the original insurer contract for the original insurer to pay periodic rebates to the insured after it has paid for the treatment.

One problem with contractual rebates is that they are not transferable between insurers, so there is a lock-in effect. It would not do simply to mandate that rebates be transferable, since this would give insurers with net outflows an incentive to provide overly generous rebates, which might induce insureds to purchase effective but inefficient treatments. The lock-in effect problem is probably not that large, however, because it decreases with time, as more of the rebates are paid; it is difficult to treat locked-in insureds differently from other insureds because most health insurance is group health insurance; insurers want to develop reputations for good service, and potential insureds may not distinguish well between service to locked-in insureds and to other insureds, or may expect to become locked-in insureds themselves; and group insurers have an incentive the other way to be particularly solicitous of insureds who have undergone cost-saving treatments, since they become lower-cost members of the insured pool.

Another problem with rebates is judgment-proof insureds. Many of the morbidly obese patients for whom bariatric surgery is an efficient treatment, for example, are poor enough that they would be unable to muster the $25,000 cost of the surgery. One solution is to finance the surgery through contributions from others who benefit from it, such as life insurers, treatment providers, and suppliers of goods used in treatment. Life insurers benefit from treatments that increase an insured’s life expectancy since they cannot update their premiums to reflect decreases in life expectancy. And there is at least anecdotal evidence of suppliers solving financing problems: after it was revealed that surgeons had difficulties getting malpractice insurance for bariatric surgery from commercial insurance companies, at least one manufacturer of bariatric-surgery equipment got involved in forming a physician-owned insurance company (also called risk-retention-group) which provides liability insurance coverage to bariatric surgery surgeons. Another solution is a loan secured with the annual rebates.

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116 Novus Insurance Company is a risk-retention-group (RRG) founded in June 2005 that provides liability insurance for bariatric surgeons. See [www.novusrg.com](http://www.novusrg.com). A RRG is essentially a liability insurance company owned by its members who are involved in similar activities that therefore represent similar liabilities. See “Risk Retention Groups owning Up to Success”, Insurance Journal, January 27th, 2003 (cover story). How come Novus is able to provide insurance where commercial insurance companies cannot? Novus’s answer is that “only by thoroughly analyzing the true risks, can a complete understanding of the risks be achieved. Our research has revealed that risks perceived by
Yet another is government funding, although this raises the familiar private-information and public-choice problems. The best evidence that these solutions are not in fact feasible is the fact that we do not see them in the real world. A minor problem is that insurers may become insolvent; in the United States, this risk is very remote.

The rebate solution has insureds paying an up-front cost and receiving the equivalent of a premium reduction as they remain with the insurer at the time particular treatments are performed. An alternative that has been discussed in the economics literature is having insureds pay an up-front cost at the outset, in higher premiums, and then receiving lower premiums later when they remain with the same insurer.\textsuperscript{117} The initial higher premium could theoretically factor in the risk to the insurer that the insured will switch insurers after the insurer covers a prospectively efficient treatment like bariatric surgery. An immediate problem with this approach is that it requires insurers and insureds to calculate the expected costs and benefits of treatments future treatments, including treatments not yet invented or improved so as to be efficient, and the likelihood of insureds switching at different times in the future, and to do this not only for one condition, but simultaneously for the full range of health problems an insured might encounter.\textsuperscript{118} Also, unlike life insurance, which is sold for a lifetime, health the traditional insurers are overstated, particularly as to the severity of Bariatric Surgery claims. Unlike traditional insurers, Novus has undertaken to perform an initial in-depth evaluation of the risks associated with Bariatric Surgery, and more importantly, to develop systems and tools to reduce those risks.” Id. Interestingly, the funds to perform studies on Bariatric risk management came from Ethicon Endo-Surgery, Inc. See \url{http://www.novusrg.com/about.htm}. Since 1995, Ethicon Endo-Surgery has been the market share leader in surgical stapling products for, among other things, gastric by-pass surgeries. See \url{http://www.ethiconendo.com/surgical.jsp}.

\textsuperscript{117}Pauly, Kunreuther and Hirth, Guaranteed Renewability in Insurance, Journal of Risk and Uncertainty 10, 143 (1995). Cochrane offered to create an account into which insureds pay a constant amount each period and the account pays a premium (which is different from the amount the insureds paid) to the insurer for the one-period insurance. If a person is diagnosed with a long-term disease that raises his premium, the insurer pays into the account a lump-sum equal to the increase in the present value of future premiums. If he gets healthier so that his premiums decline, the account pays the insurer a lump sum equal to the decline in the present value of future premiums. Cochrane ibid. Dowd has offered an identical mechanism when analyzing preventative care. See Bryan E. Dowd, Financing Preventative Care in HMOs: A theoretical Analysis, Inquiry 19 68, 76 (1982).

insurance is sold annually. And there are good reasons for this.\footnote{119} Guaranteed renewable contracts are more attractive the longer the time-horizon. But because many people are uncertain how long they will remain in a particular location or job, they may have good reasons to prefer annual health insurance over a long-term policy that would end when they move.\footnote{120} The same judgment-proof and lock-in considerations would also apply to this type of solution.

C. Mandatory Clearinghouse with Coverage by Insurer Vote

We think a mandatory-membership clearinghouse for insurers in which they would decide collectively on schedules of transfer payments binding on all of them is the best solution to collective myopia in health insurance.

Clearinghouses are organizations that allow producers and consumers to overcome substantial transaction costs that would otherwise prevent them from doing business. The recording and publishing industries have benefited most from clearinghouses. Content clearinghouses enable artists and creators to avoid the very large transaction costs of tracking down and suing copyright infringers or negotiating royalty payments with each content consumer. Similarly, the clearinghouses allow users to purchase rights to large blocks of content without facing the transaction costs of determining who owns the rights to each song or piece of writing.\footnote{121} These

\footnote{119} Unlike life insurance, health insurance is less portable. When an insured leaves a geographical area, she might need to change a provider who might well refuse to insure her at the old terms. Moreover, unlike life insurance where insureds only worry about the insurer solvency and exclusions, in health insurance insureds also worry about quality of care. Once insureds are stuck in lifetime health plans, insurers have no incentives to provide an advanced level of service. Lastly, future health costs are unpredictable and non-diversifiable. Insurers do not like such risks. Id at 627.

\footnote{120} Pauly, Kunreuther and Hirth at 150.

\footnote{121} In America, for example, Copyright Clearance Center, Inc. (CCC) provides licensing systems for the reproduction and distribution of copyrighted materials in print and electronic formats throughout the world. Similarly, BMI is an American performing rights organization that represents approximately 300,000 songwriters, composers and music publishers. It is a non-profit company, founded in 1939, which collects license fees on behalf of creators. The license fees BMI collects for the "public performances" of its repertoire of approximately 4.5 million compositions - including radio airplay, broadcast and cable television carriage, Internet and live and recorded performances by all other users of music - are then distributed as royalties to the writers, composers and copyright holders it represents (see \url{http://www.bmi.com/about/}). ASCAP (The American Society of Composers, Authors and Publishers) is another membership association of over 240,000 U.S. composers, songwriters, lyricists, and music publishers of every kind of music.
ASCAP protects the rights of its members by licensing and distributing royalties for the non-dramatic public performances of their copyrighted works (see http://www.ascap.com/index.html).

Analyzing the formation of the CCC provides a salient example of how clearinghouses can solve seemingly insurmountable market problems. In 1976 Congress passed an updated version of the U.S. Copyright law, which went into effect in 1978. See PL 94-553. In the years leading up to the law’s passage, scholarly journals and other publications began to see their profits being eroded by unauthorized photocopying. See A.F. SPILHAUS, JR., THE COPYRIGHT CLEARANCE CENTER. The new law made it clear that permission of the copyright owner is needed by anyone reproducing short articles and other publications. To facilitate the collection of royalties generated by library copying, Congress recommended “that workable clearance and licensing procedures be developed.” Id. The CCC was born from this Congressional recommendation in 1977. The CCC is a voluntary, non-profit organization that operates as a central clearinghouse for the payment of copyright license fees to authors. Publishers, authors and “user organizations” like “libraries, corporations, government agencies, and information services” register with the CCC. At first, the CCC employed a system called the Transactional Reporting System (“TRS”) where “[p]ublishers would print a legend at the bottom of the first page of their books indicating the fee to be paid for copies, and users would account for each copy made, periodically remitting the accumulated sums to the CCC for distribution to its members.” PAUL GOLDSTEIN, COPYRIGHT’S HIGHWAY: FROM GUTENBERG TO THE CELESTIAL JUKEBOX 205. However, the CCC experienced a serious problem with illegal underreporting. After signing up over seven hundred members, the CCC received reports from only fifty five. Id. In 1980, the CCC employed a more proactive approach called the Annual Authorized Service system (AAS). With this system, the CCC would “audit each user’s photocopying activities on the user’s premises and convert the results of the audit to a statistical model that accounted for the number of times the user copied to works of individual publishers.” Id. at 205–6. Based on the statistical model, the CCC extrapolated how much in fees it should charge each users, and to which publishers the sums should be routed. The major court decision in American Geophysical Union v. Texaco, 802 F.Supp 1 (F.D.N.Y. 1992), that ruled that copying of scholarly journals did not fall under the “fair use” provision of copyright law provided the “stick” that the CCC needed to cement and enforce its system. Currently, the CCC “manages the rights to over 1.75 million works and represents more than 9,600 publishers and hundreds of thousands of authors and other creators.”

Many valuable lessons can be learned by following the CCC’s progression from its formation, through troubled times, and to its eventual success. First, the CCC emerged from an environment of “cooperate or perish.” The serious threat that illegal copying posed to the industry’s bottom line kept publishers negotiating through inevitable disagreement. 84 CAL. L. REV. at 1338. Robert P. Merges noted that, “to a large degree, members acquiesce in the compensation schemes of these societies, despite the fact that there are numerous points for possible disputes, because they realize that without joint action no compensation would be forthcoming at all.” Id. Next, although the government did not formally establish the CCC, many recognize that clearinghouses have little chance of success without some sort of enforcement mechanism. GOLDSTEIN, supra. The original founders of the CCC knew that if the organization were to succeed, it would need both a carrot and a stick. The “carrot” was the promise of increased profits for publishers; the “stick” would be “an enforceable legal rule to the effect that unlicensed photocopying… constituted copyright infringement.” Finally, the presence of a substantial profit potential is needed in order to get members to participate in a clearinghouse system. In the publishing context, although the value of each transaction accounted for was small, the
transaction costs are analogous to the costs of bargaining between potential subsequent insurers and original insurers in the health-insurance context.

The health-insurance clearinghouse we propose would promulgate schedules of transfer payments decided on collectively by the insurer–investors. Each schedule would specify the treatment to which it applies – for example, bariatric surgery for morbidly obese patients – and the payments to be made when an insured who has undergone that treatment switches from one insurer in the clearinghouse to another at various times. The schedule might be, for example, monthly, quarterly, or annually, specifying payments for a switch after one, two, three, etc. months, quarters, or years. Payments could be made in real time as insureds switch insurers, or the clearinghouse could keep track of switches and then require the insurers to settle up periodically, for example, annually. Real-time payments may be advantageous in that they do not require the clearinghouse to retain as much possibly sensitive data about the treatments that insureds have undergone.

The rules for coming to collective decisions about transfer-payment schedules should have several features, some of which follow directly from our analysis in Part II. As many insurers as possible should be made members of the clearinghouse to minimize the prospect of insureds switching to a non-member insurer after receiving a treatment that is subject to a schedule and, hence, of a member insurer’s not receiving a transfer payment for that treatment. It would be better for this reason if the clearinghouse were implemented through federal action rather than state by state. The most straightforward way to do this would be through federal legislation under Congress’s power to regulate interstate commerce. Membership in the clearinghouse should be mandatory, since otherwise insurers will resist joining, hoping to benefit from insureds who receive mandated treatments from member insurers but contributing nothing to the cost of providing those treatments. Coverage mandates should be required to apply to all insurers equally, that is, to mandate the same coverage and the same transfer payments for every insurer, and transfer payments should be required to be only in connection with switches of insureds between insurers. These two restrictions prevent the clearinghouse from devolving

number of transactions was huge. This huge profit potential gave companies incentive to participate in the system.

If payments are set correctly, it is not necessary to make investment mandatory since it will be in each insurer’s interest to invest. Mandates that establish transfer prices but do not make investment mandatory have the advantage that they allow insurers for whom covering a treatment is particularly costly nonetheless to vote for a transfer payment that reflects the costs of covering it for insurers in general. If the mandate passes, they can avoid their own unusually high costs by simply declining to cover the treatment themselves.
Adopting a schedule should require a concurrent majority of insurers with substantial net inflows and insurers with substantial net outflows to be enacted and to continue in force. A schedule should apply to treatments performed so long as the schedule commands a concurrent majority, and should apply to those treatments forever, even if the insurers later alter or repeal the schedule. By a concurrent majority, we mean a majority of the insurers with substantial net inflows and a majority of the insurers with substantial net outflows. As the analysis in Part II explains, insurers with net inflows prefer transfer payments as low as possible, while insurers with net outflows prefer mandates with very high transfer payments and would support schedules that compensate them for covering even socially undesirable treatments. The maximum transfer payment the inflow insurers would agree to and the minimum transfer payment the outflow insurers would agree to happily define a range that is nonempty only for socially desirable treatments.

Whether insurers have substantial net inflows or substantial net outflows should be calculated with respect to the patients covered by any particular proposed mandate. Initially, insurers can self-report this classification, with penalties for misrepresentation; in time, if the clearinghouse maintains anonymous data on switches, it will have enough information to police these representations itself. The purpose of disenfranchising insurers with neither inflows nor outflows and insurers with inflows or outflows but without substantial inflows or outflows is to prevent vote trading or vote buying. Insurers like this have no interest or an insufficiently large interest in the particulars of a specific schedule of transfer payments, and so might agree to vote in the inflow pool for payments that are too high or in the outflow pool for payments that are too low in exchange for a reciprocal vote on a different schedule or schedules or for some outside benefit such as a simple payment. Such payments and collusion should be legally proscribed. Ensuring that every voter on each schedule has a substantial interest in it means that any such payments or deals will have to be large, and so hopefully easier to detect.

Two consequences of this voting scheme may seem strange: under it, many insurers may be disenfranchised, and the insurers are counted equally within pools, so that, for example, an insurer with 30% market share in Michigan might count the same as an insurer with 2% market share in Rhode Island. Neither of these consequences is problematic. Under the voting rules we propose, insurers are essentially homogeneous — each inflow insurer represents every other inflow insurer well with respect to the

123 An alternative scheme where coverage levels vary and so do the associated transfer payments might be too complicated administratively, although not necessarily so.
decisions they are authorized to make through the clearinghouse, and the same is true for each outflow insurer. Thus disenfranchisement has no instrumental impact on the disenfranchised; there is no way for the enfranchised to take advantage of them. This is also why simple majority rule is better. There is no set of decisions the individual pools can make that is likely to be particularly harmful to a minority, so there is no set of decisions that the voting rule should privilege over others.\textsuperscript{124} Simple majority rule is the only rule that has this feature of outcome neutrality. Moreover, there is no symbolic or fraternal or any other such non-instrumental value to voting in the clearinghouse. Voting here has no political connotation. It is simply a way of eliciting investors’ private information about the costs and benefits of potentially efficient treatments.

One potential problem with the clearinghouse is that insurers will perceive a risk that payments will not actually be made or that the system will otherwise fail and hence will be hesitant to participate. This problem is small if the clearinghouse is established by law and its mandates given legal effect enforceable in the courts, as we recommend. Relatedly, an insurer may not pay because it goes bankrupt. The chances of this are small in the United States. And to the extent it is a problem, the clearinghouse can effectively insure against non-payment by setting transfer payments a little higher than it otherwise would. Another problem is that insureds may switch from insurers within the clearinghouse to insurers not within the clearinghouse, leaving the original insurer uncompensated. If the clearinghouse were implemented on a state-by-state basis, insureds who moved out of state would be in this category. This problem is solved by implementing the clearinghouse on a national basis through congressional action. Even a national clearinghouse, however, will experience the problem of uncompensated switches with respect to insureds who simply become uninsured because their jobs have ended or they can no longer afford insurance. To an extent, the clearinghouse can absorb the cost of insureds who leave the system in this way by increasing the transfer prices

\textsuperscript{124} A further substantive restriction to consider is a rule forbidding mandates to distinguish between classes of patients who are medically indistinguishable with respect to a particular treatment. Such a distinction can allow investors to treat each other differently using only facially neutral mandates with transfer payments tied only to switches: if insurer $A$ has morbidly obese patients with irrelevant characteristic $A$, while insurer $B$ has morbidly obese patients with irrelevant characteristic $B$, a mandate that requires insurers to cover bariatric surgery for patients who are morbidly obese and have characteristic $A$ is facially neutral but disadvantages insurer $A$ relative to insurer $B$. Such a rule would only require the government to distinguish medically relevant characteristics from medically irrelevant ones, not to assess the social value of treatments. Majority rule may be sufficient to prevent this problem, depending on the distribution of medically irrelevant characteristics, particularly since such a distribution must be persistent for the expropriation to work.
for switches to insurers within the clearinghouse. Alternatively, state or federal governments could make the transfer payment for insureds who become uninsured.

The clearinghouse is better than administratively mandated coverage, injunctions to cover, and damages for switching in that it harnesses insurers’ private information about the costs and benefits of treatments. This means the decisions it makes about what treatments are socially desirable are more likely to be correct than the same decisions made by an administrative agency or the courts. The clearinghouse is also better than these alternatives because it saves on litigation and lobbying expenses. The clearinghouse is better than lock-in contracts and rebates in that it does not create a lock-in effect for insureds. Insureds are free to switch insurers whenever they want, and, despite this, insurers are not deterred from covering clearinghouse treatments since they expect to be compensated for such switches. The clearinghouse also avoids the first-mover problem that we described in the context of lock-in contracts. Finally, the clearinghouse involves decision-making and enforcement between insurers rather than insureds, which is advantageous because insurers are likely to be more sophisticated than insureds and are less likely to be judgment proof than are insureds.

**CONCLUSION**

We presented a general analysis of collective myopia, a problem that induces underinvestment in prospectively efficient improvements. We then presented a series of solutions to collective myopia: solutions that mandate investment in specified improvements; solutions that internalize the costs and benefits of improvements in one of the parties; and solutions that facilitate collective action among the investors. We also identified a set of real-world conditions that affect the relative desirability of these solutions and the best way to implement each of them. We then took this framework and applied it to the problem of health insurers’ failure to cover prospectively efficient treatments such as bariatric surgery. We analyzed the problem as one of collective myopia, considered each of the types of solutions generated by our framework as applied to health insurance, and concluded that the best solution is a mandatory-membership clearinghouse in which insurers would collectively decide on transfer-payment schedules applicable to all of them. Congress should erect this clearinghouse now.