Review of Optional Law: The Structure of Legal Entitlements

Omri Ben-Shahar
University of Michigan Law School, omri@uchicago.edu

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The concept of “property rights” plays a prominent role in economic theory. Economists have been studying how property rights emerged as a system of allocation, replacing regimes of open access and lack of legal order. Property rights are regularly viewed by economists as the primary policy tool to control the incentives to invest in new assets (e.g., in information) and to maintain existing assets (e.g., fisheries) when contracts are incomplete. Property rights are the endowments that individuals exchange in a market economy, the equity that investors trade in
financial markets. Property rights are a basic building block in economics.

But what are property rights? While "assets" are physical, natural, things, the rights of individuals in the assets are an abstract legal creation. Economists usually focus on one aspect of the right in the asset: the right to control. Legal analysis of property rights, on the other hand, adds another aspect of the right in the asset: the privilege of an individual to invoke the state's enforcement powers to fend off encroachments by nonrightholders. A property right, then, is a "pair" that is defined by (1) the physical uses that the rightholder is entitled to make ("the entitlement") and (2) the particular enforcement techniques that the state accords the rightholder in the event that others are violating or threatening to violate the entitlement ("the protection").

Recognizing that property rights have this dual structure—"entitlement" and "protection"—opens up a rich array of possibilities for designing property rights. Society has to choose not only the identity of the rightholder, namely, to whom the "entitlement" ought to be assigned, but also how to protect property rights. In the past generation, legal scholars influenced by the law-and-economics school of thought have shown that the protection technique is as fundamental to the assignment of property rights as the entitlement itself. A mini-field has developed studying the formal characteristics of different protection regimes. One of the most creative and prolific contributors to this movement, Ian Ayres of Yale Law School, has now assembled his contributions into an impressively rich theory titled *Optional Law*.

The starting point for this book was defined over thirty years ago by Guido Calabresi and Douglas Melamed in one of modern law's most influential and intelligent articles. At a time when legal analysis was partitioned into rigid fields such as contract law (obligations created voluntarily), tort law (involuntary obligations created by harming others), and property law (the catalog of rights to control assets), Calabresi and Melamed offered a new, general way to look at all legal rights. Focusing on the "protection" aspect, they coined the distinction between two types of protections, "property rules" versus "liability rules." An entitlement is protected by a property rule through *deterring* others from violating it (e.g., through injunctions, punitive damages, and even prison terms). Conversely, an entitlement is protected by liability rules through *compensating* the entitlement holder when a violation occurs. To illustrate, consider a right formed by contract (say, the right of a buyer to receive from the seller the parcel of land which the buyer bought). This contractual right is the "entitlement" portion, but how is it protected when the seller breaches and refuses to make the promised transfer? Under a "property rule" regime, the buyer can invoke remedies that deter the seller from breaching the contract (e.g., large punitive damages; or a court order mandating performance, enforced by the threat to place the seller in jail or pay large fines if he defies the order). Under a "liability rule" regime, the buyer can invoke remedies that compensate her for the monetary loss arising from nonperformance of the promise (e.g., damages equal to the buyer's valuation of the parcel of land—what contract law calls "expectation damages").

Calabresi and Melamed did not only introduce this distinction between the two types of protections, they also offered a fundamental insight as to when the law should accord one type of protection versus another. Property rules make sense, they claimed, when transactions costs are low. Since they deter potential violators from committing unilateral breaches and force them to reach consensual transactions, efficient allocations would be assured (this, recall, is the Coase Theorem.) But when transaction costs are high and consensual transactions do not occur, liability rules become the efficient mode of protection. An outsider who wants to acquire the entitlement from the legal rightholder need not spend (or be discouraged by) the high transactions costs of a voluntary deal, but may rather take the entitlement unilaterally and pay the legally set damages to the rightholder. A liability rule regime attaches a price to the asset and grants outsiders the power—the option—to take the asset if they pay this price.

Viewing the protection component of a liability rule as a call option—the option for any potential infringer to take the entitlement if it pays the exercise price of the legally fixed damages—opened a fertile ground for research. For one, if the protection component is an option, it need not be restricted to call options, but can be expanded and include put options. Whereas the call option liability rule grants the option holder
the right to take the asset for a fixed damages sum, the put option liability rule would grant the owner of the asset the right to force a sale and be paid a fixed sum for surrendering the asset. She need not secure the agreement of the transferee; she may even target an unwilling beneficiary, forcing him to accept the asset and to pay the nonnegotiated sum.

Enter Ian Ayres. Put options, he noticed, do not exhaust the possibilities afforded by option theory for the design of the protection component of property rights. In a barrage of creativity, Ayres invents a host of new options to be attached to entitlements. Consider one example, a “Dual-Chooser” option. If Jack has an entitlement and Jill has a call option to take Jack's asset and pay the legally fixed damages, why not grant Jack a reciprocal call option to take his asset back? In fact, once we open the door for such sequential options, many versions can be considered. Under one version of the dual option scheme, Jack would merely have to pay the same exercise price Jill had to pay to reacquire his asset. Ayres calls this rule the “single-price” dual-chooser rule. Under a more sophisticated version, the option prices are escalated. Jill may take Jack's asset for the price of \( p_1 \); Jack may take his asset back but for a different price, \( p_2 \), potentially higher than \( p_1 \). In fact, why have only two rounds with two prices? Theoretically, Jack and Jill can keep taking the asset from each other, with the price increasing per round, until one drops out. Such higher order sequential options are the equivalent of an auction mechanism, and as an auction “surrogate” they have the potential of allocating the asset in a more nuanced way toward its highest valuing party.

But recognizing (or inventing) new platforms for legal allocations of assets is only the starting point for the analysis in Optional Law. The basic normative question remains: what benefit society gains by these option schemes? When should the law allow a party to take another's asset for a price? And when should it do the reverse, and allow the asset owner to force another party to take the asset and to pay for it, without first securing consent. Is there any social value in dual-chooser rules?

If assets are to flow to their most efficient values, it may appear at first blush that society would need a great deal of information to assign the entitlements efficiently. If the value that individuals assign to assets is often private information, courts cannot simply measure the competing valuations. Moreover, with asymmetric information, parties competing for the use of an asset may not always succeed in consensually agreeing on the efficient allocation. The trick, then, is to design a legal mechanism that would implement efficient allocations. Options, Ayres shows, “harness” individuals' private information. They induce the option holders to act in accordance with their information, thus reveal whether they are the highest valuers.

Consider a simple example: Jack, the owner of an asset, values it at $50. Jill, a potential taker, has a valuation that, while known only to her, is known to lie uniformly on a continuum between 0 and $100. In the presence of high transactions costs, Jack and Jill are not certain to succeed in agreeing on a sale of the asset to Jill whenever she values it more than $50. But if Jill is granted a call option to take Jack's asset for $50, she will do so only when it is efficient for her to acquire the asset. Courts do not need to verify Jill's valuation: the call option “harnesses” Jill's private information to the social enterprise of allocating the entitlement efficiently.

Similarly, put options can be useful when it is the asset owner that has the private information. In the same example, let us assume that Jack, the owner, is the party with private information, whose value is only known to be distributed uniformly between 0 and $100, whereas Jill, the potential taker, is known to have a certain value of $50. If Jack is granted a put option to sell the asset to Jill for $50, again he will do so only when it is efficient. The option, Ayres concludes, ought to be assigned to the party who has private information. If both parties have private information about their valuation of the asset, a single-option scheme would assign the option to the one with “more” private information, that is, the one whose distribution is known to have a larger variance.

Even better, both parties’ private information can be “harnessed” under the scheme of dual-chooser, described above. This would create an improvement whenever the parties’ distributions have different means, but relatively similar variances. If, say, Jack, the owner, is known to value the asset between 0 and $100 and Jill, the potential taker, is known to value the asset between 20 and 120, a simple improvement can be obtained by double-call options. Jill would exercise her call
option whenever her value exceeds the exercise price (say, $50, Jack's average value); Jack will counter by exercising his reverse call option and regaining ownership of the asset when his own valuation also exceeds this same, or a potentially higher ($60), strike price.

In fact, even if both parties are known to have identical distributions, an improvement can be gained under the dual-option scheme if the prices under the two call options are “escalated.” Ayres develops the formula for the optimal sequential options. For example, in the case in which both parties’ distribution of value is uniform between 0 and 100, an ideal dual option scheme would entitle Jill to take the asset for a price of $44.44, and for Jack to take it back for a price of $66.67. Interestingly, notice that Jill might decide to exercise her option even when her valuation is less than $44.44 in the hope that Jack will buy the asset back and leave her with a net gain. But the critical point is that, with escalating prices, the asset is allocated to the higher value more often. Effectively, one might say, the asset is auctioned to the competing bidders, with the proceeds of the sale cleverly divided between the parties.

One of the most impressive accomplishments of Ayres theory is the surgical precision with which he isolates efficiency concerns from wealth distribution and gives each a thorough examination. Ayres is writing against a tradition of law-and-economics that is at times agnostic with respect to distributive concerns (and focuses solely on allocative efficiency). He is also writing against a tradition of mainstream legal scholarship that, while concerned primarily with fairness and redistribution, lacks the rigorous tools to determine analytically how legal rules redistribute wealth. So while his theory prescribes the allocations of puts and calls according to the efficiency-minded “information harnessing” criterion, he recognizes that such rules can be fine tuned to achieve any ex post distribution that policymakers desire. Go back to Jack and Jill: if we think that granting Jill a $50 call option on Jack’s asset unfairly accords Jill the entire surplus, there is a simple solution. Jill can be required to pay Jack some money irrespective of whether she exercises the option. If she does not exercise the option, she will have pay $p_0; if she does, she will have to pay $p_0 + $50. This “Pay or Pay” scheme allows society to achieve any redistribution from Jill to Jack (and vice versa, if $p_0 < 0), and by maintaining the $50 gap between Jill’s two strategies, it is guaranteed that she will exercise the option only when the value of the asset to her exceeds $50. Courts, Ayres shows, can maximize the ex post surplus and at the same time preserve their “unfettered control” to divide it as they like.

Hence, piece by piece Ayres demonstrates how options can be designed to govern the “protection” element of property rights. With all the pieces in place, a striking claim emerges: ownership of assets need not be protected by property rules, but rather by liability rules. An owner of an asset should not be entitled to prevent or deter others from taking her asset, nor should the state punish or try to prevent nonconsensual takings. All that the owner should be getting in terms of protection, and all the state will help her achieve, is the payment of a court-set sum of damages after the asset is taken from her, and potentially be accorded a reciprocal option to reacquire her asset. Even more far-reaching, an owner of an asset who wants to sell it need not secure the agreement of a potential buyer. Instead, he could have a put option and dump the asset upon a nonconsensual recipient, again, for a price set by law, and perhaps subject to the recipient’s reverse option to counterdump the asset (potentially, though, for a lower price).

An important claim that Ayres makes with full force throughout the book concerns the superiority of the nonconsensual transfer mechanism and the fact that this superiority is maintained even when bargaining is possible and transactions costs are low. One would think—and law-and-economics writers have repeatedly argued—that with low costs of trade, the market-oriented consensual transfer system would be preferable to a court-mandated scheme, at the very least due to the saving of legal costs. But Ayres shows otherwise. With low transactions costs, he argues, an individual who is anxious about options being exercised against her (say, concerned that her asset will be taken for some price) can “bribe” the holder of the option and purchase a release from the option. And if she is concerned that the legally set price is too high so that there will be no takers, she can again get around it by offering a lower consensual price. Low transactions costs smooth the operation of crude options/liability rules just as well as they facilitate Coasian transfers under a system that forbids nonconsensual takings. But—and this is the punch line—even with low transactions costs,
asymmetric information may prevent efficient bargains from being struck. It is here that the system of options has the advantage over "unstructured bargaining" by setting "clear choices and structure responses" that harness private information.

There you have it, "Optional Law"—a legal order of options that redesigns the baseline for the transfer of assets in society. To many, lawyers and nonlawyers alike, this scheme may sound revolutionary, putting more faith in courts and the legal system to regulate exchange than in market transactions, thus turning on its head the institution of property rights. But the case Ayres makes for Optional Law cannot be dismissed merely on the ground that it is so unorthodox. For one, Ayres is well aware that his theory may "prove too much" and that factors mitigating its applicability ought to be explored. Furthermore, throughout the book Ayres uncovers many examples that demonstrate how the law already applies variants of his option scheme in protecting entitlements. The most powerful example, of course, is the protection of contractual rights. Anglo-American law allows a party to a contract to breach the contract unilaterally—that is, to "take" the contractual right of the counterparty—and pay damages. Contracts, then, are a species of entitlement that is already subject to call options. Ayres goes beyond this obvious example and shows that in many other areas of the law, some quite esoteric but others more central, rights and entitlements can be taken or conferred nonconsensually, subject to legally mandated exercise prices.

But the fact the legal system occasionally samples the Optional Law scheme is still a long way from the claim that it ought to be reformed to conform to Ayres's vision of options throughout. Even if classroom experiments or numerical simulations demonstrate that entitlements subject to call and put options lead to superior bargaining results, it is doubtful whether this book can truly settle the debate and declare the victory of liability rules, and prove the inexistence of a theory that can support a regime of consensual transactions. On a technical level, many of the intuitions fleshed out by Ayres are demonstrated in restrictive environments of incomplete information, where the distribution of values is assumed to be uniform. Other writers have shown that for more general distributions of value it would be difficult to generate legally workable formulae of option prices. But my critique here does not build on any alleged technical shortcomings of the theory; in fact, this theory is at least as sound technically as much of the law and economics models that preceded it. Rather, in the remaining space I wish to sketch one direction that a substantive critique of Ayres's theory of options can take.

One of the basic ingredients of Optional Law is the put option—the possibility of granting the owner of an asset the option to force another to buy the asset for a court-set fixed sum, even if the other is not interested in making a consensual purchase. Put options, recall, are necessary because the "harnessing" insight requires that in an important set of cases, entitlements be assigned to "optimal chooser"—the person with the greatest variance of values—even if she is known to have a lower mean. The lower mean problem is resolved by granting the assigned owner a put option. Thus, this theory builds on the symmetry between put and call options ("deep similarities," as Ayres refers to it), maintaining the absence of an a priori reason to prefer one type over the other. But the overwhelming tradition of the legal system denies this symmetry. While call options are quite abundant (damage rules for contract breach, compulsory licenses of patents, and the right of factories to create compensated nuisances are some prominent examples), put options are strikingly rare. Ayres finds a neat example here and there, but that only works to emphasize that it takes Ayresian ingenuity to notice their existence, for otherwise put options are too bizarre and obscure. Even he recognizes that their incidence is lower than that of call options.

For many legal scholars, this descriptive observation about the rarity of put options in the law would suffice in disproving Ayres's theory. They would conclude that there must be some underlying reason, not recognized by Ayres, that undermines the validity of his thesis, or else why would the law squander centuries of opportunity to "get it right"? Why does the law generally prohibit put options and why is it fairly stingy in allowing call options? My argument, though, is not based on "revealed preference" by the law, but more concretely on the existence of a competing efficiency perspective, focusing on the ex ante behavior of parties. Put options, we might worry, subject people to disruption of their freedom to "be left
alone.” If you are not interested in owning my Chevy and if you never made any gesture that would have led me to believe you might be a willing buyer, you would hate to find my Chevy parked in your lot, coupled with a legally backed obligation on your part to pay for it, however reasonable the price might be. True, there is an allocative efficiency argument that cannot be denied: “on average,” you may be a more efficient user of the Chevy than me, especially if I privately know that I truly don’t need the car any more. It may even be possible to prove that you value my car. But you may be reluctant, perhaps because you prefer to shop around for an even better vehicle. My ability to force unwilling parties like you to pay for my car gives me ample opportunity to extort the likes of you, folks who would be willing to pay some money to be free from the disruption that my put option imposes. Thus, a way to truly flourish in Ayres’s economy is to invest in opportunities to extort: to identify all those parties who, while they objectively benefit from the asset (and are thus subject to the put option), they truly do not want the asset. Having identified such targets, an owner can threaten to exercise the option, and be paid off.

To gain a more concrete grip on the danger underlying Ayres’s put option scheme, think of all the unsolicited emails individuals receive daily, all the junk mail offers and phone solicitations, marketing this product or that. In the existing regime, sellers need to secure the assent of their targeted buyers. Indeed, these pestering communications represent sellers’ effort to convince skeptical buyers to say yes. But if sellers had put options—if they were allowed to deliver the product without the buyers’ saying yes and charge the buyers the legally set price—individuals’ freedom to be left alone would be seriously disrupted. Even if the recipients would have a reciprocal option, namely, the right to return the goods and be relieved from the duty to pay, they would have to constantly be on guard to avoid getting stuck with unwanted benefits. Individuals may find it worthy to “bribe” sellers to take them off the marketing list. And with the growing potential to stick buyers with unwanted products or to extract “bribes,” sellers would have greater incentive ex ante to enter the business of offering unwanted benefits. The fact that regulators and courts have devised rules that intend to protect consumers from such situations suggests that the problem of unwanted benefits may be a serious one.

Ayres is not oblivious to this risk, and at times admits that the options he advocates should not be operative between “strangers.” But he does not provide a theoretical yardstick to limit the scope of his theory, and occasionally follows the natural conclusion that the theory has unlimited scope—that the option scheme ought to govern all allocations.

In the end, Ayres can be commended for recognizing that entitlements can be coupled with more than one type of option—that there are numerous dimensions that can be manipulated in designing the options. His analytical achievement is significant in showing so cleanly how these options can be designed to elicit private information without sacrificing distributive concerns. But one may worry that some of these “dizzying array of options,” as Ayres calls them, would in fact create a dizzying array of opportunities to pester individuals into deals they do not want, to take from individuals assets that they do not wish to sell, and to force individuals to spend time and money defending against these risks. True, one-sided options can overcome failures of consensual transactions that are due to asymmetric information. But an exchange economy in which individuals have the right to determine whether to enter into a transaction, while perhaps sacrificing some allocative efficiency, may have other ex ante benefits that dwarf the incremental ex-post improvement of the option scheme.

Ayres’s theory is indeed brilliant and intriguing, certain to become a benchmark in many debates. It provides new understandings for some existing legal traditions and it may even have the power to prescribe some new legal rules. But this reader, for one, remains skeptical whether the theory has a significant domain of applicability.

Omri Ben-Shahar
Professor of Law and Economics
University of Michigan Law School