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# The Exchange Order: Property and Liability as an Economic System

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## Governing Exchange

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**Abstract:** This is the introduction to *The Exchange Order: Property and Liability as an Economic System*, New York: Oxford University Press, 2017. It briefly describes the exchange order, the comprehensive social system comprising explicit markets, tort liability and criminal liability. These institutions are portrayed as different ways to govern exchanges, compensated transfers from lower to higher valuing owners, across a range of environments. Every transfer involves both the taking of goods and the imposition of costs, and exchange means that cost bearers are fully compensated by takers for their losses. Markets govern exchanges in environments where property rights are secure, so all trades are consensual and compensation occurs at the moment of taking. Tort and criminal liability operate in environments where property is insecure, completing involuntary transfers of entitlements, rights to be free of unlawful cost imposition, by imposing compensatory liability prices on takers equal to the cost of the taking. All three systems thus operate to move rights and objects to higher valuing owners through the payment of compensatory prices.

**Keywords:** exchange, markets, tort liability, criminal liability, governance, entitlements, prices, liability prices, compensation.

## INTRODUCTION: GOVERNING EXCHANGE

### **Trading Goods and Bads**

Imagine that you're the czar of the entire criminal justice system of your country, and that one of your powers is to set the punishment for every crime at any level you like, to achieve any purpose or objective you might have. Suppose too that the country's criminal law itself is simple and enjoys broad popular support. It doesn't make crimes out of things that lots of ordinary people want to do or see little harm in doing, and does make crimes only of things that almost everyone agrees are wrong, like stealing, or assaulting or killing someone. Because the law is well understood and supported by almost everyone, it seems reasonable to want everyone to obey it, and forbear from committing malicious acts that obviously cause harm to other people. If stealing is wrong, no one should do it. So that's the objective you adopt for criminal justice, a society free of crime. Using the only instrument at your disposal, criminal punishment, your goal is to reduce the incidence of crime, people doing bad things they know they shouldn't do, as close to zero as possible.

What do you do? If you're an enlightened czar, perhaps you'll first recognize that there are some unfortunate people who simply can't be deterred from crime by the threat of punishment, not because they don't know what the law is or don't want to obey it, but because they're mentally ill and, as a result, not in sufficient control of their thoughts and actions to be held criminally responsible for what they do. Whatever the law might require or forbid, inevitably, some mentally ill people will do things that would be crimes if people who weren't mentally ill did them. But

assume that once they're identified as such after having done whatever they did, mentally ill offenders are removed from your domain, treated as best they can be and cared for humanely.

What about the rest who might be tempted to commit a crime, ordinary people who aren't mentally ill, even if they sometimes do crazy things, or even necessarily evil or immoral? They know the act they're contemplating is wrong, a crime, but they're still lured by the thrill and the rewards, material and psychological, the crime might bring them. How can you use your cudgel, criminal punishment, to stay their hand, and make every person who's about to victimize someone else for his own gain or satisfaction stop and think, even if just for an instant, and decide instead to obey the law? The obvious strategy, not for the squeamish, is to wield the club as violently as possible, and make the punishment for *every* crime the most gruesome, torturous death imaginable.

It wouldn't even be necessary to carry out the threat more than once or twice, just to show you were serious. Once an example is made of one poor fellow caught swiping a t-shirt from a store, and word gets out that you really do mean to subject everyone who commits a crime to the harshest punishment you can devise, almost no one will commit any crimes ever again, even relatively serious ones, where the stakes are higher and people sometimes have what they think are good reasons, even moral ones, to commit the assault or murder they're contemplating. There might still be people so committed to a cause, or whose personal hatred or thirst for revenge are so great, that even this maximal penalty would be worth bearing for the satisfaction of having committed the crime. But there won't be many, and it's hard to imagine anyone taking the risk of becoming the second person caught stealing a t-shirt. If deterring the most crime possible is your objective, this is the way to do it.

Of course, this is not the way crime is punished in the United States, or almost anywhere else. There are, most people would agree, good reasons for this. Punishing every crime with

maximal severity seems radically disproportionate to all but the most serious offenses. It obliterates crucial distinctions between crimes based on their moral weight, the kind and amount of harm they do, and violates an ancient, deeply rooted principle of criminal justice found in legal codes everywhere: *an eye for an eye, a tooth for a tooth, but not an eye for a tooth*. It's wrong to punish people out of proportion to the harm their crimes have done. Justice to both sides, victim and offender, demands that the punishment "fit the crime" in all its particulars, that it measure an offender's moral guilt and inflict back on him exactly the harm his crime has imposed on his victims. All crimes are wrong, in this almost universally held view, but some crimes are more serious, more wrong than others. Just punishment is sensitive to these moral gradations between and within classes of crimes, and tailors penalties accordingly. Murder is more blameworthy than robbery, so punishments for robbery should generally be smaller than punishments for murder. But not every robbery, or every murder, is equally blameworthy, does the same moral damage to the community, so punishments for more harmful robberies should be greater than those for less harmful ones.

This makes for a regime of punishment very different from the draconian attempt to deter the most crime possible. If punishments are proportioned to seriousness, penalties for murder, which is much more serious than shoplifting, must be much greater than those for shoplifting. And this means, if we exclude gruesome torture for murderers and put an upper limit on the suffering that can be inflicted on anyone, relatively small penalties for shoplifting. This does seem fair, and for that reason is a worthy objective of criminal justice. But it certainly will invite more crime among those who think about the consequences of what they do than would the policy of maximum deterrence. People who would never commit a robbery if they knew the penalty was horrible death might, in the right circumstances, feel differently if the penalty were less severe, and relatively trivial punishments may encourage a lot of relatively trivial shoplifting. Still, in

their ideal forms, where every perpetrator of every crime is captured and suffers a perfectly just punishment, this is how systems of criminal justice almost everywhere punish crimes. They try to measure the magnitude of suffering caused by the crime and, as precisely as possible, inflict that suffering back on the offender in the form of a proportional punishment. Killers pay high prices for their crimes, and petty thieves pay low ones. An eye, but only that, for an eye.

The object of such a system can't be the absolute deterrence of all crime. It's clearly willing to tolerate some crime, since it doesn't do what it would take to deter all crime, but which crimes *is* it willing to tolerate, and toward what end? What *are* criminal justice systems that try to inflict proportional punishments on every offender trying to do? This book is in large part an answer to that question. In one sense, the answer is obvious, and I've just given it: systems like this, including the American legal institutions that are my principal subject here, are trying in every case to exact an eye for an eye, to retaliate or take vengeance against the offender by inflicting suffering on him that matches the suffering his crime has imposed on others. The wrongdoer slaps society, hard, by committing his crime, and society, through the law, slaps him back, just as hard but no harder. That's how he "pays his debt to society." It isn't pretty, and there may well be more just or effective ways to address the problems that systems of criminal justice almost everywhere are in place to address. But it's the way that all regimes of proportional punishment work. Showing just what this means is one of the purposes of this book.

Criminal justice is not the only corner of the social universe where retribution and vengeance are the order of the day. Perhaps unsurprisingly, civil liability in tort looks much the same, if somewhat less menacing. Torts aren't easy to define, and we'll have much to say about them later on. But for now it's enough to describe them as unlawful acts that cause harm to other people but don't rise to the level of crimes. In criminal justice, the operating principle that controls the infliction of suffering, and the level of crime, is called *proportional punishment*. In tort, it's

called *corrective justice*, compensating the victim for the costs, and only those costs, she's borne at the hands of the wrongdoer, but it means exactly the same thing. For reasons of personal justice, to right an acknowledged wrong done by one person to another and restore the moral *status quo ante*, people who unlawfully inflict harm on others, and those people in particular, must be made to bear those costs themselves by compensating their victims precisely for the harm they've done to them.

Torts are not the same as crimes. Both are unlawful acts, recognized by the law as inflicting harm that the actor is responsible for compensating in full. But the harm done by torts, and the compensation demanded for them, is usually measured in dollars and concentrated on one or a very few victims. Most torts are accidents caused by careless behavior, and while almost everyone knows they shouldn't act carelessly and agrees that careless people should be responsible for the damage they do, they also agree that the actor's moral responsibility is fully discharged by payment of fair monetary compensation to the victim, usually the value of replacing what's been lost. Accidents, after all, even careless ones, are accidents, and can happen to anyone. Even when we disapprove of what's caused them, they don't generate the sort of outrage that crimes do. If I carelessly knock down your fence with my car, you're entitled to have the law certify that I owe you the value of the fence, plus a little extra for the inconvenience and aggravation, and help you collect. Tit for tat. But once I've paid up, the case is closed. Justice has been done.

If it hasn't, and my action has disturbed the moral order to a greater extent than mere carelessness does, there may be more to it. Suppose I don't like you much, and purposely drive my car into your fence to destroy it. I still owe you the value of the fence and the aggravation, but most people would say that, given my malicious intent, paying only for these damages wouldn't fully discharge my moral obligation. This act has other victims, not direct victims like you, but every individual member of society, every person who's subject to the law and participates in the

moral consensus, the universally understood distinctions between right and wrong, that is its ultimate foundation. Part of that consensus, I'm assumed to understand, is that intentionally destroying your fence in this way is wrong, in a way that carelessly destroying it isn't. When I do this, I inflict damage not just on you, but on everyone who knows about my act and is outraged and repulsed by it. The cost these indirect victims suffer isn't material, like the cost of replacing a fence. It's moral, and experienced subjectively, as outrage, disgust and dismay at the injustice of my purposeful infliction of cost on you and, irrepressibly, a desire to make me pay, beyond the cost of the fence, for having done it. This moral element is what makes it a crime. And it's these costs, suffered by the large class of individuals subject to the law, "the people," that criminal justice is intended to compensate.

So criminal justice and civil liability both seem to be institutions that try to do corrective justice by inflicting precisely proportional punishments on wrongdoers, to make people who unlawfully impose costs on others compensate their victims in full for them. The circumstances in each case are different – torts have one or a few victims, each of whom suffers costs measurable in dollars, while crimes have many victims, all of whom suffer costs that are very hard to measure in dollars – but the two systems seem to employ similar procedures, accusations, trials, verdicts and judgments, to reach the same result: in every case, to require people who've unlawfully imposed costs on others to pay in full for the damage they've done, and restore their victims to the state they were in before the unlawful act.

More striking is that corrective justice is also the operating principle of markets. Markets, as economists think of them, aren't real places like bazaars or stock exchanges. They're mental objects, an abstract category economists use to describe a class of interactive human behaviors that actually do take place in the real world. Markets are the conceptual "places" where real people voluntarily exchange real things with one another. So there's a market for steel, where real

people sell real steel to other people in exchange for real money, and similarly defined markets for nuclear submarines, nursing services, peanuts and ten thousand other things. Markets for some things have many buyers and sellers, some have only one or a few, some work smoothly, so voluntary exchange is easy to conduct, and some don't, but all markets share the same essential characteristic: people own property that's reasonably well protected against theft by the law, so they don't have to surrender it unless and until they want to. This makes every transfer of property from one person to another *consensual*. Because people only surrender their property voluntarily, unless they want to give something away, their consent to losing it can generally be won only by giving them something in return that they believe adequately compensates them for what they've lost. Every owner of property has the choice to say yes or no to any transfer of her property, and the authority to say to anyone, if you want to take *this* thing from me, you'll have to give me *that* thing in return before you can have it.

When people are engaging in consensual exchange in this way, and think of themselves as doing just that, they're trading in *explicit markets*. No one surrenders anything without being fully compensated for it by the person who's taking it. In explicit markets where there aren't many buyers or sellers of the thing being traded, *prices*, the rates at which things are exchanged, vary from trade to trade depending on the tastes and wealth of the particular traders. If something, say the only postage stamp of its kind in the world, can be bought from only one person, no buyer will get it unless he's willing to pay whatever price the one person who can sell the stamp thinks is satisfactory compensation for losing it. In markets with many buyers and sellers of essentially identical things, like markets for steel or wheat, prices rise or fall until the price of every good, in every exchange, is exactly equal to the cost of producing it.

But in any explicit market, every consensual exchange of goods is at the same time a consensual exchange of bads, a game of slaps. Seen from one perspective, I voluntarily give the

stamp dealer a million dollars and she voluntarily gives me the stamp, and because we've both agreed to the exchange, we both feel that the thing we got was worth at least as much as what we had to give up to get it, or we wouldn't have done it. But seen from another, no less revealing angle, I want to seize the stamp from the seller, inflicting a substantial cost on her by doing so, but because she's able to keep me from taking the stamp unless she feels fully compensated for losing it, she seizes a million dollars from me in retribution at the same time. Slap me by taking my stamp, she says, and I'll slap you right back, to the tune of a million bucks. Tit for tat.

Their operation distilled to a single sentence, these three ostensibly different constellations of institutions, organizations and individuals seem remarkably alike. In explicit markets, prices measure the costs that surrendering things imposes on the people who surrender them, as experienced by those people themselves, and before any object is surrendered, the person who would take it must pay that compensatory price to the person who loses it. In tort liability, after an unlawful act has been committed, damages measure in dollars the costs imposed on specific individuals by the tort, as estimated by a trial jury, and the cost imposer is made to pay those monetary damages to compensate the individual he's harmed. In criminal justice, after an unlawful act has been committed, punishments measure the moral costs, the degree of outrage imposed on the society at large by the crime, as estimated by a jury or judge, and the offender is made to suffer those costs, in the form of painful deprivations of liberty, as compensation to those who've borne them. Markets do corrective justice; tort and crime match prices to costs. In all three, individuals are required to pay for what they take, and encouraged to take only what they can pay for. Different as they appear at first glance to be, explicit markets, tort liability and criminal justice all seem to be "trying to do" similar things, or the same thing described differently in three different social contexts.

Juxtaposing them in this way, as I hope to show here, casts a new light on how each system

operates, under what conditions and toward what apparent end. But in addition to illuminating their similarities and differences, seeing property and liability in this perspective reveals something larger. Markets, tort and crime are not three otherwise unrelated systems "trying" to do similar things, linked by metaphor or analogy but not in their essential nature or operation on the ground. They're branches of a single, more encompassing system of institutions evolved over millennia to serve the same function under different conditions or circumstances: to *govern* a particular kind of exchange, provide a set of institutions, rules and procedures that facilitates the completion of as many exchanges of that kind as possible, in circumstances unique to that kind of exchange. The constant across the three systems is a deeply ingrained aspect of human sociality that Adam Smith (1776, p. 13) described as a "propensity to truck, barter and exchange one thing for another" and considered the one characteristic that, along with the institution of property that made exchange possible and gave it meaning, most distinguished human beings from the other animals. What varies from one set of institutions to the other are the particular qualities of the things being exchanged and the conditions under which the trades take place.

So markets, tort and crime are three different institutional systems that govern exchanges under three very different sets of conditions. The kinds of exchanges that take place in each could not be satisfactorily governed by the rules and procedures that govern the others. The systems are distinct, and distinctive – scholars study one in departments of social science and the other two in schools of law. But as they actually operate in social life, in the roles they play in organizing relations among people, they're not separate. They're branches of the same tree, parts of the same larger whole, a comprehensive social order that comprises the operation of both explicit markets and systems of legal liability and whose apparent function is to facilitate the successful completion of as many exchanges of goods for goods and bads for bads, in as broad a range of trading conditions, as possible. This astonishing constellation of interlocking institu-

tions, the subject of this book, is the *exchange order*.

### Property and Liability

Whatever its source, the desire to exchange is a powerful motivator of individual behavior that has strongly influenced the historical development of the legal institutions of property and liability. People want to trade, not just for the kind of material benefits that economists stress but for the trust and good will that repeated successful exchange builds over time and the outlet it provides for what Smith called human "gregariousness," the need for cordial social contact and stimulation. In this, consensual exchange offers a model of how differing interests can be harmoniously reconciled, something traders and makers of markets around the world have known for thousands of years and economists discovered rather later. But how easily or satisfactorily exchange can be completed depends on the physical and social conditions under which it's undertaken, the particular state of what I call the *exchange environment*. Where it's easy to find potential trading partners, negotiate prices with them, and physically move things between sellers and buyers, exchange takes place freely whenever both sides would benefit from it, and prices accurately measure the costs of producing whatever it is that's being exchanged. When any of these things becomes harder, when significant effort or resources must be expended to find trading partners and actually do business with them, transactions are impeded, and some consensual exchanges that would have been completed had these difficulties not existed won't be completed because they do.

Economists call these impediments to exchange *transaction costs*. So some explicit markets, those in which transaction costs are low, work well, and exchange is easy. In other markets, transaction costs are high, so they work less well, and exchange is more difficult, and sometimes impossible. But consensual exchange is never possible at all unless property is adequately pro-

tected against theft, so that everyone can be reasonably certain that their property won't be taken from them without their consent. This is the indispensable characteristic of every exchange environment within which consensual exchange in explicit markets can take place. It's what ensures that every exchange of property between individuals is consensual. Voluntary exchange can occur in trading environments where the costs of completing transactions are high, or low, or where there are many buyers or sellers or just one or a few. But it can only take place at all where theft is controlled and property is secure.

Part I of this book is about explicit markets and the legal institution at their core, property. Property is what's actually exchanged in markets, and it's the conceptual point at which law and economics intersect. Give people property, one might say, and the freedom to exchange it, and there'll soon be markets. So we begin by looking closely at what property is. I've been referring loosely here to vaguely defined "things" that change hands in trades, and economists typically describe what gets bought and sold in markets equally loosely, as "goods" or "resources." Chapter one reviews the law's crucial distinction between rights and objects and describes the things traded in markets as *property rights*, legal authority to control each of the potentially infinite number of ways that any physical object might be used. Seen this way, an object can have many owners, each one possessing the right to control the use of the object in a different way, or at a different moment in time. Chapter one also introduces the old but still unresolved questions of where property rights come from, how they should be distributed among the many people who want to control the use of objects, and what government's role should be in deciding these sorts of things. In the United States, in a historically unique and consequential way, these questions have been contentious from the earliest days of the republic, with one or the other of two conflicting theories of property ascendant in the law at different moments in the nation's history, strongly influencing not just the way property is consensually exchanged in markets, but how

tort and criminal liability treat involuntary transfers of property as well. The contending views are traced to the English philosophers John Locke and Jeremy Bentham, whose voices are heard again and again in the chapters that follow.

The focus then moves to consensual exchange of property rights in explicit markets and the social outcomes it produces. Chapter one concludes by describing how exchange works when it works perfectly, and chapter two develops the ideas of utility, wealth and value and their subtle relations to exchange. They identify the essential social function that markets exist to serve: discovering who, among all the potential claimants, is the one who'd derive the greatest value from owning any particular property right, the ability to control the use of a specific object for a specific purpose, and moving that property right to that person. In any consensual exchange, each trader gives up something she values less to get something she values more in return. So when the exchange is complete, each trader is left with something whose value to her is greater than the value of what she's given up, everyone is "better off," and the total value experienced by both traders together is higher than it was before the trade. As more people are brought into the arena of exchange, and more consensual exchanges are undertaken, they continuously move property rights in this way from people who value them less to people who value them more. When the trading stops, because there are no more mutually beneficial exchanges to be made, every property right is owned by the person who values it most, so the sum of the value of each right to the person who owns it is as large as it can possibly be.

Whether this is a good or bad thing is hard to say, and depends on a variety of things. But even if it's a good thing, when conditions are less than perfect, and transaction costs gum up the works of consensual exchange, not even this felicitous value-maximizing outcome is assured. Chapter two considers the implications of this point for property law and the governance of voluntary exchange. Should property rights be granted to facilitate their eventual ownership by the

person who values them most, or are there good reasons to give them to someone else, to achieve some other social objective? Chapter two poses these questions in two distinct exchange environments, one with high transactions costs and one where they're low, and tracing the outcomes of awarding property rights to one claimant or another in the two environments.

All this assumes a reliable but restrained government in the background, doing no more than its Lockean duty of protecting individual property rights from theft so they can be consensually exchanged for mutual benefit in explicit markets. But modern government has long since exceeded the limits on its powers fixed by Locke, and may have other objectives that adversely affect what people can do with objects, and thus the value to them of the property they own. As Bentham pointed out, the only meaningful property rights people have, and the only things they can transfer to others in consensual exchanges, are rights the government is prepared to enforce. If two people each claim the same right to control a specific use of an object, and the government decides in favor of one and against the other, thenceforth one of them owns the right and the other doesn't. So property has a conditional aspect to it, which is examined in chapter three. It shows how closely every individual's ownership of property rights, and their value to her, depend on the government's choice of policy objectives and how it resolves the conflicts that result from them, and introduces a central idea of the book, *involuntary exchanges*.

Acting under the power of *eminent domain*, and constrained by the fifth amendment to the Constitution, American governments may take any person's property and put it to a public use as long as "just compensation," typically the market value of the closest available substitute for the property that's been lost, is paid the person whose property is taken. Takings by eminent domain, the focus of chapter three, are seizures of property, involuntary transfers of property rights from private individuals to the government that, had they been done by a private taker, would constitute a theft. But the requirement that the government pay the fair market value of what it takes

turns the confiscation into a compulsory sale, an involuntary exchange at a price over which the owner of the property has no control but which must meet the constitutional test of fairness. If eminent domain works perfectly, and the government's decision to take property by eminent domain always turns out as intended, once any involuntary transfer has been completed, the owner is compensated for the market value of what she's lost, and in this sense restored to the state she was in before the taking. And the government, having correctly estimated that the taking would produce more benefit for the public than cost to the private owner, and then putting its money where its mouth was by actually paying the compensation, is left "better off" than it was. The property has been moved from a lower valuing owner, the private holder, to a higher valuing one, the government and the public it represents, with the private owner fully compensated for what she's lost in the involuntary exchange.

Eminent domain is an institution that governs involuntary exchanges of a particular kind, where the property rights are taken by government from a private owner and government is required to pay the fair market value of what it's taken as compensation to the owner. It's also an institutional way station between explicit markets, which govern voluntary transfers of rights from private owners to private takers, and liability, which governs involuntary transfers of rights from private owners to private takers. Like markets, tort and crime, eminent domain too governs exchange in a specific exchange environment by requiring the taker, in this case government, to compensate owners for the costs takings impose on them. And like the other three, when it works perfectly, it unerringly moves rights and objects from lower to higher valuing owners.

In chapter four, both the dependence of property rights on the government's choice of what claims to enforce and their vulnerability to theft, involuntary takings by private takers, are illustrated in the especially rich and institutionally challenging context of intellectual goods. These are ideas rendered in some symbolic form, words, music, visual images and the like, and turning

them into objects that can be protected from theft and consensually exchanged in explicit markets poses especially difficult problems of governance. Because of the unique characteristics of intellectual goods, burglars with the necessary tools can easily break into the channel that links sellers to buyers and steal the goods as they pass in commerce, a kind of high-tech shoplifting that threatens explicit markets in ideas, with the immense benefits they bring to so many people, with extinction. The law's answer, strongly colored by the special qualities of these goods, is intellectual property, patents and copyrights, a peculiar kind of property right traded in a unique and especially fragile kind of explicit market.

In ideal markets, there is no theft, and in real markets, theft must be sufficiently controlled to enable consensual exchange to take place. How the law controls theft is the subject of Part II. Chapter five defines theft as the imposition of *external cost* by defining the imposition of external cost as theft, the uncompensated taking of a legally recognized right from its owner. Economists typically speak, again rather loosely, of external costs as simply being "imposed" on people: a person imposes an external cost by doing something that harms someone else without his consent and without compensating him for the imposition. But people do this all the time, in situations where the law doesn't interfere or entitle the cost bearers to any compensation at all. You can legally impose uncompensated costs on me, sometimes very large costs, in a thousand different ways, even intentionally or maliciously. You can insult me, or wear clothes that offend me, or laugh at me, or break my heart, or bankrupt me by selling at a lower price than I can, all without my being able to stop you or force you to compensate me for the pain your act causes me.

But there are some things you *can't* do to me without my consent or without compensating me, and if you do them, I can call on the law to stop you, or if you can't be stopped, make you compensate me for the loss. You can't assault me, or steal my wallet, or slander me, or even damage my fence by driving carelessly. I have a legal *right* not to have costs imposed on me in

any of these ways, and hundreds of other ways the law defines as torts and crimes. It's the violation of this right not to bear the costs of your action that makes the costs you impose external. Externality is thus the question to which liability is the answer. If you do any of these things, you'll have to compensate me in a liability proceeding for the external costs you've forced me to bear, for your seizure and annihilation of my right not to have costs imposed on me in this way. And if your act is a crime as well, you'll also have seized the rights of everyone else in the jurisdiction not to bear the costs of witnessing your criminal victimization of me, and you'll have to compensate them too.

By definition, when an exchange takes place, some physical or conceptual object must pass from trader to trader in one direction, while another such object moves in the opposite direction. It's these legally recognized rights to be free of the consequences of other people's unlawful behavior that are the conceptual objects transferred in the involuntary exchanges governed by tort and criminal liability. The victims of torts and crimes possess them until they're taken from them without consent by tortfeasors or offenders, and payment by these cost imposers of liability prices, compensatory damages in tort and proportional punishments in crime, completes the involuntary transaction begun by the tort or crime itself. Where they work perfectly, tort and criminal liability, like explicit markets, move rights to be free from torts and crimes from lower to higher valuing owners and, like explicit markets, contemplate the possibility that the taker, in this case the person committing the unlawful act, might be the higher valuing owner.

These objects of exchange aren't the same as property rights, but they're like them in that they signify the law's commitment to protect their owners from losing their value to others without compensation. They're not rights to unconditional possession or ownership of property rights, because nothing like this can possibly exist in an imperfect world. They come into play only when, and precisely because, property rights of some kind have in fact *been* unlawfully seized

from their owners. They're rights not to have one's property rights taken without compensation, a kind of meta-right that protects the ability of individuals to require that they consent to transfers of their property and thus makes consensual exchange and explicit markets themselves possible. In making them the focus of attention, I follow an analytical path broken more than forty years ago by Guido Calabresi and Douglas Melamed (1972), and call these objects of exchange *entitlements*.

A tortious entitlement is a right, held by every individual subject to the law, not to bear the costs imposed directly on them by acts defined as torts; a criminal entitlement is a right, again held by every person in the jurisdiction, not to bear the moral costs indirectly imposed on them by acts defined as crimes. A tort is an involuntary seizure of a direct victim's entitlement, and the liability proceeding is an attempt to do corrective justice, to compensate the victim in full for the monetary costs the tortfeasor has imposed on her. Damages, the compensatory price the tortfeasor must pay, are the value of the entitlement that's been taken, and payment of compensation is the second, restorative slap, the completion of the involuntary transaction begun by the tortfeasor's seizure of the entitlement. Tit for tat. A crime, similarly, is a nonconsensual taking of all the indirect victims' entitlements, and the liability process an attempt to make the punishment fit the crime, to inflict suffering, visible to the cost bearers and proportioned to the moral costs of the crime, on the offender that satisfies the desire of the cost bearers for just retribution. An eye, but only that, for an eye.

This is the story elaborated in Part II. Chapter six shows how the institutions of tort liability, the substantive law that distinguishes legal from illegal cost imposition and the costly, imperfect trial procedures that carry it out in individual cases, govern the exchange of tortious entitlements, how they bring the parties to the involuntary exchange together, establish liability prices that do corrective justice to both sides of the transaction, and extract those compensatory prices

from tortfeasors. Chapters eight and nine do the same for criminal liability, and chapter ten looks closely at the procedures through which criminal liability prices are assessed and begins to add a comparative dimension to the analysis. Together, they show how the differing characteristics of torts and crimes and the entitlements they involve pose different problems of governance for tort and criminal liability, and how those institutions have evolved differently to facilitate the completion of involuntary exchanges in these different environments. But they reveal at the same time a strong commonality between the two liability systems, and with small but significant differences, between them and the consensual exchange of property rights in explicit markets.

All three systems, in their ideal forms and to the extent possible in practice, seek to do corrective justice by ensuring that every transfer of legally recognized rights, property rights in explicit markets and entitlements in tort and criminal liability, from lower to higher valuing owners is accompanied by compensation paid by the taker to the previous owner for the full value of the rights taken. The equality of cost and price in markets and the governing principles of corrective justice in tort and proportional punishment in liability all demand that, in every transaction, losers of rights be paid the full value of the rights taken, but that takers pay no more than that for them. In all three systems, as a result, those who value rights more than their current owners are effectively encouraged to take them, so long as the owners are compensated for their losses.

As I show in chapters seven and nine, in the conditions of uncertainty under which every real liability system must labor, the principles of corrective justice that govern the establishment of liability prices make it impossible to achieve an ultimate placement of entitlements across the entire system that most contemporary economists, in the style of the pioneering English economist Arthur Cecil Pigou a century ago, would call "optimal." But despite their unwillingness to bend to the prescriptions of modern Benthamites, these ancient, Lockean systems keep trying to do what they've always been in place to do, even as the exchange environments in which they

must do it have changed dramatically. Together, imperfectly but serviceably facilitating compensated transfers across a remarkable range of challenging environments, markets, tort and criminal liability form the exchange order, an immense, encompassing system of institutions that governs the movement of rights and objects toward more valuable uses. All of us are born into and immersed in this vast order all our lives, though it scarcely impinges on anyone's consciousness. I hope to help us see it, and suggest how it can be studied.