
RECENT DEVELOPMENTS IN ZONING
AND PROPERTY RIGHTS

FOREWORD: THE POLITICAL ECONOMY
OF LAND USE
REGULATION

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This forward focuses on economic and political aspects of local land use controls. Our purpose is to bring the logic of economic markets and the economic interpretation of property right systems to bear on the problem of land use. With a grounding in the mechanisms that motivate uncoordinated economic decisionmakers, we may understand something about the pattern and consequences of location decisions, particularly as they relate to problems of incompatible uses of adjacent property. This serves to illucidate the mechanics of the price system and the signals which confront decisionmakers. We then develop the rationale for land use regulation concerning potential problems of incompatible uses. We argue that there is no justification for *comprehensive* land use control. This is followed by a

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discussion of the political consequences of land use regulation and the biases induced by the political system. Our point is that land use control, like many other forms of regulation with laudable goals, affords politicians opportunities to pursue substantially different purposes from the stated rationale for controls. We argue that land use controls are more likely to serve political ends than to solve problems that occur through uncoordinated decisions over land use.

I. THE CAPITALIZATION PROCESS

In general, the price of an asset reflects its potential for the production of income as well as its potential value in consumption. This includes the various uses to which the asset may be put as well as the risks associated with its use. Non-pecuniary aspects become particularly important in the case of land and housing. Consider two identical houses on identical pieces of land. Potential buyers generate market forces that act to equalize their prices. If they are not equally priced, then prospective homebuyers find it advantageous to move to the one with the lower price to the exclusion of the overvalued one, thus bringing prices into line. The same process, however, implies that the market can sustain substantial differences in the price of housing, even when the physical dwelling and plot of land is the same, if important differences exist in other dimensions relevant to the housing consumer. If, for example, one of the two otherwise equal houses is in the flight path of an airport, the noise inconvenience will be factored—i.e., capitalized—into the value of the home. The process of capitalization follows the preferences of individuals who are current and potential home buyers. For the case of income-producing assets, this includes all factors affecting the possibility for deriving income.

Other factors whose importance becomes capitalized into the value of a house include undesirable activities in the neighboring areas (e.g., factories, sources of pollution, major highways, garbage dumps); quality of municipal services (quality of schools and crime levels are of paramount importance here); and regulations controlling the building of new housing or restraining the ability to build low income housing in upper income municipalities.

The example of schools illustrates the potential for large differences in the capitalized value of a home. Consider two middle-class residential areas, the first in a municipality with excellent schools, the second in an area where all middle-class children attend private

schools because public schools are judged to be inadequate. Many other attributes may yield differential prices in housing, but we will ignore these here. Assume again we have two otherwise identical houses in two communities and that residents of the second must pay to send their children to private schools which they consider comparable to the public schools in the first. What will be the capitalized value of schools implicit in the price of the house in the municipality with good schools? Assume that families have two children, private schools cost \$3,000 per pupil per year, and that the interest rate is 10%. Home buyers will be willing to pay a premium to live in the first community up to the total cost of private schools. They will be exactly indifferent between the two houses if the difference in price is \$60,000.¹ If the price difference is anything less, new purchasers would choose to live in the city with good schools, raising the prices of these houses while lowering the prices of houses in the other community. The process works in reverse if the difference is greater than \$60,000.

The capitalization process also captures the value of various forms of regulation and land use control. Imposing environmental regulations that make it more difficult to build new homes (e.g., restricted access to water or sewage systems, or restricting permits for building on undeveloped land) must increase the value of existing homes since fewer alternative homes will be available. Whereas, without these regulations, potential buyers have the choice between existing homes and new homes, now they are faced only with existing homes and bid up prices for these homes.

This effect also carries over to zoning regulations. It is well known that the same piece of land can have two disparate values depending upon the menu of legal uses. Thus, a corner lot may sell for a much higher price if it is zoned for commercial rather than residential use. This is precisely what is meant when we say that the value of an asset reflects its potential uses. The capitalization process extends to nearly all relevant dimensions of land, not simply zoning restrictions. We shall see that this process has important implications for zoning often overlooked by urban planners and legal scholars.

1. \$60,000 is the maximum amount of money a family with two children would borrow at 10% interest rates to purchase a home in an area with good schools instead of a home in an area with bad schools. In this example, we are ignoring certain technical questions such as the length of the decisionmaking time horizon; these are made for purposes of illustration and do not affect the qualitative nature of the results.

Before turning to the economics of property rights, let us briefly review some of the empirical studies of the effects of the capitalization process. In the last fifteen years, economists have begun to examine the extent and importance of the capitalization process. The results provide evidence for the view described above, namely that important elements of the physical or legal environment are indeed capitalized into the value of property.² Perhaps the best reference for a legal audience is the work reported by Inman and Rubinfeld.³ Writing in the *Harvard Law Review*, they investigate judicial reform of the local fiscal process which attempts to create a more equal distribution of local services and taxes. Important judicial initiatives include efforts to force intra-jurisdictional service equity (all residents should be entitled to the same level of service regardless of their tax contribution) and equalization in property tax valuation methods within a given jurisdiction. Inman and Rubinfeld argue that the effects of these rules become capitalized in the value of local property. Because individuals may respond to changes in property values by relocating across municipal boundaries within a metropolitan area, they may undo much, if not all of the efforts to enforce equity. In their words,

Unfortunately, the gains [from these policies]—often envisioned by lawyers and courts as the “likely” outcomes—may disappear if the local economy is permitted to adjust to new legal rules. The fluidity of the urban economy is considerable; there are strong economic forces at work which tend to undo, wholly or in part, the potential achievements of legal reform.⁴

A host of other studies support our views. Earlier work by Ridker and Henning found that local pollution is capitalized in the value of homes: high levels of sulfur dioxide pollution in an area depress property values.⁵ Oates, in a classic study, showed that both school

2. In addition to the evidence summarized below about environmental factors capitalized into housing values, there is a large and growing literature in finance that shows how important environment factors (*e.g.*, regulations, antitrust actions, plane crashes, and so on) and expectations are regularly capitalized into the value of financial instruments such as stocks and bonds. While no non-technical survey of these findings exists, the literature is surveyed in Schwert, *Using Financial Data to Measure the Effects of Regulation*, 24 J.L. & ECON. 122 (1981).

3. Inman & Rubinfeld, *Judicial Pursuit to Local Fiscal Equity*, 92 HARV. L. REV. 1662 (1979).

4. *Id.* at 1665.

5. Ridker & Henning, *The Determinants of Residential Property Values with Special Reference to Air Pollution*, 49 REV. ECON. & STATISTICS 246 (1967).

quality and property taxes are capitalized into housing prices.⁶ More recent works, generally using better quality data,⁷ have found similar types of effects. Grether and Mieszowski, one of the first studies to use data on individual houses, show that a variety of effects is capitalized into housing prices.⁸ Finally, Mieszowski and Saper demonstrate that the negative effects of airport noise reduce residential property values.⁹

II. ECONOMICS OF PROPERTY RIGHTS

The existence and enforcements of rights in property, both tangible and intangible, underlie the production of income and wealth in any society. These rights are the key to attaining levels of income above subsistence. Consider a farmer planning the coming year's activities. The sequence of growing crops necessitates considerable investment before the fruits of his labor mature. The farmer must prepare the land; invest his labor—planting, irrigating, and so on; and finally harvest his crops. A crucial component of this decision often taken for granted in this country is the security of property rights. The expected gain from his investment depends upon the security of the farmer's rights to his crops; that is, whether anyone may harvest them (no security) or if there is a significant degree of protection. To the extent that security in ownership is uncertain, the farmer must discount the potential gains. The greater the uncertainty, the lower the investment and consequently the lower the level of income. In the extreme, lack of protection leads to lack of production. The point is that the existence of rights to production underlie any economic system.¹⁰

6. Oates, *The Effects of Property Taxes and Local Public Spending on Property Values*, 77 J. POL. ECON. 957 (1969).

7. The early studies used aggregated data on housing values, *i.e.*, they measured housing value by the median house value in a census tract or in an entire municipality. More recent studies have used data on individual houses.

8. Grether & Mieszowski, *Determinants of Real Estate Values*, 1 J. URB. ECON. 127 (1974).

9. Mieszowski & Saper, *An Estimate of the Effects of Airport Noise on Property Values*, 5 J. URB. ECON. 425 (1978).

10. Economists have been successful in applying this approach to alternative property right structures such as those present in the socialist economies. *See, e.g.*, Furubotn & Pejovich, *Property Rights, Economic Decentralization, and the Evolution of the Yugoslav Firm*, 1965-72, 16 J.L. & ECON. 275 (1973). Professor Douglas North also discusses several different property right structures as they emerged in different nations in the modern world. *See* D. NORTH, STRUCTURE AND PERFORMANCE IN

From an economic point of view, several questions are relevant for structuring different systems of rights governing the means of production. What are the consequences of different forms of property rights or legal controls over resource use? What forms of control maximize the welfare of a community? And particularly relevant for local land use control, how are incompatible uses of neighboring properties to be handled?

In order to answer these questions, we need to discuss some elements of property rights systems.¹¹ We emphasize that the economic analysis of property rights differs significantly from that made by legal analysts. These distinctions are useful to the extent that they teach us about important policy issues such as problems of incompatible uses.

There are three essential components to a complete and efficient property rights system. These are the right to exclusive use of property, the right to income from the property in any use, and the unencumbered right of alienation. Each of these elements plays an important role in economic exchange. Moreover, significant problems arise if any component is incomplete or subject to important qualifications. We shall take up each component in turn.

Exclusivity can be seen to be necessary because it underlies the relationship between investment and return. As indicated in the illustration of the farmer, incomplete excludability leads to losses in income production. An important, if extreme example of non-excludability is the common property resource where no one may be excluded from using a given piece of land, asset, or other property.¹² Under these circumstances, no one has an incentive to worry about the future of the asset. Each individual instead faces incentives to

ECONOMIC HISTORY (1981); D. NORTH & R. THOMAS, *RISE OF THE WESTERN WORLD* (1975).

11. Several useful treatments of this topic include the collection of articles in *ECONOMICS OF LEGAL RELATIONSHIPS* (H. Manne ed. 1975). See also DeAlessi, *Economics of Property Rights: A Review of the Evidence*, in 2 *RESEARCH IN LAW AND ECONOMICS* 1 (1980). Coase, *The Problem of Social Costs*, 2 *J.L. & ECON.* 1 (1960). See also R. POSNER, *ECONOMIC ANALYSIS OF LAW* (1976); H. Demetz, *Toward a Theory of Property Rights*, 57 *AM. ECON. REV.* 347 (1967).

12. For further analysis of this problem, see Hardin, *The Tragedy of the Commons*, 162 *Sci.* 1243 (1968); Cheung, *Structure of a Contract and the Theory of Nonexclusive Resource*, 18 *J.L. & ECON.* 49 (1970). See Smith, *The Economics of the Primitive Hunter Culture, Pleistocene Extinctions and the Rise of Agriculture*, 82 *J. POL. ECON.* 727 (1975).

overuse the asset. Since no factors control or coordinate use, the resource is depleted or exhausted.

Consider the problem of grazing cows on a common pasture land for the production of milk. Suppose the maximum yield of milk involves 10 cows—adding additional cows means there is not enough grass to go around and the whole herd produces less milk in total.¹³ If the community owns less than 10 cows, no problems arise. However, if there are more cows, will individuals have an incentive to restrict the number of cows they pasture so that the total is not greater than 10? The answer is no. Consider an individual deciding whether to add an additional cow. While this implies that total milk production goes down, his private production of milk increases; the decrease is borne by the owners of other cows.¹⁴ If there are enough cows in the community, pasturing may be so intensive that the survival of the pasture itself is not insured.

13. The following table gives the hypothetical relationship between the number of cows and milk production. For simplicity we are ignoring all other costs associated with grazing cows.

<u>Total number of cows</u>	<u>Milk/cow (gallons)</u>	<u>Total milk produced by herd</u>
7	13	91
8	12	96
9	11	99
10	10	100
11	9	99
12	8	96
13	7	91
14	6	84
15	5	75
16	4	64
17	3	51
18	2	36
19	1	19
20	0	0

The maximum yield of milk occurs when 10 cows graze on this pasture. Adding more cows reduces the total amount of milk available to the community.

14. Continuing with the hypothetical example from footnote 13, suppose each of ten individuals owns one cow. Total milk production is maximized and each individual gains 10 gallons of milk. Now, suppose that some individual has an additional cow. Will he choose to add the cow, thereby increasing the size of the herd to 11 and thus decreasing the total milk yield to 96? The answer is yes. The decrease in production is borne by all others who now receive but 9 gallons/cow. The individual adding the cow, on the other hand, now receives 9 gallons from each of two cows for a net gain of 8 gallons. As each individual behaves similarly, the total milk production trickles down to nothing.

Here, the consequence of non-excludability is overgrazing. More generally, the consequences include the depletion and ultimate exhaustion of the resource. The same does not occur however for private ownership. This is obvious for the case of one individual owning all the cows. Alternatively, if someone owns the land and charges a fee, then contracting will lead to no more than 10 cows, since this maximizes the net gain.

Non-excludability is a serious problem even in the modern world. It underlies the current conflicts over resources such as minerals, international fishing grounds, and whales. The potential extinction of the whales due to overgrazing by the Japanese and Russians is a direct consequence of non-excludability. Air and water pollution present a more dangerous consequence. Since no one owns these resources, there are no limits to access. Polluters treat air and water as free resources, hence overuse them. The difficulties in devising an efficient regulatory scheme for air and water pollution suggest how important these rights are.

The second feature of a complete property rights system is the right to enjoy income from the possible uses available for the land. This underpins maximization of community wealth since only unrestricted use allows resources to be adapted to uses valued by the community and the economy. To see the necessity of this proposition, simply consider what income generation means. Larger income in one use than in another implies that members of the community, on the basis of their own actions, judge one use higher than another. The fact that a piece of property is much more valuable when used as a local grocery store than as an apartment complex means members of the surrounding area value the convenience and services provided by the grocery store more than would-be apartment dwellers value the property as a potential residence.¹⁵

Restrictions on potential use impose barriers in the process of selecting the use that is most valuable to the community. This becomes particularly relevant as preferences, technology, and demographics change. Unencumbered usage allows transformation of resources from activities which may have decreased in value to currently more valuable activities. Restrictions upon this process cause economic de-

15. Decisions about land use are made through calculations by developers who maximize their profits based upon their ex ante expectations over the likely success of alternative strategies for development.

cline in the face of change since resources fail to move into higher valued uses and remain in lower valued uses.

The final component of a complete property rights system is alienability. Only when resources can be fully and voluntarily transferred may they move to their highest valued use. Restrictions on voluntary transferability inhibit investment activities since they attenuate the capture of the rewards of investment. Investment, whether in the form of current maintenance of capital or of improvements, will not take place if its rewards may not be captured.

If these conditions govern the use of property, then the private interaction of economic decisionmakers will maximize community wealth. No property use controls or regulations are needed. There is no economic justification for property rights controls beyond enforcing the underlying system of exclusivity and transferability. Problems arise only if this system is incomplete, whether by design (e.g., legal restrictions) or of necessity (e.g., complete exclusivity fails). Important failures of a complete property rights system as outlined above stem from high or prohibitive enforcement costs. Crime, for example, is a direct violation of exclusion. We now turn to the policy implications for one type of potential problem that also arises from the failure of the exclusivity condition.

III. POLICY IMPLICATIONS OF INCOMPATIBLE USES

An important aspect of the real world not present in a perfect property rights system is the possibility of incompatible uses of property—that is, uses of one piece of property which significantly and negatively affect the use of adjacent property. This occurs because of the failure of the exclusivity condition. If exclusion were perfect, then negative external effects from adjacent properties would be ruled out. In practice, it is impossible to exclude many such effects. From an economic point of view, however, incompatible uses are not a sufficient condition for legal control of property rights. The issue requires a deeper analysis to determine the circumstances under which private exchange or contracting fails to fully solve this problem. The analysis above implies that there is no direct necessity for public control if private parties solve these problems. We shall see that controls are only justified when two conditions hold: (1) the existence of incompatible uses; and (2) the existence of an impediment to private bargaining and contracting solutions.

The first implication of our above discussion for incompatible uses

follows from the capitalization process. Since the price system capitalizes relevant factors which affect land values, the price mechanism avoids many potential conflicts. To see this, consider the sequential location problem of a housing area and a garbage dump. First, suppose there exists a garbage dump and an adjacent piece of open land. A housing developer has the choice of developing this piece of land or choosing some other piece not adjacent to a garbage dump. How will the developer make his decision without land use controls? If the price of land is nearly equal or if the price of land near the dump is higher, he will clearly prefer the one not located near the dump. Since potential home buyers dislike living near dumps, they will pay less for such homes. He may earn greater profits by developing land away from the dump. But what if the price of the land near the dump is relatively low so that this difference more than compensates potential homebuyers for living in an unattractive area? Only when consumers, exercising their free choice, feel that the price difference more than compensates them for the disadvantageous location will developers choose to develop the property near the dump. Thus, no problems arise even though no controls exist.

What about the case in reverse, where a housing development exists first and a garbage company is deciding where to locate, either near the housing development or in another place removed from houses. The process of capitalization discussed above implies that the potential use of the land adjacent to the houses for additional houses of similar quality will become capitalized into the value of the land. The adjacent land's price reflects the value in its best potential use. If the undeveloped tract is relatively desirable for residential development, this use will be capitalized into its price. The garbage company, in choosing where to locate its dump, must of necessity take into account the location of nearby houses. The company will prefer to locate in other undeveloped areas which do not have the potential for becoming housing tracts, and are therefore cheaper.

In neither case were controls necessary to yield the proper location decisions. The price mechanism insured that incompatible uses of adjacent land did not become a problem. Would the result have been different under controls? Here, controls may actually harm home buyers. Controls that do not allow housing developments near garbage dumps rule out the possibility of lower cost housing in less desirable areas. Developers will only find this location profitable if potential home buyers find houses in these locations worth purchasing. Under these circumstances, potential home buyers have a choice

between cheap homes in locations with some undesirable (but not debilitating) characteristic and homes in more expensive and more desirable areas. However, in the presence of controls, only more expensive homes exist. Thus, some people who would have purchased the cheaper homes now find themselves priced out of the market. Secondly, because more people wish to purchase the desirable homes when no cheaper substitutes exist, the price of these houses must be higher than if there were no controls.

Let us extend this logic to an additional case of interest. Suppose a plot of land is perfect for a particular use with one exception; a neighboring plot houses an incompatible use. If there are no impediments to bargaining,¹⁶ then bargaining between the two parties can achieve the optimal mix of land use. If the location is so desirable and the use so valuable to ultimate purchasers or consumers of the development, then the profits from this venture should exceed the profits from not developing the land (which allows the existing property to remain in its current use). This implies that a bargain can be struck whereby the owner of the resource with incompatible use will sell. Indeed, it is common for developers to buy out several different types of existing owners in pursuit of their plans. Most problems of incompatible uses are a simple extension of this logic. Indeed, only in the presence of substantial impediments to bargaining will this process fail.¹⁷

These examples show that in many cases thought to justify land use controls, economic decisionmakers already receive the appropriate signals for development through the market price mechanism. The capitalization process insures that land values reflect potential uses and hence relative desirability. To the extent that the capitalization process works, there may be little need for public controls.

The logic of the capitalization process undermines the rationale for comprehensive land use controls. The capitalization argument shows

16. Impediments to bargaining generally go under the heading of *transactions costs* in the economic literature. These relate to fundamental problems that inhibit or prohibit the relevant parties from arriving at an appropriate agreement. See Coase, *supra* note 11. Excellent discussions are also contained in Buchanan, *Politics, Property, and the Law: An Alternative Interpretation of Miller et al. v. Schoene*, 15 J.L. & ECON. 439 (1972); R. POSNER, *supra* note 11, at 27-52.

17. An example here is large numbers of potentially affected parties on one side of the transactions. Problems arise if any one of these parties becomes a holdout by trying to extract all the value of the contract. This is the economic rationale for eminent domain. See R. POSNER, *supra* note 11, at 39-44.

that the benefits from this system are, even in principle, less than often thought. Moreover, controls can often work to the detriment of the capitalization and market price signalling mechanism. To the extent that usage is restricted, market prices will not reflect the highest valued use, only the highest valued use allowed. With binding controls, more services of a particular type may be needed, but, because land use is restricted, resources do not move into this type of activity. Moreover, to the extent that revitalization, renovation, and neighborhood change is an incremental process, comprehensive structured land use controls may inhibit this process unnoticed by planners. On the other hand, if prices may adjust incrementally, the decisions which occur through uncoordinated private decisionmaking become easier. This is especially important for unforeseen trends in development which only become apparent once the process has proceeded.

Two further policy implications follow from the logic of capitalization. First, uncertainty over property rights imposes costs on owners of land and consequently on the potential consumers of the goods and services the landowners provide. Uncertainty about the nature of property rights inhibits economic decisionmakers from making long-term investments whose value varies with redefinition of property rights. For example, developers may choose not to hold particular pieces of property for future use if unpredictable controls govern the use of the land. This type of risk, particularly when caused by the political system, has widespread and subtle effects. An example from utility regulation illustrates this point. Uncertainty over the rate levels allowed by a given public utility commission directly affects the return on investment. As a result the utility faces higher borrowing costs in the national capital markets since investors must discount the return on investment by the probability that the public utility commission will make adverse decisions which lower the return below that expected at the time the funds were raised.¹⁸

Similarly, uncertainty over the future course of zoning patterns in a given area will inhibit development. Developers are more reluctant to undertake projects with long periods between inception and completion where changes in zoning may substantially reduce the value of the investment.

The second point involves nearly the reverse of the first. Consider

18. Systematic evidence of this effect is found in K. Lehn, L. Benham, A. Benham, *Ideology, Investment Expectations, and Economic Efficiency* (1981) (Working Paper No. 14 in Washington U. Dep't. of Economics).

the case of an unexpected shift of property rights where there had previously been little uncertainty about those rights. The change in rights changes the uses to which the land may be put, significantly affecting the value of the land. If a piece of land has some value in its most valuable use, and zoning disallows this use, then the value of the land must fall. While not a compensable taking under current legal interpretation, it constitutes an unambiguous loss for the landowner. Consider, for example, a piece of land with an ocean view. Suppose that the only productive use of this land is through housing. As we have seen, the price of the land reflects its value in this use. This remains true even if the current owner chooses not to develop the land. Similarly, it does not matter whether the owner is a large commercial developer or a couple who have spent twenty years saving to build their retirement home. Now, suppose land use controls are radically altered so that there is a long term freeze on building in this coastal zone. The value of this land must fall since it has no other use. The uncompensated loss borne by the owners of the land is independent of the rationale for the controls.

Consider the effects of uncertainty over property rights where the uncertainty takes the following form: rules governing land use are changed regularly and, while it may not be easy to predict which rules will be altered in the future, everyone knows that no rule is sacred. The most obvious effect is that land values fall, reflecting the uncertainty over whether the current potential will be realized. Second, any type of project, development, etc., which takes place over time is inhibited since the potential returns for completing this project must be discounted by the probability that the rules will change during the course of the project and make the entire project useless. As a direct consequence borrowing rates for investment in this area must rise to reflect the uncertainty over the value of the collateral. Finally, and in a similar vein, if a company is searching nationwide for an area to locate a new facility, this type of uncertainty represents a direct cost which must be figured into the investment calculations. Other things being equal, the company will locate the facility in the area in which the property rights are most secure.

In sum, economic decisionmakers considering long-term investments necessarily take into account uncertainty over property rights. Areas in which the value of investments may be substantially altered through changes in property rights are generally avoided, or like South Africa, require substantially above normal returns to attract investment funds.

IV. APPLICATIONS TO CURRENT PROBLEMS

This discussion of property rights and the process of capitalization has implications for several problems raised in the articles which follow.

Managed Growth. Many different trends in law affect the growth of metropolitan areas. One recent possibility is court enforced provision of a certain percentage of low income housing by all cities within a metropolitan area. The economic effects of this thrust are twofold. First, one primary service provided by certain suburbs is the exclusion of families in the middle and lower income ranges. Many tools are available to municipalities to restrict the type of residents. These include minimum lot size, prohibitions on apartment complexes, the complete absence of sewer systems (so that all dwellings must have cesspools, thus ruling out large apartment complexes), and so on. Indeed one particularly perceptive scholar argues that the bulk of the growth of new cities in the Los Angeles area during the last twenty-five years provided residents with minimal service cities.¹⁹ The importance of these cities for potential residents is their low tax rates. Middle and upper income families pay a substantial premium in the price of their house in exchange for lower taxes and for the protection from future taxes. Judicial enforcement of low income housing directly intercedes in this process. This hinders the ability of cities to practice exclusionary zoning as well as lowers property values in those municipalities which practice exclusionary zoning.

Second, as Inman and Rubinfeld argue,²⁰ the potential benefits from this type of policy for local families are substantially lower than anticipated by those advocating these policies. This follows because wealthier communities with the most attractive fiscal resources tend to be located far away from poorer neighborhoods, and hence from the jobs held by poor people. The transit costs alone may completely erode the potential benefits of this policy. Thus, even with the appropriate changes in zoning, these units may never be successful. If this occurs, it is tantamount to throwing away the land. In this case, the original price of the land prior to rezoning measures the net resources lost from this policy.

19. G. MILLER, *CITIES BY CONTRACT* (1981).

20. Inman and Rubinfeld, *supra* note 3, at 1738.

Blighting. One major impediment to bargaining occurs when larger numbers of parties are on one side of a potential transaction than on the other. This may substantially reduce the ability of one party to put several interdependent properties to their best use. Not only do direct costs of negotiating increase with the number of parties, but strategic bargaining problems become important. For example, if many parcels are necessary for the success of a project, then one particular owner may hold out and extract a price greater than the value of his property because his parcel is key to the success of the entire process. It is one thing when an oil company is searching over many different corner lots to locate its next station—competition among land owners of different corner lots insures that no one land owner may extract a price greater than the value of the land. However, when many different pieces are all essential, this type of competition is no longer present.

Thus, if a developer plans to combine a set of parcels into a redevelopment project, he may face strategic behavior from current owners who either wish to extract a greater price up front for their property or who wish to remain owners and free ride on the investments made by the developer. Owners pursuing the latter strategy hold their property until its value rises with the success of the project around him.

Eminent domain powers can in principle solve this problem.²¹ They are not always called for, however. New developments are constantly undertaken and it is not obvious why redevelopment of blighted areas is any different from development of new areas. It may be that the greater number of subdivided parcels exacerbates bargaining costs, but the burden of proof that this is true must fall on those favoring such powers for redevelopment.

Solar zoning. Of the issues taken up below, solar zoning is the most straightforward in economic terms. Since problems of various sorts occur through uncertain property rights, the main implications of the approach outlined above is that property rights to the sun should be unambiguously defined. Then individuals will be able to reallocate these rights through contracting and bargaining. Market forces provide the appropriate incentive for proper utilization of sunlight.

21. See *supra* note 17 regarding the economic rationale for eminent domain.

Spot zoning. This issue is no different from any other type of zoning or variance policy. As argued above, there is no economic rationale for comprehensive controls. Ironically, many of the situations which call for spot zoning are simply failures of the existing system because it is too restrictive. Spot zoning becomes viable in the presence of imperfect use of controls. Moreover, because uncertainty over property rights is capitalized into the value of property, fears above spot zoning may erode the value of a wide variety of parcels in the area, thereby inhibiting investment decisions. Thus, if a community currently has little land zoned to industrial use and housing developments are built within this set of property rights, then the restrictions on the possibility for nearby industrial facilities are capitalized into the value of these homes. However, if a developer can cheaply purchase land whose low price reflects the residential restriction and then controls are relaxed through spot zoning, the surrounding land owners may experience a substantial loss in value of their homes reflecting the unattractiveness of the new neighbor.

Undesirable uses. The problems at which some exclusionary zoning is aimed (preventing uses such as adult entertainment districts, abortion clinics, or group homes), is basically the same as that involved in spot zoning. There is some use of land to which residential users object either because of the activity allowed or a feared decline in property values. Many of the examples considered involve uses of land by a public body such as the city or state government. To the extent that these uses do reduce the value of neighboring property, they represent a nonphysical taking without compensation by the government. Exclusionary zoning is often an attempt to insure against such a loss in property value associated with undesirable use. Of course, these issues may also go beyond simple economic concerns to include other political purposes such as Catholic support for removing abortion clinics or even policies which mask covert forms of discrimination.

Protecting developer's rights. Here the interesting situations occur when someone acquires property to develop in a certain manner but, at some later time, the municipality changes the zoning laws to prohibit this intended use. First, as noted above, this constitutes an unambiguous loss imposed on the developer that is independent of the purpose of the zoning change. Moreover, as noted above, since the price of the land reflects its potential uses, owners of land may well

experience a direct economic loss from changes in zoning even if no work has been undertaken. What happens if compensation is required only when the project is far enough along so that physical initiation of the project has occurred? Clearly, land prices for undeveloped land must fall to reflect the uncertainty that the current use may not be allowed in the future. Consider a developer who holds many more parcels of land than can be developed at one time. Suppose that compensation is allowed from losses due to zoning changes only if the project is physically initiated. Then uncertainty over the security of current zoning rules imposes risks on the developer because he may lose substantial sums of the various parcels he is holding but not yet developing. This, in turn, raises development costs since interest rates on land acquisition funds must rise to reflect the greater uncertainty over the future value of the land. The uncertainty over property rights is directly capitalized into the value of the land, further raising the cost of borrowing. Lastly, the uncertainty directly inhibits projects of long duration between inception and completion because of the risk they will be prematurely forestalled.

V. POLITICAL USES OF LOCAL CONTROLS

We argued above that unregulated markets solve many of the problems thought to justify local land use controls. Potential problems from incompatible uses and so on simply provide no support for ubiquitous and comprehensive land use control. If this is so, then why do we observe the pervasive use of these controls? In this section we argue that the imposition of these controls affords local officials substantial political advantages. Advocates who focus on the benefits which in principle may be derived from a particular policy rarely face the issue of the political uses of local controls.

A major problem for any type of public regulation, including local land use control, is that its intended purpose is rarely the only use to which the policy may be put. The history of regulation is replete with examples in which politicians subvert laudable mandates to quite different political purposes. A host of examples have been elegantly surveyed elsewhere.²² No matter how laudable in principle is the ra-

22. More than 25 years ago, Marver Bernstein chronicled the history and performance of the major regulatory agencies. He found that regulation more often served the industry being regulated than the laudable purposes for which the agency was designed. See M. BERNSTEIN, *REGULATING BUSINESS BY INDEPENDENT COMMISSION* (1955). Since then, the literature on regulation has provided even more sup-

tionale for regulation, regulation in a political environment will serve its most important political purpose. Rarely is it possible in a political setting to remove the potential for exploitation by politicians serving particular interests.

The relevance of this discussion for local land use controls becomes clear by looking at the role these regulations play in the local political environment. We conclude that *even if there were no social rationale for land use control, politicians would find it in their interest to invent controls*.²³ Controls create the potential for politically directed transfers of income, one of the most compelling motivations for any political action. The income transfers are of two sorts. First, restrictions on the number of plots available for a given use raise the value of those plots. Second, the plots which are denied this use are of lower value. Careful targeting of the gains under the first category rewards specific constituents. The second category leads to an even more curious political situation because it creates the potential for political gain through variances or changes in restrictions. As long as the participation of the local politicians favorably affects an appeal to the zoning board (e.g., a letter, phone call or personal appearance), even random initial zoning decisions are valuable for politicians. Finally, the greater organization of special interests—whether these be developers, large land owners or renter cooperatives—combines with the ability of politicians to affect the impact of restrictions and biases the implementation of land use controls away from economic and community welfare criteria in favor of political uses.

Local land use controls thus become a tool for local decisionmakers to target economic gains and losses. Judicious use of this tool can work to the political advantage of local officials. While there are always counterbalancing losses,²⁴ careful targeting of the gains to

port for the general proposition that agencies serve political purposes beyond those provided in the mandates. For elegant surveys of the modern literature, see S. BREYER, *REGULATION AND ITS REFORM* (1981); Joskow & Noll, *The Theory and Practice of Public Regulation*, in *STUDIES IN PUBLIC REGULATION* (G. Fromm ed. 1981). See also M. Weidenbaum, *The Impacts of Government Regulation* (1978) (Working Paper No. 32 in Center for the Study of American Business, Washington U.).

23. The arguments of this section are further developed in Weingast, Shepsle & Johnsen, *Political Economy of Benefits and Costs*, 89 J. POL. ECON. 642 (1981). This reference discusses the political issues surrounding the policy implementation and how politicians foster those policies that provide benefits to constituents. See also M. FIORINA, *CONGRESS, THE WASHINGTON ESTABLISHMENT* (1977).

24. Granting a variance to one parcel may increase its value but this change may

particular constituents may allow politicians to avoid blame for pecuniary losses to others. Much of political behavior is the pursuit of those activities for which politicians may simultaneously claim credit for the benefits while avoiding blame for the costs.

There are three reasons why pecuniary gains are politically more important than pecuniary losses.²⁵ First is the "Robert Moses effect,"²⁶ the observation that pecuniary gains in the form of increased jobs, profits, and local tax revenue go to named individuals, firms, and localities from whom the legislator may claim credit and exact tribute. The pecuniary gains are targeted to particular constituents while the pecuniary losses are often dispersed over large numbers, many of whom are outside the politician's constituency. Second, higher prices which generate the pecuniary losses may not easily be distinguished from general price inflation, particularly if they must work through several factor markets before ultimately increasing the price of consumer goods.²⁷ And third, those who gain are often more concentrated and politically organized. They can reward politicians in a manner that the diffuse opposition cannot counter. As Fiorina and Mayhew emphasize, politicians survive on the basis of their ability to claim credit for the political benefits bestowed upon constituents.²⁸ These three effects enable politicians to extract political

also negatively affect the value of other parcels—*e.g.*, neighboring parcels or parcels which were previously not restricted from the use allowed by the variance. Similarly, overly restrictive zoning may afford landowners whose parcels are not restricted higher land values, but ultimately this may translate into higher costs to consumers of the local community because the restrictions hinder development of competitive provision of services.

25. Weingast, Shepsle & Johnsen, *supra* note 23, at 648.

26. So named for that famous New Yorker who exploited this principle so effectively. For a lucid description of local politics associated with land development, see R. CARO, *THE POWER BROKER* (1974). Caro carefully details the role of manipulated local land use controls as well as contracting for local construction projects.

27. Consider the effects of a defense contract for fighter planes on the price of airline tickets. The latter market is removed from direct effects of the defense expenditure, but nevertheless is affected indirectly. The contract increases demand in this industry, thereby raising prices for industry outputs. This includes the price of commercial airlines sold to major trunk carriers which, in turn, feeds into increases in the price of air travel. Movements in the price of airline tickets, however, may not be readily associated by the average air travelers with the defense expenditure. Thus, the pecuniary gains to firms and employees in the defense industry are directly attributable to this contract whereas the pecuniary losses borne by consumers of air travel are not associated with the policy. This allows politicians to gain credit for the positive effects while escaping blame for the negative effects.

28. M. FIORINA, *supra* note 23; D. MAYHEW, *CONGRESS: ELECTORAL CONNEX-*

benefits because they may simultaneously avoid blame for part or all the costs which fall on politically irrelevant individuals (i.e., those outside their political constituency).

One final observation is worth noting. Two legal principles partially support the opportunity for political discretion in the use of local land use controls. First, the rules governing compensation to landowners for changes in land use controls allow for political purposes which might not be undertaken if the costs were visible or if these costs were borne by the community. Historic preservation, for example, may have substantial benefits to a community interested in saving its prized local heritage, but the costs and benefits of this decision to local citizens differs markedly if they can impose the costs of this policy on current owners. The decision may well differ if instead, current owners were allowed compensation so that community purposes were in fact paid for by the community. Second, judicial review of local decisions is largely limited to procedural improprieties and gross misconduct. There is no judicial test to determine whether policy implementation in any way resembles the ostensible rationale for controls. In general, procedurally correct local decisions, even if they serve purposes beyond the rationale for control, stand up in court.

In sum, the most important uses of local controls may well have little to do with the laudable issues discussed by policy advocates. The political environment in which these policies are administered have systematic implications for the pattern of decisions which take precedence over other public purposes.

VI. CONCLUSION

In this introduction, we discussed the law and economics of local land use controls. Central to the paper were potential problems of incompatible uses of adjacent pieces of land. We argued that, as a consequence of the capitalization process, the market pricing mechanism solves, at least partially, the problem of incompatible uses. Potential problems from conflicts over use simply do not justify a ubiquitous and comprehensive system of land use controls.

The policy implications of this view focus on the uncertainty over the definition of rights. The fact that rights may be altered at some

TION (1974). These are two of the most famous scholarly treatments of the modern Congress in the political science literature.

point in the future has an effect on property values today as the risk to future values is capitalized. The uncertainty over future rights generated by the ability and inclination of a community to alter rights (for whatever purpose) has a hidden and negative effect that must be considered by policymakers.

Our inquiry leads to the second conclusion that laudable rationales for land use control need not play a role in the implementation of this policy in order for this system to be of political value. Social goals embodied in incompatible uses or in the series of issues taken up in this volume may have only the vaguest connection with the implementation and day to day operation of these controls. Therefore, we caution policymakers concerned with the actual purposes underpinning these controls to consider the likely consequences of implementing different systems of land use regulation.

