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Abstract

This paper analyzes the role of uncertain costs and liability in the free market context and compares it with Calabresi's approach. Contrary to the mainstream literature, the free-market view claims that property rights should not be tampered with, that the tort-feasor should always be held liable and that the presence of unknown costs (accidents) makes no difference. In particular, bad luck is not enough to justify a claim on society. It is observed that Calabresi reaches the same conclusions as far as non-accidental costs are concerned, but tends to diverge from the free-market position in the presence of accidents. These views are illustrated by examining the *respondeat superior* doctrine and their implications are further developed by considering the case for unlimited liability.

JEL Classification codes: K10, K13
Keywords: accidents, respondeat superior, unlimited liability, social responsibility

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1 The Law-and-Economics view and free markets

Since the early 1960s, the activity of legislators has attracted increasing attention from the economics profession. In particular, while the public choice school has studied how individuals incline to making use of politics in order to create and exploit privileges, most of the modern law-and-economics tradition has focused on how to utilize law-making and judicial rulings to obtain efficiency.[1]

To be fair, the law-and-economics literature has not aroused great enthusiasm among free-market supporters,[2] who feel rather uneasy about law and economics' resorting to social efficiency as a justification for tampering with private property rights and engaging in extended policy-making.[3] Yet, by focusing on Calabresi (1961), one of the

[1] See Rowley (2005). References to efficiency in order to justify and assess policy-making date back to Adam Smith and, from a different perspective, John Stuart Mill. In recent times, the consequentialist approach to property rights has been made explicit by many authors. See for instance Demsetz (1967), Posner (1975) and, more prudently, Epstein (1995) and Kaplow and Shavell (1996).

[2] Yet, free-market advocates have not been absent from the law-and-economics agenda. Henry Manne and, from a broader perspective, Bruno Leoni, have actually made path-breaking contributions to this literature. See also Rizzo (2011), who offers a comprehensive view on the connection between the (Austrian) free market approach and the law.

[3] For the purpose of this paper, the free-market view identifies the school of thought that originated from the Scottish Enlightenment, evolved into Classical Liberalism (Humboldt 1852 [1969]) and later became what is now known as the Austrian School of economics (Menger 1871 [1950)], Mises 1963 [1949] and Rothbard 1993 [1962]). In a word, free-market advocates hold that all individuals have a right to be free from coercion and have a duty not to violate the liberty and property rights of other men. In this light, the role of government consists in protecting individuals from violence, while the judiciary should enforce contracts and sanction the use of violence. Thus, according to this understanding of the free-market view, the state cannot force individuals to consume public goods, and the judiciary must abstain from introducing regulation and assigning property rights.

The vision outlined above contrasts with the neoclassical approach, according to which the politician should select the social goals and the economist should identify the appropriate instruments – including taxation, regulation and, more generally, encroachment on private property rights -- to obtain these pre-defined goals. The Chicago view belongs to the neoclassical school. In particular, for Chicago, material wealth is the main scope of policy-making.

Although Calabresi does not belong to the liberal camp, he does not fall squarely into the neoclassical tradition, either. True, he does focus on an efficiency goal -- cost-minimization. Yet, in Calabresi's work, the term "cost" actually means "social cost" and takes into account social justice, which legitimizes redistribution regardless of (allocative) efficiency (Van den Bergh 2008).

seminal essays that gave origin to the modern law-and-economics research programme, we suggest that Calabresi's view on accidents and torts presents key methodological insights that keep him distanced from the mainstream, neoclassical tradition and that should in fact be appreciated also by free-market supporters. In particular, this paper underscores that Calabresi is wary of rule-making and rule-overhauling when they are driven only by efficiency concerns, and that he is reluctant to give in to technocratic planning even in the presence of uncertain costs. In a word, Calabresi's contribution provides an interesting alternative to the traditional Chicago view[4] and leads to a better understanding not only of the distinctive features of the free-market approach to liability but also of other issues currently debated, such as the consequences of the Lockean view of property rights and the role and limits of institutional analysis.

To illustrate our claim, in the next paragraphs we briefly clarify the nature of the costs to which liability applies, which is the focus of Calabresi (1961), and we review Calabresi's arguments on efficient legislation applied to the realm of accidents and torts. We then proceed to investigate the free-market perspective regarding two sets of situations in which uncertain costs play a role -- *respondeat superior* and limited liability (sections 2 and 3, respectively) – and assess the difference between the free-market perspective and Calabresi's. Section 4 concludes and draws attention to key issues for the future of institutional economics broadly understood.

1.1 On the nature of uncertain costs

Uncertainty plays a crucial role in the free-market context, since it creates opportunities for entrepreneurial endeavours, which in turn are the handmaiden of growth. Free-market supporters particularly draw on Knight (1921) to classify uncertain costs in three categories. The first includes "risky costs": costs the nature of which is known as well as the probability distribution following which they might occur. For example, we know that there is chance that our car will be stolen during the next six months and that, as a consequence, the cost of using that car might suddenly increase, since when the theft

[4] Although the Chicago school is generally wary of government intervention, it is not necessarily supportive of the free-market view. As mentioned earlier, the linchpin of the Chicago view is efficiency (wealth maximization), rather than individual freedom. This has consequences. For example, in the aftermath of the recent financial and public-debt crises, free-market advocates have been arguing for outright deregulation, while Chicago scholars have generally been in favour of better regulation.

occurs the residual value of the vehicle drops to zero. We can easily acquire information about how likely the possible theft is and buy insurance, if we want to do so.

Another kind of uncertain costs are "potential costs": their nature is known, but their probability distribution is not. A typical example is an earthquake: we know it might come one day, but we have vague or no ideas about "when" and how extensive the damage will be. In most of these cases we can still buy insurance, although the price of the policy is necessarily erratic.

Finally, we define a third source of uncertain costs as "accidents", the very nature of which is unknown. For example, imagine a situation in which a builder completes the construction of a house with materials that years later reveal unhealthy features that had been previously ignored or severely underestimated.[5] Under these circumstances, of course, insurance is not available, unless it is included in very comprehensive policies against "all kinds of illness".

In truth, this definition of accident is dear to the economics profession, whereas in the law-and-economic literature the word "accident" usually means "non-intentional injury". Yet, we incline towards underscoring the unknown nature of the accidental event (as opposed to its unintentional component), since the question we purport to analyze is not whether one can insure against unintentional injury, but rather what ought to be done in the presence of unexpected damage, and whether an individual can still be considered an aggressor if he has no possibility of taking action against accidental harm. Moreover, dealing with our notion of accidents widens the debate from the realm of allocative efficiency to that of ethics and distributive justice, which seems to be particularly appropriate in the context proposed by Calabresi.

[5] Admittedly, the notion of "unknown" suggests that the difference between potential costs and accidents could be faint. For example, Strabo and Pliny the Elder had noticed that something was wrong with asbestos, but their concerns were not taken very seriously. When and why did asbestos cease to be a source of accidental costs and turned into certain harm? Surely, at the time, sellers of asbestos-intensive products were not considered criminals.

For the purpose of our discussion, we refer to accidents when there is no strong evidence about the chain of causality leading to an adverse event or about the harmful content of a transaction – and let the judge decide when withholding relevant information is fraudulent.

1.2 Calabresi and the resource-allocation approach

What is the role of uncertain costs in Calabresi's and the free-market frameworks? Since the marginalist revolution, the normative view argued by the economics profession has been the so-called resource-allocation approach. Put simply, this approach maintains that individual behaviour in the market place produces efficient outcomes as long as prices are a good measure of scarcity. Both the free-market vision and Calabresi (1961) accept this argument and add that the buyer and the seller should bear the full cost of their decisions, since they are in the best position to know whether the value of one unit of good X is greater/smaller than the value of what they could buy with P_X. Forcing the seller to accept a price that does not compensate him for the sacrifice he makes when he gives away X would amount to an act of unjustified violence against his preferences, and there is no reason to ask third parties ("society") to subsidize the purchase of goods and services that such third parties are unwilling to buy.

In contrast with the Chicago view on law and economics, however, Calabresi (1961) warns his readers that efficiency and cost-minimization are not the only options and thus, he argues that rule-making should mimic the resource-allocation approach only when the nature of property rights is ambiguous.[6] Following from this, he suggests that the presence of uncertain costs does generate ambiguity and that, therefore, one may assign liability with a view to reducing deadweight losses (allocative inefficiencies), to promoting the purchase of insurance at the lowest price, or to sharing the burden. He concludes that when damages are not exceedingly high, monopolistic enterprises should be held liable, since the costs of accidents would erode their rents with no further consequences (e.g. a drop in output).[7] Calabresi argues that default liability for uncertain costs should also be assigned to the seller/producer in competitive environment, although for a different reason: the seller/producer is presumably in a better position to evaluate the nature and probability distribution of risky events and/or to contract away at least part of the cost to third parties (Calabresi 1961: 506-507). However, Calabresi

[6] For example, Calabresi (1961) mentions a situation in which a worker is injured on duty and the injury is caused partly by his own negligence and partly by the hazardous facilities of the location where he operates.

[7] Calabresi's argument includes two implicit assumptions. First, rents are undeserved and, therefore, no social harm is produced when they are dented. Second, since no marginal firm would be hit, production would not fall, which is desirable since in monopolized industries production is already sub-optimal.

also finds that in some contexts, the burden of uncertain costs could be absorbed/spread by introducing a state insurance programme financed by taxpayers at large[8] or by a lump-sum tax levied on all producers subject to uncertain costs.[9] In his view, this solution (taxation) is more appealing in the presence of accidents and substantial judicial costs; when enterprise liability might drive some companies out of business with significant secondary effects, such as lower output and more unemployment; or when the activities involved are extra-hazardous.[10] In short, consistent with Chicago but in contrast with the free-market vision, Calabresi admits that there are situations in which rule-making can encroach upon individual freedom for the sake of efficiency; he accepts that a victim has a right to compensation even in the absence of an identified tort-feasor; and he is also open to the idea that property rights can be created and managed by government.

In the rest of this paper Calabresi's vision is examined by considering two different areas in which the law-and-economics literature has produced important contributions. One is the analysis of accidents within the "*respondeat superior*" doctrine, the very area examined in Calabresi (1961) and to which Guido Calabresi devoted considerable attention during his entire scholarly career. The other area regards limited-liability

[8] A similar argument was already put forward in Smith (1923). Yet, this author did not engage in any utilitarian accounting, but merely claimed that it would be socially more expedient to frame the law so as to encourage the master to buy insurance.

Calabresi (1961: 519) is rather wary of the loss-spreading mechanism provided by private insurance schemes. In his view, whenever a producer buys insurance, he still generates significant losses to other parties, who would be charged higher prices (consumers) and would be offered lower wages and prices (workers and suppliers). These secondary effects would be magnified in a stagnant or declining economy, but would be relatively modest in monopolistic industries, in which the monopolistic firm would be more likely to translate higher costs into lower profits, rather than into lower output and lower demand for inputs. Under such circumstances, of course, the cost of accidents would be spread among the company shareholders.

[9] A lump-sum tax on producers would not affect marginal costs. Thus, prices and quantities would remain constant in the short run. In the long run, however, some marginal companies would leave the market, or new (marginal) producers would abstain from entering. In this light, therefore, the difference between producer liability and state liability with a tax on production raises two issues. One relates to efficiency, since in the latter case the incentive to avoid accidental costs would be smaller, and one relates to the desirability of redistribution among the sellers. In particular, a lump-sum tax would favour large, innovative firms, which would be required to pay a proportionally smaller tax and which would be more vulnerable to (unpredictable) accidents.

[10] According to the standard definition, extra-hazardous activities are characterized by frequent incidents involving large damages (see the previous section). Yet, one may wonder whether frequent events are really accidents. Furthermore, and following up on that, does that fact that an activity is extra-hazardous make it worthy of a subsidy? Shouldn't one hope, instead, that the presence of extra hazards would result in at least some enterprises ceasing operations and in an output decline?

firms, a field in which, rather than following the general principle according to which the actor should be held liable in case of mishaps, most scholars have agreed to let the actor off the hook and pass at least part of the harm provoked by accidents to the victim. Thus, the case of firm liability presents a perspective on default liability opposed to that observed under *respondeat superior*, and it shows how Calabresi and the free-market advocate can both challenge the prevailing view, based on efficiency and dear to the Chicago school.

2 Different perspectives on *respondeat superior*

How far is Calabresi's position from the free-market vision? As mentioned above, we try to shed light on this issue by looking at two areas: *respondeat superior* and firms' limited liability. *Respondeat superior* refers to the legal doctrine that assigns liability to the principal for the damages provoked by agents who operate on his behalf. As we shall argue below, *respondeat superior* illustrates that although the free-market perspective requires neither mandatory risk-spreading nor state insurance, it generates conclusions similar to those put forward by Calabresi. Likewise, a closer look at limited liability shows that efficiency is not necessarily compromised by the adoption of a free-market rule, according to which the owner/aggressor is always liable, regardless of intentionality. In contrast with Calabresi's position, however, we believe that the presence of accidents in fact strengthens the case for compliance with free-market guidelines and that the economic argument in favour of transforming accidental losses into a social burden at the expense of the taxpayer is vulnerable to criticism.

2.1 Respondeat superior: the free-market perspective

The free-market view emphasizes individual responsibility (the tort-feasor is always liable)[11] and contractual commitment. By contrast, all kinds of implicit/tacit agreements

[11] See Feinberg (1968) for the distinction between the concepts responsibility and liability. The former characterizes the author of the damage (the aggressor, in our case); the latter refers to the obligation to compensate the victim. According to the traditional vision, responsibility does not necessarily imply liability: "liability requires the capacity to act, predictability of the consequences, and the possession of control. In the case of groups, their degree of unitary character is an added factor that must be considered" (Collin 1996: 286).

are regarded with skepticism,[12] even when the acceptance of these agreements might legitimize efficiency-enhancing regulation. Put differently, free-market advocates argue that unless somebody else explicitly accepts liability in his stead, the owner is always responsible (and liable) for the damage provoked by his actions or by objects that are his property. In particular, within the context of exchange, the owner is the seller until the transaction is completed; and the buyer becomes the owner only after completion of the transaction. The principal/agent question, therefore, boils down to finding out who the owner is and – in the case of a contractual transaction – who has signed the contract (or on behalf of whom the contract has been signed). Thus, the agent is never liable by definition, unless he operates outside the principal/agent contract, and thus ceases to be an agent and becomes a principal.

In a word, the *respondeat superior* problem vanishes altogether from a free-market perspective. Compliance with the principles and implications of ownership/property suffices. Certainly, tradition and habit could shape default rules that apply to incomplete contracts and that the judiciary enforces. Yet, a default rule should not be binding and opting out should always be permitted.

2.2 Normative consequences

The free-market vision outlined above generates two normative consequences, depending on whether damage takes place while the transaction is in process, or after it has been completed. If damage occurs while the transaction is underway -- e.g., a company carries out maintenance works in a building and its employees (unintentionally) break a pipe or harm a resident -- this event is equivalent to an encroachment on the residents' private property or on their physical safety/health, respectively. In this case, the tort-feasor is the contractual counterpart, rather than the physical executor. Hence, if maintenance services are sold by his agent, the agent is liable,[13] since in this case the agent is in fact the principal, even if he pretends otherwise.

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[12] Skepticism towards implicit contracts goes back to John Locke, who underscored that contracts require explicit consent (Simmons, 1989).

[13] Under such circumstances, the "agent" should be held liable not only for damages, but also for fraud, if he actually induced his counterparts to believe that he was a mere agent.

On the other hand, if services are sold by the principal who then relies on the agent, the principal is liable.

Of course, the above is true independent of the accidental nature of the event. The presence or absence of criminal intent also makes no difference, since in both cases the offender remains the owner/principal. However, when damage is accompanied by a criminal intent, the eventual contractual/voluntary transfer of liability from the seller to the buyer becomes void, and both the principal and his agent are liable. To illustrate this last point, consider a situation in which the seller (a) knowingly conceals risky or potential costs, so as to increase the chances to close a profitable deal; (b) induces the buyer to accept liability for all accidents, should they materialize, and (c) subsequently tries to persuade the buyer that the observed risky or potential costs were in fact unpredictable (accidents). For example, maintenance might involve damage to a pipe, a possibility that the builder might not mention and that leads to an extra charge to the residents. Under these circumstances, if both the agent and the principal knew about this possibility and kept silent, then both the agent and the principal are liable, since their behaviour is equivalent to that of two accomplices who collude to bring the buyer to enter a contract he would not have signed if he had known the full story.

A different conclusion applies when damages emerge after the transaction has been completed. For example, suppose that an individual buys a car produced by a manufacturer and sold by a distributor/dealer employed by the manufacturer and acting on his behalf; and that after a few months the car breaks down, possibly harming a fourth person as a consequence of the malfunction. How would the free-market liability principle work in this case? Of course, if the malfunction was possible or even likely (and therefore not accidental), and if this possibility was known to the manufacturer and to the dealer, but not to the buyer, then the free-market approach would maintain that the buyer is liable towards the fourth person (the buyer driving the car is the aggressor even if his action was not intended to provoke any harm, and the fourth person is the victim), while the dealer and the manufacturer are accomplices and fully liable towards the buyer, who fell victim to fraudulent behavior.[14] By contrast, if the damage is indeed

[14] However, if the dealer explicitly requested the buyer to bring in the car for periodical check-ups and the buyer did not complied, then the buyer would be in breach of contract and the dealer off the hook.

accidental (i.e. completely unpredictable), then neither the dealer nor the producer can be held liable towards the buyer, unless they explicitly accepted liability (i.e. guarantee against malfunction and the damages that might follow) when signing the contract.[15] In other words, since the accidental event took place after the buyer acquired full property rights, the driver cannot claim he has been harmed by the manufacturer or the dealer, and the seller should be discharged from all obligations.

From a free-market perspective, therefore, liability for non-accidental damages is assigned according to the contractual agreement. Absent an explicit accord between the parties, the default rule prescribes that one should identify the victim, since there cannot be a tort-feasor without a victim, and then identify the tort-feasor (if there is one). In a contractual transaction, the offender (tort-feasor) is always the owner of the good to be sold or the contractor that vows to perform given services: he is the principal and by signing the contract, he takes responsibility and thus necessarily accepts liability. An employee selling/delivering a faulty car on behalf of his principal is indeed responsible and liable if he knows about the fraud, since he becomes the principal's accomplice, even if he is a mere agent. But if he does not know, then only the principal is liable, since the buyer's counterpart is the principal, while the agent is the instrument used by the principal in order to fulfill his contractual obligation.[16] By definition, however, the presence of accidents rules out fraud. Thus, the seller is liable until the transaction is completed, and unless a different agreement intervenes, the buyer must bear liability for

[15] The driver would still be liable to the fourth person, though, since there is no doubt that the driver is the aggressor and that the victim never agreed to waive the driver's liability. This contrasts with Calabresi (1961: 506), who refers to a car hitting a pedestrian and seems open to the idea of making the pedestrian liable if he happens to obtain lower insurance prices and thus enhance efficiency. Yet, there is no doubt that the pedestrian owns his health and life and that, when hit by a car, he is the victim, rather than the tort-feasor. One could perhaps appeal to the Coasean principle of reciprocity, and ponder whether it would be more efficient to deprive pedestrians from their right to life and physical integrity (the Coasean view taken to extremes). Nonetheless, it is factually obvious that running over a pedestrian is an action performed by the driver.

[16] True, there can be ambiguities and borderline situations. For example, what should one make of the term "faulty"? In most cases, however, competition ends up solving the problem. Producers know that if they want to sell their cars, they must guarantee against malfunction and the damages that malfunction could provoke. Thus, the legislator might certainly envisage default liability rules in order to spare the hassle of negotiating the terms of the guarantee *ex novo* each time. Nevertheless, opting out should always be possible.

Likewise, coercive liability rules could also be admitted, but only if they do not violate property rights. For example, the owner of a highway might restrict access only to those cars that have been guaranteed by the dealer and/or by the producer against malfunction. More generally, the owner of the highway should be able to make his own rules, independent of what the government might like.

what happens after he has acquired full ownership. The fact that there is a victim, but not an offender, is not enough to make the seller responsible for damages; since the seller can no longer be an offender after full ownership has been transferred.

2.3 Respondeat superior: is Calabresi's position really different?

The alternative to the free-market view on *respondeat superior* rests on two sets of arguments, both articulated in Calabresi (1961). One is based on cost minimization. Consistent with the line of theorizing dear to the neoclassical tradition, this explanation maintains that the principal has better control than the agent over the economic activity at issue and has access to a wider range of remedies to contain the cost of the accident. Thus, since the principal is in better position to contain the cost the accident, he should be held liable. The second argument, on which we focus our attention, claims that the cost of the accident would fall on the rich, because the rich has deeper pockets and fairness requires that he bear the burden (the ability-to-pay principle). In particular, this line of thinking assumes that no buyer would ever do business with a counterpart who has little incentives to keep his word and who might not be able to compensate the victim if he fails to deliver, provokes damages, or is subject to accidents. The law-maker (or judge) can thus infer that the principal's/seller's pockets are necessarily deep and, therefore, the principal/seller must be considered liable.[17] Clearly, the argument according to which the rich should pay impinges upon the role and meaning one attributes to the principle of social justice (or fairness), which in turn follows from the existence and nature of the social contract. Regrettably, however, the debate on the social contract is far from settled. Some authors follow Thomas Hobbes in believing that the social contract exists and that it is implicit. Others support John Locke's view, according to whom the social contract exists only if it is explicit. And a third group of theorists argues with John Rawls that the social contract is legitimized regardless of people's opinion as long as it derives from a shared set of hypotheses. By contrast, the free-market camp flatly denies the existence of any social contract.[18] As a result, since

[17] As mentioned in Smith (1923), almost a century ago Baty (1916) listed nine reasons that could explain the *respondeat superior* doctrine and concluded that there is only one real motivation, which boils down to deep pockets. A similar argument had also been made by Pound (1914: 233), who referred to the "exigencies of social justice".

[18] See Huemer (2013) for a free-market view of social contract theory.

the terms "social justice" and "social responsibility" are based on the constitutive elements of the social contract, by denying its existence, the free-market supporter empties the notions of social justice and social responsibility (and deep pockets).

In other words, it appears that both the free-market vision and Calabresi's reject neoclassical efficiency and the Chicago's emphasis on material wealth as the only relevant standard, and rather underscore – the free-market advocate more so than Calabresi -- that the allocation of liability should also take into account the meta-principle of justice. Of course, the notion of justice is not the same: as argued earlier, the libertarian maintains that justice consists in the preservation of freedom from coercion and in the protection of (uninfringeable) property rights. By contrast, Calabresi seems more inclined towards the "ability-to-pay" criterion.

In other words, the free-market view chooses the Lockean-Rothbardian approach to property rights.[19] Within this context, the very nature of accidents rules out the existence of responsible tort-feasors, and the victim has no right to hold anybody liable or to ask for compensation. In fact, the whole *respondeat superior* doctrine becomes a moot issue. Regardless of whom falls victim to the accident before the transaction is completed − the principal or the agent − the buyer's rights with regard to the principal remain unaltered. On the other hand, if the accident hits the buyer after the transaction is completed, he can blame neither the principal, nor the agent.[20]

[19] To simplify, the Lockean property rule claims that an individual can appropriate a good in two ways. The first is voluntary transactions: individual A receives the good from rightful owner B, either as a gift or in exchange for something else (e.g. money). The second way originates from the first-user-first-owner principle: an individual can rightfully appropriate a resource as long as that resource has not been previously appropriated by somebody else. According to Locke's *Second Treatise of Civil Government*, the act of appropriation is effective when the individual makes use of that resource: "Whatsoever then he removes out of the state of nature hath provided, and left it in, he hath mixed his labour with, and joined to it something that is his own, and thereby makes it his property".

The Rothbardian view reproduces the Lockean structure, with an important addition: Once an individual has mixed his labour with the previously unappropriated resource (e.g. a piece of land), his property right on the resource is established for good, even if the mixing no longer takes place – see Rothbard (1993 [1962]).

[20] Once again, from a free-market vantage point, the default rules are straightforward and depend on whether the cost is provoked by truly accidental circumstances. For example, there is no accident if the worker is negligent. Thus, the worker is responsible for his negligence and liable to his employer. By contrast, if the employer enjoins the employee to perform certain duties and the employee gets injured because – say – the machine he is operating breaks down or the scaffolding collapses, then the employer/principal is liable, insofar as he is the owner of the machine/scaffolding.

This also applies in the absence of a buyer. If an employee is struck by a lightening while performing on behalf of his employer, the employer is not responsible. But suppose that an agent drives a truck owned

By contrast, the vision resting on Calabresi aims at putting forward solutions that are both efficient and consistent with the expectations of public opinion (and therefore just, one is tempted to add). Hence, access to information and market power matter, and liability should be assigned to those allegedly better placed to tackle risky situations and/or buy cheap insurance (typically principals, rather than agents). Moreover, when the deep-pocket or the asymmetric-information argument does not hold water, the ultimate risk-spreading device – tax-financed subsidies covering accidental costs − becomes tempting. From Calabresi's perspective, the underlying assumption is that since an accident is nobody's fault, the lack of an offender makes society liable; and since the logic of collective action suggests that resistance to socializing losses is usually weak, forced solidarity obtains consensus and becomes morally acceptable.

Despite the differences with respect to the notion of (social) justice, however, we stress that Calabresi and the free-market supporter would agree on two important points. First, the allocation of liability should follow a default rule, according to which the principal is liable until the transaction is completed. The law-maker could intervene and introduce default rules for the sake of efficiency. Yet, default rules can be waved through a contractual agreement. Second, we observe that Calabresi's argument for risk-spreading when accidents occur and nobody is at fault is based not on efficiency, but on the existence of a hypothetical social contract, according to which the members of a community find it moral that when nobody is at fault, then the whole community – rather than an individual – should be considered a victim and thus suffer the consequences. Efficiency might play a role, of course; but it is not critical. To repeat, the free market supporter would also agree that efficiency is not critical, and would accept that risk-spreading depends on the existence of a social contract. Yet, while Calabresi is happy with its implicit or hypothetical version, the Lockean, free-market view would require that the social contract be explicit.[21]

by the principal, that the driver is blinded by a sudden flash of light, loses control and hits another vehicle. Then, unless the employer and his agent had previously agreed otherwise, the principal is liable, since he is the owner of the vehicle and (temporarily) of the labour input provided by the driver.

[21] According to Locke, in the absence of an explicit social contract, the role of the state consists in protecting and enforcing individuals' natural rights (physical integrity and property). Put differently, the state should not give substance to the notion of social justice, let alone carry out redistribution. In this vein, therefore, the rights of an individual correspond to his natural rights (liberty and property), and his

3 Limited-liability companies

As we have already suggested, the case of limited-liability firms offers an interesting opportunity to analyze the law and economics of accidents from a different perspective. In contrast with the general principle typical of the *respondeat superior* doctrine, limited liability makes individuals external to the firm – e.g. suppliers -- vulnerable to uncertainty, especially when extra-hazardous activities are involved. Under limited liability rules, therefore, the firms' owners become the beneficiaries of some kind of subsidy, which increases with the size of the uncertain costs and with the value of the shares in their possession.

The traditional justification for limited liability relates to the alleged dynamic efficiency of the companies characterized by this type of governance, as well as to the lower transaction costs that limited liability implies.[22] Put simply, it is usually argued that limited liability makes it easier for entrepreneurs to raise the amount of capital necessary to attain optimal size; that investors would not engage in activities characterized by substantial uncertain costs (including those provoked by bad managers), if they ran the risk of losing all their wealth; and that by letting shareholders off scot-free, a community would avoid squandering the resources necessary to find shareholders and close legal loopholes.

3.1 Limited liability: the free-market view

The libertarian – a synonym for free-market advocate -- is probably ready to acknowledge that the limited-liability regime is simpler. Yet, in his view, simplicity, allegedly optimal company size or subsidies to risk-taking are not enough to justify making the victim pay "the consequences that belong to the worst of all in the set of

obligations are his duties to respect the natural rights of the other members of the community and to comply with the terms of the social contract (when it exists).

[22] See for instance Epstein (1995: cap. 14) and Grundfest (1992).

possible outcomes of an action" (Collin, 1996: 286).[23] Consistent with what we have already argued, therefore, the principle of individual responsibility would induce the free-market supporter to consider the owner/offender liable by default in this context as well. In particular, liability regards both the owner's misdeeds and his employees', as long as employees operate within an agency agreement. The fact that the owner/offender is an individual or a company makes no difference. Certainly, there may be situations in which a counterpart voluntarily agrees to deal with a limited-liability business partner. This would raise no problem to a free-market advocate, as long as full liability is waived explicitly and the waiver also includes accidents.

In practice, a company can become an offender within two different settings: when it enters a contractual agreement and falls down on the job, and when it experiments with innovative activities in its laboratories and causes accidental damage. The former case presents no particular problem, for liability in the presence of breach of contract is not disputed. But unless the victims have waived their rights, the offenders is clearly responsible also in the latter scenario (dangerous experiments), since one can hardly decline liability unilaterally and let the victim deal with the consequences. The fact that damages are provoked by accidents makes little difference in assigning liability.[24] Furthermore, the involvement of a government authority does not alter the essence of the argument. For example, it might happen that the local authorities allow a producer to carry out experiments with potentially harmful materials and agree that the tort-feasor would bear only limited liability for the damages he might produce. Under these circumstances, however, either the local authorities have an explicit mandate and are empowered to ignore the residents' initial right to give permission and claim compensation;[25] or the local authorities (fully liable individuals) overstep their mandate and become the producer's accomplices, with whom they will thus share liability.

[23] See also Hansmann and Kraakman (1991), who advocated (proportional) liability and triggered an intense scholarly debate. In fact, full liability would not prevent large corporations from coming to the surface. There is also evidence suggesting that the pool of shareholders would not be necessarily small (concentrated ownership) or that "the shares would be perceived to be particularly risky" (Grossman, 1995: 78). By contrast, it is doubtful that gate-keeping legislation and regulation under a limited-liability regime lead to "optimal" behaviour by the managers, who might still fool shareholders and third parties.

[24] Of course, this does not imply that unlimited liability companies are vulnerable to all uncertain costs. In fact, companies frequently buy insurance against risky or potential costs, so that insurance companies end up with the cost of uncertainty.

[25] It is assumed that the residents homesteaded the area before the company started operating and causing damages.

3.2 Against risk spreading

Calabresi's emphasis on risk spreading suggests that accidents should be treated differently than the other categories of costs. In particular, he argues that society should be liable for involuntary and unpredictable torts, possibly for the sake of dynamic efficiency.

The free-market camp would object to that on two grounds, both of which are in fact manifestations of the principle of individual responsibility mentioned earlier. The first motivation draws on the conviction that costs are a function of knowledge and that the "discovery of knowledge" should develop free of artificial impediments. When applied to uncertain costs (including accidents), this means that the importance of damages also depends on the extent to which individuals can devise products and processes that reduce their impact. The free-market advocate knows neither the optimal speed of the discovery process, nor the identity of the potential discoverers. But he posits that (a) the discovery process is analogous to entrepreneurship: it is driven by a mix of intellectual curiosity, complacency, vanity and greed (profit-seeking) and can be best performed by individuals who respond to those stimuli and react accordingly; and (b) since legislators have rather tenuous notions about which way and how fast discovery should go, they should not be allowed to force its direction.

The second motivation relates to the principle of social responsibility as a whole, regardless of the accidental nature of the event The free-market view does not object to the existence of instruments providing broad coverage against catastrophic events. Unless this coverage involves protection against violations of one's natural rights, however, this should be the object of (voluntary) cooperative agreements and exchange, rather than of government action. Put differently, and in accord with the Humboldtian vision of social rights and obligations, the (minimal) state should not engage in insuring against accidents, let alone by taxing the population at large.

To summarize, when uncertain costs do not lead to bankruptcy, the liability question actually vanishes and, if insurance is indeed preferable, unlimited-liability companies will buy insurance anyway, with no need for social risk-sharing. For both Calabresi and the free-market observer, then, the crucial question are in fact catastrophic accidents, which cannot be neutralized through insurance and the cost of which cannot be covered by the firm's net capital. Should these costs be borne by the shareholders (unlimited-liability companies), or by the other stakeholders and society at large (limited-liability companies)? Who is right -- the free-market champion or Calabresi's supporter?

Unfortunately, the answer will hardly come from the economics profession. Social scientists will have to look elsewhere and, most notably, toward political philosophy: the nature of the social covenant, the meaning of social responsibility and the source of legitimacy of government coercion, which define the extent to which private property can be violated. To repeat a point already mentioned earlier, in order to define the default liability rule in the presence of catastrophic accidents, one should identify the victim when the accident hits a member of society. Is the victim society, of which the individual is just a component? or the individual per se? In the former case, there is no doubt that society as a whole should pay. For example, suppose that a new source of energy unexpectedly becomes available. As a consequence of this accident, companies operating in the traditional mining and oil industries suddenly go broke, and create significant secondary problems (contracts with workers and suppliers are no longer honoured). Following from our first scenario – society is the victim – the taxpayer will compensate the stakeholders by paying the debts of the failed companies and guaranteeing unemployment benefits to those who lost their jobs. Within this framework, the only open issue regards the features of taxation. If the victim of the accident is the individual, however, one has to evaluate the nature of the covenant between the individual and society. This evaluation is the essence of the second meta-issue. If one believes that the only implicit covenant between the individual and society regards protection against violence by other human beings, then the individual cannot ask society to pay for the damages caused by the accident. In fact, two explicit contracts are required: one between the potential victim and a government authority, and one between the government authority and the taxpayers who should provide the resources to pay compensation. By contrast, if one believes that the covenant also includes some kind of tacit collective insurance that materializes at the very moment one becomes a member of society, then risk-spreading might be justified, and the stakeholders might well ask the taxpayers (or some taxpayers) to replace the debtor after an accident has struck.

The analysis of the social covenant is well beyond the scope of this paper and we shall not pursue the matter further. Yet, we believe that both Calabresi and the libertarians would agree that the evaluation of the existence and nature of the social covenant is crucial, even if it pertains to the domain of political philosophy, rather than to that of law and economics. By contrast, the Chicago view is more likely to take the opposite view and maintain that the notion of justice is ultimately driven by efficiency, either because it is the only objective criterion upon which individuals might agree, or because this criterion would eventually prevail as a result of an evolutionary process in which the most efficient societies succeed at the expense of the others.[26]

4 Where do we go from here?

Although Calabresi's concerns for fair redistribution are well known, we have observed that he refrains from advocating violations of freedom of contract for the sake of wealth creation, let alone suggesting that judges become technocrats involved in cost-benefit simulations. Thus, Calabresi rejects much of the Chicago vision, which develops from the two Coasean principles of reciprocity and wealth creation.[27] The same also applies to uncertainty. The Chicago approach borrows on the neoclassical tradition and deals with uncertainty by resorting to regulation or -- rather – judicial intervention. Calabresi, by contrast, sides with the free-market perspective and considers uncertainty inevitable.

In the end, we believe that the only significant gap between Calabresi and the free-market approach in the realm of liability regards the connection between accidental events and social responsibility. From the free-market vantage point, the treatment of an

[26]See Holmes (1897) and, more recently, Posner (1985).

[27] According to the former, the identities of the victim and of the aggressor cannot be established *a priori*, but only after the policy-maker has reached his verdict on the matter. According to the latter, property rights should be assigned so as to reproduce the situation that would have emerged if the agents had been able to transfer property rights in an ideal world characterized by zero transaction costs.

accident relates to the existence of an injurer. If there is no aggressor, the victim has no right to compensation and the long-standing debate about negligence and strict liability becomes less relevant, since no precaution is possible in the presence of an accident.[28] Put differently, bad luck creates no rights and, therefore, the attribution of liability is a political decision that has little to do with efficiency or with natural law.[29] By contrast, Calabresi's perspective takes for granted the intrinsic justice of a social arrangement that ultimately redistributes wealth from the rich to the poor.[30] As we mentioned earlier, however, the nature of this debate pertains to political philosophy, rather than to economics: social responsibility ultimately depends on one's notion of social justice and, therefore, of society. These are crucial questions, of course; but beyond the scope of this paper.

Do the above conclusions have consequences for the relevance of institutional economics, which is so deeply indebted to the law-and-economics approach? By and large, the economics profession tends to justify policy-making by referring to the presence of market failures, defined as undesirable outcomes originated by unfettered interaction among individuals. From this perspective, therefore, it is argued that policy-makers should be responsible for creating and implementing the suitable social architecture and for enforcing desirable cooperation agreements that would hardly see the light spontaneously.

Speculation about the features of the appropriate social architecture has created a very substantial literature. Yet, it is undeniable that the bottom line remains somewhat frustrating and often boils down to a set of tautologies. For example, economists tend to call good institutions arrangements that lead to satisfactory economic performance and

[28] The reader might recall our definition of accident, which does not refer to unintentional injuries, but rather to unpredictable events (see section 1.1).

[29] By natural law, we refer to the individual's right to freedom from protection and private property. In this context, an individual cannot be held liable if he has not done violence to the victim, and the victim has no right to ask for state intervention. Moreover, one may observe that the free-market view on accidents and liability described here is also efficient. One could hardly imagine the magnitude of the transaction costs involved in assigning liability for the unpredictable damages provoked by a good that has been previously owned by several different actors and the producer of which is no longer in business.

[30] From Calabresi's perspective, therefore, the issue consists in deciding whether the damage originates from an accident or from another category of uncertain costs: society is in charge of the burden in the case of accident, and the victim suffers the loss otherwise. The free-market perspective is simpler: the owner always shoulders the burden, unless ownership is vitiated by fraud.

are accepted by the community to which they apply. That is of course equivalent to "theorizing" that good formal institutions should always comply with the common interest, which is reasonable, but operationally unsatisfactory. Indeed, it is not surprising that the static explanatory power of today's institutional economics is limited to underscoring the presence of transaction costs, as if legislation and regulation were just the constitutional counterpart to Posnerian law and economics. Efforts to shape institutional dynamics are also rather disappointing, since path-dependence is not really a theory about change, but about inertia, until a shock occurs. And of course, not much can be put forward from the normative vantage point, since the prescriptions for optimal institutional design follow one's beliefs about the range of actions of the policy-makers (and thus, belong to the realm of political philosophy) and about the possibility of restraining their discretionary power (and thus, come under the rubric of public choice and constitutionalism).

To conclude, by neglecting the political-philosophical side of institutional analysis, the original Coasean insights have offered neither satisfactory explanations of the dynamic of the rules of the game nor credible normative prescriptions. At their very best, they have offered empirical investigations to prove the obvious: growth suffers when entrepreneurial skills are stifled through regulation, expropriation and ideological intolerance. Luckily, Calabresi seems to take a different and – we believe – more promising route. He does not discard neoclassical efficiency reasoning altogether, but he is well aware of the problematic aspects raised by the notion of responsibility, both as the source of desirable incentives and as the essence of moral behaviour. To be fair, Calabresi is inclined to believe that social responsibility might eventually be a reasonable solution to the thorniest situations and, therefore, he runs counter to the free-market emphasis on individual responsibility. Yet, even the most rigid libertarian must acknowledge that Calabresi's way of framing the law and economics debate is more fruitful than the standard, neoclassical version; and that it leaves the door open to the much-needed contributions by moral and political philosophers. The interaction between these disciplines and the economic way of thinking is indeed where institutional economics should be heading in the future.

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