

Takings, Commons and Associations:  
Why the Telecommunication Act of 1996 Misfired

By

Richard A. Epstein \*

There is widespread agreement today on all sides of the telecommunications wars that something is deeply flawed with the design or implementation (or both) of the Telecommunications Act of 1996.<sup>1</sup> The immediate grounds for this judgment lie in the short term wreckage that has come in wake of its passage. The ostensible end of the 1996 Act was the introduction of competition into an industry that has long been dominated by the local exchange carriers (LECs), which operated under a statutory monopoly for their respective territories. But the term “competition” carries with it a distinct connotation in telecommunications. As a network industry, no free-standing entity can enter the market and win away customers from an incumbent by the simple expedient of offering a better product at a lower price. Some form of cooperation is strictly necessary so that customers of the various competitors on the telecommunications grid are able to forge connections with each other. The near-decade long battle has been over the terms and conditions under which the needed interaction between rival carriers takes place. A purely competitive market needs no central agency to set prices for either inputs or outputs. In contrast, “competition” in a network industry requires at least one centralized decisionmaker to allow the various entities to compete for customers on one side of their business while coordinating their operations on the other.

The choice of institutional mechanism for achieving this result is absolutely critical to the overall competitive effort once the decision has been made to abandon the old monopolistic model subject to rate regulation. Here there are two, and only two, possible ways in which the government regulation can procure the internal infrastructure

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\* The James Parker Hall Distinguished Service Professor of Law, The University of Chicago, School of Law and the Peter and Kirsten Senior Fellow, The Hoover Institution. I have served as a consultant on various telecommunications matters for SBC and Verizon.

<sup>1</sup> The Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, codified at 47 U.S.C. § 151 et. seq. [hereinafter the 1996 Telecommunications Act, or just the 1996 Act].

needed to make the network cohere, and the 1996 Act allows for both. First, the law can develop interconnection rules that allow two separate networks to pass traffic back and forth between them.<sup>2</sup> The clear implication of this system is that any new entrant has to invest in its own facilities in order to gain access to the market. The disadvantage of that solution is that it requires at a minimum a duplication of capacity that raises the cost of production above that which would be achieved if seamless communication could take place on a single network shared by multiple providers. Second, the only way to avoid the cost of duplicate facilities is to allow the new entrant to gain access to the critical components of the existing LEC by some mechanism that allows for the purchase or lease of the various network components, generally described as unbundled network elements, or “UNEs.”<sup>3</sup> In principle, the formation of these rival synthetic networks could introduce a measure of competition without incurring the costs of assembling an expensive set of independent facilities. But in a world in which all alternatives are imperfect, this

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<sup>2</sup> See 47 U.S.C. § 25.

<sup>3</sup> See 47 U.S.C. § 251(c)(3), (d)(2)(A)–(B):

(c)(3) Unbundled access.—The duty to provide, to any requesting telecommunications carrier for the provision of a telecommunications service, nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are just, reasonable, and nondiscriminatory in accordance with the terms and conditions of the agreement and the requirements of this section and section 252 of this title. An incumbent local exchange carrier shall provide such unbundled network elements in a manner that allows requesting carriers to combine such elements in order to provide such telecommunications service.

(d)(2) Access standards.—In determining what network elements should be made available for purposes of subsection (c)(3) of this section, the Commission shall consider, at a minimum, whether—

(A) access to such network elements as are proprietary in nature is necessary; and

(B) the failure to provide access to such network elements would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer.

approach has its own downside, which lies in the difficulty of deciding which UNEs the incumbent local exchange carrier (the ILEC) should supply to the competitive local exchange carrier (the CLEC), and at what price. These two issues of *access* and *price* respectively have been the source of intense litigation in which the outcome has proved to be something of a draw. The CLECs have by and large won the battle over the question of price, as the Supreme Court has upheld against statutory challenges the decision of the Federal Communications Commission (FCC) to base the prices for UNEs not on the historical costs incurred to assemble the network, but on TELRIC, or total element long-run incremental cost. This TELRIC price is derived on the assumption that the ILEC is able to put in place the most efficient network at the time that the UNEs are transferred to the CLECs.<sup>4</sup> Yet, as of this writing, it appears that the ILECs are winning the battle over access insofar as the courts have backed up their contention that some restrictive conditions must be met before the CLEC can demand these UNEs at all.<sup>5</sup>

The incredible rate of litigation and recrimination that has marked the eight years since the passage of the 1996 Act indicates just how far removed from a frictionless competitive market the world of telecommunications is. Nor has this endless blizzard of litigation been without its adverse economic and social consequences, which have taken their toll in the form of a rash of bankrupt telecommunications firms and huge losses of capitalized market value of established telecommunications carriers. I have done no empirical work on these issues, but one sentence in the economist letter to President George Bush appears to summarize the present bleak state of affairs. “Since 2000, telecommunications service providers and the equipment manufacturers that supply them have lost several hundred thousand jobs and have lost over \$1 trillion in market capitalization, while annual investment declined by more than \$70 billion and the United States lingered at 11th in the world in deployment of advanced broadband networks.”<sup>6</sup>

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<sup>4</sup> See *Verizon v. F.C.C.*, 535 U.S. 647 (2002).

<sup>5</sup> In reverse order, these decisions are *United States Telecom Association v. F.C.C.*, 359 F.3d 554 (D.C. Cir. 2004) (*USTA II*); *United States Telecom Association v. F.C.C.*, 290 F.3d 415 (D.C. 2002), which invalidated much of the F.C.C.’s second effort at issuing the appropriate regulations. The initial effort on these impairment regulations was invalidated in *AT&T Corp. v. Iowa Utilities Board*, 525 U.S. 366, 389–390 (1999).

<sup>6</sup> Letter from 22 economists to the President of the United States (March 25, 2004).

That letter was written in order to support the effort by the Incumbent Local Exchange Carriers (ILECs) to persuade the President (and Solicitor General) not to support a petition for writ of certiorari in the recent decision of the District of Columbia Court of Appeals in *USTA II*. This decision struck down, over eight years after the passage of the Act, for the *third* time the proposed regulations that a sharply divided Federal Communication Commission had issued for determining whether or not there was an “impairment” that justified the statutory sale of unbundled network elements under section § 251(c)(3).<sup>7</sup> (The economic dislocation is matched by a legal impasse, for it is not known at this writing what will become of the decision in *USTA II*. It is uncertain whether the Solicitor General’s Office will support any FCC effort to obtain certiorari on the issues, and whether, in either event, the Supreme Court will hear the case; or, if it is not heard, what will be done on remand to resolve the question.

In some sense, the resolution of all these short-term issues is not the initial purpose of this paper. Rather, the larger question is one of institutional design. Here I now think that that the entire 1996 Telecommunications Act was a mistake. The preexisting system of rate caps was not perfect, but it generated only a fraction of the litigation and confusion that takes place under the current law. In addition, the strength of the local exchange monopoly would have dwindled in any event, rendering the rate caps superfluous, so that genuine deregulation could have taken place without strong government intervention. As the price of mobile phones goes down, more people, especially single people forever on the move, are prepared to do without a wire-based connection. In addition, the ability to introduce internet or cable based local exchanges offers a second direct challenge to the traditional local exchange monopoly. The upshot is that advances in technology in all likelihood would have redefined the boundaries of the relevant market allowing competitive forces to do their work so long as some system of interconnection could be created between the various networks. The costs of facilities should not, therefore, be measured in terms of the new telecommunications network that

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<sup>7</sup> See *supra* note 3 for the operative provision.

might be created, but in the available networks that may not be converted to new uses at low costs.

In a sense, it is not too late to recognize what should be clear in retrospect: that the fundamental mistake in design of the 1996 Act is that it created a complex system for the purchase of UNEs instead of limiting itself to the more mundane task of the ordering of interconnection agreements between carriers. The difference in the difficulty of the two tasks is captured by a simple analogy. The need to establish interconnections is not a trivial task, but is comparable to joining together the different elements of the spinal *column*. The sale of UNEs in contrast is a task comparable in difficulty to cutting up different nerves of the spinal *cord* into small segments and then putting them back together again.

The 1996 Act repeats an old mistake. It seeks to be ecumenical in allowing two different regimes of cooperation to operate side by side. But instead of getting the best of both worlds, it generates the worst. It is another case in which we have paid a heavy price for ignoring the power of the maxim, simple rules for a complex world. The applicable principles in this area, moreover, are not confined to telecommunications, but derive from more general considerations that should be deployed to determine the choice of coordination arrangements for telecom in general. That some rethinking of this subject is needed seems evident, for shipwrecks of this magnitude do not just happen by chance; nor can they be attributed to earthquakes or acts of God. The difficulties begin squarely at home, with the basic institutional structure. Only after we have some sense as to how these business and cooperative ventures should be organized in principle is it possible to address the second question of what has gone wrong. In responding to the first of these questions, Part I examines the respective sphere for three different kinds of sharing arrangements. The first of these arrangements are business operations that are conducted through complex voluntary arrangements, often in some partnership form. The second are those that rely on government coercion through a takings power, which allows the transfer of private property under government order from A to B, circumscribed perhaps by some limitation that the taking in question must be done for some public use (or, as is often said inaccurately, public purpose). . The third type of sharing arrangements are operations that are run through some form of a legal commons, which are open to all. These legal commons arise in a large number of different contexts, from the allocation of

certain resources like water or oil and gas, to the proper formation of highways, to the delineation of legal regimes that deal with the different forms of intellectual property. Any choice of institutional arrangements is not confined to these three pure types, but could involve some amalgam among them. But it is helpful for the analysis to start with the simpler types before considering any of the blended cases that occur so often in fact. At the outset of the inquiry, I will assume that there is no constitutional impediment to the choice of these three different devices, and will seek only to identify the set of circumstances under which each of these arrangements should be preferred. Thereafter, I shall turn to the question of the various arrangements for coordinated activities that exist in the communications arena, in which all three of these mechanisms are deployed, albeit in the wrong proportions.

### **I. CHOOSING THE RIGHT CHURCH**

*Contractual Relationships.* Deciding what type of legal regime should govern the cooperation among different actors is as old as the law of property itself. The first and simplest way is to allow for the coordination of activity between two or more persons through a voluntary agreement. For these purposes, the general definition of a contract is an agreement between two or more individuals whereby each agrees to perform or forbear from the performance of some particular action. The standard form of contractual theory treats the content of the obligation as a matter of supreme indifference to the state agency charged with the validation or enforcement of the contract. The reason for this indifference to the content of a contract is the strong conviction that any voluntary transaction between two or more individuals will work to the advantage of both or all. That conclusion follows from the assumption that each side will take care of its own self-interest, so that it will only enter into an agreement if it thinks that it is better off with what it has received than with what it has surrendered. Thus, contracts are always Pareto improvements for the parties to them. Since this condition holds no matter how many parties join in a particular agreement, or no matter how many sequential agreements a particular party chooses to enter, the bottom line is that low transaction costs for voluntary contracts translate into high levels of social welfare. It is this conclusion, rather than some fantasy about how the world looks when the costs of transactions are zero, that offers the true explanatory force behind the concern with transaction costs that

is central to the work of Ronald Coase.<sup>8</sup> To complete this picture, the initial presumption is that any external effects from the typical successful voluntary transaction are likely to be positive. The greater the wealth of the two trading partners, the more likely it is that opportunities for trade will open up to third parties. So long as we take into account the wealth of the transactors and of everyone else, voluntary contracts move us along the path to some social optimum.

The skeletal account of contracts, however, is far from a complete account of how the process of contracting works in practice. The most obvious point is that the general theory does not take into account the specific content of the particular contracts in deciding on the question of institutional design. Yet that element is absolutely critical to the ground level question of how individual parties decide both the contracts they should enter into and the form these contracts should take. That question depends critically on the ratio between expected benefits and expected costs, which in turn depends on the probability of performance or breach, and the payoffs that are received or made in all different states of the world. At the practical level, therefore, each potential transactor has to take into account the mix of social and legal sanctions that it can bring to bear on the other side, and those which can be brought to bear on it. That ratio of legal and social sanctions is not constant across different types of relationships, but varies with the identity of trading partners and the types of transactions.

The first point depends on the types of obligations in question. Many voluntary transactions result in *clean* deals, whose sole function is to move some specific asset from one person to another, such as the ordinary contract of sale, which, in its simplest and most common form, substitutes the buyer of the asset as the owner for the seller. The key point is that once clean deals are concluded, there is no longer a continuing relationship between the two sides. I sell my house to you and move out of town. From the date that you acquire ownership, no lingering obligations bind us together, say in the form of a financing or warranty arrangements. Clean deals thus foster the following remedial pattern. The level of trust between the two parties need not be particularly high. Most contracts of sale of large assets, e.g., homes, are made to strangers. The difficulty in nursing the transaction through the executory phase is often eased by a set of brokers,

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<sup>8</sup> Ronald Coase, *The Problem of Social Cost*, 3 J. LAW & ECON. 1 (1960).

escrow agents, lawyers, and insurers. But once the deal closes, all relationships between the parties are at an end. In these relationships, therefore, the mix of remedies moves heavily to the legal side, where the choice of trading partner is less important than it is with continuous relationships. A sale of land is enforced by specific performance at the instance of either party, and the elements of discretion that defeat the application of the remedy are usually few and far between. The precise and secure nature of the obligations minimizes the levels of trust required of both parties. Apart from questions of honesty and solvency, the quirks and intentions of the other side are of little consequence. What matters usually is the ability to take strong security, e.g., a forfeitable deposit, for completion. A sound set of legal rules works to eliminate the uncertainty in obligations, as by insisting on written documents for enforcement and by eliminating, often through merger clauses, parole evidence that could be introduced to vary the terms of the arrangement.

A second type of contractual arrangement contemplates not a sharp conclusion to a transaction, but some limited continuing relationship between the parties, as with real estate transactions in which the seller retains an interest in or near the property sold to the buyer.<sup>9</sup> Most leasehold arrangements routinely require some continued level of cooperation between the parties. Some of these obligations, such as the payment of rent, are fixed and definite in their content. But others most certainly are not. A standard lease could often require a landlord to make reasonable repairs on the premises, but that obligation differs from the standard obligation to convey in two particulars. First, its content is not specific, but depends on some joint assessment of future circumstances unknown at the time of agreement. Second, the subtext of the obligation is one of cooperation. If the landlord has to make repairs, the tenant has to allow him access into the leased space. In these situations, the parties become more selective in their choice of contracting partners in order to reduce the stress on the continuing relationship. The situation only gets more complicated in situations where a single landlord has multiple

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<sup>9</sup> See, for an extended discussion, IAN MACNEIL, *THE NEW SOCIAL CONTRACT: AN INQUIRY INTO MODERN CONTRACTUAL RELATIONS* (1980); Ian Macneil, *Values in Contract: Internal and External*, 78 *NW. L. REV.* 340 (1983). Macneil stresses that even the simplest transaction has a relational component. But the differences in degree matter. A vendor will sell gasoline to anyone who can pay the price, but he will not hire just anyone to work behind the counter.

tenants, for then cooperation, or at least compatibility, is needed in both vertical and horizontal dimensions. At this point, the shrewd landlord will choose to rent only to tenants who are likely to share common values and behaviors in order to reduce the potential conflicts that might hinder cooperation at both levels. The importance of the choice of contracting partners thus rises, and the soft social mechanisms to control low level disputes often overshadow the legal remedies that are by and large reserved to deal with major dislocations that call for termination of the relationship, as through either eviction from or abandonment of the premises.

Within this framework, the choice of trading partners becomes progressively more important. Where there is some level of affinity between the parties, each side is more likely to hold back against moves that devastate the other. Both parties will have these affinities such that the loss to the other side will not be treated with indifference as though it were a loss to a stranger, but to a business friend or a trusted tenant. If the individuals are well known to each other and are integral parts of some larger social community, then reputation is likely to constrain antisocial behavior. If the relationship is solid, then people are able to maintain informal accounts, so that a favor today is repaid by a second favor that is done next week. With these property relationships, however, the level of day-to-day cooperation is generally at a relatively low level, dealing with the limited interactions needed for repairs and inspections. No one confuses the level of cooperation needed in an ordinary lease with that needed in a business relationship or employment relationship, where constant sharing of tasks and information is par for the course.

Moving onto that situation, it is clear that these service intensive relationships are at the opposite end of the spectrum from the out-and-out transfer of real property. Here the term “relational contract” carries even more weight because within the general parameters of the deal, virtually all daily decisions are resolved on a continuous and ongoing relationship that depends on some high level of trust and cooperation. In some instances the relationship is that of an employer and employee. The adoption of that general framework signals two strong, fixed elements to the arrangement. First, it gives the employer the right to set the task, for which he agrees to take the role of a residual claimant on the firm’s income. Second, within the domain of human capital, the employee functions as a creditor of the firm, and the employer as a holder of equity—at

least until more complicated compensation forms, e.g., commissions or bonuses, alter that stark delineation of risk by making the employee an implicit part-owner of the business.

In many cases, however, the firm is operated as a partnership where the basic agreement states the split of profits (and losses) between the partners, and indicates the level of initial contribution of cash or kind in the firm. Since partnerships have no clear hierarchical arrangement, the level of trust and cooperation needed for them to work is higher still, so much so that the modern law on the subject still follows the Roman rule that each partner owes a generalized duty of good faith when dealing with the other.<sup>10</sup> That term covers not only honesty in fact but has a second equally precise meaning: each partner is expected to treat the costs and benefits of his partners with the same respect that he treats his own.<sup>11</sup> If that maxim is complied with in full, all private decisions are made with an eye to the optimization of the welfare of the group as a whole. There is no doubt that there is some (and in some cases, much) deviation from the rule. Since the legal sanctions tend to kick in only on the termination of an arrangement, the choice of partners and the level of trust between them has to be very high, as in the case of the family partnership in which ties of natural love and affection reinforce the business arrangements. It is not an accident that a law suit between partners counts as the end of the partnership: the element of trust cannot survive the ensuing litigation.

One sign of the strength of this tradition is found in the old Roman Law rules, still operative today, which deal with the question of how to sort out the interest of two or more individuals whose property and labor have accidentally been commingled.<sup>12</sup> The

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<sup>10</sup> For the basic classifications, see BARRY NICHOLAS, *AN INTRODUCTION TO ROMAN LAW* XXX (1962).

<sup>11</sup> One instance of this position is the good faith obligation that insurers have to settle large claims within policy limits. In essence, the insurer should act as though it bore all the risk for either settlement or litigation and settle on terms that reduce the expected costs. That obligation is important because the insurer has a tendency to avoid settlement from which it bears all (or at least a larger fraction of) the risk, while some portion of the adverse verdict is born by the insurer. For a clear articulation of this sentiment, see *Merritt v. Reserve Insurance Co.*, 110 Cal. Rptr. 511, 519-520 (Cal. App. 1973).

<sup>12</sup> These rules are set out in GAUIS INSTITUTES, II. (deZulueta trans. 1945); JUSTINIAN, INSTITUTES, 2. For its relationship to the just compensation principle, see RICHARD A. EPSTEIN, *SIMPLE RULES FOR A COMPLEX WORLD* (1995).

simplest case is one in which I fashion my statue out of your bronze. The presence of the dual inputs makes it most unattractive to award the improved sculpture to one side or the other. But the one solution that is *never* adopted is to treat the two claimants as partners of the common item, replete with fiduciary duties: forced marriages based on accidental happenstance have little chance of success. Instead, these arrangements are governed vertically, so that one party becomes a creditor for the value of his contribution while the other becomes the owner of the object, subject to a lien that can be discharged by the payment of a fixed sum, or alternatively, the substitution of a new bronze ingot. The partnership form is avoided in cases where the circumstances of formation bode ill for its success. The property is (or at least should be) awarded to that person whose subjective value is likely to deviate more substantially from market values. The object lesson: high levels of cooperation are only likely to succeed (and then not always) in voluntary transactions.

*Takings.* A parallel analysis needs to be undertaken with the use of takings, backed by government force, to reassign property rights between ordinary individuals. Here it is useful to note at the outset that the basic takings clause, like the basic theory of contract, does not differentiate much among different types of property or different types of persons in articulating its general proposition. Thus the operative provision in the United States Constitution states: “Nor shall private property be taken for public use, without just compensation.”<sup>13</sup> The first point to note is that this provision is written in terms as broad as those found in the pure theory of contract. There is no effort to differentiate among the different types of property that are the possible targets of condemnation: as drafted, the provision applies to everything from a toy doll to land, from intellectual property to public utilities. Nor does the clause offer any hint as to the kinds of occasions on which the use of the takings power makes sense, relative to those in which it does not. Thus, the government could condemn anything from a candy bar to a copyrighted work, so long as it pays the proper levels of compensation and turns the work to some public use.

In practice, however, the use of the condemnation power is not coterminous with its stated constitutional scope. I am aware of no case in which any government official

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<sup>13</sup> U.S. CONST. amend V.

has ever sought to condemn a fungible product when an exact copy was available for purchase in ordinary competitive markets. Even on the complex procurements needed to run the defense establishment, condemnation always yields to a complex system of bidding preceded by intensive negotiations over all terms relating to all phases of production, delivery and price. (Nor is it an accident that a voluntary military has outperformed the previous military under conscription.) In practice, the explicit use of the condemnation power is confined to interests in land, with a few interesting applications for intellectual property, say, with trade secrets that are needed to determine whether pesticides or prescription drugs are safe for general licensing.<sup>14</sup> The reason for this limitation is reasonably clear. Some land is unique by location and function, so the government gravitates toward the use of the condemnation power in order to eliminate the landowner's holdout potential. That position is most evident in those cases where separate plots of land are needed to assemble some larger plot of land that is worth far less in an unassembled condition. Land for highway acquisition is one obvious illustration: the road is long and thin, for the networks for communication are configured like strands while those used for productive activities, e.g., factories and stores, are usually configured in more compact shapes. Any single owner of land along the network route has the ability to block its completion. This holdout problem is overcome by offering the landowner compensation for the land in its best alternative use, wholly without regard to any increment in value attributable to the proposed road. The same principles apply with respect to condemnation needed for fortification and perhaps for the much more dubious purposes of slum clearance or beautification.

These examples demonstrate that the use of the eminent domain power works best in clean deal type situations where the state takes only a small number of large parcels with few distinctive characteristics. Those restraints make it most likely that the use of the power will conform to the basic theory of eminent domain, which should be invoked only for those social projects that generate a social benefit in excess of the costs of their

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<sup>14</sup> For some of these issues, *Monsanto Co v. Ruckelshaus*, 467 U.S. 986 (1984); *Philip Morris v. Reilly*, 312 F.3d 24 (1st Cir. 2002). For commentary, see Richard A. Epstein, *The Constitutional Protection of Trade Secrets under the Takings Clause*, 71 U. CHI. L. REV. 57 (2004).

operation.<sup>15</sup> That condition is more likely to be satisfied if each owner who is required to contribute an input to the joint venture is treated as the individual whose bronze has been taken for a statue. He is given a “lien” against the project (which is then discharged by cash payment), such that the amount received in compensation places him on the same level of utility that he enjoyed before the project itself was undertaken. If the state can discharge all such liens on its property, the social surplus so generated is left for the citizenry as a whole, net of administrative costs. The net social result is positive if the proposed project is worth more than the subjective value of the property contributed to the venture plus the administrative costs, as incurred by all parties, in order to bring it about. In principle, the stronger the holdout potential of a single owner, the more likely an invocation of the takings power will produce the desired social benefit.

The success of this system depends on two critical elements: scope and valuation. The first addresses the purposes for which the condemnation can be undertaken and second addresses the required level compensation. These two points interact. In principle, a broad, even infinite, class of takings should be allowed if they satisfy the above test for net social gain even if the property were not turned to public use as the Constitution now requires. But the chances that the desired outcome will be reached are sharply reduced when the takings in question are diverted to private uses. At this point, any error in the choice of the compensation formula will be magnified by allowing a too-generous set of forced exchanges to march through the legal system. What seems clear is that focusing on a small class of valuable but homogenous properties, like undeveloped farm land for roads, is most likely to reduce the strains on the valuation system.

All systems of takings require that some valuation be made to determine the amount of compensation due for the property taken. That question of valuation is troublesome even under the best of circumstances, but the costs needed to fuel the operation will depend largely on the targets of the condemnation effort. The simplest assumption for valuation is that the process always has a fixed cost that is independent of the size and value of the parcel, which is augmented by a variable cost that responds to

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<sup>15</sup> For the huge literature, see, e.g., Frank Michelman, *Property, Utility and Fair: Some Comments on the Ethical Formulations of “Just Compensation” Law*, 80 HARV. L. REV. 1165 (1967); RICHARD A. EPSTEIN, *TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN* (1985); WILLIAM FISCHER, *REGULATORY TAKINGS* (1995).

the difficulties in the individual case. Where the number of properties taken is small, these fixed minimum costs need to be incurred in only a few cases. Where the properties are substantial in value, the variable costs are likely to be a smaller fraction of the whole. Where the properties are uniform in type, the process is simplified still further because fewer complex and subjective elements have to be added back into the valuation process, so that market values become a more reliable benchmark for state compensation.

It should not be supposed that even these simple cases are without difficulty, for when less than the entire plot of land is taken, it becomes necessary to inquire into a possible reduction in the compensation offered, depending on the increase (or decrease) in the value of the retained parcel. But these cases are easy in comparison with those where the state takes, for example, a fractional interest in developed land in current use for commercial purposes.<sup>16</sup> Just that happens when the state condemns a business for a short period of time, leaving overhangs on two margins: what happens to the value of the remainder of the establishment during the lease; and what happens to its value at the expiration of the lease, perhaps at some unknown future. In these cases, the appraisal and legal fees increase, the valuation should (but in fact does not) take into account the full range of consequential damages, including the loss of good will, relocation costs, and the reduction in value of site-specific personal property that is moved to a different location. The modern insistence that the compensation in question cover only the value of “the property taken,” and not the full extent of the loss to the owner,<sup>17</sup> not only produces residual unfairness, but it also spurs the state to take too much property because it is allowed to pay too little in cash for what it has taken. The upshot is that the condemnation process becomes ever more inefficient as the state migrates from a few easy targets, to a large number of complex ones.

The force of this general observation is confirmed when we look, for example, at the stout resistance against various forms of compulsory licensing schemes in the

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<sup>16</sup> See, e.g., *Kimball Laundry v. United States*, 338 U.S. 1 (1949) (allowing compensation only for transferable property values).

<sup>17</sup> See, e.g., *Monongahela Navigation Co. v. United States*, 148 U.S. 312 (1893).

intellectual property area.<sup>18</sup> There is no doubt that there are serious problems of blockade that exist in the worlds of both patents and copyrights. A person who wants to put together a new invention may need to make use of inputs from many other IP holders. The preparation of a movie could involve the need to acquire all sorts of clearances from previous rights holders of text, music or image. The basic argument is that some form of a takings system in the form of compulsory licensing can overcome the holdout problem while allowing the assembly of the needed IP constituents for some scientific or artistic adventure. This concern with the possibility of multiple vetoes has been described as the anticommons problem, which has received much attention, both generally,<sup>19</sup> and in the area of intellectual property.<sup>20</sup> But the proposal for compulsory licensing ignores the major advantages of the current property rights regime, which allows the owner the absolute discretion on whether to contribute or hold back his property from some independent venture. Indeed, one careful study of IP development in the pharmaceutical industry could not identify a single promising therapy that had been halted by the widespread distribution of intellectual property rights.<sup>21</sup> In light of what was said above, any legal regime that contemplates the partial condemnation of small fractions of complex constellations of interests is just asking for trouble.

The need for resorting to a compulsory licensing system is, moreover, often overestimated. First, the holders of these other forms of intellectual property are not state bureaucrats who increase either income or psychic satisfaction by withholding permits from private applications. Rather, they are owners of IP, who can only make income to the extent that others are willing to use their products. It, therefore, follows that they will entertain a certain ingenuity in negotiating for the appropriate rights

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<sup>18</sup> For my views, see Richard A. Epstein, *Steady the Course: Property Rights in Genetic Material*, in PERSPECTIVES ON PROPERTIES OF THE HUMAN GENOME PROJECT 159 (F. Scott Kieff, ed., 2003).

<sup>19</sup> Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621 (1998).

<sup>20</sup> Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 SCIENCE 698 (1998).

<sup>21</sup> John P. Walsh, Wesley M. Cohen, Ashish Arora, *Working Through the Patent Problem*, 299 SCIENCE 1021 (2003).

packages if the ability to obtain compulsory licenses is denied. The creation of patent and copyright pools is one sign of the private ingenuity that helps overcome these difficulties. The use of these pools or licenses has collateral advantages in working out a comprehensive deal, and illustrates how private ingenuity can often solve the transaction costs problem without resorting to government coercion. One of the greatest dangers of a compulsory licensing system is that it will misprice the value of certain components to the common pool. If the compulsory licenses are set too high, the entire operation comes to a grinding halt unless voluntary means are developed to circumvent the external standard. If the licenses are set too low, a land rush takes place, which undervalues the initial set of IP property rights. That valuation mistake results in short-term inequities and in a long-term reduction in the level of needed invention when the original owner finds his return reduced by forced licensing arrangements. In addition, the use of a compulsory license is necessarily primitive in its treatment of the covered invention. A voluntary licensing agreement is a complex affair that makes explicit contractual provisions on a wide set of terms outside of royalties, and typically have complex fee structures, inspection provisions, sharing arrangements and the like.<sup>22</sup> The net effect in the short run is to displace sensible agreements with state-arrangements that misprice the underlying assets and develop an inferior set of collateral terms. That problem is magnified in the long run. People become less skilled in working out private arrangements, and the pace of invention slows so that substitutes that might have otherwise become available are not invented in the first place or are pulled from the market. The choice of property regimes always involves a trade-off between holdout and valuation problems. Once we leave the domain of the clean deal, the condemnation solution usually comes in second place—a lesson that should not be lost in dealing with communications policy.

## II. THE COMMONS.

*The voluntary commons.* A third possible property rights configuration involves the creation of some commons. For these purposes, it is important to distinguish among various kinds of commons. First, some commons are created by consensual means. A group of individuals can decide to pool their land together to form a large field for

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<sup>22</sup> Harvard Exclusive License Agreement as of June 1, 2001 Web address.

grazing cattle in the winter. They can then agree on a formula that first determines the carrying capacity of the commons and next allocates the number of each individual's cattle that are brought into the field in proportion, say, to that individual's contribution (acreage or value) to the commons. There is nothing exceptional about this complex venture, for it satisfies the desirable condition that each of the owners gets greater value out of the commons than he contributes to it, just as in any other kind of joint venture. The one point of note in this situation is the nature of the uses involved when private owners pool their land. The common pattern is one where each of the contributions is identical in kind, so that the property in question is dedicated to a *single* use (e.g., grazing) during the period in which it is held in common. The use of identical assets means that the allocations in question can be made by knowing the relative amounts contributed by each, even if no one knows the actual value of any parcel of land contributed to the pool. In the end, the only coordination among co-owners is to determine the number of heads of cattle that each owner is allowed to introduce into the field. There are no complex coordination problems such as those that are found in running the firm, where it is necessary to integrate the sharply differentiated activities of large numbers of individuals who (as noted above) could assume the relationship of partners, employers and employees. Nor with the simple commons is there any major decision on investments needed to acquire or develop the highly specific assets that are involved in complex manufacturing or business processes. Any expenditures can be prorated across the group in proportion to their entry rights.

Similar devices can be carried over to intellectual property. The Creative Commons, for example, offers on its website a standard form by which the owner of copyrighted material can offer nonexclusive licenses to the entire world in exchange for simple acknowledgement of the contribution in question. The device thereby reduces the coordination costs of acquiring intellectual property without entering the treacherous shoals of compulsory licensing. But once again, this form of commons does not involve highly coordinated activities between the licensor and licensee, which, if desired, must be handled by more discrete person-to-person negotiations. The private commons, therefore, is a relatively simple affair.

*The Open Commons.* The voluntary commons offers a useful template against which to evaluate systems of common property created by operation of law. Here one

common mistake is to assume that all such commons are unstable and should be hastily converted to a form of private property in order to create a better alignment of risk and return. But that position overlooks the numerous situations in which the durable commons has proved its worth, both historically and today.<sup>23</sup> It is no accident that the discussion of property in Justinian begins with an account of those forms of property that are held in common: the water, the air and the beach.<sup>24</sup> Here the argument against the privatization of these various forms of property is that the system wide value of the network in question will be necessarily lost by the balkanization from toll booths along the river or fences on the open range.<sup>25</sup> But here again it is important to recognize the limited condition under which, for example, an open range (in which each landowner is under a duty to fence out cattle owned by others) is likely to prove superior to a closed range (where the owner has the duty to keep the cattle off the land). Thus, if the land in question is of little value, and each of its owners uses it for cattle, the open range system (with branded cattle) is likely to make optimal use of the land. The common nature of the use spares the need for any one to build any fence, and all of the landowners are better off by being in the overall pool than outside of it. The system will work well if in winter each owner has to house his own cattle, for that necessity will put some limit on the number of cattle set out to graze. But the moment a more intensive use of some land becomes desired, as for agriculture or construction, the open range system will fail. The costs of suitable fences were often prohibitive, and the assignment of the right to graze to the cattle owner could not be avoided by any private negotiations.<sup>26</sup> So long as a single owner of cattle held out, the landowner had to fence his property because an effective renegotiation of rights was not possible. But under a closed range regime, the owner had legal protection for development from all ranchers, but could if he chose, lease land to a

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<sup>23</sup> See, e.g., Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711 (1986).

<sup>24</sup> J. INST. 2.1.

<sup>25</sup> For a general discussion, see ROBERT ELLICKSON, *ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES* (1991).

<sup>26</sup> Kenneth R. Vogel, *The Coase Theorem and California Animal Trespass Law*, 16 J. LEGAL STUD. 149 (1987).

single cattle owner while excluding all others. The open commons cannot survive the increased variations in patterns of land use that bring with it increased levels of investment.

The same situation applies to water rights, which, for these purposes, should be understood as an early form of a network industry. In these circumstances, the enemy has always been the privatization of the river.<sup>27</sup> The point here is that the value of the river for transportation is effectively destroyed if free passage along a river can be obstructed by any owner of the banks. It is possible to show that the succession of blockades has the same effect on the overall value of the resource as does the overconsumption that takes place when everyone is entitled to fish without limit in the commons.<sup>28</sup> The system of open water rights reduces the need for coordination between lots of different riparians. Unlike the situation with intellectual property rights, a strong case can be made that for access to rivers and oceans, the holdout problem is more severe than any valuation difficulty, so that common property, with easy and universal access rights, is the preferred form of holding resources.

The success of a physical commons starts with rights of universal access, but it certainly does not end there. Initially, two problems have to be faced. The first of these is the question of the rules of the road. The task in this setting is to find ways in which large numbers of people are able to coordinate their activities with each other. But coordination in this sense does not mean deep collaboration on a common task, such as found within the firm. It just means that all users have to obey the rules of the road, as set by its owner, so as to maximize utility while minimizing the risks of collision. These rules have to organize basic tasks for a huge array of shifting, random pairs of individuals, who are utterly unknown to each other. The only way to accomplish that task is through rules that allow people to pass by each other without having any deep knowledge of the purposes for which others have entered the transportation grid. The

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<sup>27</sup> See, e.g., Hugo Grotius, *THE RIGHTS OF WAR AND PEACE* 95 (A.C. Campbell trans. 1901) (“It is upon the same foundation of common right, that a free passage through countries, rivers, or over any part of the sea, which belongs to some particular people, ought to be allowed to those, who require it for the necessary occasions of life.”)

<sup>28</sup> See James Buchanan & Yong J. Yoon, *Symmetric Tragedies: Commons and Anticommons*, 43 *J. LAW & ECON.* 1 (2000).

upshot is that we have bright lines down the middle of the road, on and off-ramps, speed limits, stop lights and stop signs, and require all individuals to act in strict compliance with the rules of the road and bear responsibility, either in whole or in part, in those cases that they deviate from them. This form of minimum cooperation between drivers of two different vehicles is far different in kind than the cooperation that takes place when one person drives an automobile and the other gives direction. The only way in which it is possible to coordinate mass activities is through simple rules that make it easy to observe, both before and after any accident, who is in compliance with the rules of the road. The governance structure for this network is more complex than that which sets boundaries between ordinary plots of land. But it is a far cry from the specific and deep arrangements that characterize ordinary partnerships and other voluntary arrangements.

The failure to observe this difference has strong consequences for the operation of the overall system. One trenchant observation in Hayek's *The Road to Serfdom* was that the highway system was a sensible paradigm of government action because it was content to determine the rules of the road and not the composition of the traffic. Writing at the same time, but with a very different vision, Justice Felix Frankfurter authorized extensive comparative hearings for the allocation of broadcast frequencies on the ground that the test of "public interest and convenience" required the government to go beyond the rules of the road in order to determine the composition of the traffic. Yet in the 60 years since that decision has come down no one has developed any coherent metric to decide which applicant should obtain what frequencies for what use. What has ensued has been political struggles in which large elements of spectrum value are dissipated with pointless comparative hearings—which often result in a resale by the winner one year after the original license has been granted.

The problem of creating this form of commons becomes more complicated once the full realization of the asset value depends on additional investment. The traditional rules of the road, among users, could apply to a deer path or more often, to rivers and streams that allow for navigation in their natural state. The only additional rules needed were those that prevented blockage of free passage by abutting landowners, including riparians or third parties. But once paths have to be paved, and rivers have to be dredged, then sound rules of the road will not suffice. In addition, leaving the resource as a public commons makes it difficult to raise the needed capital. Some private rights (such as

those to erect mills along a river) have to be carved out of the commons to create a mixed system, or some system of taxation or tolls has to be developed in order to finance a process that in all likelihood needs some degree of centralization in its operation. Here is not the place to go into the many difficulties that were incurred in seeking the ideal rules for developing dams and bridges during the nineteenth century.<sup>29</sup> Suffice it to say that the creation of these early network industries raises many of the problems that are found in connection with the telecommunications industry. How is it possible to meld together disparate elements, some of which fall under private ownership, into a comprehensive whole?

The same question applies with equal force to the area of intellectual property noted above. The entire system of IP rights has two key components that fall squarely into the public domain. First, certain elements are not subject to reduction to private ownership but remain part of the overall commons. The best illustrations of this IP limitation are *ideas*, which are expressly exempt from the patent law (which covers inventions), the copyright law (which covers writings), and trademark and trade name law (which allow the protection only for the nonsemantic components of language). The basic argument is that ideas are the single most essential component of any communications network, so that it becomes quite impossible to think of how social life could take place if a royalty were owed each time two words were combined in a sentence or two numbers into a total. The blockade potential from the privatization of ideas is enormous, but the additional incentive to produce new words or ideas is minimal, given the other incentives and reward structures, such as prizes, that are in place. There is more precision than platitude in the observation that it is language that allows us to forge a common identity.

The second element of the public domain arises when writings and inventions that were once private property fall into the commons on the expiration of the legal protection. Here the public domain only means that all individuals may use the now unprotected material at zero price, so that the burdens of licensing agreements are effectively eliminated, which in turn means that all public domain property becomes part of an intellectual platform on which the next generation of competition among private

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<sup>29</sup> See HERBERT HOVENKAMP, *ENTERPRISE AND AMERICAN LAW 1836-1937* (1991).

firms can take place. The creation, therefore, of rules that allow for the rapid creation of IP rights not only produces benefits during the period that they are privately owned, but also speeds up the time at which these items will fall into the public domain. Further, the public domain is not like the fishery that can only be preserved by limitations placed on access. Rather, it is inexhaustible in the sense that the nonrivalrous consumption of public domain ideas by one person does not preclude or diminish the opportunities for their use by another. The marginal cost of the next person using the work is zero. That said, however, it is important not to romanticize the functions of the public domain. The public domain does not encourage any high level of cooperation among individuals, who have unlimited access to its contents. Those networks only facilitate voluntary cooperation; they are not a substitute for it. There is a deep sense in which the idea of a “creative commons” is an oxymoron. The commons is a source of supply at zero price for all those who want to partake of it. The creation takes place after the removal from the commons by conventional means.

*Summary.* At this juncture it is useful to take stock of the overall situation. No comprehensive social system can exist with a single type of property regime for all occasions. In equilibrium three types of systems are needed. The first of these is the one of voluntary cooperation. Here the right to exclude is critical, for deep cooperation is only possible if a small subset of the total population is involved in a common venture. It is critical, therefore, that all parties be allowed to choose who they work with and to set up the mixture of legal and social sanctions that will determine how much each will contribute to and withdraw from the common arrangements. The second of these organizations is a system of forced exchanges where property is taken from one person for use by the state or another individual. These rules of forced exchanges will work best only when infrequently invoked in order to overcome holdout problems that block the formation of common networks. The process tends to break down when it must be frequently invoked over assets with small value and distinctive characteristics in which some measure of continued cooperation is required between those individuals whom the state has brought in privity with each other. Last, in many cases the coordination difficulties created by a system of private property are so massive that resort must be had to a commons. Some commons (e.g., language) are so easy to create and have a virtual infinite capacity that we scarcely think of them as a commons, which is why they work so

well. Other physical commons (e.g., running water) may be created by nature, for which rules of the road created by man are needed, and which are not pure in form. Some removal of water in greater or lesser amount is allowed under different schemes of water rights. Other types of commons require human intervention and investment for their creation, as happens with highways, railroads, and telecommunications networks. These commons require a higher level of cooperation than is required between neighbors on privately owned property, but they will work best when simple anonymous rules allow for the free flow of traffic back and forth across the network, without the creation of deep and specific relationships characteristic of voluntary associations. Seen in this light, the errors of the telecommunication act should now be obvious. The 1996 Act uses state force to try to form deep and specific arrangements that are only successful when voluntarily formed. The network structure will only work when the state's eminent domain power is limited to forging connections between independent facilities, and to decree ersatz cooperation at the barrel of gun wielded by the FCC and the state PUCs, especially under regimes that do not reflect historical costs. The choice of the wrong paradigm offers the most powerful explanation for the recurrent failures of the 1996 Telecommunications Act. The next section explains these points in greater detail.

### **III. THE STRUCTURAL FLAWS OF THE TELECOM REGULATION**

As is well understood by the drafters of the 1996 Act, telecommunications is the quintessential network industry so that competition between firms cannot take place without some measure of cooperation, which in turn requires some measure of government regulation. The only question worth asking is which form of regulation minimizes the distortions attributable to private opportunism and government overreaching. Here the nub of the difficulty rests in the decision to require the forced sale of UNEs and, by administrative interpretation, UNE-Platforms (which are best understood as “bundled unbundled network elements” (they might better be called BUNE rather than UNE-Platform or UNE-P, but I will let the point pass). The regime in question violates all three conditions for the successful application of a regime of forced takings. First, the number of separate transactions is uncommonly large in that any application by any CLEC may apply to any particular UNE. Under this definition, even components of any given local loop could be subdivided, and each of them subject to a separate and distinct legal regime. The administrative costs of keeping track of the

various items alone are high, and the questions of valuation associated with the sale of these elements is difficult even under the best of circumstances. There is no question that the cost of running this system is in principle part of the costs associated with providing the BUNE or UNE. There is a much larger question as to whether these valuations can measure the true cost of compliance, especially when this cost varies with the nature and the number of requests for the transfer of these elements.

To understand the nature of the problem, it is useful to recall the two distinct methodologies that have been developed over the years to determine prices of regulated public utilities. The object in all cases is to set prices for an industry that has received some monopoly protection. The task itself involves the delicate negotiation between two obstacles.<sup>30</sup> Set the rates too high, and the firm continues to enjoy monopoly profits. Set them too low, and the firm is subject to a confiscation of its invested capital. That prospect takes place because the usual cost configuration in these industries requires the regulated firm to make large expenditures of capital before it can recoup any fraction of its initial cost in the rates that it charges to its customers. The invocation of the takings clause is designed to prevent the state from doing a double take whereby a firm is lured into making substantial investments at time 1 only to be told at time 2 that it will receive rates that will allow it to cover its average variable costs (so that it does not pay for it to withdraw from the business), but which will not be sufficient to allow the recovery of its fixed costs. The integrity of the rate structure depends on keeping at the back-end the promise that was made at the front.

The next question concerns the way in which the rate of return is calculated. Here, traditionally, two different ways have been used to determine the rate base. One, which is associated with *Federal Power Commission v. Hope Natural Gas*,<sup>31</sup> is to take all capital that is invested in the business and to assume that it earns a return regardless of how it is deployed. The firm is in effect spared exclusions from the rate base for expenditures that provide no benefit to customers, but receives in exchange a lower rate of return because the risk of mistaken investment falls on the rate payers. In effect, the

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<sup>30</sup> See, e.g., *Duquesne Light Co. v. Barasch*, 488 U.S. 299 (1989); *Jersey Central Power & Light Co. v. Fed. Energy Reg. Comm'n*, 810 F.2d 1168 (D.C. Cir. 1987).

<sup>31</sup> 320 U.S. 591 (1944).

returns in question are judged by the simple issue of whether the bottom line return on the full investment is sufficient to cover costs plus a reasonable rate of return. The intermediate steps used to reach that return are ignored. The advantage of this system is that it offers a clear delineation of the rate base and a relatively simple means to calculate the permissible rate of return. Its disadvantage is that it does not offer strong incentives to economize on initial costs. The converse (and earlier) system announced in *Smyth v. Ames*<sup>32</sup> is one that incurs greater costs to determine which fraction of the initial investment is used and usable in the business, but then allows the firm a higher rate of return because it bears the risk that some capital will be excluded from the rate. The short and simple truth is that the balance of advantage between these two systems is sufficiently close that the current constitutional strictures of the Supreme Court allow the regulator to adopt either of these strategies or some combination thereof.<sup>33</sup>

The problems of determining this rate base do not disappear under the new competitive regime when forced sales at UNE or UNE-P rates are allowed to competitors and not customers. In principle, the question of confiscation could still arise, as would be the case if the regulator dictated that all rates should be set at \$.01. The shift in context from consumers to competitors does not, therefore, change the basic problem, which is to determine how the industry could recover its cost if each and every UNE were acquired by a potential CLEC. The constitutional standard should require that the regulated firm be subject to a risk-adjusted rate of return that allowed it to recover its cost of capital with a reasonable rate of return. On this question, the ILECs argued in *Verizon v. F.C.C.*,<sup>34</sup> that the only way in which this result could be achieved is if they were allowed to compute the rate base on the historical costs of their networks. The point of this argument is that only this system would allow the recovery of full costs on the assumption that each element were disposed of by a forced sale to the CLEC so that the incumbent remained a shell of its former self. Yet the moment the question is put in this way, the same issue that bedevils ordinary ratemaking must be revisited. Who takes the

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<sup>32</sup> 169 U.S. 466 (1898).

<sup>33</sup> See *Duquesne Light*, 488 U.S. 299. For extended discussion, see RICHARD A. EPSTEIN, *PRINCIPLES FOR A FREE SOCIETY* 278–318 (1998).

<sup>34</sup> 535 U.S. 647 (2002).

risk of investments that did not turn out to be profitable? That issue is of especial importance in this context because the rapid level of technological improvement in the industry implies that economic depreciation is more rapid than the physical deterioration of a given network. In dealing with this question, the FCC, in its effort to “jump-start” competition, opted for the TELRIC, which essentially calculated the cost base on the most efficient network possible at the time of the initial transaction. The effect of this rule was to treat the rate base as though, in the spirit of *Smyth v. Ames*, only used and usable expenditures were included, which is unfortunately married to the low rate of return that would be appropriate if the CLEC and not the ILEC, bore the risk of capital depreciation under *Hope Natural Gas*.

In my view, the TELRIC system wrongfully saddles the incumbents with the unsatisfactory element of each of the two basic systems of rate regulation. The narrow rate base of *Smyth* receives the low rate of return of *Hope Natural Gas*. The TELRIC methodology was unsuccessfully challenged in the *Verizon* case on administrative law grounds, namely, that the method in question was inconsistent with the statute whose language authorized a recovery based on “cost.” The decision was reached on the grounds of *Chevron* deference to the decisions of administrative authority.<sup>35</sup> In essence, the Court held that the term cost could mean either historical or forward looking, so that the agency was given full discretion to decide which definition better served to implement the purposes of the Act. The Court further noted that there was enough slippage in the TELRIC system that the regulated firms could do a bit better than they supposed. The constitutional issue was not addressed because the potential uncertainties in the application of the TELRIC system in individual cases precluded a facial challenge of the ruling. The upshot is that the constitutional challenge was decided *de facto*, for the same forces that led to the adoption of *Chevron* deference on the statutory issues point to the acceptance of the rational basis methodology under which it will be concluded that

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<sup>35</sup> See *Chevron, U.S.A., Inc. v. Natural Resources Defense Counsel, Inc.*, 467 U.S. 837 (1984).

the FCC is entitled to full deference in the implementation of a complex constitutional scheme.<sup>36</sup>

The impact of that decision, however, undercuts any possibility that cooperation could take place between the two sides. The ILECs regard the pricing scheme as confiscatory and the arguments made on its behalf as an elaborate procedural smokescreen. The CLECs regard the question of price as settled, and treat noncooperation as a deviation from the required legislative standard. There is no question that the full cost of the system could not be recovered if all UNE-Ps were taken over, but the implicit subsidy for new entrants under the TELRIC rules does not create any windfall profits to the CLECs that receive the mandated subsidy in the name of competition. The benefits in question are open to any CLEC, so that none is able to use the below-cost system of prices to procure a competitive advantage over other CLECs, who also receive the same implicit subsidy. But by the same token, the system of transfer eliminates the incentive that any new entrant has to engage in facilities-based competition, which could not compete with the lower prices that are made available by the generous pricing of UNE-P. The upshot is that the cross subsidies involved lead to major distortions in the investment decisions of all parties. The ILECs will think long and hard before making any investment in infrastructure if they know that it can be condemned at below historical cost by any new entrant. The system of conscious subsidy, therefore, retards the emergence of any sustainable competitive equilibrium. The situation is but a rerun of that which happens in many takings contexts. The usual rules of compensation for the “property taken” result in systematic undercompensation of the property owner who is denied any compensation for consequential damages and is thus left worse off after receiving compensation than it would have been if no taking had occurred. Government mispricing produces long term allocative mischief.

The situation is complicated when we look, however, at the question of which UNEs are subject to acquisition. The problem here is identical to that associated with the public use problem under the takings clause. No matter what the compensation formula, the state cannot take property unless it is for a “public use.” The judicial interpretation of

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<sup>36</sup> For a straw in the wind in this direction, see *Eldred v. Ashcroft*, 537 U.S. 186 (2003).

that phrase has a long and storied history, but the bottom line is that the Supreme Court is reluctant to treat it as a strong barrier against the exercise of the takings power, preferring to allow the takings to go forward under a rational basis test whenever some “conceivable” public use may be presented.<sup>37</sup> The interaction of the below-market compensation formula with the liberal public use requirement expands the class of takings by systematically insulating the government officials from some portion of the costs associated with the taking. The more frequent the takings, the greater the allocative distortion.

The FCC in its effort to draft the impairment regulations faced the identical problem. Here the language of section 251(d) does not speak with magnificent clarity. The only clear point in the analysis is that the requesting carrier must cross a higher threshold if it seeks to acquire UNEs that are “proprietary” in nature, that is, those for which there is, for example, some special intellectual property protection. But the standard applicable in those cases is that access to that proprietary element be “necessary,” which in turn is a term with a storied history, most notably in connection with “the necessary and proper” clause of Article I of the Constitution.<sup>38</sup> In *McCulloch v. Maryland*, necessary was held to mean (probably incorrectly) to refer only to the idea of “appropriate” for the occasion,<sup>39</sup> even if the ordinary meaning of “necessary and proper,” suggests dual conditions that are a good deal more stringent than those which Marshall embraced. Whatever the merits of the constitutional dispute, Marshall’s interpretation of “necessary” is not defensible in this context, because it sets such a low bar for proprietary elements that the impairment standard of section 251(d)(2)(b) starts to read like the public use clause. It is always satisfied regardless of the reasons for acquisition because there is some “conceivable” public benefit (even if there are also public inconveniences) that flows from jump starting competition. At this point, however, the only clear sense

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<sup>37</sup> See *Hawaiian Housing Authority v. Midkiff*, 467 U.S. 229 (1984).

<sup>38</sup> U.S. CONST. art. I, § 8, cl. 18. “To make all Laws which shall be necessary and proper for carrying into Execution the foregoing Powers, and all other Powers vested by this Constitution in the Government of the United States, or in any Department or Officer thereof.” For one recent originalist interpretation, see Randy E. Barnett, *The Original Meaning of the Necessary and Proper Clause*, 6 U. PA. J. CONST. L. 183 (2003).

<sup>39</sup> *McCulloch v. Maryland*, 17 U.S. 316 (1819).

that comes out of the endless judicial wrangles is that the requirement has to have some teeth that the FCC is not prepared to give to it. But just what might that be? Suppose that the UNE (or UNE-P) price under TELRIC is lower than the price that the CLEC would have to pay if forced to purchase that element or set of elements in the open market. Does that differential price count as an impairment on the ground that the CLEC is worse off without the bargain price than it is with it? The upshot of that interpretation is that forced sales will be required even in otherwise perfectly competitive markets, which seems utterly inconsistent with the overall structure of the basic act which is to spur competition, and not to require cross-subsidies that necessarily distort the behavior of ILEC and CLEC alike. Yet if this unacceptable interpretation is rejected, what workable interpretation can be suggested that walks the narrow path between the higher, if undefined, “necessary” standard and the lower impairment standard? I can see no intelligent way to read the impairment language against the backdrop of TELRIC pricing, for it hardly makes any obvious sense to think that TELRIC pricing is required under section 252(c)(3) but there are no cases in which that statutory option meets the impairment standard under section 252(d)(2)(B). The stakes are enormous for it now seems that either every, or no, ordinary UNE is subject to the TELRIC regime. The effort to split the difference cannot be made operational. It is, therefore, appropriate to shed a tear for the FCC, for even if one does not think that it sought the best possible interpretation of the access language, the decision in *USTA II* does not quite deal with the point. It contains a long discussion on the question of whether the FCC is allowed to delegate the formation of the applicable standards to the state commissions, which depends on a close reading of the applicable text, but which raises no central issues of telecommunications policy. The key issue for long-term planning is whether anyone can articulate a set of standards that indicate which elements should be allowed to transfer, over which I have great doubts. The important point to note is that with the rise of intermodal competition from cable and internet sources, it seems totally unwise to evaluate the question of entry on an element-by-element basis when a system wide intervention is all that is needed to deal with the problem.

No one, of course, doubts that there will still be some obligations for interconnection with the new modalities or with new facilities conducted for traditional telephone lines. But note the key differences between the two approaches. The question

of interconnection arose under the pre-1996 regime, for it was always necessary to transfer phone calls that initiated within one of the RBOCs and completed in the regime of a second. But a simple bill-and-keep regime provided a useful focal point because it allowed for connection at the system-wide level without the need to determine the cost structure of either party. The interconnection agreement has the enormous advantage of being perfectly symmetrical between incumbents and new entrants. Those systems, moreover, with somewhat higher costs will collect higher revenues in the short run, but they run the risk of losing out business to competitors who operate from a different facilities base. Hence, there is no reason to try to equalize revenues between the parties. The system will work well so long as the traffic moves in roughly equal proportions in both directions, so as to avoid the heavy imbalance that used to apply to wireless/land line interactions when the higher cost of cell-phone telephones meant that these phones were used largely to initiate, but not receive, calls. But that slight hitch could be cured, if it were a problem, by allowing each carrier to charge its customers for calls either made or received, at which point the rates would adjust downward to reflect the larger cost base. But the key point is that these interconnection agreements can expand to cover any number of carriers without any alteration in the basic way of doing business.

That pattern of behavior cannot exist when UNEs are for sale. At this point, all the transactions are asymmetrical so that the valuation issue remains an obstacle. The more skewed the prices, the greater the pressure on the access rules under the 1996 Act. In addition, the asymmetry creates a fundamental business problem when large numbers of CLECs enter the market. Normally, it is appropriate to think the more the merrier. But since these are forced interactions, open entry raises the costs to the incumbents to service huge numbers of involuntary trading partners. The proliferation of accounts increases the costs of compliance and the likelihood of error: most businesses seek to consolidate their supply chains, not to expand them indefinitely. The problems are only exacerbated because of the constant struggle over what is or is not included in the underlying agreement, where the grievances can move sharply in both directions.

Here are a couple of examples of the basic problems that can arise. The basic agreements between the ILECs and the CLECs are complex affairs that have to deal with all sorts of service-related risks, the last kind of issue that is appropriate for a forced interaction. The enforcement of these arrangements depends on the articulation of a

Performance Assurance Plan (PAP), which contains a full range of terms that deal with every aspect of the service arrangement. These agreements are, in virtue of their complexity, a fertile ground for disputes over the performance standards for hook ups and the payment and penalty standards in question. The New York Public Service Commission's 2003 Report on Bell Atlantic's proposal for an Amendment to the basic PAP is a case in point.<sup>40</sup> Virtually all the issues faced there are the sorts of negotiated matters that are now subject to external commands. Thus, one key debate concerns the statute of limitations periods during which the CLECs could challenge the Verizon bills. The billing issue is tied up with the performance issue, which is itself hotly disputed, so that any short statute of limitations does not give the CLECs the time needed to marshal the evidence about the inaccuracy of the bills. That issue is further complicated because the Public Utility Commission establishes various penalty provisions for improper service calibrated with reference to anticipated profits, so the question arises whether penalties could be collected when there were still unpaid bills. The point here is complicated because of the large risk of bankruptcy, at which point the late-paid bill becomes an unpaid bill that cannot be collected at all. But there is no provision that allows for service to be cut off if bills are late, or to require payments in advance to control against the risk. In a voluntary market, there is no rule that requires these penalties for services to be provided, but the situation will likely resolve itself because both sides wish for the cooperative arrangement to continue. But in those situations the providers of services could protect themselves by contract with an insistence on advance payments, guarantors or other forms of security, all of which are conspicuously missing from these mandated arrangements.

The New York PUC also addressed the question of what absolute performance standards should be used to see that there was performance parity. This parity depends on absolute scoring systems and some assessment of the seriousness of certain breaches that were involved in long term provision of services, with the need to trade off type one against type two error, and to make sure that the penalties involved were tied to the likely

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<sup>40</sup> In re Bell Atlantic New York, New York Public Service Commission, Case No. 99-C-0949 (2003) (Petition Filed by Bell Atlantic-New York for Approval of a Performance Assurance [Plan and Change Control Assurance Plan], filed in Case 97-C 0271).

frequency of breach. The obligations in question must deal with all aspects of ordering, installation, performance and repair. Once again, it is just not possible to be confident that the arrangements in question do not contain some implicit subsidy one way or the other. But it is clear that the variation in performance works in the CLECs advantage because only they can pull out of the deal in whole or in part, if the terms run against their interests.

The PUC also had to face the question of how the interconnection obligations should be modified, if at all, to take into account strikes against Verizon by the telecommunications union. On the one side, Verizon wanted some excuse doctrine, while the CLECs wanted rigorous enforcement of the nondiscrimination provision, which with hundreds of CLECs could be difficult to perform in times of stress. But with the element of distrust, the parity requirements were maintained, even if some absolute standards were subject to possible modification in light of extreme circumstances. It is anyone's guess whether these terms would have been incorporated into a voluntary agreement for the resale of UNE-Ps. But that is the entire point: once the sales of UNE-Ps are required, there can be no voluntary agreement, making it impossible to know whether the terms in question, and the allocation of risks stipulated, turn out to be efficient.

In the face of these and other complexities, the allegations that arise in litigation are just what one would expect to see. The situation in telecom looks like rent control in New York, where the feuds between landlords and tenants are all driven by the simple fact that the statutory regime requires leases, including renewals, at prices that are below market value, so that there is no shared surplus that will help the two partners over the routine obstacles they face. The CLECs will argue that the services in question are provided slowly to staunch the flow of lost customers. The ILECs will argue that the CLECs are slow in paying bills and will stir up trouble by lodging inappropriate complaints against the ILECs. There is nothing that says that both sets of allegations cannot be true at the same time, and the resolution of particular disputes is not within my competence or knowledge. But the basic dynamic insures that these grievances will pile up without end. The transfer of UNE-Ps is a complex service arrangement, not a simple sale. These arrangements require large measures of cooperation from both sides, and those measures are just not obtainable unless each side has the right to withdraw from a

transaction that it does not like. The failure to grasp that one simple truth does more than any complex econometric knowledge to explain how strong regulatory oversight in a regime of forced interactions has led to a meltdown of the telecommunications industry, a meltdown that shows no signs of abating.

These predictions have been borne out in the various law suits that have arisen between unwilling partners. Thus, one Verizon suit alleges that Covad had instructed its employees to file false trouble reports about Verizon services in order to aid its antitrust and regulatory activities.<sup>41</sup> The allegations included claims of incompetent training and deliberate subterfuge of the operation, which were allegedly done in part to support the Covad antitrust action against Verizon. An examination of the papers in support of that complaint tell a very different story in which Verizon is charged with stonewalling the collocation of facilities, requiring Covad to build unnecessary facilities, overcharging for power, refusing to test loops or to furnish the correct loops, and generally abusing legal and regulatory processes to frustrate entry.<sup>42</sup> To mention one other suit, Verizon brought an action against ATX Communications for nonpayment of bills for wholesale services, which was met with an antitrust claim that it had received insufficient assistance in its activities. Verizon for its part claimed that the nonpayment was a conscious part of ATX's business strategy.<sup>43</sup>

I refer to these cases not because I have any inside information of whose claims are true and in what proportion. The questions of fact are not for any academic (or consultant, as I have from time to time been for Verizon) to resolve. Rather, my sole point here is that it is important to isolate the institutional setting in which this breakdown of trust has taken place. And for that there is one and only one diagnosis: forced associations do not work. One side has a subsidy from which it will not easily back off. Another receives a burden that it will take steps to remove. There is no front end good

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<sup>41</sup> See *Verizon Delaware, Inc. v. Covad Communications Co.*, 232 F. Supp. 2d 1066 (N.D. Cal. 2002).

<sup>42</sup> See *Covad v. Bell Atlantic Corporation*, 201 F. Supp. 2d 123 (D.D.C. 2002) (Covad mentioned the specific abuses discussed above in its appellate brief on December 2, 2002).

<sup>43</sup> See *Verizon Communications v. ATX Communications*, No. 02-1374 (D. Del. Dec. 18, 2003).

will to ease the blow, and no way for any outsider to discover which allegations of foul play are true or false. One way in which to ease this pain is to change the pricing mechanism so that the implicit subsidy is eliminated, at which point the CLECs will peel off into facilities based competition. Another is to take the firm position that the rise of internet, cable and wireless technology means that we should concentrate solely on forging networks not swapping UNEs. The later results in a vast simplification of the overall structure and could be achieved by administrative decisions that use a high, but defensible, impairment standard under the current law. The better way to go is to undo the legislative decision that was doubtful in 1996, but clearly wrong today. Allow only interconnection, and kill the purchase or lease of any network elements. Here is yet another case in which a simpler rule does better in a complex world.