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Abstract

The traditional law of leases imposed no duty on landlords to mitigate damages in the event of tenant breach, whereas the modern law of leases does. An economic model of leases, in which absentee tenants may or may not intend to breach, shows that the traditional rule promotes tenant investment in the property by discouraging landlord entry. In contrast, the modern rule prevents the property from being left idle by encouraging landlords to enter and re-let abandoned property. The model reflects the historic use of the traditional rule for agricultural leases, where absentee use was valuable, and the emergence of the modern rule for residential leases, where the primary use entails continuous occupation.

Journal of Economic Literature Classification: K11, K12, O18, R11

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Lease Defaults and the Efficient Mitigation of Damages

1. INTRODUCTION

Leases represent fundamental tools in property markets. They also present an interesting challenge to economists. In the event of breach or disagreement among the parties, courts can construe the written and implied terms of lease agreements differently depending upon whether the agreements are interpreted using the doctrines of property law or using the doctrines of contract law. One example is the requirement that the victim of a breach of a lease undertake reasonable efforts to mitigate the damages from a breach. Historically, courts viewed real estate leases from the perspective of property law, which imposes no such duty on the landlord. Courts in many states, however, are increasingly interpreting residential leases according to the doctrines of contract law, which do require that landlords exert reasonable effort to re-let the leased property in the event of apparent abandonment by the tenant.

The law of leases currently straddles the boundary between property law and contract law (Miceli, Sirmans, and Turnbull, 2001; Merrill and Smith, 2001, pp.820-833). The challenge is to explain the evolving interpretation of some types of leases, while at the same time explaining why the changes do not uniformly apply to all types of leases. This paper assesses the economic aspects of damage mitigation in the event of breach and offers an explanation for the trend among states toward establishing a duty by residential landlords to mitigate their damages when tenants breach their leases.

Before turning to the analysis, it is appropriate to acknowledge at this point that there are some economists who view the differences between property and contract law as arcane details that are irrelevant to market theory. The assumption is that any

voluntary agreement made by individuals or organizations are contracts, the terms of which are uniformly enforced by courts. This view, however, overlooks the fact that not all terms of an agreement are enforceable in the event of breach. The legal principles applied by courts determine whether or not contracts are set aside entirely, or specific terms of the agreement deemed unenforceable, regardless of the actual intent of the parties at the time the agreement was made (Miceli, 2004, pp.113-126).¹ In sum, institutions like legal doctrines matter in market transactions. As illustrated by the mitigation requirement, the specific redress for breach of lease varies according to the body of law applied by the court. At root, the task at hand is to explain why different types of leases draw from different bodies of law.

The urban and real estate literature for the most part assumes the legal doctrine underlying leases is given and presents no impediment to enforcing the agreements (Brueckner, 1993; Cho and Shilling, 2007; Grenadier, 1995; Miceli and Sirmans, 1995). This is understandable given the focus on commercial property leases, and the fact that commercial property has not experienced as profound a change in legal doctrine as has residential property. Nonetheless, questions about the changing functions of lease doctrine are properly viewed as part of the broader question about how legal rules underpin property markets and how they affect resource allocation in the urban context. For example, Miceli, Sirmans, and Turnbull (2000) show how the rules used to resolve conflicting claims to property title influence the pace and spatial pattern of urban land development. Likewise, Miceli, Sirmans, and Turnbull (2003) derive the effects of adverse possession laws on land use decisions in a monocentric growing urban area,

while Baker et al. (2001) empirically examine how the range of feasible land use opportunities in turn influence states' adverse possession laws.

From the developing country perspective, Hoy and Jimenez (1991), De Meza and Gould (1992), and Turnbull (2009) study urban squatting as an equilibrium outcome, a feature arising from the private enforcement of property rights in lieu of formal adverse possession rules. Informal residential rental markets in developing countries offer a contrast to the US experience in the sense that the law establishes no lease that is enforceable by appealing to courts. Turnbull (2009) examines the consequences of informal rental markets for longer term land use patterns. The results illustrate how the lack of a legal doctrine governing leases makes it impossible to resolve moral hazard by both parties in the agreement. The unifying theme of this literature is that property and lease laws systematically affect land use patterns and the pace of urban development.

The analysis in this paper is organized as follows. Section 2 begins the analysis with a review of the law concerning mitigation of damages in leases. Section 3 then develops a model of the trade-off between the traditional property and modern contract rules. One possible explanation for the observed trend is that it reflects the view of courts that the duty to mitigate should fall on the party who can replace the defaulting tenant at lowest cost, and in modern leases, this is the landlord. While not dismissing this possibility, our analysis offers a different perspective, focusing instead on the ability of the landlord to use observed tenant behavior as an accurate signal of the tenant's intent to default. In this context the benefit of the traditional (no-mitigation) rule derives from the potential value of absentee use of property by tenants, coupled with the inability of landlords and courts to accurately observe the intention of absentee tenants regarding

continued future use as opposed to true abandonment of the property. Thus, the traditional, or property law, doctrine requiring no mitigation is appropriate when the likelihood of tenant abandonment, conditional on his absence from the property, is low (reflecting a high value of absentee use), while the contract law doctrine requiring mitigation by the landlord is appropriate when the reverse is true.

It is also worth noting at the outset that, under traditional property law principles, abandonment of the property and delinquency of rent are treated as separate issues, but neither entitles the landlord to enter the premises. If a tenant fails to pay rent, whether or not she is present, the landlord can only sue for recovery of rent; he cannot enter the property or evict the tenant (Cribbet, 1971, Chapter 4; Miceli et al., 2001). Thus, under the traditional rule at least, delinquency of rent is not generally a reliable signal of an intention to abandon. Consequently, we do not explicitly consider this issue in the model.

Section 4 extends the basic analysis from Section 3 to residential and commercial leases, and also considers the impact of heterogeneous tenants. Finally, section 5 concludes.

2. REVIEW OF THE RELEVANT LEGAL PRINCIPLES

Under the traditional law of leases, which predates contract law, the lease was a conveyance. Once the landlord conveyed the property to the tenant, his duty was complete; the tenant in effect was the owner of the property during the term of the lease. Thus, if the tenant failed to take possession or abandoned the property, the landlord had no duty to attempt to re-let it. Instead, he could simply “fold his hands and hold the tenant for rent for the full term” (Cribbet, 1975, p.190).

The traditional “no-mitigation” rule, however, has been overtaken in many states by the modern rule that requires landlords to take reasonable steps to re-let the property in the event of tenant breach. This rule is based on the view that a lease is a contract, and contract law requires mitigation by victims of breach.² The problem the modern rule creates for landlords, however, is the need to distinguish between tenants who have legally abandoned the leased property, and those who are absent but not intending to breach. In order to prove legal abandonment, the landlord must establish “an intention by the tenant to abandon, plus conduct by which the intent is carried into effect” (Friedman, 1997, p.1092).

Imposing a duty to mitigate on landlords therefore often requires them to ascertain the tenant’s unstated intent from the latter’s conduct. The question is, what specific conduct will be judged by the court *ex post* as reflecting an intention to abandon? Case law has established that voluntary discontinuation of regular business operations on the leased property, even for a period of years, will not, in itself, be so judged. For example, in *Berae v. Gorman* (1969), the tenant had ceased commercial operations and even missed a rental payment, but the court found no intention to abandon the lease based on the tenant’s claim of an intention to re-open and the presence of saleable merchandise on the premises. Similarly, in *Smith v. Favilla* (1979), the court found no abandonment had occurred when the tenant, after construction of a pig barn, ceased pig farming but left personal property in the barn. Even nonuse of a railroad spur for fourteen years was not judged by the court as sufficient evidence of an intention to abandon the leased property. (*Simkin v. New York C.R. Co.*, 1966). Finally, courts sometimes even refuse to accept the

apparently definitive act of “tossing the keys” to the landlord or his agent as evidence of the tenant’s intention to abandon.³

All of this illustrates the fundamental trade-off underlying the choice between a rule that requires mitigation by landlords and one that does not. On the one hand, efficiency dictates that landlords should mitigate damages by finding a new tenant in the event of true abandonment,⁴ but on the other, mere absence of the tenant is not inconsistent with continued efficient use of the property by that tenant. The traditional (no-mitigation) rule therefore places priority on protecting the incumbent tenant’s right to use the property in any way she sees fit (including absentee uses) by barring entry of landlords during the term of the lease under almost any conditions (including, as noted, non-payment of rent). The cost, however, is that the property may be left idle in the event of true breach by the tenant. In effect, the traditional rule reflects the court’s preference, in the face of uncertainty about the tenant’s intent, to err in the direction of protecting the tenant’s rights to the property.

In contrast, the modern rule places priority on re-letting the property in the event of breach. The cost in this case is that some apparent breaches by tenants will result in their replacement by less efficient users of the property, given uncertainty by both the landlord (ex ante) and the court (ex post) about the true intention of the tenant. The modern rule therefore reflects the court’s decision to err in the direction of promoting mitigation by the landlord.

The preceding argument suggests that the traditional and modern rules represent imperfect (second-best) responses to the problem of tenant abandonment. But consider a third rule that holds tenants liable for the losses due to a failure to mitigate, unless they

first inform landlords of their intention to abandon.⁵ Such a rule should be able to achieve the first-best outcome by encouraging tenants to reveal their private information, thereby inducing landlords to enter and mitigate optimally. In fact, that is probably what happens in most cases, given the joint interests of the parties in resolving their dispute out of court. The difficulty, however, is that transaction costs and missing or judgment-proof tenants—problems that are highly likely in the case of abandonment—will often prevent the necessary transfer of information. Thus, landlords and courts are left to infer the intention of silent tenants, which takes us back to the trade-off described above. The analysis in this paper highlights the role of the law in resolving these difficult cases, which after all are the ones that end up in court.

3. THE MODEL

We begin with a simple model in which a risk-neutral landlord and tenant enter into a lease for a piece of property. For concreteness, we focus initially on an agricultural context but later extend the results to residential and commercial leases. The model employs the following notation:

x = dollar investment in the property by the tenant;

$V(x)$ = gross value of the leased property to the tenant as a function of x , $V' > 0$,

$V'' < 0$;

R = fixed rent for the lease period.

In the case of an agricultural or commercial tenant, x represents crops or other improvements of the property. For residential tenants, x could represent improvements like painting the walls, but it could also reflect other location-specific investments, like

taking a nearby job or joining a local health club, that would be less valuable if the tenant were forced to relocate.

The rent for the lease period is agreed to before the start of the lease. At the start of the lease, the tenant chooses x to maximize the expected value of the lease. In a world in which tenants never breach, x would therefore maximize $V(x) - x - R$, which yields the first-order condition $V'(x) - 1 = 0$. We assume, however, that some breaches of the lease by the tenant are unavoidable. For simplicity, we do not explicitly model the reasons for such breach, but instead assume that they are exogenous and arise stochastically. In the event of a breach, we assume that the value of the initial tenant's investment in the property is zero to either the landlord or replacement tenants, that is, x is non-salvageable.⁶

Suppose that after the tenant spends x on the investment in improvements to the property, there are some states of the world in which he chooses (or needs) to be absent from the property without necessarily intending to abandon it permanently. Let q be the exogenous probability that such a state occurs. Thus, $1 - q$ is the probability that the tenant remains on the property. This gives rise to a private information environment. Although the landlord observes whether or not the tenant is absent, he cannot observe if this absence represents a true breach of the lease—i.e., a permanent abandonment of the property with the resulting loss of $V(x)$ —or whether it is consistent with continued use of the property (and hence no loss of $V(x)$). Let p be the *conditional* probability that the tenant's absence represents a true breach, and $1 - p$ the probability that it does not. Thus, qp is the unconditional probability of a true breach, and $1 - qp$ is the unconditional probability of no breach.⁷

In the event of the tenant's absence, the landlord may enter (i.e., take possession) and re-let the property. If he does, $V(x)$ is lost, but the new tenant obtains a value of v from the property (which we assume is the rent that he pays to the landlord net of the landlord's search cost). As noted, we treat v as independent of x , meaning that the new tenant does not appropriate any portion of the original tenant's investment in the property. We also assume that

$$(1) \quad V(x) > v > 0$$

in the neighborhood of the equilibrium value of x . The first inequality ensures that continued occupation by the original tenant is preferred to replacement by a new tenant when breach has not occurred (for relevant x), while the second implies that mitigation is desirable when true breach has occurred.

We further assume that

$$(2) \quad R > v,$$

or that the current tenant's rent exceeds the value of the property to the new tenant (the next best user). We expect this to be true for several reasons. First, v should be thought of as an expected value that takes into account both the search costs involved in finding a new tenant as well as the possibility that no tenant will be found. Second, if we assume that the original tenant was (and continues to be) the highest valuer of the property, then her rent should represent the highest bid available. Finally, v reflects the value of the property as altered by the original tenant. This will tend to make it less valuable to a new user.

The sequence of events and payoffs to the parties are shown in Figure 1. First, the tenant chooses his level of investment x , then nature moves, determining first whether the

tenant is absent from the property, and second, whether the tenant's absence represents a breach. In the event the tenant is observed to be absent, the landlord decides whether or not to enter and mitigate damages. The dashed line connecting the landlord's two decision nodes reflects the assumption that when the landlord makes his entry choice, he does not know whether the tenant has truly breached the lease or is merely absent. At each terminal point in the tree, the payoffs are shown, first for the tenant, then the landlord, then the joint, or "social" return. In some cases, the payoffs for the landlord and tenant include damage payments, representing the legal rules governing tenant breach and, when applicable, the landlord's duty to mitigate. These will be specified below.

Social Optimum

As a benchmark, we begin by examining the socially optimal outcome in a world where there is no uncertainty regarding the tenant's breach. (That is, the landlord knows which node he is at when he makes his decision of whether or not to enter the property and take possession.) Note that neither the legal rules (as embodied by the damage payments) nor the rent matter for this analysis since they are merely transfer payments (i.e., they do not appear in the social returns).

First, consider the landlord's entry decision, given that the tenant has chosen some level of x and is observed to be absent from the property. (The landlord has no decision to make in the state where the tenant remains present on the property.) Note that for any x , the conditions in (1) imply that entry and mitigation are only desirable when the tenant has truly breached. This reflects the assumption that, once the tenant has spent x , she is the highest valuing user of the property in the no-breach state and therefore should not be replaced. In this state, the social return is $V(x) - x$. However, mitigation is desirable in the

breach state in order to salvage some value from the property, in which case the social return is $v-x$.⁸

To establish a benchmark for evaluating the different legal rules, consider the efficient level of x given efficient mitigation. Recall that qp is the probability of breach and $1-qp$ is the probability of no breach. Thus, the expected social value of the property at the point when x must be chosen is given by

$$(3) \quad (1-qp)V(x) + qpv - x.$$

The socially optimal choice of x therefore solves

$$(4) \quad (1-qp)V'(x) - 1 = 0.$$

Let $x^*(p)$ denote the solution to (4). Note that $x^*(p)$ is decreasing in p , reflecting a lower optimal investment as the conditional probability of breach increases.⁹ Substituting $x^*(p)$ into (3) yields the maximized expected value of the lease:

$$(5) \quad W^*(p) = (1-qp)V(x^*(p)) + qpv - x^*(p),$$

where $W^*(p)$ is also decreasing in p (see Figure 2). This expression will serve as a benchmark for the outcomes under the two rules.

Equilibrium under the Traditional Rule

We now turn to the actual decisions of the parties when the landlord (and the court) are uncertain about the tenant's intent. We first consider the traditional rule. Recall that this rule imposes no duty on landlords to mitigate damages in the event of tenant breach. Rather, when the landlord observes an absentee tenant, he has the option to enter and mitigate, or to sit tight and collect the full rent. The latter option implies that, in the event that the tenant fails to pay the rent and the landlord chooses not to enter, the landlord is entitled to damages equal to the rent, or $D_N=R$. Consequently, by not

entering, the landlord is assured of receiving R , whether or not the tenant has truly breached.¹⁰

Alternatively, the landlord can enter and attempt to re-let the property to a new tenant. In the event of a true breach, the landlord receives v from the new tenant, but by entering he risks extinguishing the original tenant's rental obligation if the court views the lease through the lens of property law and interprets landlord entry as acceptance of surrender (Cribbet, 1975, p.191). In order to highlight this distinguishing feature of the traditional rule, we assume that landlord entry eliminates the tenant's rental obligation with certainty (i.e., $D_E=0$). Thus, if the landlord enters and re-lets the property in this case, his return is¹¹

$$(6) \quad D_E + v = v.$$

Suppose instead that the landlord enters when the tenant did not intend to breach. In that case, the tenant may succeed in ejecting the landlord, in which case the tenancy is restored and the landlord collects the rent R . Alternatively, the court, given its inability to observe the tenant's true intent, may incorrectly interpret the latter's absence as a breach, in which case the landlord's return is identical to that in (6). Let β be the probability that the court *correctly* ejects the landlord. (Thus, $1-\beta$ is the probability of legal error—i.e., an incorrect interpretation of the tenant's absence.) The landlord's expected return from entry in the no-breach state is therefore

$$(7) \quad \beta R + (1-\beta)(D_E+v) = \beta R + (1-\beta)v.$$

(Note that when $\beta=1$, this simply reduces to R .) Weighting (6) by p (the probability of breach given the tenant's absence) and (7) by $1-p$ yields the landlord's expected return from entry:¹²

$$(8) \quad R - [1-(1-p)\beta](R-v),$$

In general, this is less than R (given (2)), reflecting the fact that, by entering, the landlord risks losing his claim for damages of $R-v$ against the original tenant. As a result, *a rational landlord will never enter under the traditional rule, since by staying out, he retains a claim for the full rent against the original tenant.* Note that this conclusion is true even if $\beta=1$, for in that case, (8) becomes $R-p(R-v)<R$. Thus, even in the absence of legal error the landlord will prefer not to enter in the event of tenant absence under the traditional rule. Legal error will play a more pivotal role in our analysis of the modern rule below.

Next consider the optimal choice of x by the tenant, given the anticipated behavior by the landlord (non-entry). The tenant's expected value from the lease at the time she chooses x is given by

$$(9) \quad (1-qp)V(x) - x - R.$$

Since the resulting first-order condition is identical to (4), the tenant chooses the efficient level of investment, $x^*(p)$. Intuitively, because the landlord never enters, the tenant's property rights are fully protected against the risk of unintended loss. That is, the tenant never runs the risk of being removed from the property if she vacates without intending to abandon (breach). As a result, she invests efficiently in the property.

While the preceding shows that the traditional rule provides efficient incentives for tenant investment by deterring landlord entry, the rule obviously does not provide the correct incentives for mitigation in the event of true tenant breach. This can be seen by noting that the joint value of the lease under the traditional rule, given the equilibrium behavior of the parties, is

$$(10) \quad W^T(p) = (1-qp)V(x^*(p)) - x^*(p),$$

which is less than the first-best value in (5) due to the absence of the expected value of mitigation, qpv . Thus, $W^T(p)$ deviates further from first-best the larger is the probability that tenant absence is a sign of true breach. The relationship between $W^*(p)$ and $W^T(p)$ is shown in Figure 2.

Equilibrium under the Modern Rule

Unlike property law, contract law imposes a duty on landlords to mitigate damages in the event of tenant breach. Specifically, the landlord must exercise due diligence in re-letting the property in the event of tenant abandonment. The law enforces this obligation by awarding damages to the landlord that equal the rent less the reasonable rental value of the property in the event of tenant breach, whether or not the landlord actually obtains a new tenant. In terms of the model, this implies that $D_E = D_N = R - v$. Compared to the traditional rule, damages for breach in this case are therefore lower when the landlord does not enter ($R - v < R$), but higher when he does ($R - v > 0$). While the traditional rule deterred entry, we will see that the modern rule encourages it.

Consider first the landlord's entry decision when the tenant is observed to be absent from the property. If he chooses not to enter, he receives the rent R if the tenant has not breached, but his damages are limited to $D_N = R - v$ if the tenant has breached, where the limitation reflects the duty to mitigate.¹³ His expected return from non-entry is thus

$$(11) \quad (1-p)R + p(R-v) = R - pv.$$

Suppose instead that the landlord chooses to enter. If the tenant has truly breached, the landlord recovers damages of $D_E = R - v$ from the original tenant, and rent of

v from the new tenant, yielding a combined return of R . Note that in this case, the landlord does not risk forfeiting his claim to damages from the original tenant by entering, which is the key feature distinguishing the modern rule from the traditional rule.

If, however, the tenant has not breached, suppose, as above, that the tenant succeeds in ejecting the landlord with probability β , but she will be found in breach with probability $1-\beta$, in which case she will owe damages of $R-v$. Since the landlord will obtain v from a new tenant in the latter case, his overall expected return from entering in the no-breach state is $\beta R+(1-\beta)(D_E+v)=R$. It follows that entry yields the landlord a return of R regardless of whether or not the tenant intended to breach. Since this exceeds the return from non-entry in (11), *the landlord will always enter under the modern rule based on contract law*. Of course, this is precisely the purpose of the rule; namely, to provide an incentive for landlords to enter and mitigate damages in the event of tenant breach.

The problem with the modern rule in this real estate context is that it results in “excessive” entry, given the landlord’s and court’s inability to observe an absentee tenant’s intentions. It therefore reduces the security of the tenant’s property right at the time that he makes his investment decision. To see this, note that when the tenant is absent from the property but not intending to breach, she expects to lose possession with probability $1-\beta$ as a result of legal error. Thus, the expected value of the lease to the tenant, given the anticipation of landlord entry under the contract rule, is

$$\begin{aligned}
 & [(1-q)+q(1-p)\beta][V(x)-R] - q[p+(1-p)(1-\beta)]D_E - x \\
 (12) \quad & = [(1-q)+q(1-p)\beta]V(x) - R + q[p+(1-p)(1-\beta)]v - x.
 \end{aligned}$$

The tenant’s optimal choice of x therefore solves the first order condition

$$(13) \quad [(1-q)+q(1-p)\beta]V(\hat{x}) - 1 = 0.$$

Let $\hat{x}(p)$ denote the solution to (13), where $\hat{x}(p)$ is decreasing in p . A comparison of (4) and (13) shows that $\hat{x}(p) < x^*(p)$ for $\beta < 1$ and $p < 1$. Thus, the tenant underinvests in the property under the modern contract rule to the extent that there are possible states in which she can lose possession without intending to breach. This represents the inefficiency associated with a rule compelling landlord mitigation in a world of uncertainty.

The resulting social value of the property under the modern rule is given by

$$(14) \quad W^M(p) = [(1-q) + q(1-p)\beta]V(\hat{x}(p)) + q[p + (1-p)(1-\beta)]v - \hat{x}(p),$$

which is decreasing in p (see Figure 2.) It is important to note that if $\beta = 1$, $\hat{x}(p) = x^*(p)$ and $W^M(p) = W^*(p)$ for all p . Thus, in the absence of legal error, the modern rule achieves the first-best outcome. This is true because if courts correctly perceive the intention of tenants, they can prevent excessive entry by the landlord by simply expelling him whenever the tenant's absence is not a sign of breach. In contrast to the traditional rule, therefore, the possibility of legal error ($\beta < 1$) is an important source of inefficiency under the modern rule because it means that the court is unable to prevent excessive landlord entry.¹⁴

Comparing the Two Rules

In comparing the traditional property and modern contract rules, we note first that both yield second-best outcomes. This is due to the landlord's and court's inability to correctly distinguish between those states in which the tenant's absence represents a true abandonment of the property (breach of the lease) and those in which it does not. As a result, the law can at best provide an imperfect instrument: it can either deter entry so as

to fully protect the tenant's property rights, thereby encouraging efficient investment ex ante (the traditional rule); or it can induce entry, thereby guaranteeing efficient mitigation ex post (the modern rule). The preferred rule depends on which of these objectives has the greater effect on the expected value of the property.

Formally, the relevant comparison is between (10) and (14). We have seen that the traditional rule induces the tenant to make the efficient level of investment, $x^*(p)$, but that it provides no incentive for mitigation in the event of breach. Comparing the resulting value of the property in (10) to the first-best level in (5), we see that the former can be written as $W^T(p) = W^*(p) - qp v$. Thus, for $p=0$, $W^T(0) = W^*(0)$, but for $p > 0$, $W^T(p) < W^*(p)$, where the difference between the two values is increasing in p . Thus, when tenant absence is never a sign of breach, the traditional rule yields the first-best outcome. However, as the possibility of breach conditional on absence increases, the outcome under the traditional rule diverges further from the first-best. This is shown graphically in Figure 2.

As for the modern rule, the comparison of $W^M(p)$ and $W^*(p)$ is a bit more complicated because $x^*(p) > \hat{x}(p)$ for $p < 1$. However, it is straightforward to show that $W^*(p) > W^M(p)$ for $p < 1$ and $\beta < 1$,¹⁵ and that $W^*(1) = W^M(1)$. Thus, the modern rule yields the first-best outcome only in the extreme case where all tenant absences are a sign of breach; otherwise it results in a lower value of the property. This case is also shown in Figure 2.

The preceding implies that the valuation functions $W^T(p)$ and $W^M(p)$ must cross at a single, intermediate point shown by \tilde{p} in Figure 2. As a result, when $p < \tilde{p}$, $W^T(p) > W^M(p)$, but when $p > \tilde{p}$, $W^T(p) < W^M(p)$. Intuitively, when landlords and courts

cannot observe the intent of tenants, the traditional rule is preferred when tenant absence is not good evidence of an intention to breach the lease (low p), whereas the modern rule is preferred when tenant absence is good evidence of such an intention (high p).

4. DISCUSSION OF THE RESULTS

Agricultural versus Residential and Commercial Leases

Traditionally, the law of leases primarily applied to leases of land for agricultural use. In this context, extended absence of the tenant from the property is not necessarily a sign of breach. For example, farmers may choose not to occupy land outside of growing season or when certain fields are being left fallow as part of a practice of crop rotation. This suggests that for agricultural leases, p is low, making the traditional rule more efficient than the modern rule.

In contrast, modern residential leases are primarily for shelter, which generally entails continuous occupation. Thus, an extended tenant absence is more likely a sign of an intention to abandon (i.e., the value of the option to leave the space vacant, while not zero, is much lower than in the agricultural context). Also, location-specific investments are probably less important for residential, as compared to commercial and agricultural, leases. These reasons suggest that, consistent with the current legal trend, the modern rule is more efficient for residential leases.

Commercial leasing appears to resemble more closely the agricultural case because the option to leave land vacant is likely to be high, for example if it is used primarily for storage or for use in unforeseen circumstances. This is consistent with the greater tenacity of the traditional property rule for commercial leases. The preceding conclusions suggest that both the historical trend toward adoption of a duty to mitigate

damages for residential leases, and the slower adoption of this rule for commercial leases, are consistent with economic efficiency.

Heterogeneous Tenants

We have assumed throughout the analysis that tenants are homogeneous, but suppose tenants vary in the importance that they attach to location-specific investments. In this setting, the modern rule may have an advantage over the traditional rule in the sense that landlords will disproportionately evict tenants with a low value of investing because the latter will be more likely to be absent from the property. The result is a kind of screening process that selects for those tenants who place a relatively high value on property-specific investments. This sort of favorable selection is not possible under the old rule because eviction is not allowed.¹⁶

5. CONCLUSION

The traditional common law viewed leases through the lens of property law, which, among other things, implied that landlords had no duty to re-let property during the term of a lease in the event of tenant abandonment. Rather, the landlord could simply sit tight and sue for the rent. The modern law of leases (at least in the residential context) has changed this; leases are now viewed as contracts, and landlords have an affirmative duty to mitigate damages. This paper has developed an economic model of leases to explain this change in the law.

According to the model, the principal benefit of the traditional rule is that it gives tenants secure property rights during the term of the lease, thereby encouraging beneficial investment in the property. This is especially valuable for tenants who value absentee use. The offsetting cost is that the landlord is discouraged from entering and re-letting the

property when the tenant abandons it. The ideal rule would therefore permit landlord entry only when a tenant's absence represents a true intention to breach. The problem is that the tenant's intent is often unstated and hence unobservable. Thus, the law must choose whether the benefits of secure property rights outweigh the cost of leaving the property idle in the event of breach.

In light of this trade-off, we showed that the traditional rule is preferred when the value of absentee use by tenants is high (i.e., absence is not a good signal of breach), while the modern rule is preferred when the reverse is true. This result accords well with the adoption of the modern rule for residential leases, where the primary use of the property (for shelter) entails continuous occupation. In contrast, the emergence of the traditional rule in the context of agricultural leases, and its tenacity for modern commercial leases, are consistent with absentee use in both of these contexts.

FOOTNOTES

1. For example, courts can invalidate contract terms deemed *unconscionable*, that is, agreements deemed to be unfair to one of the parties ex post. Unconscionability is based on the court's interpretation of the nature of the contract terms and not on agent incompetence, misinformation, duress, fraud or other criteria that also justify setting aside contracts or contract terms. Therefore, the unconscionability test raises the possibility of opportunism.

2. "As a general rule, a party cannot recover damages for loss that he could have been avoided by reasonable efforts" Restatement (Second) of Contracts, § 350 (p. 127). Also see the UCC, 2-715, which limits sellers' liability to damages that "could not reasonably be prevented."

3. See, e.g., *Gangadean v. Erickson* (1972) and Friedman (1997, pp.1092-1093).

4. For a general discussion of the desirability of mitigation, see Wittman (1981). In the context of contract damages, see Goetz and Scott (1983) and Baird, et al. (1994, pp. 4-75), and in the context of torts, see Shavell (1987, pp.158-159).

5. This is similar to the rule from *Hadley v. Baxendale* (1854), which limits promisees' damages for breach of contract unless they inform promisors that they will suffer unusually large costs in the event of breach. See Bebachuk and Shavell (1991).

6. The qualitative conclusions of the model are unaffected by relaxing this assumption.

7. We abstract from consideration of the specific reason for tenant abandonment or breach in order to focus on the issues of interest here. Our approach is not unusual. For example, the mortgage valuation literature adopts both exogenous and endogenous

borrower default models (Kau and Keenan, 1996; Vandell, 1996) as does the shopping center lease valuation literature (Grenadier, 1995; Cho and Shilling, 2007).

8. Another benefit of mitigation, primarily in an urban setting, is the presence of spillover benefits accruing to neighboring property owners from continuous occupation of the property in question. In a commercial or retail context, these benefits could represent inter-store externalities of the sort described in the literature on shopping centers (Brueckner, 1993; Miceli and Sirmans, 1995). Likewise, in a residential context, they could represent the enhancement of neighboring property values from continued upkeep and maintenance of a given property. If present, this effect would simply amplify the benefit of mitigation. We thank a referee for pointing out this dimension of the problem.

9. Thus, $x^*(p)$ is maximized at $p=0$, the case where breach never occurs.

10. We ignore the litigation costs of collecting damages, or the possibility of tenant bankruptcy.

11. Consider a more general characterization of the traditional rule. Let α be the probability that the landlord can recover damages of $R-v$ when he enters and mitigates (i.e., he re-lets the property for v), while $1-\alpha$ is the probability that he gets nothing. In that case, $D_E = \alpha(R-v)$, and entry yields $D_{E+v} = \alpha(R-v) + v$. The implications of this formulation are shown in the next footnote.

12. In the case where (6) is given by $\alpha(R-v) + v$, (7) becomes $\beta R + (1-\beta)[\alpha(R-v) + v]$ and (8) becomes $R - (1-\theta)(R-v)$, where $\theta \equiv \alpha + (1-\alpha)(1-p)\beta < 1$. For any $\alpha < 1$ (including $\alpha=0$, as in the text) the landlord chooses not to enter under the traditional rule.

13. Strictly speaking, the landlord's duty is to exert reasonable efforts to locate a new tenant. We assume here that his efforts are always successful. Alternatively, one could interpret v as the expected rent (net of search costs) from a new tenant.

14. Even if the court operated without error in this respect, there would still be a cost associated with the need for court intervention to prevent excessive entry by the landlord.

15. To see this, write (5) as $W^*(p,x)$ for arbitrary x , and similarly write (14) as $W^M(p,x)$ for arbitrary x . It is easy to show that $W^*(p,x) > W^M(p,x)$ for all x given $p < 1$ and $\beta < 1$. It follows that $W^*(p) \equiv W^*(p, x^*(p)) \geq W^*(p, \hat{x}(p)) > W^M(p, \hat{x}(p)) \equiv W^M(p)$.

16. We thank a referee for pointing out this advantage of the modern rule.

REFERENCES

- Baird, Douglas, Robert Gertner, and Randall Picker. 1994. *Game Theory and the Law*. Cambridge, MA: Harvard Univ. Press.
- Baker, Matthew, Thomas Miceli, and C. F. Sirmans, and G. Turnbull. 2001. "Property Rights by Squatting: Land Ownership Risk and Adverse Possession Statutes," *Land Economics*, 77, pp. 360-370.
- Bebchuk, Lucien and Steven Shavell. 1991. "Information and the Scope of Liability for Breach of Contract: The Rule of *Hadley v. Baxendale*," *Journal of Law, Economics, & Organization*, 7, pp. 284-312.
- Berae v. Gorman*, 168 Colo. 551, 452 P.2d 379 (1969).
- Brueckner, Jan. 1993. "Inter-Store Externalities and Space Allocation in Shopping Centers," *Journal of Real Estate Finance and Economics*, 7, pp. 5-16.
- Cho, Hoon and James Shilling. 2007. "Valuing Retail Shopping Center Lease Contracts," *Real Estate Economics*, 35, pp. 623-649.
- Cribbet, John. 1975. *Principles of the Law of Property*. Mineola, NY: Foundation Press.

De Meza, David, and J.R. Gould. 1992. "The Social Efficiency of Private Decisions to Enforce Property Rights," *Journal of Political Economy*, 100, pp. 561-580.

Friedman, Milton. 1997. *Friedman on Leases*, 4th Ed. New York: Practising Law Institute.

Gangadean v. Erickson, 17 Ariz. 131, 495 P.2d 1338 (1972).

Grenadier, Steven. 1995. "Valuing Lease Contracts: A Real Options Approach," *Journal of Financial Economics*, 38, pp. 297-331.

Goetz, Charles and Robert Scott. 1983. "The Mitigation Principle: Toward a General Theory of Contractual Obligation," *Virginia Law Review*, 69, pp. 967-1025.

Hadley v. Baxendale, 9 Ex. 341, 156 Eng. Rep. 145, (1854).

Hoy, Michael and Emmanuel Jimenez. 1991. "Squatters' Rights and Urban Development: An Economic Perspective," *Economica*, 58, pp. 79-92.

Kau, James, and Donald Keenan. 1995. "An Overview of the Option-Theoretic Pricing of Mortgages," *Journal of Housing Research*, 6, pp. 217-244.

Merrill, Thomas and Henry Smith. 2001. "The Property-Contract Interface," *Columbia Law Review*, 101, pp. 773-852.

Miceli, Thomas. 2004. *The Economic Approach to the Law*. Stanford, CA: Stanford.

Miceli, Thomas and C. F. Sirmans. 1995. "Contracting with Spatial Externalities and Agency Problems: The Case of Retail Leases," *Regional Science and Urban Economics*, 25, pp. 355-372.

Miceli, Thomas, C.F. Sirmans, and Geoffrey Turnbull. 2000. "The Dynamic Effects of Land Title Systems," *Journal of Urban Economics*, 47, pp. 370-389.

_____. 2001. "The Property-Contract Boundary: An Economic Analysis of Leases," *American Law and Economics Review*, 3, pp. 165-185.

_____. 2003. "Land Ownership Risk and Urban Development," *Journal of Regional Science*, 43, pp. 73-54.

Shavell, Steven. 1987. *Economic Analysis of Accident Law*. Cambridge, MA: Harvard.

Simkin v. New York C.R. Co., 138 Ind. App. 668, 214 N.E.2d 661 (1966).

Smith v. Favilla, 23 Wash. App. 59, 593 P.2d 564, review den.; 92 Wash.2d 1022 (1979).

Turnbull, Geoffrey. 2009. "Squatting, Eviction and Development," *Regional Science and Urban Economics*, 38, pp. 1-15.

Vandell, Kerry. 1995. "How Ruthless is Mortgage Default? A Review and Synthesis of the Evidence," *Journal of Housing Research*, 6, 245-264.

Wittman, Donald. 1981. "Optimal Pricing of Sequential Inputs: Last Clear Chance, Mitigation of Damages, and Related Doctrines in the Law," *Journal of Legal Studies*, 10, pp. 65-91.

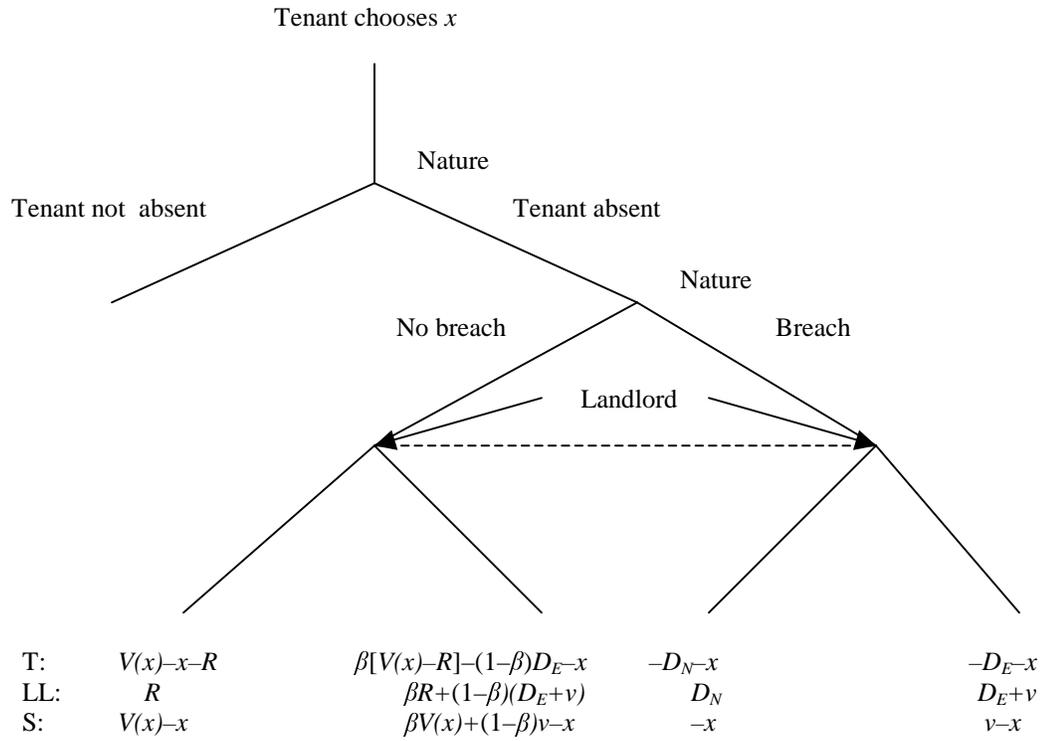


FIGURE 1: Sequence of Events and Payoffs.

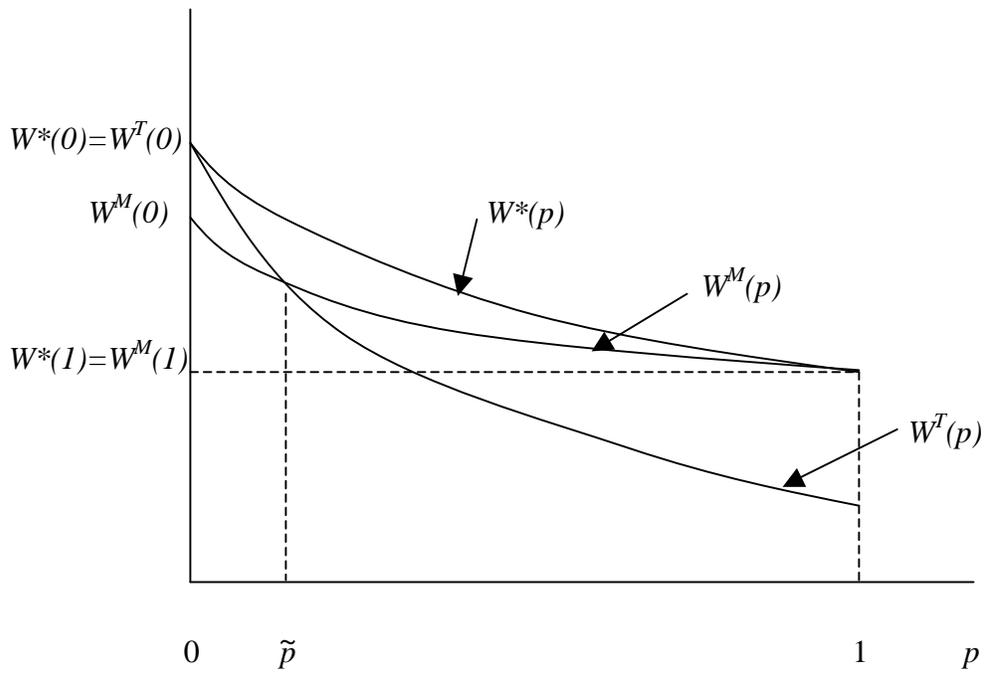


FIGURE 2: Comparison of the Two Rules.

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