

1996

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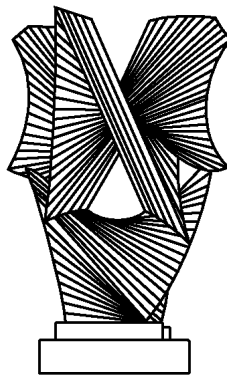
Recommended Citation

Richard A. Epstein, "Transaction Costs and Property Rights, Or, Do Good Fences Made Good Neighbors?" (Coase-Sandor Institute for Law & Economics Working Paper No. 38, 1996).

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CHICAGO

JOHN M. OLIN LAW & ECONOMICS WORKING PAPER NO. 38
(2D SERIES)



Transaction Costs and Property Rights:
Or Do Good Fences Make Good Neighbors?

Richard A. Epstein

THE LAW SCHOOL
THE UNIVERSITY OF CHICAGO

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The Coase Lecture Series, established in honor of Ronald H. Coase, Clifton R. Musser Professor Emeritus of Economics at the University of Chicago Law School, is intended to provide law students and others with an introduction to important techniques and results in law and economics. The lectures presuppose no background in the subject.

TRANSACTION COSTS AND PROPERTY RIGHTS:
OR DO GOOD FENCES MAKE GOOD NEIGHBORS?

*Richard A. Epstein**

The selection of the title for my Coase lecture was in part an act of trepidation and in part an act of literary license, which fits in with one important side of Ronald Coase's own work: its distinctive literary excellence. In any event, this quarter I have taught property based courses in two subjects, property itself and a seminar on the Federal Communications Commission, a subject on which Coase wrote with such perspicacity nearly 40 years ago, (when he was younger than I am today).¹ So the metaphor of the fence came naturally to me as the sign of property rights. But I put the point in question form because I want to get across the uneasiness that one has about fences, and by implication about boundaries. And it turns out that I am not alone in that pursuit. Susan Gzesh does more than teach immigration law—a subject in which boundaries are of no little importance; she also memorized poems in third grade. So she reminded me (with verse recited from memory) that Robert Frost's poem, "Mending Wall," achieved its greatness precisely because its long dialogue showed a deep ambiguity about fences, and perhaps about the boundaries that these were designed to protect.

That ambiguity is captured in the passage which supplies the title for this section:

There where it is we do not need the wall:
He is all pine and I am apple orchard.
My apple trees will never get across
And eat the cones under his pines, I tell him.
He only says, 'Good fences make good neighbours.'

* James Parker Hall Distinguished Service Professor of Law, The University of Chicago Law School. The Coase Lecture in Law and Economics at the University of Chicago, delivered in somewhat different version on February 6, 1996. I should like to thank the John M. Olin Foundation for its support.

¹ Ronald H. Coase, *The Federal Communications Commission*, 2 J.L. & Econ. 1 (1959).

And note only this irony: the author says that we do not need fences (a cost) because there are no boundary crossings that they need to deter, given the fixed positions of pines and apple trees. He does not say that boundaries require fences under other circumstances; much less does he say that boundaries are not important as between neighbors. Yet I shall not dwell at length on this passage, let alone this poem, for we have miles to go before I earn my keep.

The poet is often thought to be not the precursor, but the antagonist to the law and economics scholar, in which capacity I come to this speech today. Even so, I think that the message that Robert Frost has offered us is a good one: good fences are not necessarily the right way to create good neighbors, nor even to demarcate the boundary lines that exist between neighbors. But by the same token, we should not want to say that bad fences make good neighbors, or indicate that boundaries are themselves unimportant to the way individuals structure their relationships with each other. It is just, as the poet points out, that it is costly to build the wall. Quite the opposite, the best way to understand the boundary is to endow it with a certain presumptive validity, and then to ask the set of circumstances in which those boundary conditions could be relaxed to the mutual advantages of the parties along both sides of the line. Even people who do not like fences often like the privacy that they can foster.

One simple way in which to make this basic point is to ask what the world would be like if we did not have boundaries along which we could build fences. At this point we would have a world that was committed into allowing individuals to have some interest in all land, or perhaps no individual to have any interest in any land. But once these individuals lack any separate property of their own, then they will have to develop some governance mechanism to structure the way in which they interact one with the other in the never-ending commons, not an easy task to do. The preferences for certain kinds of behaviors and hence certain kinds of rules may have a certain grim level of predictability across individuals. But with the increasing rise of diversity in tastes and temperament, we can be sure that a continuous ongoing deliberation about the nature of the common good is sure to get on everyone's nerves, and to place an

enormous stress on the collective decision procedures that have to be invoked to manage the common resources on which everyone depends for their sustenance. A little community, a little participation might be a good thing; and the same is true with a little bit of community property. But a lot of a good thing turns out to be a bad thing, and the simple and most profound influence that drives us in the direction of private property is the sense that we would prefer to have more neighbors and fewer partners in this world. Only by drawing boundaries and creating separate spaces is it possible to do this.

All of this does not mean that we have put deliberation and common property to one side. The use of common areas in condominiums and apartment houses shows that the equilibrium, even when privately generated, does not make all space private. Rather the hope is that, with the separation of individuals into smaller groups we can introduce a greater measure of agreement into the deliberations that remain: it is easier for each family or group to make decisions on its side of the boundary, then to have common property for them both. The simple act of division reduces the stress on the decisionmaking procedures internal to both groups. It is for just this simple reason—the breakdown of vast collective decisions—that private property has its origins. And its limits. Clearly separation has some gain that can be captured by the sole entrepreneur. Thus we can see the power of boundaries by noting that they are created by agreement and conveyance when none existed before. The question is how we explore the uses and this limitations of these boundaries.

Given what we have said, the creation of boundaries has both benefits, for those who are given some degree of exclusivity, and costs for those who are excluded. To simply compare the gains and losses in any individual trespassory encounter is quite beside the point: the question is whether or not we can find some systematic advantage to a rule that treats the boundary as irrelevant in all cases: and we cannot. The ability to plant and to plan depends on secure property rights that allow the reaping to follow from the sowing, and the classical writers (who include both Blackstone and Bentham for all their apparent differences) were correct to assume that labor would cease on property if the return from that labor could be routinely captured by another. I sow and you reap: I work and you

collect, are the first and most powerful indications of a mismatch between labor and reward. The person who has internalized the labor should, as a first approximation be allowed to internalize the gain. That statement becomes an exaggeration with intellectual property, but as an instinct it works most powerfully with land, where only one person will ever be in that position to internalize the gain in question: no matter how hard one labors you cannot “copy” the crops. So the boundary has a powerful initial validity. But what kinds of complications does the boundary introduce?

To see the way in which the simplest model works, let us start by focusing our attention only on land, which is assumed to be owned indefinitely, and ask about the potential conflicts between neighbors and how these might be resolved. Here I can think of at least four illustrations of situations where the limited relaxation of the boundary works to the benefit of both neighbors, not perfectly, but with enough rough generality and predictability to be the basis of a rule of law.

The first is a simple agricultural practice. In medieval times when fields were plowed a nonproductive space at the end of the field was needed for the plow to turn around. Simply stating the proposition in this fashion shows the incentives created to having long thin strips, so that the ratio of unusable to usable land can be reduced. But that is a solution that does not depend in whole or in part on cooperation between neighbors, and the question is whether those neighbors can do better by agreement (or by custom) if they deviate from a property rights regime of common property. And it turns out that they can. By having a common area (just for two) for turning the plow at the end of each strip of land, the two parties can reduce the level of wasted space by 50 percent. There is here of course a question of where the common strip would be placed. At first blush there seems no reason not to place it all on the land of one party and then to have both use it. But the distributional consequences here would not come out quite evenly between the parties, and the designated loser might say why have the inconvenience with nothing to show for it. It is therefore under circumstances like these that the tendency is to split the turning strip equally between the two neighbors, so that each gains half of the surplus, or if the situation does not quite permit that, one can

imagine some possible side-payment between the parties to equalize the financial burdens from an uneven physical division.

Here never let anyone think that simple equity is at stake. To the extent that we have a rule that divides the surplus you reduce the possibility of unilateral defection from that common solution. And to the extent that you have a clear point of reference—even division at the margin—it facilitates the emergence of a broad custom that makes it possible for people to reach this solution in agricultural reasons without having to figure out time and time again the logic of sharing at the border that is consistent with joint maximization of wealth. To be sure the solution will not work everywhere: fences are needed when cattle and other animals are in issue unless the parties think that one large meadow is better than two small ones, which is often the case. Yet here too the poet is the equal to the challenge, and anticipates the major findings of the law and economics movement:

If I could put a notion in his head:
'*Why* do they make good neighbours? Isn't it
Where there are cows? But here there are no cows.
Before I build a wall I'd ask to know
What I was walling in or walling out.

The boundary solution for turns in open fields, moreover, has, as so often proves the case, a direct parallel in the public law of takings and eminent domain. Oftentimes one of the critical issues in a farming community was the location of a road to take goods to market. Let it be placed anywhere along the boundary line between two neighbors and each can have access to it. Yet here the situation is such that all other persons can have access to it as well, so that typically the cost of construction and maintenance does not fall on the original landowners. But a rule that says that they contribute the land evenly, without compensation, leaves them the net winners when the value of the retained lands is increased by greater access to markets. And the principle of even division of land contributed (or side payments in lieu of land) has the same virtues of stabilization noted above. It reduces the incentive for each party to push the road over to his neighbor's land.

In other cases the deviation from the strict borders of land exhibit a similar logic of mutual advantage to both sides. It is evident to all observers that the law of trespass has a harder edge (at the boundary quality) than the law of nuisance.² And it is important to understand why: with respect to those invasions that do not involve actual entry, there is across the board (and not only in specific agricultural settings) an opportunity by introducing a bit of gains at the margin by relaxing the rules that say either all invasions are wrong, or all noninvasions are completely permissible. Here I first worked on these cases in the 1970s when I was trying to see what was wrong with some of the work that I had done on the strong boundary principle in the law of torts.³ And I discovered that Ronald Coase was not the first Englishman who had fastened on the role of transactions costs in softening up situations at the boundary.

The most famous illustration of this principle is the so-called rule of “live and let live at the boundary” which says that all individuals have to put up with a certain amount of noise and interference with their neighbors, on condition that they do the same with them. And the explanation for this result was put forward in unmistakable terms by Baron Bramwell in *Bamford v. Turnley*⁴ when he said:

There is an obvious necessity for such a principle as I have mentioned. It is as much for the advantage of one owner as of another; for the very nuisance the one complains of, as the result of the ordinary use of his neighbour's land, he himself will create in the ordinary use of his own, and the reciprocal nuisances are of a comparatively trifling character. The convenience of such a rule may be indicated by calling it a rule of give and take, live and let live. . . .

² See Thomas W. Merrill, Trespass, Nuisance, and the Costs of Determining Property Rights, 14 J. Legal Stud. 13 (1985).

³ Richard A. Epstein, Nuisance Law: Corrective Justice and Its Utilitarian Constraints, 8 J. Legal Stud. 49 (1979).

⁴ 122 Eng. Rep. 27, 32 (Ex. 1862).

The public consists of all the individuals of it, and a thing is only for the public benefit when it is productive of good to those individuals on the balance of loss and gain to all. So that if all the loss and all the gain were borne and received by one individual, he on the whole would be a gainer. But whenever this is the case,—whenever a thing is for the public benefit, properly understood,—the loss to the individuals of the public who lose will bear compensation out of the gains of those who gain. It is for the public benefit there should be railways, but it would not be unless the gain of having the railway was sufficient to compensate the loss occasioned by the use of the land required for its site; and accordingly no one thinks it would be right to take an individual's land without compensation to make a railway.

It is odd perhaps to think that in some obscure nuisance decision on the question of reciprocal injuries at the boundary we have the following modest contributions. First, a clear and powerful statement of methodological individualism as the way to proceed to particular results: i.e. there is no public interest as such, only a set of private interests of which gains and losses have to be netted in some fashion to find out what the correct social result has to be. (Blackstone had made the same point earlier.) Second, the importance of the Paretian criterion of social welfare based on the improvements of all individuals in the social system; and third, its intimate connection to the principles of eminent domain: no compensation is needed in cash when it is supplied in kind, but the result flips over when (as with the railroad and the sparks) the damage by way of invasion runs all in one direction.

What Bramwell has done has been to identify those situations between neighbors where in fact the relaxation of the strict boundary conditions are likely to work to mutual advantage. Once again a set of customary practices paves the way to the legal rule, but here unlike the cases of plowing at the boundary lines we cannot be so confident that the parties will be able to generate the best solutions consensually if left to their own devices. The temptation to act unreasonably; to demand compensation, or worse to seek

injunctions for trivial losses may well prove too great to individuals who can insist that any invasion of their space, however minute or indirect, is subject to legal sanction. And even if the best of worlds, it costs money, imposes impediments and encumbrances on legal title, to negotiate thousands of transactions to reach the position that the live and let live places us in the first place. So here we find the relaxation of this boundary makes perfectly good sense. And for persons who derive title from a common owner, for whom the standard rule provides too much noise at the boundary or too little, it is possible to create by private covenants a distinctive environment that suits the tastes of the members of that community even if it suits none other.

The argument also works well in reverse with respect to the easement of lateral support. And once again it was nineteenth century English judges, this time Jessel, M.R., to state the rule clearly and forcefully.⁵ If each side digs out to the boundary, the land next door will fall. If each restrains that behavior, then both will be benefited. The situation becomes more complicated for it would be a mistake to allow people to build first and claim the easement of support thereafter, so the rule was wisely confined to land in its original state. For the support of preexisting structures, however, an obligation was imposed, and it was notice to the other owner with a view toward allowing him to shore up his own support, or to negotiate for rights of support. But the alternative rule would have had consequences. We never want the unilateral action by one party to transfer rights from another. Noninvasive and surely legal; but if the development rights on the other side are compromised, then we have here actions that are taken for strategic advantage, actions that would not be taken if there had been a single owner in possession of both plots of land, for whom the boundary constraint would not be relevant at all.

It may seem to be a long march from the law of lateral support to the law of privacy with respect to eavesdropping and spying, both in the public and the private context, but in fact the movement principle that is involved here is really quite small—a nice result if we care about a unified approach to all legal problems. Let us assume

⁵ *Corporation of Birmingham v. Allen*, 6 L.R.-Ch.D. 284 (C.A. 1877).

that we had a rule that allowed all individuals to eavesdrop at their pleasure so long as they did not trespass on the land of another. The net effect is that both sides to keep their conversations private would have to erect various devices to block the overhearing. In preserving privacy, the traditional law of trespass would, of course, offer landowners some protection. They could hide behind their walls and or congregate in the center of their property in order to reduce the chances that others would eavesdrop.

Yet it is possible to do better, and in so doing free up land for more useful pursuits. If one could establish that each person values privacy over snooping, then a social norm that blocks the overhearing could be adopted on both sides to mutual advantage. So the question is how can we ask whether that norm is in effect. Well here we can once again look to consensual commons and consider the applicable rule in restaurants or clubs. The no-overhearing rule is in strong effect, and sanctioned informally against those who snoop. That these rules develop in a consensual setting is a good reason to develop them in a nonconsensual setting where it looks as though the values attached to the various activities do not differ unduly from those found in restaurants and clubs. And that norm has powerful enforcement in the modern law of privacy.⁶

As with other rules, what starts out as a private rule between parties ends up ordering relationships between the individual and the state. The government position that snooping by electronic devices is not wrongful because it is not trespassory is falsified by the prior developments in the common law of privacy. Thus the long and tortuous history of the Fourth Amendment—is electronic wire-tapping an unreasonable search and seizure?—is one that receives a clear answer. The practice is no more allowed to governments than it is to private parties. The Supreme Court has reached that position⁷ but with too great a reliance on some undifferentiated notion of reasonable expectations. It is all too easy to say that one is entitled to privacy because one has the expectation of getting it. But the focus on the subjective expectations of one party to the transaction cannot explain or justify any legal rule. Should the result change if the state routinely practices snooping, so that no one has any

⁶ Roach v. Harper, 105 S.E.2d 564 (W.Va. 1958).

⁷ Katz v. United States, 389 U.S. 347 (1967).

reasonable (read, predictive) expectation that their conversations will go undetected? It is dangerous to say the least to allow a succession of government wrongs to ripen into a prescriptive right of sorts. That unfortunate conclusion is avoided by stressing the social optimality that comes by adopting a rule that extends protection against certain forms of nontrespassory conduct, for once the optimality of the rule is established, then its frequent violation by government is no longer viewed as framing expectations but as violating rights.

The last of the relaxations of the boundary conditions is not so simple because it involves the integration of the temporal and the spatial domains, which was just hinted at in connection with the problem of lateral support. When Ronald Coase wrote about the problem of social cost,⁸ he illustrated much of the difficulty with the well-known case of *Sturges v. Bridgman*,⁹ which involved a dispute at the boundary between a physician and a confectioner. The confectioner had long made up his compounds in the back of his shop without inconveniencing anyone. But when the physician decided to construct a new examining room near the back of his premises, the noise that had been harmlessly dissipated now became in the standard sense of the term a nuisance to the new neighbor who had just arrived on the scene. The question was whether the physician could recover for his damages and obtain an injunction against a continuation of the confectioner's prior practice. Coase used this case to illustrate that no matter which way the original right was assigned, the imbalance could be corrected (at least if transaction costs were zero) so that the more valuable use could continue and the other could be modified, with appropriate side payments between the parties, whose direction and amount depended on the specification of the original set of right.

The case has continued to exert a fancy over legal imaginations, and just recently Brian Simpson (who taught me property at Oxford) has written,¹⁰ subject to a pungent reply by Coase

⁸ Ronald H. Coase, *The Problem of Social Cost*, 3 *J.L. & Econ.* 1 (1960).

⁹ 11 L.R.-Ch.D. 852 (1879).

¹⁰ A.W. Brian Simpson, "*Coase v. Pigou* Reexamined," 25 *J. Legal Stud.* 53 (1996).

himself,¹¹ an extended essay on the secret history of the case that reveals the pattern of broken negotiations and disappointed maneuvers that dogged this unhappy lawsuit to its conclusion. But our fascination with the complexities of this situation should not allow us to deviate from our appointed goal, which is to understand something about the role of boundaries in disputes between neighbors.

Here the easiest way in which to organize the case is to ask the question: has the plaintiff made out a prima facie case of nuisance? Recall that for the better peace between neighbors the presumptive definition of a nuisance is a nontrespassory physical invasion that results in visible inconvenience to the affairs of a neighbor. The question of time does not at this level enter into the equation, and it seems clear that the physician thus far has the whip hand in the negotiations. But here the argument is that to every good prima facie case, we can find some affirmative defense, and the one for this occasion is that the plaintiff assumed the risk of the injury in question because he came to the nuisance: here it would be easy if the plaintiff trespassed on the defendant's land, but the entire case gains its difficulty precisely because the plaintiff had remained a good neighbor by not crossing over.

The usual case law on this point is in accord with the result of this drama and it allows the plaintiff to win, and thus puts on the defendant the obligation to purchase any needed property interest in order to continue with his business. But the question is why should this be the case? And in order to answer this question it is necessary to think back to an earlier point in time in order to decide what options were open to the physician, or his predecessor in title, the moment the confectioner started his business. If he knew that down the road, the confectioner's original activities could end up into an easement to continue, then it is quite clear that the plaintiff-physician is in a worse position by doing nothing than he would be by immediately bringing a legal action to protect his position. After all, by hypothesis if the two activities started at the same time, he could have prevailed in his action for injunction and damages. So the only way that he could stop the creation by prescription of the

¹¹ Ronald H. Coase, "Law and Economics and A.W. Brian Simpson," 25 *J. Legal Stud.* 103 (1996).

new easement to cause damages is to sue promptly. Thinking about that suit raises the following question: *cui bono*? It hardly helps the physician to have to act early to protect his rights. And it certainly does not help the confectioner to be shut down. Why precipitate a conflict over future legal rights when there is no present interference, even though there is an admitted transmission of these noises over the boundary line? So we clearly want to avoid the suit.

One way to achieve this result is to have the two parties negotiate some sort of a stand-still agreement. But that option is costly and holds open the possibility that the physician might demand an amount a good deal more than his harm suffered or profits lost in order to resolve this dispute. And the problems become still more intractable if a defendant's activity extends noise and vibration across the unoccupied lands of many individuals. So the law here has created a bargain of its own. The plaintiff is told that he cannot sue today, and the defendant is told that he cannot plead the statute of limitations tomorrow, that is, by claiming in retrospect that the harm really started when the defendant commenced his operations. So there is a forced exchange of sorts between the two parties that look to make things better off for both.

But one can only tell about the success of this engineered deal in the fullness of time. As matters go on, the result opted for here could prove triumphant if the actual conflict never occurs. The physician never builds the examining room close to the party wall, or the confectioner sells out to a new developer who abandons the older noisy practice when the neighborhood becomes more fashionable. At this point, the postponement of the legal dispute works its magic at both the front and the back end, and at a guess one would say that for either or both of the reasons just mentioned, just this outcome is likely to occur.

But in some cases the dark side of the force comes home to bear. The conflict is postponed but not avoided altogether. Now we have the physician who exercises the right. If we looked at this transaction as a one period problem we might be tempted to say that the party who is last to arrive is the one who stirs up all the conflict, and thus create a kind of prescriptive right for the confectioner. But once we recall the structure of the legal agreement imposed at an earlier time, we cannot have so limited a perspective on the problem.

Now it looks as though we are in payback time. The physician can exercise that right and the confectioner has to give way. The only help that he has is a bit of time to get his belongings in order, and normally that will be demanded before the conflict arises. There are some cases that deviate from this pattern, and some academic commentary that does not take this line. But the overall sense of the deal should be clear enough once it is set out. It is possible to reconcile time and space, although not perhaps in exactly the same sense that Immanuel Kant would have asked for us. And once again the analysis of the private law question gives us guidance in public law areas: when the state shuts down the piggery to protect nearby development, it need not compensate its owner, but can stand in the shoes of the neighbor whom it protects.¹² The analysis is the same as above.

This discussion of space and time affords a convenient transition to the next of our questions: the question of boundaries over time between different parties. This problem is one that is ordinarily obscured to common understanding because the ownership in land and in chattels is normally regarded to be forever, at least in the sense that one person has no definite limitations over the period of ownership, and can consume, sell or dispose of property just as if he were to live forever. But there are, or at least have been, situations where it has been thought appropriate to create temporal boundaries between individuals, as through the creation of leases and life estates, so that now the law has to police the boundaries between the two successive generations of holders. The boundary of this sort creates a different set of neighbors from those in the spatial conflicts (with and without a temporal dimension) that we have just had the opportunity to witness.

The key point here is that these temporal divisions contain no element of reciprocity of the sort that governed all the cases to date. No longer can we talk about the sharing of common spaces, or reciprocal easements of support. Here there is one party that is in possession of the property and the other who is entitled to take it at some future time. By definition the party who is out of possession can do little to harm the party who is in possession, but the converse arrangement is surely not true. The party in possession, however,

¹² See *Hadacheck v. Sebastian*, 239 U.S. 394 (1915).

understands the maxim that possession is nine points of the law, and is in a position to do grave harm to the holder of the property in the next generation. Just as we can consume our seed corn, so too there is a greater temptation to consume the seed corn of another. So the creation of the temporal boundary gives the regrettable opportunity for another forbidden boundary crossing. Property that has an expected value and use past the present term or the present life can be mined, cut, harvested so that the remainder is but a mere hulk with the value sucked out of it. And here the common law action of waste is offered by the state as a counterweight to the premature destruction of assets by the present tenant in possession.

But exactly what is expected of that tenant in possession? It is hard to give any categorical answer for so much depends on the nature of the resource in question. It will not do for the tenant in possession to cut down an entire forest, but if a mine is already open it is far from clear that he should stop extraction altogether and thus make a gift, of sorts, to the remainderman of the premises. So the best that one can say in the abstract is that the patterns of utilization that were followed in the earlier periods should be roughly those which would be followed by individuals with successive interests in the property, that is, if they acted as prudent owner of the entire estate. That position is not perfect because if one could show that the prudent owner would engage in a process of dramatic extraction and consumption, it would be an open question as to whether that pattern of behavior was the one which the grantor desired once the division of interests was created: after all there was some intention to create a transfer that provided benefits to the next generation?

And in a sense that is just the point. Now that the boundaries are unclear and the obligations are no longer reciprocal, it is very hard for the law to fashion an ideal set of rules that keeps the two interests on a strict sequential course. So here the legal norm falls, but the consensual solution rises in importance—the inverse pattern from the live-let-live-situation where regularities between neighbors are more easily observed: in waste cases we say is that the grantor of the two interests (or the one if one is retained and the other is transferred out) can usually specify with greater detail exactly what can be done with the property and by whom and at what time, and if that direction is spelled out with specificity, then we might allow

the authorized temporal boundary crossings to take place with relative impunity. The owner of a life estate in a grand mansion may be able to renovate or rip it down if that is allowed by the original deal. The life tenant of a mine may be able to speed up production. And a tenant in possession of real estate may be forced to surrender the leasehold improvements at the end of the lease, but usually for a cash settlement that compensates him for any unrecovered investment in the original structure, be it by predetermined formula or by a fresh appraisal when the lease terminates. So here again the rules are default rules, but typically they are not robust default rules as are those between neighbors. The fit between law and intentions is not strong enough to cover the immense kind of variation that is often found in transactions of this sort.

But once we realize that boundaries can come in time, then we realize that they can come in other forms as well. Sometimes the boundaries that one observes are financial instead of temporal. Thus just as one has to observe the boundary between neighbors and the boundaries that exist in the temporal dimension, it is also possible to find financial boundaries as well. Here again the key is how to police the lines that exist between two entities in the same property. The ordinary person who buys a home does so with a mortgage and that creates a boundary issue: if the property is held in good shape and there is no default on the loan, we see no change in the possession of the property from the time the mortgage is created to the time that it is discharged. But if the tenant in possession does go into default, then a boundary condition of sorts has been crossed. The danger that we face is that the tenant in possession will no longer think that the losses in value from the property will be his, but will know that they will instead inure to the lender. Heads I win and tails you lose becomes a possibility that the borrower would never own up to at the outset of the relationship, but which could become his sole possibility of salvation at the end of the day. So steps have to be taken to make sure that the possession goes back to the lender in the event of default, so as to spare him the risk of that gamble. From that simple insight, the entire law of foreclosure and secured transactions is borne.

But it would be a mistake to assume that only real estate can be security for indebtedness, or that only private law questions are involved with transfers of this sort. Quite the opposite is true. One

of the worst pieces of legislation passed in the aftermath to the savings and loan crisis of the 1980s, and one portion of that complex legislation was designed to make sure that the government was not caught with any banks that were insolvent: the default problem can arise not only with the ordinary home mortgage but also with complex commercial transactions. Banks both borrow and lend money. When they borrow money or take deposits and the interest rates go up, they have gained on the transaction because they can relend the money for more than it costs them. But by the same token when they lend money and the interest rates go up, then they lose money on that transaction: they have foregone the opportunity for a higher interest rate. The rise in interest rates therefore causes a decline in the value of the bank's assets—the bad side. But by way of an offset it produces a decline in the bank's liabilities—the good side. How do these sides stack up with each other?

A skilled bank aspires to the same position as a bookie. In a direct snub to Polonius they seek both borrowers and lenders to be, and to make their money on the spread. In the wake of the savings and loan crisis of the early 1980s, Congress passed the Financial Institutions Reform, Recovery and Enforcement Act of 1989 (FIRREA)¹³ The government regulations in question required that the regulated institutions mark their portfolio of assets to market, so that if the interest rates rose, the value of their loans made would go down. But they did not mark to market their liabilities, including their deposits to market, even though these too would shrink with the rise of interest. Thus only one side of the linked transactions was altered from book value, with the effect that many solvent institutions were thrown into insolvency, from which a forced liquidation of their assets followed under government direction and control.

When the savings and loans argued that the resulting fire sale of their commercial deposits was a taking that drove them to bankruptcy, they were met with the argument that banking was an extensively regulated business so that they got just what they had to expect: a raking over the coals that they could have avoided by staying at home.¹⁴ The argument here is that all property protection

¹³ P.L. 101-73, 103 Stat. 183 (1989).

¹⁴ *California Housing Securities, Inc. v. United States*, 959 F.2d 955 (Fed. Cir. 1992).

supplies to individuals is fair warning that silly regulations may take place. The individual firm can minimize its exposure once it is told about the rules of the game. But here the state is in effect allowed to use the banking conventions to cross what would otherwise be a boundary condition between debt and equity. Yet if that law were respected the state could still move quickly to stop bad lending practices by insolvent banks, but could not redefine the definition of insolvency in ways to expand its own scope of authority. The older rules would have prevented the premature destruction of billions of dollars in assets. A rule that requires the state to respect the same boundaries as any other lender would transform the world. No longer could the state justify any foolish rule by announcing in advance that it reserved the right to be foolish, thereby dashing any expectations of sound financial supervision of private banking activities. Instead property would create a set of boundaries between the individual and the state which could not be crossed at whim. The task of governance, of the delineation of the respective spheres of market and government, could be much more clearly discharged than it is today. For once again the same convention that separates two private parties could be used to separate state from citizen, to the long term advantage of both, especially since the state is only the sum of the interests of its citizenry, evaluated over the long run.

The troubled state of decisions of takings have led to a chorus for reforms. These have chiefly arisen in connection with land, but could easily be extended to other areas, banking not excepted. Yet even here the proposed legislation often suffers from one defect: the want of clear boundary conditions for enforcement. Thus we are told compensation should be triggered only when regulation reduces the value of property by—pick a number—30 percent. But that is 30 percent of what? And how does one make that calculation in a world in which there are no markets to mark the differences valuation. The question of what should be done to handle the losses in value triggered by land use regulation remains *the* central problem in ordinary takings law. Solving it is not possible here. But noting that no solution that has uncertain boundary conditions will work is appropriate. So even in areas of one's own enthusiasms, a bit of caution is always welcome.

But it is perhaps too much here to go on about the importance of boundaries, save one. The boundary between law and economics.

Here I think that the disciplines are to some extent different. The lawyer seeks to delineate the rights and duties of citizens and to work transactions within that framework. The economist seeks to understand the logic of the rules and the consequences that they generate. But in this case at least I would stress more the common mission and less the boundaries between the two. I think that Ronald Coase made his great contributions because he was able to use simple cases to illustrate important economic principles. I believe that other areas could benefit from the kinds of arguments I have made today about the use and limitations of boundaries in ordering human affairs. Intellectual property is surely one; and the study of the spectrum and the Federal Communications Commission, alluded to above is yet another. In fact I think that too much of economics today is driven by the desire to obtain mathematical sophistication even at the cost of institutional mastery. Subtle insights are often celebrated while important institutional arrangements are often overlooked because they are too obvious for serious theorists to dwell. Perhaps that is the observation of someone for whom economics is a tool that helps explain how legal rules emerged and why they are sound. But even if this study is not the only way to look at the interaction between law and economics, it is surely one of the most fruitful ways to use the study of each to enrich the understanding of the other.

The reorientation of law and economics offers a response to some of the challenges that are found in Frost's "Mending Wall." The poem concludes with the poet's protagonist unbowed:

He will not go behind his father's saying,
And he likes having thought of it so well
He says again, 'Good fences make good neighbours.'

One sees in this passage some of the recurrent themes in the traditional defense of private property and industry custom. "He will not go beyond his father's saying," makes it appear as though his thoughts are just handed down from generation to generation, and perhaps, just perhaps, are not capable of any rational defense in the here and now. And the reappearance of the punch line "Good fences make good neighbours" could lead one to believe that simple

repetition of this saying is tantamount to a rational argument in its defense. At one level I sympathize with the protagonist's attitude because it is all too clear that the nineteenth century judges who did best by economics did so in advance of the theoretical developments of the field that gave voice to the concerns they were addressing. Yet once we can marry the newer insights to the older rules we can perhaps do better than simple repetition. We can gain some understanding as to why older principles served us well, and why modern judicial efforts to accommodate the expansion of state power have unanticipated consequences in at least two dimensions. They both lead to inferior social institutional arrangements, and they stand at odds with any coherent and systematic development of general legal theory.

Readers with comments should address them to:

Richard A. Epstein
James Parker Hall Distinguished Service Professor of Law
The Law School
The University of Chicago
1111 E. 60th Street
Chicago, IL 60637

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