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CO-OWNERSHIP AND CONDOMINIUM

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Abstract

Co-ownership refers to legal relations in which two or more entities have equal rights to the use and enjoyment of property. Co-ownership relationships may satisfy the preferences of some owners, and predefined categories of co-ownership, as opposed to contractually defined relations, may allow parties to satisfy these preferences at relatively low cost. However, shared ownership results in coordination and externality problems, which the law attempts to mitigate in numerous ways, including judicial oversight of 'reasonableness' (as in the law of waste) or fiduciary duties; ending the co-ownership relation (through the right of partition) or providing rules that seek to optimize the joint decision-making process (such as compulsory unitization). A major area of growth in shared ownership is in condominium developments, where entities own some property individually, while co-owning common facilities. This permits parties to take advantage of economies of scale and the joint provision of common goods. Condominium arrangements are governed by a combination of contract, statute and judicial law, and typically include democratic decision-making structures intended to minimize the sum of decision-making costs (gathering information, voting, and bargaining) and the cost of erroneous decisions.
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1. Introduction

Co-ownership refers to legal relationships that entitle two or more entities to equal rights to the use and enjoyment of property. Although it most often arises in the context of real property, co-ownership may apply to any type of property. Co-ownership also takes numerous legal forms. The category includes tenancy in common, joint tenancy, indivision, marital estates such as tenancy by the entirety and community property (all of which are referred to here as 'cotenancy interests'), as well as condominium ownership of common areas. Other important examples of co-ownership include the relationship of neighboring landowners with interests in underground oil or gas reserves and communal arrangements such as kibbutzim, Hutterite or other planned communities.

In each case, the central economic and legal problem is how conflicting preferences and actions of the co-owners can be coordinated. In the absence of such coordination, owners may overindulge in activities that impose costs on their co-owners and underinvest in projects or activities whose benefits are shared with co-owners. The legal mechanisms used to cope with these externality problems range from doctrines that impose liability on co-owners for engaging in inefficient activities (such as the law of waste), to legally mandated common decision-making (as in compulsory unitization statutes), to forced termination of the co-ownership relationship (partition). In addition, successful coordination and decision-making in co-ownership situations often depend on social sanctions and norms outside the domain of law. This article explores the law and economics literature in three major related areas: common law and civil law co-ownership; condominium ownership; and communal ownership.

A. Cotenancy Relationships

2. Overview of Cotenancy Relationships

The common law forms of co-ownership include tenancy in common, joint tenancy and tenancy by the entirety, each discussed below, as well as coparcency (not discussed because it has largely fallen from use) and tenancy in partnership (outside the scope of this article). Civil law forms of co-ownership, also discussed below, include indivision and community property.

If parties own property as tenants in common, each is considered to own an undivided interest in the whole property. That is, each cotenant has the right to use and possession of the entire property; and none has the right to prevent any cotenant from making use of or possessing the property. A cotenant generally need not account to other cotenants for the use value derived from the property, nor for income received from the property, although where a cotenant makes use in a way that permanently reduces the value of the land (such as extracting minerals), most jurisdictions require that the income be shared. An interest as tenant in common is freely alienable and devisable, with the transferee becoming a tenant in common with the other cotenant(s).

The rules governing joint tenancy are generally the same as those for tenancy in common, with the exception that a joint tenancy interest is extinguished by the death of a joint tenant, leaving ownership in the surviving joint tenant(s). However, a joint tenant may transfer his interest in the property during life, at which point the transferee becomes a tenant in common with the remaining co-owner(s).

Joint tenancy originated in the economic and social conditions of feudal England, in which the division of landed estates among numerous heirs would have impaired the ability to render feudal services to the lord. As feudalism passed, so too did this imperative for joint tenancy. Responding to the coordination problems inherent in concurrent ownership, England abolished legal concurrent interests in 1925. In England, a grant or devise that would formerly have created a legal concurrent estate is now deemed to create a beneficial concurrent estate, with the legal title to property held in trust for sale. Upon sale, the proceeds are allocated to the co-owners. Thus, the inefficiencies of concurrent legal ownership are avoided.

Tenancy by the entirety, recognized in approximately 20 US jurisdictions, can exist only between married couples. Like joint tenancy interests, entireties property is subject to survivorship rights. However, most jurisdictions impose limitations on the ability of either spouse to alienate any interest in entireties property without the consent of the other spouse. Thus, entireties property is not freely alienable nor can it be attached by creditors (in most jurisdictions).

The civil law equivalent to common law cotenancy is ownership in indivision, under which each co-owner has an undivided ownership in the whole property. Any co-owner in indivision may use or possess the entire property, although changes to the property require the unanimous consent of all co-owners. Like tenancy in common, property owned in indivision may be transferred by deed or by will.

Community property exists in eight US states and in most civil law countries. While the specifics of community property vary from jurisdiction to jurisdiction, most provide that the earnings of each spouse during the marriage (and anything bought with those earnings) are owned equally by the spouses. Control over community property may be vested in one spouse or in both, depending on the type of property and the jurisdiction. Upon death of a spouse, typically one-half of the community property passes through the decedent's estate, while the other half is owned by the survivor.

While there is little reliable information on their prevalence, cotenancies are obviously quite common. Hines (1966) analyzed recorded deeds in Iowa, finding that while joint tenancy essentially disappeared around the turn of the twentieth century, it increased rapidly in popularity beginning in the late 1930s. By the 1950s, nearly half of all recorded deeds created joint tenancies, almost entirely between husbands and wives (Iowa does not have community property nor does it recognize tenancy by the entirety). Griffith (1961) provides survey data indicating that, between 1957 and 1961, married couples in California (a community property state) took title in joint tenancy over 85 percent of the time. Lewis (1994, p. 446, n.204) cites studies showing that joint ownership of land increased from 0.4 percent in 1890, to 22.2 percent in 1920, to 54.8 percent in 1940 and to almost 80 percent in 1960, and that a small survey of

California and New Jersey deeds from 1989 showed 65 percent co-ownership in California and almost 69 percent in New Jersey.

The historical pattern of changes in co-ownership appears largely unexplored in the legal and economic literature, and we know just as little about decisions to use co-ownership today. Hines suggests that joint ownership reemerged in this century partly out of the desire of mortgage lenders to avoid the fragmentation of ownership upon the death of a mortgagor. The preference for joint tenancies may also have been encouraged by tax factors and changes in the social status of women and in attitudes toward the ownership of property by women. This story is fragmentary at best, and the study of choices between sole and co-ownership, and among forms of co-ownership, offers a ripe area for historical, economic and sociological investigation.

3. Creation of Cotenancy Rights

One of the central benefits of cotenancy relationships is the ease with which they can be created. For parties who desire such a relationship, co-ownership can be adopted without the difficulties and expense of drafting a contract or partnership agreement, contemplating future needs or contingencies, or providing for conflict resolution or remedies should the co-owners later find themselves at odds. And the choice between forms of co-ownership allows parties to choose a form that fits common patterns of needs. For example, community property and tenancy by the entireties attempt to provide rules that will serve the needs of many married couples. To the extent that the law of co-ownership succeeds in fulfilling the desires of co-owners, it may serve as a valuable means of reducing the transaction costs inherent in negotiating, establishing, and enforcing shared ownership arrangements. Moreover, when disputes do arise, litigation or settlement costs may be reduced if the parties' rights are clearly established by law, rather than requiring judicial interpretation of a unique partnership agreement in each case.

These advantage also carry with them certain potential costs. Because cotenancy relationships are so easily created, parties may enter into co-ownership relationships without adequately considering whether the rights and obligations established by law are truly appropriate to their needs. The result may be lower initial transaction costs at the risk of increased future disputes.

Co-ownership interests may sometimes be created by careful forethought and design. For example, in some European and Latin American countries, married couples may choose among several concurrent ownership regimes for their property, choosing to hold their property individually, to hold property acquired from earnings as community property but inherited property as separate property, or to hold all of their property communally. Often, however, cotenancies arise casually or even accidentally. Co-ownership may begin by several heirs inheriting property (thereby becoming tenants in common), a gift from a parent to several children, acquisition of property by a married couple, or divorce of a married couple who own property together, to provide just a few examples. Thus, although it is possible for co-owners to contractually define the terms of their co-ownership, many co-owners do not explicitly consider the rules governing their relationship. Rather, they trust that the default rules specified by law will adequately suit their needs (Lewis, 1994, pp. 389-394). Moreover, studies of other areas involving ongoing relationships indicate systematic divergence between actual and perceived legal rules, and demonstrate that parties' actions are often governed by norms formed independently of the legal regime. While it appears likely that many cotenants misapprehend their legal rights, the absence of data leaves a tremendous void in our understanding of the economics of concurrent interests.

B. The Economic Problems of Co-Ownership

4. Coordination Among Co-owners

As Demsetz (1967) points out, one of the functions of individual ownership is the internalization of costs and benefits associated with the use of property. As demonstrated by Hardin (1968), with communal property, such as a public lake or common grazing area, the costs of an individual's resource use may be borne by the community at large while the benefits are realized by the individual alone. That is, the benefits are internalized while the costs are externalized. This leads to suboptimal resource use, as individuals maximize their own benefit at the expense of the community. The classic example is the factory spewing pollution into the (commonly owned) air.

Co-ownership creates a similar situation, in which each cotenant may seek to use the property to maximize his or her personal benefit while externalizing some costs onto co-owners. Alternatively, free rider problems may prevent a co-owner from taking measures that confer benefits on other cotenants if the cotenants cannot be compelled to contribute to the cost of those measures. For example, consider neighboring landowners whose properties lie over a common pool of oil. Each owner has an incentive to pump the oil as quickly as possible to keep the neighboring owners from getting it first. This race may lead to an inefficient investment in oil pumping and overly-rapid depletion of the pool. The same problem can be envisioned when a co-owned property contains minerals or lumber which can be taken by any co-owner. Or consider the dilemma faced by co-owners of a property who disagree on whether it would benefit from new improvements (perhaps one lives on the property, while the other does not). Who makes the decision? If it need not be unanimous, can a cotenant who wants to build force the other cotenant to contribute? And who gets the increase in value from the property? If the law does not provide an adequate means to address problems like these, shared ownership may lead to an inefficient use of resources.

As Coase (1960) demonstrated, in the absence of transaction costs co-owners would negotiate to an optimal resource use regardless of initial legal entitlements with respect to their joint property. Initially, many co-ownership situations may appear to have low transaction costs because they have a limited number of owners, who know each other, are often closely related, and can easily negotiate together (Ellickson, 1991, pp. 273-275; Ostrom, Gardner and Walker, 1994). Thus, cooperation among co-owners is likely to be the rule.

However, in bilateral monopoly situations, that is, where small numbers of parties are locked into negotiating with each other, strategic bargaining may stymie the negotiations. Moreover, because co-owners are often family members, emotional factors having little or nothing to do with the co-owned property may prevent cooperation. Lewis (1994, p. 389) notes that these problems are exacerbated by the legal rules governing cotenant decision-making: decisions in a co-ownership situation generally are not resolved by majority rule (either by person or interest), but must be unanimous. Where each co-owner has certain absolute rights over the property and cooperation breaks down, transaction costs may be quite high. Thus, as Ellickson (1993) argues, an economic analysis of co-ownership must concern itself with both the quality of the decisions made (the minimization of deadweight losses) and the cost of making and enforcing these decisions (transaction costs).

The problem of coordination among co-owners has engendered a number of legal responses. One primary response is the law of contract: generally, if the co-owners can agree on their respective rights and obligations, the courts will enforce that agreement. This permits parties with special needs to craft a relationship that meets their situation.

If the parties are unable to agree, however, the law establishes a series of default rules and an exit option to mitigate the bilateral monopoly problem. Thus, the law may impose liability on one co-owner toward the others, for the rental value of the property or for damage done to the property. Or co-owners may be treated as standing in a fiduciary relationship, forcibly aligning the parties' interests by proscribing one co-owner from profiting at the expense of others. And cotenants generally have an absolute right of partition - that is, the right to terminate the cotenancy relationship. The economic literature on each of these legal remedies is discussed in the following sections.

5. The Right to Rental Value

In most US jurisdictions, a party in possession (the ‘in-tenant’) need not pay rent to his co-owners even though the co-owners (‘out-tenants’) are not using the property. Only if the in-tenant is guilty of ‘ouster’ - denying the out-tenants the right to use the property - must rent be paid (although other exceptions, such as offset rights upon partition, complicate the picture). In a minority of jurisdictions, the tenant in possession is liable to his co-owners for their proportionate share of the market rental value of the property.

The inability of out-tenants to collect rent from a tenant in possession may result in the inefficient use of the property. Where one cotenant is living in or otherwise using the property without paying rent, and values that use less than the fair market value, the property is not being used optimally. And while an out-tenant has the right to sell his interest in the property, a sale will not result in a reallocation of the property to an available superior use because the purchaser will simply step into the shoes of out-tenant, with no right to evict the in-tenant or compel the payment of rent. Thus, because the in-tenant may impose half of the cost of his use of the property on the out-tenant, the in-tenant may continue to use the property despite valuing its use less than would other potential tenants. This is one of the simplest examples of co-ownership resulting in an inefficient use of resources.

Perhaps the first explicitly economic treatment of co-ownership was offered by Berger (1979), who identified the fundamental problem as the conflict between protecting the incentives for a tenant in possession to make productive use of the property and protecting the property interest of the tenant out-of-possession, concluding that a net leasing paradigm would lead to legal rules that enhance economic efficiency. This approach would entitle the out-tenant to its proportionate share of the market rental value of the property under a net lease less certain expenses normally paid by the landlord in a net leasing situation (for example, mortgage payments). All other expenses (such as repairs, improvements, taxes and insurance) would be borne by the tenant in possession, who receives the primary benefits of such payments. Such an approach would provide efficient incentives for the use and improvement of the property by permitting the cotenant making such use or improvements to realize the value generated by them.

Although Berger identified economic policy concerns, his methodology was that of traditional legal, rather than economic, analysis. Berger offered neither a model based on specified assumptions of human behavior nor empirical data to support his conclusions. Rather, he analyzed the confusion in co-ownership law by analogy to two other legal forms, partnership and net lease arrangements, choosing between these two paradigms on the basis of their apparent efficiency and intuitive fairness. Nevertheless, Berger’s article provided a starting point in the economic analysis of co-tenancy by identifying some of the systematic effects of the law on cotenants' rights and suggesting that economic efficiency might provide a useful guide for reform.

Fifteen years after Berger's article, Lewis (1994) offered another analysis of cotenants'rights that draws heavily on economic concepts. These fifteen years witnessed a tremendous increase in the amount and sophistication of economic analysis of legal topics, and Lewis's article reflects this increased understanding. Although Lewis (1994, n.248) explicitly denies the intent to provide an 'extensive law and economics evaluation', her analysis builds on concepts derived in the law and economics literature. Lewis argues that cotenancy is best viewed as a relational contract and that default rules must be designed to prevent each owner, caught in a bilateral monopoly, from making suboptimal use of the property in an attempt to maximize personal benefit at the expense of co-owners, and to prevent strategic considerations from reducing the benefits realized by all.

Lewis (1994, p. 439) also poses an interesting hypothesis on the relationship between ownership rules and the broader economic landscape, suggesting that the nonliability of in-tenants may have been derived from historical conditions in a largely agrarian economy, in which the rental value of land was low compared with the value of the labor used to farm it. In this situation, it would be of little use to make a cotenant who is farming the property liable for the rental value of the property because the liability would be too low to justify the litigation costs. Given the general rule against rental value liability, the exception for ouster was needed to prevent a cotenant from taking advantage of other cotenants by denying them use of the property. Lewis then argues that in a modern economy, in which the use value of property is reflected in significant market values, the minority rule (which imposes rental-value liability on the tenant in possession) will result in more efficient use of co-owned property. Lewis concludes that the minority rule should generally control, while 'noneconomic' policies (preserving family unity and furthering home ownership) should trump the allocative efficiency of rental liability in a narrow range of circumstances. In this way, Lewis acknowledges the efficiency costs of pursuing her preferred policies, and clearly separates the normative and positive components of her analysis.

6. Fiduciary Duties in Co-owner Relations

One area of investigation that has been largely ignored is the existence and extent of fiduciary duties between cotenants. The imposition of a fiduciary duty on a cotenant may mitigate some coordination problems by preventing one cotenant from taking advantage of others. Courts have found fiduciary relationships to exist between co-owners in some contexts, but there is no clear principle on which one can rely to determine when co-owners will be regarded as fiduciaries, nor is the scope of the fiduciary duty among co-owners clear. For example, cotenants are often held to be bound by fiduciary duties in acquiring the co-owned property at a tax or mortgage foreclosure sale, but not in purchasing interests directly from each other.

While the economic analysis of fiduciary relationships has received some attention, as by Cooter and Freedman (1991), the questions of fiduciary duty among co-owners have not been addressed in the law and economics literature. For example, is there an economic rationale for applying fiduciary duties to some (or all) situations among co-owners? If so, what are the proper limits of fiduciary duty in co-ownership relationships? How can a duty of loyalty be applied when the putative fiduciary has an interest that is coextensive with that of the putative beneficiary?

7. Waste

The doctrine of waste is another example of a rule designed to reduce transaction costs. While any co-owner is permitted to use the property, the doctrine of waste prohibits any owner from using the property in a way that unreasonably harms the interests of his or her co-owners. This reasonableness requirement mitigates the bilateral monopoly problem: the parties may negotiate to any solution they like, but if one party insists on acting unreasonably to the detriment of his co-owners, the law provides a remedy. Knowing this, parties are less likely to hold out for an unreasonable (that is, disproportionate) share of the benefits of ownership.

8. Voting Controls

The bilateral monopoly problem is caused largely by the right of any cotenant who does not consent to a course of action to 'hold out' and either use the property as he sees fit regardless of the desires of other co-owners, or to prevent other co-owners from acting without obtaining his consent. This has been a major problem, for example, in the ownership of oil and gas reserves. Traditionally, a landowner owns not just the surface, but also all minerals existing under the land. Thus, a pool of oil or gas is owned by everyone who owns land above the pool, and oil or gas has traditionally belonged to whoever first extracts it (the 'rule of capture'). The rule of capture creates inefficient incentives, rewarding owners for pumping faster than their neighbors, and so encouraging overinvestment and overproduction. As Murray and Cross (1992) point out, this is a classic prisoners' dilemma situation: every owner would be better off if they could all cooperate to limit their drilling to the efficient level, but each has an individual incentive to defect from the agreement and drill additional wells. Moreover, a consensual agreement to cooperate may be unobtainable (or obtainable only at very high cost) due to the need for unanimity, the number of parties who must agree and, accordingly, the risk of holdouts who seek exorbitant prices for their consent.

The primary corrections to the problems raised by the common law rule of capture have been statutes mandating conservation or compulsory unitization. Conservation statutes limit the number and location of wells and the rate of production, thus countering the overproduction induced by the rule of capture. As Murray and Cross (1992, p. 1119) point out, however, such statutes establish limits that will be inefficient for different reservoirs and geologic conditions, sometimes permitting too much activity and sometimes too little. In other words, by adopting a substantive rule, the law risks imposing an inefficient decision on all of the parties.

A superior solution may be to resolve the holdout problem through a procedural mechanism without imposing a particular substantive rule on the co-owners. In the area of oil and gas law, this has been done through compulsory unitization statutes, which have been adopted by almost all US states with significant oil and gas production except for Texas. Under a compulsory unitization statute, once a specified percentage of landowners over an oil field vote to unitize, all owners (including those who did not consent) must join together in the cooperative development of the field, sharing pro rata in the costs and production. In this way, the owners' interests are aligned to maximize the profit realized from the production of the field, rather than engaging in negative-sum competition to extract the oil or gas first.

Another example of the holdout problem arises in the co-ownership of patents. As Merges and Locke (1989) point out, in the United States, any co-owner of a patent not only has the right to make use of that patent itself, but to assign all or part of its interest in the patent to others. In this way, any owner can authorize (through partial assignments) any number of other parties to make use of the patent, thus depriving its co-owners of the central benefit of a patent right: exclusivity. France, England and Japan adopt a more consistent view, under which a co-owner may use the patent without consent of other co-owners, but no transfer may be made without the consent of all of the co-owners.

The concept that each co-owner has absolute rights in the property has generally prevented the adoption of majority rule provisions in the law of cotenancy. In contrast, when parties establish co-ownership by contract (such as partnership agreements or condominium developments), it is common to provide for voting regimes to prevent the holdout problem from imposing undue costs on the parties.

9. Partition

The law's ultimate solution to the bilateral monopoly problem inherent in cotenancy is partition of the property, available in both common law and civil law jurisdictions. Any joint tenant, tenant in common or co-owner in indivision has an absolute right to seek a judicial order partitioning the property, an order which can take one of two basic forms: partition in kind or partition by sale. In partition in kind, the property is divided into separate parcels, with each co-owner being granted title to one or more parcels; if proportionate parcels cannot readily be created, the court can order co-owners receiving more valuable parcels to make a payment, called owelty, to those receiving less valuable parcels. In partition by sale, traditionally available only if the property could not be physically divided (for example, a small lot containing a house), the court orders the property to be sold and the proceeds allocated among the co-owners in proportion to their interests.

Relatively little has been written on the economics of partition, although some preliminary matters appear clear enough. Partition serves as an ultimate protection against deadlock when co-owners disagree on management of the co-owned property, and each tenant therefore has an inalienable right of partition (although courts will sometimes enforce limited or 'reasonable' restrictions on the right to partition). Partition by sale permits a tenant to receive her share of the market value of the property by compelling her co-owners to join in the sale of the undivided whole. Thus, any co-owner who consistently attempts to extract a disproportionate share of the value of the property runs the risk of causing a cotenant to seek partition. In this way, the right of partition serves as a check on opportunistic behavior by cotenants. Moreover, partition does not require the court to determine whether the parties have acted reasonably or fairly, as remedies for waste or breach of fiduciary duty require. Thus, partition may be a relatively low cost mechanism for resolving co-owner disputes, at least where sale of the property is inexpensive compared with litigation.

While the Act of 1539, creating the action for partition in England, permitted only partition in kind, the Partition Act of 1868 permitted partition sales where such 'would be more beneficial for the Parties than a Division of the Property between or among them'. In 1925, English law was further modified to require the partition sale of co-owned real property unless the co-owners agreed upon a plan of division. In the US, most jurisdictions have statutes preferring partition in kind, permitting partition sales only where partition in kind would prejudice the interests of the co-owners. Thus, partition in kind is generally held to be preferred to partition by sale.

Reid (1986) argues that American courts generally honor this rule in the breach, ordering partition sales unless substantial factors dictate the contrary, and that this judicial preference is a manifestation of the courts' tendency to adopt economically efficient rules. Partition sales may generally be more efficient than partition in kind because many parcels lose value when divided, and because of the risks of error inherent in the judicial valuation required for a partition in kind, relative to the efficiency of the marketplace in valuing property interests. Moreover, judicial division involves substantial litigation costs which can be reduced or avoided by partition sale.

C. Condominium and Cooperatives

10. Introduction to Condominium and Cooperatives

One of the most important and fastest growing areas of co-ownership is the condominium. In a condominium development, each property owner has an individual interest in a defined parcel of property, and shares in the ownership (typically as tenant-in-common) of various common spaces and facilities. Thus, in a typical multi-unit residential development, each owner owns an apartment unit plus a proportionate interest, with all of the other owners, in the common elements, such as hallways, lobby, elevators and recreational facilities. This hybrid form of ownership can be contrasted with a cooperative, in which a corporation owns the real property, with each shareholder in the corporation being entitled to a proprietary lease to a specific apartment. (Although condominium and cooperative forms can be and are used for commercial properties, the vast majority are residential.) In addition to these two common forms of common or collective ownership of real property, recent years have seen an explosive growth in the United States of property owners' associations ('POAs'), in which a group of property owners may own in common various facilities, such as recreational facilities or streets, and/or jointly provide services such as security, landscaping or utilities. The expenses of each of these common ownership structures are paid from assessments imposed on the owners.

The economic advantages of private ownership are well documented in the legal and law and economics literature (see, for example, Demsetz, 1967; Ellickson, 1993). Among other things, private ownership internalizes costs and benefits, improving the efficiency of resource use. Private ownership also fosters contractual relations and trade, further internalizing externalities present in common ownership. Given these advantages, the historical persistence and recent expansion of condominiums, cooperatives and homeowners' associations, forms that combine private and common ownership, require some explanation, as do the mechanisms used by condominiums, cooperatives and property owners' associations to resolve the difficulties inherent in collective ownership. Following the literature, this article will focus on these issues in the condominium context. This article does not attempt a comprehensive review of the law and economics of condominiums, which would necessarily address a host of issues such as fiduciary duties and agency theory, consumer protection and securities laws, zoning, rent control and tort law. Rather, this article focuses on those issues central to the co-ownership aspect of condominiums: the coordination and control of the condominium development.

11. The Rise of Condominium Ownership in the United States

The condominium is an ancient form of real property ownership, dating back to Roman law. While it continued as a viable form of ownership in civil law countries, including much of Europe and, later, South America, condominiums only became possible in the United States with the passage of enabling statutes beginning with Puerto Rico in 1958, and spreading to over 40 states by 1963 and all 50 by 1968. The dispersal across the United States of statutes permitting the creation of condominiums is a phenomenon that has received remarkably little formal analysis. The sudden adoption of a legal institution that has long been available deserves study, yet research discloses no attempts to model the dispersion and adoption of condominium laws or to explain the timing and pace of this remarkable institutional change.

This legal change was matched by a marketplace response, as condominium developments spread rapidly in the United States during the 1970s and 1980s. A partial explanation for the popularity of condominium ownership may be found in separating the demand for home ownership from the demand for housing services. Rental housing provides a tenant with housing services, while the owner/landlord obtains an investment. As discussed by Ioannides and Rosenthal (1994), home ownership serves tax and investment purposes apart from the provision of housing. Where a consumer desires housing in the nature of a unit in a multifamily structure, but also desires the tax and investment benefits of ownership, a condominium may be superior to either owning detached housing or renting an apartment while investing in other real estate. This explanation, however, does not explain why condominium demand would have increased over time.

Hansmann (1991) suggests that the rise of condominium ownership in the United States may be attributable to an increase in the tax advantage of ownership over rental housing caused by the failure to tax the imputed rental value of owner-occupied housing (offset only in part by accelerated depreciation for real estate investments during the 1970s and early 1980s). Hansmann also identifies numerous other factors affecting the relative desirability of condominium or cooperative ownership versus owner-occupied housing, including risk and liquidity concerns, landlords’ market power, rent control regulations, the high costs of changing residence and the costs of collective governance. Lewin (1982) similarly attributes much conversion activity to tax preferences granted to home ownership, arguing that this tax subsidy has distorted housing markets to the disadvantage of low income tenants.

The conversion of rental units to condominium ownership in the 1970s and early 1980s spurred a considerable debate over the adoption of regulations intended to limit conversions. Proponents of such regulations argued that conversions reduced the stock of rental housing, which increased rents, transferred wealth from poorer to wealthier persons, and deprived tenants of their legitimate expectations of tenure. Muth (1983) notes that even at the height of the conversion craze, a relatively small share (well under 1 percent per year) of the rental housing stock was converted to condominium form, thus limiting the plausible effect of conversions on rent levels. Moreover, of converted units, roughly 90 percent were purchased by former renters, thus reducing the demand for rental housing nearly as much as the supply. Nor do the data suggest that tenants in converted buildings are concentrated among the poor or elderly, persons who might be particularly vulnerable to hardship upon conversion (Muth, 1983; Lewin, 1982, p. 136).

Various jurisdictions have responded to the perceived problems caused by condominium conversions with regulations intended to slow or stop conversion, or to enhance tenants' rights. For example, New York will only allow conversion of apartments to condominiums if a specified percentage of tenants agree to purchase their units, thus compelling the developer to offer units at a below-market 'insider' price to existing tenants. Various jurisdictions also restrict the ability to evict tenants in a conversion situation, particularly protecting elderly or low income tenants, or provide tenants with rights of first refusal. The legal literature appears largely devoid of attempts to quantitatively evaluate the effects of these policies.

12. The Economics of Condominium Management

A defining characteristic of condominiums is the combination of individual and common ownership. A fundamental legal and economic question, therefore, is where the line between individual and communal ownership should be drawn. While relatively little has been written on this question, the common ownership of some shared goods, such as recreational facilities, can clearly be explained by economies of scale, and others, such as roofs and supporting structures, on the basis of nonexcludability. De Geest (1991) notes that the observed patterns of common and several ownership can be explained in another manner as well: as attempts to internalize externalities through individual ownership, while placing the costs of certain types of failures on the owners as a group because the group can insure at lower cost than could individual owners. Thus, items that provide their benefit primarily to one owner (internalized benefits) should belong to that owner so that he or she bears the costs of maintenance and care or the loss upon destruction (internalizing the costs). Items whose benefits are dispersed among the owners (externalized benefits) should be paid for by all (externalized costs), and the owners as a group should bear the loss upon failure or destruction, to minimize the cost of insurance.

13. The Provision of Public Goods

An important function of condominium developments is the provision of public goods. A public good is one that is nonrival (use by one person does not diminish the availability to others) and nonexcludable (anyone within the relevant community may use the good, and cannot be excluded at reasonable cost). For example, residential condominiums typically provide and maintain common hallways and lobbies, elevators, external structures, landscaping and perhaps recreational facilities. Rules and regulations regarding activities by residents, intended to reduce negative externalities, are also public goods shared by the unit owners.

Profit-maximizing condominium developers should seek to provide an optimal level of public goods to unit purchasers. Public goods provided by the developer include not only physical elements, such as recreational facilities, elevators and HVAC systems, but also the rules that will govern the community on an ongoing basis. Thus, developers should seek to create rules and governance structures that will maximize the satisfaction of purchasers by reducing conflicts among the purchasers and encouraging efficient decision-making.

While it makes sense that developers should attempt to design rules and governance structures that are value maximizing for unit purchasers, there is intriguing evidence of at least some systematic failure. Cannaday (1994) presents regression results on the value of alternative covenants on pet ownership. Analyzing data on the sale of condominium units in a submarket in Chicago, Cannaday shows that, after adjusting for other relevant factors, covenants on pet ownership substantially affected the value of condominium units. That is, a condominium in a building with a ‘cats only’ covenant would, on average, sell for approximately 5.6 percent more than the same unit in a building that barred all pets. In contrast, if the covenant permitted large pets, including dogs, the value would have dropped by approximately 11 percent. This is superficially consistent with survey data indicating that renters prefer cats to dogs by a 2 to 1 margin, but this study and similar studies by Sirmans and Sirmans (1991) and Marshall (1990) raise intriguing questions: have buildings permitting dogs really surrendered approximately one-sixth of their market value by adopting a suboptimal covenant? Are condominium developers unaware of this simple rule change that would immensely increase their return on investment? Why haven't market forces levelled this inequality of prices through the greater adoption of 'cats only' covenants?

14. Transfer of Control from Developer to Purchasers

As discussed above, a profit-maximizing developer will seek to provide an optimal level of public goods to potential purchasers. However, the case annals document recurring problems with the transition from developer control to resident control, a period during which the interests of the developer and the existing residents diverge.

Typically, the condominium documents provide that each resident must pay a proportionate share of maintenance costs, even though the developer retains control of maintenance decisions until a specified number of units have been sold. As Knapp (1991) shows, when only a portion of units has been sold, the developer may desire a less-than-optimal level of services because the benefits of additional services flow to existing owners, while the costs are shared by the owners and the developer. Conversely, owners prefer a level of maintenance that is higher than the optimal amount. Moreover, these amounts will change over time: the developer will agree to provide more maintenance as additional units are sold because the cost is shared by more residents, while residents will seek lower levels as they bear a higher proportion of the cost. If it is difficult to specify and monitor maintenance levels accurately, this problem may not be soluble through contractual precommitment to perform specified maintenance. Assuming that residents and developers are aware of this latent conflict, Knapp predicts they will contract to transfer control from the developer to the residents at some time determined to minimize the costs of this conflict. By agreeing to relinquish control at a set time, the developer provides assurances to early purchasers that more optimal levels of maintenance will be provided, thus increasing the amount they will be willing to pay for their units.

Various jurisdictions have passed statutes mandating that control be transferred to developers after a given percentage of units have been sold. Knapp's model indicates that the optimal time for the transfer of control depends on the utility derived by residents from the public goods, a factor not estimated by Knapp's study. Thus, the model does not provide a method for determining when control should be transferred in a particular case, nor permit evaluation of the levels set in these statutes or of observed practices, in which transfers typically occur after 50 percent to 80 percent of the units have been sold (with occasional examples ranging as low as 25 percent or as high as 100 percent).

15. Creation of the Governing Structure

Ultimately, many of the same types of decisions must be made for a real estate project regardless of its ownership structure. Decisions regarding the level and nature of investment and maintenance expenditures, rules of behavior in common areas and mechanisms for resolving conflicts among neighbors are needed in apartment buildings, office buildings, shopping malls, cooperatives, and residential or commercial condominiums. However, the different management mechanisms of these diverse ownership and management options invite investigation and explanation.

Hansmann (1991) notes that collective decision making may result in inefficient decisions for a number of reasons. For example, decisions will be suboptimal if residents have divergent interests and an unrepresentative coalition achieves dominance in collective decisions, perhaps through a low cost of time or because they are strategically able to dominate the process. In contrast, a landlord may be able to implement efficient policies more easily than a collectively managed cooperative or condominium, because there are fewer opportunities for tenants with divergent preferences to act strategically. Moreover, the process of collective decision making may be considerably less efficient than decision making by a landlord because it requires numerous owners to gather information, meet, negotiate and vote, all of which may be costly. Thus, collective decision making, as in a cooperative or condominium, is more likely to prevail among a homogeneous group of residents, while multi-unit facilities housing diverse occupants (whether apartments, retail stores, offices or, especially, mixed uses) are more likely to be centrally managed.

A condominium may be created either by conversion of an existing physical structure or by the creation of a new one. In either case, an initial set of documents (bylaws or condominium declaration) establish the responsibilities and entitlements of unit purchasers, and will provide mechanisms for monitoring, enforcing and modifying these initial rules. Typically, fundamental decisions are controlled by the declaration or bylaws and can be changed only by a vote of the unit owners. Day-to-day decisions are made by a board of directors elected by the owners pursuant to the declaration or bylaws. Various voting schemes are used in different developments, and for different types of decisions within individual developments, including: majority, supermajority and unanimous voting requirements; equally weighted votes, votes weighted by the area of each owner's unit, or votes weighted by the value of the owner's unit.

As discussed by Ellickson (1982) and others, the governing documents, by establishing initial rules and the procedures by which those rules are enforced and modified, are akin to the constitution that provides the fundamental rules of governance for a country. Thus, our understanding of condominium control and management can build on the public choice literature, which seeks to explore the economics of voting and constitutional design. Public choice theory provides a framework for analyzing the means by which collective decisions are made, considering the different stakes faced by various constituencies and the transaction costs of gathering and maintaining voting blocs.

Ellickson (1982) uses a public choice model to explore the governance structure of condominium associations, suggesting that members will seek to minimize the sum of: (1) costs of value maximizing decisions that are not adopted; (2) losses to member from measures adopted over the member's dissent; and (3) the costs of decision making. Moreover, members will generally prefer that the association be barred from coercive measures that simply redistribute wealth because such measures will impose costs, while any predictable redistribution will be nullified through adjustments in the purchase price of the various units. In other words, redistributive regimes will impose costs for no expected benefit. Thus, purely redistributive measures, like changes in voting rights, shares of ownership in the common elements or allocation of expenses, will be subject to a unanimity requirement. Conversely, members will want value-creating measures to be passed without high administrative costs or risks of holdouts, and so such measures should not require unanimity. However, requiring a simple majority creates some risk of reallocation, so risk averse purchasers will tend to prefer some level of a supermajority requirement. Ellickson also suggests that a 'taking clause', requiring that compensation be paid to unit owners who lose objective value through an amendment, would help to ensure that association measures are truly value-creating rather than redistributive.

The public choice analysis is explored in more detail by Barzel and Sass (1990), who empirically test various hypotheses on voting costs and constitutional design in condominiums. Following the seminal work on voting and public choice done by Buchanan and Tullock (1962) and on corporate voting by Easterbrook and Fischel (1983) among others, Barzel and Sass consider how the two major costs of voting (the resources expended in attempts to use the voting process to redistribute wealth - 'rent-seeking' - and decision-making costs such as information gathering and strategic bargaining) affect the design of collective decision making in the condominium context. By hypothesis, a profit-maximizing developer will seek to minimize these costs, thereby maximizing the price that purchasers will pay for units.

Among the predictions of this theory, Barzel and Sass suggest that developers will attempt to minimize conflicts among purchasers. While this problem is relatively easy to solve where the purchasers' interests are purely financial (as in voting by corporate shareholders), it is exacerbated in the condominium context by the fact that purchasers, each of whom has a different utility function, are direct consumers of the goods and services being voted on. Different preferences lead to the possibility of voting majorities transferring wealth or utility to themselves at the expense of minorities. This problem will be further exacerbated where units are heterogenous, causing unit owners' interests to differ in accordance with their types of unit. The possibility that a majority will impose policies that benefit themselves at the expense of a minority will lead to deadweight losses as parties engage in rent-seeking and in defensive strategies to protect themselves against rent-seeking.

These problems can be mitigated by harmonizing the interests of different unit holders in various ways, such as providing homogeneous units and amenities to all purchasers and providing for the transferability of units (for example, if families vote for an assessment for an elaborate playground, owners without children may capture their share of the value by sale of the unit to a family with children). Barzel and Sass focus on three particular attributes controlled by the developer: the allocation of assessment liability and voting rights; the decision of which issues will be subject to voting control and which will simply be within the discretion of board; and the rules under which decisions are made (majority, supermajority or unanimity requirements).

Barzel and Sass predict that investment or commercial condominiums will provide fewer protections against redistribution (because the interests of voters are pecuniary rather than consumption, creating fewer divergences in interest). In contrast, residential condominiums are predicted to have greater protections against redistribution, such as more unanimity or supermajority requirements. Moreover, condominiums with more homogeneous units (measured by size and value), which are relatively immune to redistribution because unit owners' interests are similar, are predicted to have fewer supermajority requirements in order to reduce the costs of decision making. By contrast, developments with great variation among the units are predicted to have more and higher supermajority requirements, because the higher decision costs are worth bearing to assure purchasers that they are protected against redistributive decisions. In fact, these predictions are confirmed by the data.

Various other predictions from this model were also confirmed by empirical data, including predictions that, all else being equal, developments with more heterogenous units would have more amenities installed by the developer (because subsequent agreement among unit owners would be relatively harder to obtain than in homogeneous communities), that deviations from the predicted voting structure would tend toward 'one unit, one vote' systems and would increase with the number of units in the community (because the cost and difficulty of value and area based voting, as opposed to simply counting owners, increases with the number of voters).

These findings have interesting implications in light of statutes or regulations requiring diverse ownership mixes. For example, New York City requires that certain developments have both commercial and residential space. Other jurisdictions require developments to provide accommodations for a minimum percentage of residents with low incomes. Such mandated diversity will bring with it higher decision-making costs and reduced flexibility, as supermajority requirements are used to reduce the risks of redistribution and rent-seeking.

Barzel and Sass note that developers can reduce unit owners' decision-making costs by making binding decisions in advance. De Geest (1992) shed further light on this idea by comparing the laws and practices in Belgium, France, Italy, the Netherlands and Switzerland, finding that a simple majority is generally sufficient to control acts of maintenance or conservation, supermajorities are generally needed for improvements or changes in rules concerning the use of public goods, while unanimity rules are imposed for changes that would redistribute rights or change fundamental architectural aspects. De Geest explains this tiered structure in terms of 'ex ante determinable goods' (public goods for which advance determinations can generally be made that will be valid for the life of the building) and 'ex ante indeterminable goods' (public goods for which not enough information is available to make optimal decisions in advance).

Fundamental decisions such as the location and nature of common facilities or major architectural structures (ex ante determinable goods) can be predetermined for the life of the condominium project, and so parties can choose to purchase or not purchase a unit with full information on these aspects: in other words, 'revelation of preferences via entry and exit decision is preferable to voting'. (De Geest, 1992, p. 304). Changing these decisions on less than a unanimous vote would impose a cost on losing voters which could have been avoided at lower cost by implementing the new option as the initial choice.

However, for decisions that cannot be settled ex ante, some mechanism is needed that appropriately balances the quality of the decisions made (or the deadweight losses of inefficient decisions) against the costs of arriving at the decisions. Examining public choice theory for guidance, De Geest rejects the log rolling model offered by Buchanan and Tullock (1962), suggesting that such deals are not generally feasible in condominium decision making because too few items are on the agenda at any given time. De Geest argues that, absent log rolling as a mechanism to reveal the intensity of preferences, a simple majority voting scheme minimizes the cost of value-maximizing decisions that are rejected because the required majority is not reached (deadweight losses). Moreover, majority voting is likely to reduce error costs (other things being equal, it is presumably less likely that the majority will be wrong), and maintenance and conservation decisions are likely to spread their costs and benefits evenly across the community so concerns about redistributive motives are minimized. Thus, De Geest argues, it appears that for ex ante indeterminable goods, majority voting will tend to minimize deadweight losses and transaction costs.

Decisions that are partly ex ante determinable (that is, decisions influenced by factors that are likely to change only slowly), typically require some level of supermajority, a regime suggested to minimize the sum of four costs: costs imposed on 'losers'; costs of optimal decisions not made because the required supermajority is not benefitted; costs of strategic behavior (optimal decisions foregone because benefitted parties could not reach agreement); and negotiation and voting costs (time, effort and resources spent in decision-making).

De Geest (1992) also seeks to explain why votes are generally allocated according to the value of the owners' units rather than on a 'one person, one vote' basis, suggesting that unit values are likely to reflect the intensity of preferences more accurately than per capita voting. Further light is shed on this question by Barzel and Sass (1990, p. 751), who note that while the costs of gathering information needed to vote intelligently may be borne by the individual voter, the benefits of better voting are shared by all. Thus, information gathering provides positive externalities and will be characterized by free riding and underproduction. However, while the costs of information gathering do not vary with the voter's stake, the benefits increase proportionately: in other words, voters with more at stake will invest more in information. For this reason, allocating voting power in proportion to the value of the owner's interest may provide more efficient incentives for gathering information and improve the decision-making process.

Evidence that public choice theory predicts voting regimes in condominiums shows that developers and lawyers use reasoning similar to that of economists in designing voting regimes. However, if condominium evidence is to be used to test public choice theory, it will ultimately be important to evaluate whether different voting regimes, other things equal, change the value of the units. In other words, when a developer puts in place a voting regime which the theory would predict to be inefficient, does the value of the condominium development go down, or do the units fail to appreciate as quickly over time (as conflicts between unit owners develop)? As Barzel and Sass recognized, condominium declarations provide a remarkable set of data for testing these types of questions. Their article provides an important step both in testing public choice theory, and in understanding voting and control issues in condominiums.

16. Conflicts Among Unit Owners

Generally, externalities affecting neighbors are dealt with through the law of nuisance. In the condominium context, however, many 'nuisances' are handled through association rules or covenants that control the permissible uses of the premises. There have been few attempts to analyze the economics of rules in condominiums or homeowners' associations. De Geest (1991) briefly considers the works of Calabresi and Melamed (1972) and Shavell (1984, 1987) in the context of condominium rules. Calabresi and Melamed distinguish between property rules (the owner of an entitlement may not be deprived of that entitlement without the owner's consent) and liability rules (the owner may be deprived of the entitlement upon payment of compensation). Shavell identifies factors that may lead to ex ante regulations, as opposed to rules of ex post liability. Regulations may be preferred when parties may be unable to compensate for the harm done or enforcement of a liability rule will be too difficult (for example, because the victims are too dispersed). Liability rules may be favored where regulators have inadequate information to establish optimal rules in advance. Considering these factors, De Geest concludes that a system of liability rules, rather than regulations, would seem preferable in condominiums - a conclusion at odds with the observed reality. De Geest concludes that the difficulty of assessing accurate damages upon breach (how much does your music playing harm your neighbor?) militates against liability rules and in favor of ex ante regulations. Parties whose preferences are inconsistent with those regulations may then choose whether or not to join the community. The result is to permit a market decision about purchasing or not purchasing a unit to establish the values of rules, rather than relying on self-serving testimony in a liability determination.

As Ellickson (1982) points out, the condominium community is formed by voluntary consent by unit purchasers to the initial governing documents; thus, it represents an actual social contract as contrasted with the many hypothetical social contracts of political philosophy. Accordingly, courts have generally been willing to accord a strong presumption of validity to provisions contained in the condominium association's initial documents. Subsequent actions or enactments, however, are often subjected to a test of 'reasonableness'. Ellickson (1982, p. 1530) argues that, consistent with the contractarian basis of the condominium, this reasonableness standard should be based on consistency with the condominium's original purposes, rather than external criteria.

Natelson (1990) provides a further insight into the regulation of conflicts among unit owners. Where a unit owner complains of an association rule that existed at the time the owner purchased his or her unit, courts generally reject the challenge. This is in keeping with a least cost avoider rationale, and with De Geest's discussion of 'ex ante determinable goods': the purchaser could avoid the conflict by researching the rules in advance and not purchasing in the development if the rules are not acceptable. In contrast, existing owners cannot easily avoid the conflict and in fact may have relied on the challenged rule in choosing to purchase their units. For rules enacted after an owner has purchased a unit, courts generally uphold condominium rules that are 'reasonable', a standard that, Natelson argues, is applied to mean 'Pareto superior'. That is, courts uphold rules whose benefits exceed their costs if the benefits and costs are equally shared, because every owner is made better off. If a measure's benefits do not exceed its costs, courts tend to find the measure unreasonable and so invalid. However, if the measure's benefits exceed its costs, but the measure imposes a net loss on a subset of owners (that is, the measure is Kaldor-Hicks superior but not Pareto superior), courts generally uphold the measure while requiring the payment of compensation to the harmed owners. Thus, measures are upheld only if some parties are made better off and none worse off - a Pareto superior outcome.

17. POAs and Condominium Boards as Local Governments

Local governments provide various public goods, and are constrained in their actions by various constitutional (and other) limitations. In the United States, for example, they are required to obey the dictates of the First Amendment, the equal protection clause, and the due process clause. However, as we have seen, in many respects condominium associations and POAs exercise powers similar to those of local governments: assessing 'taxes', providing common goods such as recreational facilities, garbage collection, security and dispute resolution. POAs also exercise control over what have typically been considered public spaces, such as streets, roads and parks. Moreover, these entities, like local governments, are typically governed through some form of representative democracy established through a governing constitution. To the extent that these private entities may substitute for and exercise the prerogatives of local governments, yet are governed by a differing legal regime, we may expect to see people choose between membership in a POA or life in a traditional community. This choice is not only an economic decision, but may affect the relationship between citizen and government in important ways.

Much more work remains to be done on the economics of consensual private 'government' and its relation to local and state governments. A systematic analysis of these issues is offered by Foldvary (1994), who argues that the spread of local, consensual governmental institutions, which provide benefits tied to land ownership, can provide an efficient and just social order, essentially displacing local governments. Foldvary points out that many items commonly considered public goods, such as security, parks or recreational facilities, are actually tied to a physical locale, and so provide all or most of their benefit to those who own property within a specified area. These items can therefore be provided by a market financed by 'land rents', such as condominium assessments. Accordingly, Foldvary argues, the market can provide many items that are commonly considered 'public goods' for which the marketplace is inadequate. Foldvary supports and illustrates his analysis with a series of case studies of communities within which collective goods are provided by market, rather than governmental, mechanisms.

Foldvary provides an attempt to expand the Tiebout model of competition among local governments in the production of public goods, to cover the creation and operation of private quasi-governmental entities. This is an important direction for scholarship if the recent growth of private common interest communities is to be analyzed in the context of their competition and coexistence with more traditional local government structures.

D. Communal Ownership

18. Communal Ownership in General

In addition to the common and civil law cotenancy relationships and condominium and cooperative relationships discussed above, co-ownership regimes include communes, kibbutzim and other structures for shared ownership of land. As Ellickson (1993) has described, these communal ownership structures must address the externality problems common to all forms of co-ownership. However, due to the larger number of co-owners, monitoring for improper behavior becomes substantially more difficult. These monitoring problems have caused most attempts at communal ownership, from Woodstock-era communes in the United States to collectivized farms in the Soviet Union and China, to fail.

However, some communes have survived, such as Hutterite communities in the United States and Canada and some kibbutzim in Israel. To do so, the community must have an effective mechanism to promote effort and cooperation by members. While the ideal mechanism might be socialization or inculcation of norms so that members voluntarily contribute, successful communes have had to rely in large part on intrusive social controls. As Ellickson (1993, pp. 1346-1357) shows, successful communes tend to enforce equality in ownership (consumer goods are distributed to all households or to none), limit privacy, closely monitor members' behavior, and actively use material and social sanctions (gossip, ostracism or even expulsion) to punish undesirable behavior. Decisions are often made in a participatory manner. This is a time-consuming process, but tends to be made easier by the homogeneity of the members and, crucially, it allows information on the activities of members to be widely shared. Exit from these communities is typically discouraged by requiring departing members to forfeit all or most assets. The Hutterites have also maintained an isolation from the outside culture. While this is less often the case at kibbutzim, it is also true that more than half of the children born on the kibbutz choose to leave (Ellickson, 1993, p. 1361).

Thus, some communes have succeeded in overcoming the deadweight losses associated with communal ownership by incurring heavy costs in decision-making, monitoring and enforcement. Or, put another way, some communities have succeeded in establishing equality and close social ties by rejecting the classical liberal values of liberty, privacy, diversity and self-determination.

E. Conclusions

19. Potential Areas of Future Research

Co-ownership is typically characterized by repeated, long-term interactions between parties, a situation which calls for several modes of analysis seldom utilized in the existing law and economics literature on co-ownership. For example, many co-ownership situations rely on norms and enforcement mechanisms outside of the formal legal structure. Most cotenancy relationships are part of a broader relationship which may provide the context for implicit or explicit expectations or functional rights different from the formal rules of law. However, the literature is short on description and analysis of the extra-legal mechanisms by which co-owners coordinate their activities.

Indeed, there has been remarkably little written on the economics of joint decision making and resource use in the cotenancy situation overall, perhaps because the disputes tend to be small and private and the situations personal rather than commercial. Moreover, the conceptual problems in a full exploration of this domain are daunting: it is likely that relations between co-owners will submit best to game theory analysis, a field that has blossomed relatively recently. However, the successes of game theory are still quite limited, and generally rely on the ability to specify clearly the objectives and decision-making criteria of the parties. By contrast, many co-ownership situations are familial and thus emotional, perhaps rendering them more difficult to analyze than many other small group interactions. In this regard, Rose (1992) applies game theory in a rich psychological context to explore negotiations between men and women, providing one example of the type of work that ultimately may help shed light on the patterns of decision-making and control among co-owners.

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