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ARTICLE

Mutualism: a model for managing risk in P2P sharing

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Abstract

This article explores how the risk structure currently adopted by the sharing economy, in particular the highly formalised and contrived systems of contract constructed by platforms, is largely constituted by the rules of property law. This effectively ties sharing activities to the old model of private property and its accompanying boundaries of privatised risk and value and undermines the efforts of collaboration to supersede those boundaries through peer-to-peer co-production of value. This article aims towards presenting an alternative model of risk distribution for the sharing economy that is more reflective of its collaborative nature. To this end, I will draw on ideas from commons and mutualism and propose the possibility of creative use of contracts to stipulate positive duties and obligations between collaborative partners as a device to construct a collective and/or mutual risk system.

Keywords: property law; law and economics; sharing economy; risk management

1 Introduction

The advent of the sharing economy has made possible the realisation of economic benefits hitherto infeasible. Scarce resources can support more use value and produce economic gains by reducing waste and potentially reducing overproduction (Martin 2016; Morgan and Kuch 2015; Zhu 2023). What used to be a limited activity practiced amongst close social circles has now expanded to include strangers in the community. Participants are sharing their personal possessions such as cars, clothes and spare rooms with strangers. Coupled with the economic benefits are the social values that sharing embodies, such as cooperation, communal management of resources and trust (Huurne et al 2017; McArthur 2015).

The preceding articles have all addressed various paradoxes of the sharing economy, but no paradox has been more intractable than that of the disjunction between the promises of sharing as a communal and as a service-oriented activity and its reality as a sector dominated by for-profit market transactionalism. Why sharing, with its tenets of collaboration and co-production, seems to invariably gravitate towards models based on market rather than communal exchange is the paradox addressed in this article. I propose that the problem lies in the legal infrastructures that facilitate sharing relations, specifically those that allocate risk amongst actors based on private property rights. These institutional rules on risk allocation and management bind sharing to the old transactional forms and hold back full collaboration, which must be overcome for sharing as an alternative form of economic activity to realise its potential efficiencies and benefits.

Private property makes sharing possible: we can share because we own (Kreiczer-Levy 2024; Kochan 2017). At the same time, the legal infrastructure of private property, which assumes exclusive ownership and use of resources, poses a limit on what and how much we can share. It does so by preventing our ability to share risk. For example, you might be happy to share the use of your car to strangers for a mutual benefit. Calculated into that benefit is your risk appetite: what if

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they steal your car or damage it or injure others while driving it? There is little opportunity to share those risks with your counterparty before those risks eventualise because the law allocates loss based on fault and, ultimately, on who owns the property. The result is that you might be disincentivised to share in the future because you must take on the risk of either losing your property or claiming recovery from the counterparty. Or you might be willing to share only if the benefit is sufficiently high, which might disincentivize the counterparty from sharing. Either way, a potential mutual benefit is not achieved. The inability to share risk undermines the ability to share benefit.

There is a dearth of theorisation on the nexus between risk and benefit in the context of property and law. The literature on sharing economies almost exclusively focusses on the sharing of benefits (Botsman and Rogers 2011; Bradley and Pargman 2017; Martin 2016; Morgan and Kuch 2015; Wallenstein and Shelat 2017). Those that address risk do so only in the context of tort liability (Berke 2016; McPeak 2016; Traum 2016; Vazquez 2020). Similarly, property theory focusses on how to maximise or allocate the benefits of resources through property law, without accounting for how risk functions in these allocations (Claeys 2014; Merrill and Smith 2001; Smith 2002). This gap starkly appears in the context of sharing property because sharing challenges the theoretical assumptions of property theory and law, namely that resources are best utilised when they are subject to exclusive control. This exclusivity is causing problems for sharing as an alternative property practice by constraining it to quid pro quo exchanges that are more amenable to existing risk infrastructures. To cultivate more communal sharing and lend potency to the disruptive potential of these new economic forms, new risk strategies thath are tailored to serve the purposes of sharing, including changing the relationship between risk and property, need to be instituted (Morgan and Kuch 2015).

I aim to address this gap in property theory by providing an original critique of the risk infrastructure that is inherent in property law and by drawing from sharing economy practices to suggest alternative. Mutualism offers a potential framework for theorising sharing practices. Peer-to-peer (P2P) arrangements contain an inherently a mutualist structure, and the long tradition of mutualism and mutualist movements have strong resonances with contemporary sharing economy agenda, which promotes sustainability, social over profit objectives and providing services to the community (Jackson 2016). My objective is to use the ideas of mutualism to advance a reconfiguration of property and risk that challenges the predominant system of privatised risk. Specifically, I will propose a model of mutual insurance and draw on real-life examples from sharing economy practices to show how these practices can or already mutualise risk through insurance. Mutualising risk is viable not only for the sharing economy but also for encouraging more collaborative practices in other areas of the economy. To that end, we must recognise the blind spots in the theoretical framework of property law and actively change them before collaborative property practices can become possible.

I will limit my inquiry to the sharing of tangible personal goods, thus excluding land and intangible property. The sharing platforms I will draw upon relate mostly to goods such as cars (Turo, Getaround), clothing (By Rotation, Style Lend) and household items (Share Shed, Library of Things). This is for clarity f analysis; the risks posed to and by tangible property are governed by the same doctrines, practical considerations and management techniques such as insurance. In contrast, intangible property is not vulnerable to the same risks of being damaged or causing damage as tangible property is, and a copyright is not capable of being exhausted in the same way that a car is. While land is susceptible to similar risks of being damaged or causing damage as tangible property, the doctrines of English land law involve concepts such as tenure and concurrent interests, which are not applicable to personal property. As such, I will adduce evidence of practice from sharing platforms that relate to land, such as Airbnb, but I will not be extending my critique of law and privatised risk to land law. I will also focus on P2P as opposed to other forms of sharing such as business-to-consumer (B2C) because B2C services do not carry the same normative injunctions for risk sharing because the financial positions and interests of the

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parties are too imbalanced. Such arrangements raise issues that more naturally relate to existing consumer regulations, which generally place risk on business actors and are outside the scope of my argument.[1]

I will begin in Section 2 by delineating how law constructs and privatises risk based on private property before I explore how this model is implemented in the sharing economy via platform service providers' user agreements and contracts; in Section 3 I will discuss the problems these agreements and contracts cause. In Section 4 I introduce the idea of mutualism and give a brief overview of its history and principles before I present my argument for using it as a model for structuring P2P risk-sharing relations. Finally, in Section 5 I propose key design features for a mutual insurance model that can be grafted onto existing sharing practices, thus giving real-life evidence of existing platform practices that are compatible with my proposals.

2 Law, property and risk

That holding property comes with risks seems a foregone conclusion: there is not only the initial cost of acquisition but also the ongoing risks of malfunction, damage, injury to persons and obsoletion attached to ownership of goods (Saccani et al 2017). However, what appears to be an inherent aspect of tangible objects (their integrity or destruction) is actually a legally constructed relationship (amongst the resource, its value and the person who must bear any loss to that value) that is mediated through the institution of property.[2] In other words, law translates the uncertainty of future events into discrete risks that are allocated to persons via means such as attributing liability, much like how insurance translates uncertainty into premiums using statistical, actuarial calculations. And in the specific case of uncertainties relating to resources and their values, the primary means of distributing and managing risk in law is to append the risk to ownership.

2.1 Risk legally appended to property

That risk is a legally mandated add-on to property through the purposeful form of (private) ownership rather than a natural aspect of holding or possessing property is evidenced by the variety of non-ownership resource management structures, which manage the burdens of adverse outcomes in different ways. The clearest examples of this management system are common pool resources such as those documented by Ostrom (1990) in which a community collectively contributes to the maintenance of a common resource, receives benefits according to communally determined rules and, most importantly, collectively bear the risks of adverse events such as natural disasters or bad harvests (Ostrom 1990; Takasaki 2011). Ostrom has noted that not all resources in a community are subject to collective governance and stewardship and that many communities adopt a mixed approach, with common pool resources existing alongside private modes of ownership (Ostrom 1990). Historically, the system of open field agriculture practiced in pre-enclosure England also operated on a logic of cooperative risk: arable land was allocated in such a way as to ensure that the burdens of poor-quality land were shared amongst different families; non-arable and fallowed lands were grazed in common; and sharing the means of production such as plough oxen was critical (Ault, 2006). The burdens of labouring the land and the risk of harvest from a particular furlong fell on individual tenants, but the risks associated with resource allocation, such as allocating land and enforcing grazing rights, fell to the collective.

[1]Consumer Rights Act 2015 Ch 2 places obligations on traders in consumer contracts to warrant quality and fitness for purpose, conformity to description and other factors; Consumer Protection Act 1987 Part I places strict liability onto producers and suppliers of goods for damage caused by product defects.

[2]'Value' can be understood in many ways, and in this article I use the term to denote both the utility, or the use value, of a resource as well as its exchange or market value. Hence, depreciation of value includes both loss of function and loss of monetary value.

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These examples show that uncertainty or risk does not arise passively from ownership but is determined by forced social choices. People are thus exposed to certain risks by virtue of being a contributing unit of a collective and being subject to communal institutions rather than by deciding to establish a proprietary relationship with objects (Cole et al 2014).

Viewed against this context, it is easier to see how the legal institution of ownership operates as a mechanism to bind risk to objects and, by extension, to persons with proprietary relations with objects. This is particularly true for tangible personal property for which fragmentation of title or possession, whereby there are multiple title holders or possessors, is not allowed (Sheehan 2017). This contrasts with land ownership that allows for multiple concurrent titles in time and interests in use, which can be explained by the variety of simultaneous use values that land can support. And while a separation of legal and beneficial titles is possible under a trust, the allocation of risk based on ownership remains the same: ownership gives the trustee management powers over the property, but owners must account personally to the beneficiary for the economic value. Hence, in the context of tangible personal property, it is not controversial to speak of 'ownership' in the sense of having the entire interest in an object.

Ownership as a legal institution represents a different form in which to connect the benefits of resources to its burdens and loss, whereby instead of apportioning benefits and burdens according to social norms of contribution and membership, ownership ascribes all outcomes, whether beneficial or adverse, to the exclusive responsibility of the proprietor. Put simply, an owner has exclusive access to the benefits of his resource, including its use and exchange values, but must also exclusively bear any burdens arising from the resource such as devaluation, harm caused to others and destruction of the property. By ascribing exclusive control and responsibility, ownership bypasses the social and collective elements of uncertainty and transforms them into private risks based upon private property (see Rothstein et al 2006 on the general topic of institutionalising risks). Thus, an entire neighbourhood may face and suffer the same risks from natural disasters, but the losses are for each ownership unit to manage individually, whether through self-insurance or premium insurance.

2.2 The ideological drive for privatised risk

This privatisation of risk through binding it to property is not simply one method of risk management to be chosen amongst many but benefits from a strong ideological drive that is derived mainly from economics, which is also advocated by property theorists who are proponents of private property. The process of transforming collective problems into individual ones roughly conforms to the economic concept of internalising externalities, and the law operates to internalise both costs and benefits of resource control through property rights and allocating these rights to people based on their legal obligations as owners (Demsetz 1967). This process is widely seen as necessary to achieving greater economic efficiency and avoiding a tragedy of the commons scenario, for the following reasons:

First is the much-rehearsed argument from the incentive standpoint that states that in order to incentivise the commitment of labour and capital to the improvement of property, the proceeds of that investment must be guaranteed exclusively to the investor; otherwise there will be little motivation to raise productivity or improve the stock of resources available to society because a rational actor will not work unless he can reap the benefits of that work. Many property theorists have advanced similar intuitions, from Locke's insistence that private property must be respected in order to protect and reward productive labour (Locke 1690) to Nozick's argument that private property raises productivity far better than the alternative of common property (Nozick 1974). The less rehearsed flip side of this argument is the notion that owners of capital should be rewarded for taking on the risks of ownership by being able to charge rents and to appropriate the labour that others expend on the property (Harris and Mooney 1994; Heinsohn and Steiger 2013). Thus, while benefits patently incentivise production, risk can also have an incentivising effect as it

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drives owners to maximise the efficient use of their property because they expect a return in exchange for bearing the risk.

A second argument is the commonly cited tragedy of the commons scenario, which results from what economists term free-riding behaviour and externalities. Simply put, if one does not bear the full risks of one's behaviour, such as fishing in a common pond, then a rational actor will underestimate the costs of that behaviour, such as overfishing, with the result that the negative effects, such as depletion of fish stocks, outweigh the benefits (Cf. Cole et al 2014; Hardin 1968). Free-riding behaviour is similar and occurs when actors can get away with not shouldering the burdens of the negative effects of their behaviour and thus free-ride on the positive effects of others' actions. In short, both involve a division of risk from benefit and the inability to attribute the costs and burdens of adverse outcomes to those who gained a benefit at the expense of others. This is a problem that plagues many common pool resources but is usually checked by the social norms of monitoring and sanctions. Private property ostensibly offers an alternative solution by parcelling resources into private lots and giving owners incentives to unilaterally police the use of their property – in other words, internalising the full costs of using a resource and decentralising the governance of those resources. This makes each owner's decision more rational and in the aggregate should lead to an efficient outcome (Miceli 1997, 119–126).

Arguments such as these are powerful ideological drives towards using private property as a means of organising resources, which is widely seen as superior to alternative models such as common or collective governance (Cf. Cohen 1995; Demsetz 1967; Nozick 1974; Waldron 1988). In these narratives, the disciplinary function of risk in incentivising efficient choices is often implicit but no is less integral. In privately owned property there is no opportunity to free-ride, and any adverse outcomes are borne fully by the owner, which incentivises them to mitigate risks by maintaining and generally ensuring the continued value and productivity of the property.

The dominance of this ideological position has come under widespread critique, particularly in recent years because of its inability to solve the problem of economic growth at the expense of intensifying ecological destruction (Ansari et al 2013; Cobb 2016). It is beyond the scope of this article to mount a comprehensive critique of this ideology, so I will confine my argument to demonstrating that even within the logic of prioritising economic efficiency, privatising risk is not necessarily the most successful way of achieving this end. And in the case of informal P2P sharing, privatised risk may actually hinder rather than promote efficient activity.

2.3 Legal doctrine

Private law doctrine is crucial to the functioning of P2P sharing; the internal structure of legal rights and their conceptual underpinnings are of immediate significance to how sharing is conceptualised and enforced by law. As demonstrated by high-profile cases such as Airbnb hosts inadvertently becoming landlords to their guests because they are unable to evict them (*Swan v. Uecker* [2016] VSC 313) or Uber drivers contesting their status as independent contractors (*Uber B.V. v Aslam & Others* [2021] UKSC 5), doctrine determines the possible sets of legal relationships in sharing. Here I address the connection between doctrine and the ideology of privatised risk before I turn to its effects on P2P sharing relations in the next section.

Although private law is increasingly but not entirely influenced by economic considerations, there are many instances where doctrine reinforces the drive towards privatising risks in property. This is in part due to the structure of legal obligations, which are constituted by sets of correlative individual rather collective rights (Hohfeld and Cook 1978; Honore 1961) and emphasise corrective over distributive justice (Weinrib and Oxford University Press 2013). The persisting influence of the Law and Economics School and other functionalist approaches to private law also strengthens the move towards economically efficient legal resolutions. Regardless of the motivating factors, it is clear that private law doctrine functions to reinforce the privatised approach to risk outlined in section 2.2 (Miceli 1997, 116–118).

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A prominent example is how tort liability is attributed to people on the basis of their legal relation to and control over property. Producers and occupiers are both classes of people whose liability depends on their exercising control over the property that subsequently causes harm, as established respectively by the Consumer Protection Act 1987 (c. 1) and the Occupiers' Liability Act 1957 (s. 1). Strictly speaking, they need not be owners of property: being an occupier requires only 'a sufficient degree of control over premises' rather than merely proprietorship (*Wheat v. E Lacon & Co Ltd* [1966] A.C. 552: 578 per Lord Denning). Nevertheless, owners are presumed to have the responsibility and the obligation to maintain the safety and integrity of their premises even in lieu of physical occupancy. Similarly, producers' common law liability is established by negligence under the *Donoghue v. Stevenson* [1932] A.C. 562 principle, which connects manufacturers to their ultimate consumers (with whom they are in proximity) based on the manufacturers' control over their products that are sold in the same state as where they were manufactured. In both cases, the risk of harm caused by property is placed on owners and possessors, both of whom have positive duties to mitigate risks by virtue of their legal relationship with the defective and unsafe property.

Another indication of doctrine reinforcing the connection between the risks of a property and its ownership are the rules on insurable interest, which determine who may insure property. Briefly: any party who will suffer a loss has insurable interest, and prima facie this includes anyone with a proprietary or contractual interest in property, or a legal or contractual obligation towards the holder of proprietary interest, such as bailees and lessees (*Lucena v. Craufurd* (1806) 2 Bos & PNR 269; *Waters v. Monarch Fire and Life Assurance Co* (1856) 5 EL & BL 870). The insurable interest of lessees is best viewed as deriving from their relationship to the owner rather than their relationship to with the property such that the interest being insured is the personal obligation rather than the property per se. Bailees are an exception as they have an independent proprietary interest in the possession and may insure the full value of the property regardless of their obligation to the bailor (*A Tomlinson (Hauliers) Ltd v. Hepburn* [1966] AC 451; for an argument based on commercial expediency, see *Petrofina (UK) Ltd v. Magnaload Ltd* [1984] QB 127: 135 per Lloyd J). While the rationale for insurable interest is to prevent fraud and purely ambiguous contracts (The Gaming Act 1845, s.18), nevertheless the function is to reinforce the connection between ownership of assets and the risks pertaining to that ownership.

2.4 Atomised risk

The ideological conviction that privatised risk leads to more productive and more efficient outcomes, coupled with the innate bilateral structure of private law obligations and its concern with individual liability, has resulted in an atomistic approach to risk. Risk relations are typically structured as exchanges of premium or consideration for indemnity, and it is difficult to construct a risk-sharing arrangement without also sharing ownership. While I am not completely rejecting the propounded connection between private property and efficient decision-making, or the bilateral structure of legal rights, I am questioning whether such arguments remain valid in the platform-mediated P2P sharing context or whether an alternative risk structure might better realise the goals that privatised risk purports to achieve. To that end, I will demonstrate how these practices represent drawbacks and inefficiencies in the context of P2P goods sharing in the next section.

3 Risk in sharing; platform mechanisms and problems

Directly applying private law doctrines to sharing economies would lead to owner–providers of resources bearing the entire risks and harms from sharing their property – not only those arising from damage or loss of the property but also those caused by the property to other persons or property that may be attributable to providers as bailors or suppliers of defective or dangerous

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goods (*Houghland v. RR Low (Luxury Coaches) Ltd* [1962] 1Q.B. 694; CPA 1987 (s.2)). Prima facie, this is a barrier to sharing that would discourage all but the most altruistic sharers. Neither is it feasible to expect participants to arrange risk mitigation between themselves, as the costs of doing so would be prohibitive to the activity of sharing, which is premised on low-cost and flexible access to resources. To circumvent this barrier, many commercial and nonprofit Platform Service Providers (PSPs) have constructed elaborate contractual regimes to manage risk amongst participants. While these are effective in surmounting immediate concerns and facilitating the continuation of large-scale P2P goods sharing, they also raise further transaction costs and normative concerns regarding the fairness of risk distribution.

3.1 Platform mechanisms

Most PSPs that facilitate P2P sharing operate a business model that rewards maximisation of users and transactions (Evans 2003; Evans and Schmalensee 2016). Specifically, the more providers to which a platform has to contribute resources for sharing, the greater its attractiveness is to potential user–consumers and the greater its ability to create market depth (Evans and Schmalensee 2016). Offering mechanisms for risk mitigation to reassure providers and to incentivise them to contribute resources is therefore crucial to PSPs' core business. Doing so entails circumventing or replacing the de facto legal rules on property and risk, and diverse platforms have employed very similar means, typically through determining obligations of participants through their user agreements (hereafter Agreement) and arranging insurance.

The foremost commonly pursued method is to shift risk from provider to consumer by inserting a clause into the Agreement that places strict liability for all damage to property onto the consumer for the duration of sharing, effectively making consumers the insurers of the good. Such clauses are found not only on commercial platforms such as Airbnb and Turo but also on nonprofit and community platforms such as Share Shed and Library of Things. Sometimes the PSP contractually undertakes to act as guarantor for the consumer's obligations as an additional assurance to the provider; prominent PSPs that offer this service include Airbnb and By Rotation. The result is to enforce obligations that would likely otherwise arise in tort through negligence or bailment but to do so *ex ante*, thereby increasing certainty and potentially allaying costly disputes (Posner 2014). However, shifting risk between private individuals with similar financial means achieves little cost or efficiency gains, and shifting risk from owners who may already have insurance in place onto users who have little opportunity to arrange risk mitigation is of dubious fairness.

A more formal method is either to arrange insurance for users directly or to extend platform insurance to users. Again, it is not only commercial platforms such as Turo or Airbnb that pursue this method but also community platforms such as Library of Things that provide public liability insurance to members for their use of borrowed items. Using insurance has the benefit of shifting risk away from private individuals onto commercial parties with greater financial means and thus achieves real efficiency and mitigatory effects. However, it is more costly to the users, who must generally pay additional premiums to increase their existing insurance, and there are overlaps such as hosts and guests both paying to insure the value of a shared vehicle.

3.2 Problems

3.2.1 Fragmenting risk

Both the legal and the platform approaches evince and exacerbate the fragmentation and atomisation of the risks of sharing. Rather than treating sharing as a joint activity that engenders risks that are peculiar and unique to the activity, the approaches fragment it into a set of individual activities undertaken by providers, consumers and platforms, whereby each activity comes with its own risks, which must be managed by the party undertaking that activity. Hence, the holistic

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activity of 'sharing' is divided into disparate activities undertaken by participants who are categorised as renters, rentees and online service providers, and the risks borne by each party are attributed to their individual liabilities, which are determined by their relationship to the shared property. Specifically: the provider, who risks that their property will be damaged or will cause damage to other people or property; the consumer, who risks the liability for damage to the shared property; and the PSP, who risks liability for causing loss by their negligence in administering the platform along with other contractual obligations to users that they have undertaken.

This approach poorly reflects the economic dynamics of sharing as a distinct form of economic exchange in which risks are more interdependent. Unlike businesses, lay participants do not have the advantage of diversifying risk across large customer bases and are, therefore, more exposed to the idiosyncratic risks of each transaction, which depend on their counterparty, asset, and other specific factors (Hopkin 2018, c.1). It also leads to ineffectual regulation because there is no standardisation of responsibility or expectation for participants, who face disparate obligations depending on whether they are hirers or hirees for consideration or are gratuitous lenders or borrowers and on whether their counterparty is a private or a business party.

3.2.2 Transaction costs

Another problem engendered by fragmentation of risk is its proliferation into supposedly independent risks that are dispersed amongst parties. Instead of consolidating all property-related risks and enabling participants to contribute towards the costs of mitigation, each party must manage their own independent risks, which replicates efforts in purchasing insurance or monitoring others' behaviour and leads to higher transaction costs. For peer parties to agree to risk allocation in every transaction is unfeasible, considering the fast-paced and episodic character of sharing. PSPs obviate these costs by centralising many transaction functions, including coordinating payments and communications and, most importantly, setting contract terms that effectively allocate risks amongst users.

While centralisation provides some efficiency through scaling, it cannot overcome all the frictions of shifting risks amongst users and enforcing risk allocations when losses occur. Placing strict liability *ex ante* onto consumers for damage to shared property may appear to give certainty, but disputes will invariably arise, which brings back the need to attribute fault: was damage caused by the consumer's action or omission, or was the damage caused by an existing, latent defect in the good? Such issues are not readily resolved by fact-finding but require establishing causation, which inevitably leads back to fault and the need for dispute resolution. One direct result is the processing fee charged by platforms to users for settling disputes, processing claims and generally administering their risk management systems. Another is the cost to users in proving their claim by compiling information and meeting with dispute counterparties and platform agents (Moon et al 2019).

3.2.3 Market exchange

Finally, the very fact of treating risk as an independent commodity to be shifted by indemnities favors the market exchange form of sharing. Market exchange can easily incorporate risk shifting because the exchange is constructed as a set of independent transactions rather than as a joint activity. The benefit of asset use is exchanged for monetary or in-kind payment, and indemnity is exchanged for the willingness of the other party to engage in the contract. However, this transactional model does not reconcile well with community-oriented sharing, in which the incentives and the pressures to participate cannot be expressed in terms of rational utility calculations and in which members may be expected to undertake duties that do not necessarily further their economic utility because of their standing or position in the community (Schor et al 2016). In other words, bearing risk is often part and parcel of wider commitments to a community,

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and members are not expected to receive compensation for their risk bearing, at least not in the form of indemnity or premiums.

A privatised risk model also favours for-profit or commercial platforms over gratuitous nonprofit platforms. The former can easily incorporate risk management as another cost of business, factoring risks against costs of premiums, monitoring, and guarantees to achieve positive net benefits for users and PSPs. For nonprofit platforms, such calculations are not as easy because allowing members to transfer their duties or contributions for money would be anathema to the communal ethos (Cf. Morgan 2024). Moreover, many available risk strategies such as insurance require monetary consideration, which nonprofit platforms may lack. Thus, fragmenting risk and subsequently shifting it through market exchange exacerbates the extractive form of sharing, which is based on monetising private resources and maximising individual utility.

3.3 The dilemma between sharing and risk

Combining the ideological and doctrinal drive towards privatising risk and the significant economic gains promised by sharing resources, we arrive at a dilemma: sharing offers economic benefits that are otherwise not realisable. Numerous PSPs have developed to facilitate peer sharing of all kinds of resources, driven by a mixture of profit and nonprofit incentives. Because of the risk structure of private property, the ability to shift or spread risk and loss is costly and limited. Participants can shift risk through contracts coordinated by the platform, which reduces the transaction costs of contracting but does not improve overall economy due to the equal financial standing of sharers and their similar abilities to absorb loss. Participants can also shift risk through insurance, either privately arranged or coordinated through the platform. While this achieves some economy by shifting risk to an insurer more capable of bearing loss, it is highly costly and is available only to participants with an insurable interest.

The overall outcome is increasing barriers to sharing due to the high costs of risk mitigation. Participants who are risk-averse will be disincentivised from sharing, and those who are profit-driven will include the cost of risk mitigation into their transaction and drive up the cost of sharing. This is borne out in the landscape of the sharing economy: nonprofit platforms generally host low-value goods that sharers can afford to lose (Library of Things, Share Shed) and depend on contractual indemnity for risk mitigation. For-profit platforms generally host high-value goods that sharers treasure (Turo, Airbnb, By Rotation) and depend more on insurance to mitigate risk.

The ability to manage risk leads to a natural selection for sharing arrangements, which either can afford the costs of mitigation, such as for-profit platforms, or have less need to mitigate loss, such as with low-value resources. This polarises the sharing economy and makes the area between the poles – namely, sharing high-value resources at low or no cost – legally and economically difficult, which precludes the realisation of significant economic benefits. The solution is to address the barrier, which is the risk structure of property and the means of shifting and spreading loss.

4 Mutualism: an alternative risk structure

I propose mutualism as an alternative model for structuring risk relations in P2P sharing. Mutualism has many affinities with P2P structures; thus a mutual risk management strategy may help to realise the immanent advantages of sharing by rationalising its risk relations.

4.1 Mutualising risk

At its core, mutualism involves members binding together and pooling their resources to achieve benefits that would be impossible to achieve individually. For example, consumer mutuals using their combined buying power to buy quality products in bulk and thus at bargain prices (eg. the

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Co-Op in the UK) or producer mutuals sharing the costs of marketing and selling their goods (eg. New Zealand's dairy producer co-operative Fonterra). Sharing risk is an inherent part of all mutuals: the consumer mutual mitigates the risks of volatile commodity prices, which its members cannot absorb individually, by coordinating buying and stockpiling decisions; the producer mutual spreads losses from price fluctuations among members and can sometimes even influence market prices in their favour.

Mutualism and mutual enterprises have a long history, dating back to medieval guilds, which offered their members sophisticated forms of insurance, pensions and other benefits (Leeuwen 2016, c.2). Its history is also continuous, as many existing large institutions such as farmer co-operatives, retailers, banks, insurers and so on can trace their origins to the mutualist movements of the 1800s (Birchall 2010). In some European countries, mutual enterprises eclipse their investor-backed equivalents in terms of market share and economic clout. There has also been a resurgence of interest in this alternative organisational form in response to the recent financial crises, which exposed the limits of firms run for shareholder profits, and there is some evidence of mutualism's comparative economic benefits (Birchall 2010, c.2; Cf. Cummins et al 1999; Jackson 2016).

The oldest institutional mutuals are arguably those that involve the direct management of risk for its members by taking on some form of insurance function. This is not due only to the nature of uncertainty being uniquely resistant to individual solutions (Dekking et al 2005, 181–190). Moral concerns around ambiguous contracts hindered the growth of premium insurance until the advent of actuarial logic (Daston 1988, 6–30), and alternative insurance structures such as Takaful still exist to cater to religious sensitivities.[3] Hence, in terms of risk strategies, mutuals tend to operate on principles of 'risk sharing', using diversification and law of large numbers to spread the burden of loss amongst members (Albrecht and Huggenberger 2017). Because members are essentially indemnifying each other and by extension themselves, this is seen to ameliorate the aleatory aspect of insurance because although members do not 'win' if they claim and 'lose' if they don't, they collectively guarantee the solvency of the fund and reap the benefits of surpluses (Kassim 2012). This contrasts with stock insurers, that operate 'risk transfers' by taking premiums as payment for bearing risk, investing those funds and retaining any surplus as profit (Heath 2006; Kassim 2012).

The underlying idea of mutualism, whereby benefits and losses are borne by the community and then allocated equally or equitably to individual members, contrasts with the idea of privatised risk, whereby benefits and losses are allocated based on proprietary interests. This makes mutualism a viable alternative framework to organising risk and is potentially better suited to enabling collaborative property practices such as sharing. Adopting a mutual model of risk can lead to a measure of risk collectivisation and risk sharing that is currently not possible.

4.2 Mutualism and P2P

Many of the functional and normative principles of mutualism align with P2P structures: they both represent pools of resources contributed by their members, which are administered for the service and benefit of members and rely on members' contributions to make up losses and maintain the viability of the common pool. Rather than outright collective ownership, participants in mutuals and P2P platforms are bound together by their ongoing commitment to the common project in the form of resources such as the money, time and assets they bring to the pool. P2P platforms exhibit many of the aspects observed in successful mutual organisations: there is an affinity group of persons sharing similar traits and principles; members of guilds were often from

[3]Takaful is a system of Islamic insurance that is finance-structured to circumvent the prohibition on ambiguous contracts. It is an economically significant sector in Islamic countries and is considered an alternative to investor insurance alongside mutuals. See Kassim (2012).

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the same village and had homogenous risk profiles by virtue of having similar lifestyles; and many sharing platforms, which tend to specialise in one type or class of good, have tribal and constitutional elements (Sheffi 2020). There is also a commitment to open membership that keeps risks diversified but also runs the danger of adverse selection and moral hazard, so mutuals are reliant on peer monitoring much like how platforms use peer reviews and ratings to regulate their users (Feldman and Chuang 2005).

Indeed, the affinity between P2P sharing and mutualism runs deeper. If all participants contribute resources, bear the entire risk for their contributions, and can access the common resources openly rather than transactionally, then they are already engaging in some measure of mutualised risk, as they are risking their resources in exchange for benefiting from access to others' contributions. For example, a community library that receives donations from members in exchange for access rights is still a P2P exchange, just one whose access rights are delayed, banked, and intermediated by the collective.

4.3 Formalising mutual relations in P2P

What can the principles and institutions of mutualism bring to P2P sharing, specifically in relation to risk management? As I have demonstrated, a collective P2P model already approximates many mutualist elements, but the predominant form of sharing remains P2P market transactions, which constrains sharing to bilateral exchange and precludes mutualisation of risks and benefits. The problem as I have diagnosed it lies in the privatisation of risk; therefore, consciously instituting more mutual risk relations on P2P platforms may be a first step to overcoming this problem.

Countering privatisation of risk entails instituting more formalised mutual risk management systems, such as secondary mutual insurance that is in addition to sharing transactions and using the existing platform infrastructure. The aim is to rationalise inefficient risk strategies and to increase utility by severing the connection between risk and ownership in order to mutualise the risks of sharing, with the intention of effectively shifting platforms away from being digital marketplaces and towards being de facto mutual organisations while preserving those aspects of P2P transactionalism, such as decentralised decision-making and flexibility, that underpin the economic advantages of sharing compared to actual collective ownership.

My claim is not that implementing mutual risk mechanisms will promote more collaborative sharing, although that may also occur, but that the risk structure inherent in sharing is already more mutual rather than private. Enforcing privatised risk shoehorns sharing into an economic form that is the most conducive to market exchange and, to some degree, prevents the realisation of other forms. Deliberately instituting rules to draw out the innate mutual dynamics of sharing will hopefully counteract those deleterious effects of private property ownership.

4.4 Caveats

Before advancing concrete proposals for a mutual risk system, I delineate some limitations of this approach. A foremost limitation of mutualism and P2P models is that they are essentially forms of self-help, which means that the amount and types of risk covered cannot be too excessive or unpredictable. For example, because identity theft, fraud and other operational risks, as well as risks with indefinite losses such as personal injury, are difficult for private individuals to guard against or absorb, they are not suitable for mutual management but must be delegated to PSPs. Takaful insurance operates a system whereby underwriting risks are borne by members, and business risks are borne by operators (Odierno et al 2012). As such, PSPs cannot be wholly mutualised but should retain some financial independence and continue to charge for their services. Another limitation is that the risks should be somewhat homogenous in frequency and magnitude and should be realisable within the time horizon of contributions. So, while it is entirely possible to have mutual life insurers, the fund must be guaranteed by similarly long-term

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commitments from members. For P2P sharing, which can often be ad hoc and episodic, the commitment time horizon limits the amounts and types of risks that mutualism can cover.

In response to these caveats, I will limit my focus to P2P goods sharing and its risks to tangible property. Risks of damage to tangible property can be easily mutualised because they are tied to physical property and present *ex ante* determinable amounts of loss. They are homogeneously grouped on platforms that specialise in types of consumer goods of similar value. They also materialise quickly enough to be addressed within the timeframe of sharing. Because the probability of loss is random amongst participants, damage in one case does not affect the probability of damage in another case. And participants are able to guard against moral hazard and adverse selection by monitoring the behaviour of others, identifying bad actors by their proximity to the shared good and enforcing sanctions by reporting and barring these actors from participating in future sharing. These features of P2P goods sharing conform to the principles of insurability (Rejda, 2011), hence making the risks of property damage in sharing a prime candidate for mutualisation.

5 P2P Mutual insurance

This section advances a model of mutual risk management that can be integrated into existing P2P sharing practices in order to bring risk management for sharing more in-line with its principles of collaborative benefit. I will present an insurance model that would essentially take the form of a secondary insurance scheme alongside the primary activities of P2P sharing. In this model participants contribute to an insurance pool and receive payouts if any losses occur during their sharing, such as damage to shared property. This is coordinated and administered through the platform mechanism alongside the property sharing activity in order to lower transaction costs. To maintain flexibility, contributions should be paid on each transaction, thus upon a user entering into a sharing agreement with other users, rather than upon the commencement of membership, which is upon registration with the PSP. As to whether the scheme exists for the benefit of providers or consumers or both and as to which party (or parties) should contribute can be calibrated to suit the particular purpose or situation on the platform; but generally, those who contribute and those who benefit should be from the same class, which is in-line with mutualist principles. In the following sections I delineate the design features of a mutual insurance scheme from a formal and an analytical perspective and, where relevant, use examples of extant platform practices to illustrate how my proposals might be implemented.

5.1 Features of mutual insurance

P2P mutual insurance for property damage will be very different from other, more conventional mutual insurance schemes. The limitations of P2P mutualism means that only low-value losses can be mutualised; hence, these schemes' primary function is not to insure the full value but to share and alleviate a small portion of the risks of sharing and to promote collective responsibility towards shared goods. As such, constraints should be placed on P2P mutual insurance funds, such as limiting payouts and placing underwriting risks on participants. Whether participants would respond to these incentives is purely hypothetical; however, for the purposes of good institutional design, such considerations are important.

5.1.1 Actuarial features

The actuarial logic behind insurance involves balancing future cash inflows (premiums) with outflows (payouts), which is informed by statistical projections of risk probabilities and magnitudes, and providing the opportunity to increase capital stocks through investment (Rejda 2011). These future cashflows are discounted to present values using a discount rate determined

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by the risk-free cost of capital (Giaccotto et al 2020). Predicting these factors accurately is vital to the sustainability of an insurance fund, and historically, many guild funds became insolvent due to their inabilities to predict risk probabilities and to balance loss ratios (Leeuwen 2016, 36–46). However, many of these features are not applicable to a mutual insurance fund administered through PSPs, which face much uncertainty over future contributions. Because I have argued that contributions to mutual insurance should be levied on transactions rather than on membership, these contributions are not guaranteed to occur with certain regularity or value. For example, Turo users are not, and should not be, required to pay for insurance as soon as they register their vehicle on the platform: they are required to pay only after they have agreed to share their vehicle with another user. The frequency and value of the insurance levy thus depends on how many sharing transactions occur, which can be predicted but not to the same extent that future premium cashflows for conventional insurers can be. Neither should PSPs invest users' insurance pool to meet future insurance obligations, as the desire to keep sharing flexible and open demands that surplus funds be redistributed to users whenever possible, both to fulfil the principles of mutualism and to avoid locking users into one platform.

The primary goal of mutual insurance for P2P sharing is to facilitate the sharing of risk and to reduce transaction costs of risk management. Such a scheme should be simple and inexpensive, therefore eliminating the need to engage in complicated statistical modelling or discounting. This means that all cashflows should be treated as present values: a dollar today is worth the same as a dollar tomorrow. Although it is foreseeable that the future prices of sharing may rise owing to factors such as inflation, the short duration of sharing means that damage can be discovered and claims can be processed quickly; thus the lag time between contribution and payout is sufficiently short to justify the lack of discounting.

In addition to operating in nominal present values, contributions and payouts should be determined as fixed amounts rather than as proportional to the value of loss, which means giving less than full reimbursement and placing upper limits on payouts. While conventional insurance typically covers full replacement value, such a strategy would not be optimal for mutual P2P insurance, as giving full reimbursement will result in less predictable outflows and expose the fund to potentially greater obligations than it can meet. This is because even though P2P platforms specialise in types of goods, there are significant variations in the value and condition of goods, which make their replacement value unpredictable and thus not sufficiently homogenous in terms of risk exposure. For example, a car-sharing platform can host a range of options from budget to luxury cars. The cost of replacing a luxury car will be significantly higher than that of replacing a budget car. Stock insurers can address such variations by grouping policies and adjusting premiums according to their reference class, essentially by charging higher prices for higher coverage. This means charging the parties who share a luxury car a higher insurance levy to cover the potentially higher payout. For the purposes of promoting more equitable and cooperative forms of P2P sharing, such a policy would be self-defeating. Discriminating amongst users based on the value of their shared goods undermines the very purpose of mutual risk management and perpetuates the extractive market exchanges by factoring risk as a private cost. So, instead of adjusting contributions based on property value, mutual insurance should simply cap payouts for all users regardless of the actual value of loss. This means setting an upper monetary limit on payout and leaving the excess loss to be mitigated through other means. Adopting a one-size-fits-all approach and ensuring that it remains viable by offering low payout limits best serves the purpose of P2P mutual insurance. It also drastically reduces the complexity and costs of administering the program, as there is no need to predict the magnitude of payouts, only their frequency.[4]

[4]The distribution of their mean and their variance, which if loss occurrences are stochastic, should be the aggregate of their random spreads (Gray and Pitts 2012).

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This means that setting a ratio of contribution to payout is crucial to the sustainability of the fund. For example, a contribution of $5 for a payout of $50 assumes that only one in ten cases will pay out, so as long as claims remain in that ratio, the program will be viable.

5.1.2 Moral hazard

Moral hazard is a persistent danger in all insurance programs (Arnott and Stiglitz 1988), and in the P2P sharing context, this danger means that either the owner/provider or the user/consumer is taking less care in sharing and using the asset because of the presence of insurance. Stock insurers use tools such as fiduciary disclosure obligations, premiums and other financial incentives for good behaviour and deductibles to counter moral hazard. I have shown why such a strategy is unsuitable for P2P risk sharing, which should give fixed payouts of less than full value. Here I address in more detail how the dual constraints of capping payout and placing underwriting risk on participants can aid P2P mutual funds in countering the contagion of moral hazard.

Conventional insurance policies providing full replacement value combat moral hazard by shifting some risk to the policyholder, such as charging a financially significant deductible to dissuade frivolous claims and incentivise risk mitigation (Mol et al 2020). P2P risk mutuals, which cannot feasibly adopt such a strategy, should instead adopt an inverse approach – that of bearing the risks of low-level losses only and leaving losses of greater magnitude to be borne by participants. This means that losses that exceed the payout limit are not shared but must be borne by either providers or consumers. Placing risk on either party can potentially create distortionary incentives for opportunistic behaviour, but on balance, I would suggest that placing the risk on the consumer is more efficient.

Providers who are indemnified by both mutual insurance and consumers' strict obligation to compensate damage will have less incentive to be careful about choosing their counterparty to guard against fraud or non-payment or about maintaining the property in working condition in order to reduce the chance of cumulative wear and tear. Limiting the payout to a small but non-negligible amount gives providers a meaningful financial guarantee while limiting the distortionary effects on their incentives. The limitation amount would depend on the average value of hosted goods and the average income relative to the value generated for providers, and the actual payout should be the lower of either the cost of repair or the limitation amount. For example, the recently defunct US platform Style Lend, which hosted P2P sharing of clothing worth $250 or more and typically rented at 10 percent of market value, offered insurance for up to $50 in minor repairs. A $50 insurance reimbursement would have represented at least the income from two transactions, assuming a $250 piece of clothing rented at 10 percent of market value, which amounts to a $25 income for each sharing transaction, or at most 20 percent of the total property value, assuming a $250 piece of clothing (Style Lend nd). This would have represented a small but non-negligible amount to the provider but would not have been sufficiently large to disincentivise them from taking care of their property altogether. Moreover, placing strict liability on consumers is not the same as insuring them since the providers still must bear the risk of non- or partial recovery from the consumer. And the profit-incentive effects of competition on providers are arguably sufficient to motivate them to offer well-maintained and functioning assets.

Comparatively, consumers have a greater likelihood of engaging in opportunistic behaviour because they bear no risk regarding the condition of shared property beyond that stipulated by the sharing arrangement, so without the threat of liability, they effectively have no incentive to take care of goods in their possession. As such, platforms ubiquitously place strict liability onto all consumers of their platform in the interests of certainty and countering moral hazard. Strict liability by itself is not necessarily conducive to responsible behaviour, however, since liability will follow regardless of how careful a consumer is, which can counterproductively lead to consumers taking less care and may even dissuade risk-averse consumers from sharing. However, the availability of insurance changes that incentive structure such that more consumers may feel

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comfortable sharing goods on the platform, without the platform having to indemnify irresponsible behaviour. Insurance thus alleviates consumers' liabilities, and, depending on the payout limit and goods shared, would cover most minor accidents and damages (see also Weber 2014). Although consumers remain strictly liable for any damage in excess of the payout, they should be able to offset amounts paid to the provider because of the insurance against their liability. For example, if a consumer purchased a $50 insurance plan for $5 and the total loss is $250, the first $50 of loss would then be deducted from their liability, reducing their total liability to $200. This would offer the consumer a measure of relief, as the amount they owe is reduced from $250 to $205 (the $200 liability, plus $5 for the insurance). The first $50 of loss may be considered 'mutualised', while the excess remains privatised. Essentially, this is the inverse of the deductibles system, in that the insurance covers minor losses but leaves major losses the liability of the policyholder. Under this system, participants may have an incentive to enter spurious claims because there is no cost attached to claiming damages. This hazard should be countered through encouraging peer reviews and tracking users' actions on the platform, with frequent claimants possibly barred from accessing mutual insurance protection.[5]

Finally, the moral hazard of both providers and consumers taking fewer precautions because of the presence of insurance can threaten the viability of the mutual insurance fund. For example, if past data suggest that one in ten transactions results in a claim and if contributions and payouts are determined on this basis, any increase in the incidence of claims will undermine the solvency of the program, unless extra capital is injected or unless contributions are raised and payouts are reduced. This danger of moral hazard is exacerbated if any shortfall in the fund is guaranteed by the PSP or its insurers or if this shortfall does not lead to negative consequences for participants. Hence, the underwriting risk should be borne by participants, meaning that any shortfall should be covered by raising contributions, lowering payouts or doing both (Odierno et al 2012). Calibrating contributions and payouts is straightforward, as these are levied on transactions instead of on membership, but it runs the risk of earlier participants benefiting at the expense of others by taking advantage of generous insurance, which raises the costs of insurance for subsequent participants. This could potentially lead to platform recycling as sharers flock to the newest platform with a clean insurance balance sheet in order to avoid these hazards. In practice, this eventuality is quite remote, given that the short time horizon and the open membership of mutual P2P insurance means that the PSP is not 'stuck' with bad policyholders, as the PSP can easily refuse to insure them by barring their participation on the platform. This further means that other disciplinary mechanisms, such as gathering public peer reviews, fostering community loyalty and applying social sanctions, become more important to maintaining both the integrity of the platform and the financial attractiveness of its insurance (Huurne et al 2017; Leeuwen 2016).

5.1.3 Surplus

A characteristic that differentiates mutual insurance from stock insurance is how underwriting surpluses are distributed. Stock insurers take the surplus as profit, whereas mutual insurers distribute it back to members. Distributing surpluses back to sharing participants will reduce the overall cost of risk management and will act as further incentive for good behaviour. Distributions should not be given to all existing members but, as much as possible, limited only to those members who have contributed to the pool within a certain period of time, such as those who have participated in a minimum number of transactions in the past twelve months, which should be feasible for PSPs that maintain records of all users' transaction histories (Srnicek 2017). While such a policy can have a positive effect by rewarding greater loyalty, it also ensures fairness as

[5]Many platforms already use ratings and other incentives such as priority listing to reward good performance; see Gunter (2018) and Teubner et al (2017). Insurance can be easily used as an additional incentive.

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participants who have contributed more because of their frequent transactions will receive more of the surplus.

5.1.4 Tokens

Finally, I briefly suggest the idea of a token system as an alternative to mutual insurance. A token system, whereby members gain tokens or rights to access common resources in exchange for contributing, can also be a good way of spreading risk. For example, Love Home Swap offers points that members can bank and spend against each other (Love Home Swap n.d.). If a member's assets are damaged or destroyed, they can use the tokens earned from contributing that asset to access replacements, thus remedying their loss of utility but not necessarily their loss of exchange value.

However, tokens can introduce unnecessary administrative complexity, which may increase PSPs' operating costs and, ultimately, result in higher costs to participants. Tokens also introduce greater unpredictability and breach the zero-discount-rate condition: if a participant can delay spending tokens for a number of years, the price of accessing assets may have risen since they first began accumulating those tokens, which would give them unfair entitlement over peers. It also rewards past rather than present participation, which is counterproductive to the ethos of community building.

5.2 Advantages

5.2.1 Collectivity with flexibility

The foremost advantage of a P2P mutual insurance system is to construct a risk system that better promotes the cooperative potentialities of P2P sharing while retaining the transactional flexibility of market exchange. Collectivising ownership would simplify risk sharing by collectivising risk from the outset; however, that would create allocative inefficiencies as the supply of resources would not be able to adapt as quickly to market signals and would increase the costs of maintaining common resources.

Tokens can also reduce flexibility by tying sharers to one platform and preventing them from sharing their resources elsewhere. If tokens are given for each transaction, only a fraction of the entire utility of an asset would be covered, which would be inadequate to remedy the provider's loss. If tokens are given in proportion to an asset's projected utility (i.e. how much use it can support and what people are willing to pay to access it), the asset's owner would have to be committed to sharing the asset for a considerable period of time, which reduces flexibility.

Mutual insurance has the advantage of flexibility over both collective- and contribution-based models of risk, as it does not necessitate commitment of future time, membership or contribution.

5.2.2 Applicability to different sharing models

Mutual insurance also does not necessitate the adoption of any particular model of access, as risk is severed from the ownership and the benefit structure. Because it treats risk as an independent commodity (much like private property models) and institutes a separate risk management structure on top of existing benefit-sharing structures, mutual insurance can be used equally to facilitate market exchange or membership-based open-access sharing. It can also apply to any type of resource, as its accounting unit is monetary and can be calibrated to the specific needs of any platform. For example, the sums involved in car sharing will be much greater than those involved in the sharing of household goods. It can also be combined with existing risk strategies such as private insurance, which can better cover the risks not covered under mutual insurance. For example, the car-sharing platform Turo operates a program in which the platform covers the first £5000 of damage, with the rest covered by insurance provided through Allianz (Turo nd, Insurance). While this is not explicitly set up as a mutual insurance plan, it effectively

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approximates a half-mutual/half-private risk strategy with Turo covering the first £5000 damage as business costs supported by the profits from users and the excess covered by an external insurer. Because my primary objective is to ameliorate the inconsistencies between the privatised risks of shared resources and the costs of risk management, mutual insurance is a suitable instrument, as it can be easily grafted onto existing platform mechanisms without wholesale reforms of their underlying property or sharing models.

5.3 Drawbacks

The primary drawback of my proposed system is its reliance on monetary value as the measures of contribution and compensation. While such a system may potentially reduce total monetary costs to participants and platforms, it may still prove too expensive for gratuitous and nonprofit sharing. If sharing is gratuitous, there is no apparent reason to pay for risk management *ex ante*: participants are willing to take their chances and distribute losses after they occur. This works because gratuitous sharing is motivated more by social incentives than is for-profit sharing, and the financial stakes involved tend to be much lower.

While commercial and for-profit PSPs may have the incentive and the means to institute a mutual risk program, they may be put off by the greater responsibility placed on them to administer this program. There is no clear incentive to take on additional costs when they can continue to outsource risk management to insurer partners, as they do now. And while there may be benefits of mutualising risk for their users, there is little clear advantage for PSPs, especially considering how the most established platforms such as Airbnb do not struggle to attract new users. Their adequate risk strategies, on top of their quasi-monopoly positions, means there is little reason to change.

This leads to the ironic outcome that those platforms that are most amenable in principle to mutualising risk cannot or will not be able to afford it, and those platforms that have the means have no commercial or principled reason to do so. My response is that the division is not so stark, as many commercial platforms already take on risk burdens for their users. For example, By Rotation, a UK-based clothing-sharing platform, guarantees lenders that damage to the clothing they provide will be covered by the PSP to obviate the risk of not being able to recover the cost of the damage from the renter (By Rotation). Style Lend, a recently defunct US-based clothing-sharing platform, indemnified their lenders (Style Lend). Similarly, car-sharing platforms all offer public liability insurance to their users as standard and subsume the cost under their transaction fees (Turo nd, Insurance; Getaround nd). Some nonprofit but non-gratuitous platforms such as the Library of Things also purchase public liability for their users' sharing activities (Library of Things nd, Terms).

These practices demonstrate that managing risks on behalf of users is commercially expedient. More broadly, mutualising risk need not be only through monetary or even insurance structures. Non-monetary and non-insurance approaches are conceivable, such as tokens, in-kind benefits and membership systems. I have proposed a monetary insurance scheme because it can best integrate privatised risk, as my foremost concern is to ameliorate the deleterious effects that privatised risk currently exerts on sharing by shifting it closer to a risk-sharing paradigm. But the guiding principle of mutualism can be applied in more fundamental ways such as building a fully mutual P2P cooperative platform (Morgan and Kuch, 2020).

6 Conclusion

Sharing access to resources represents an alternative proprietary and transactional form to the existing structures of private property and market exchange. However, it cannot fully realise its collaborative potential as long as legal and platform mechanisms continue to prevent risk from being shared alongside benefits. I have proposed a mutual insurance system as a method of

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making risk management more aligned with the principles of sharing, without disturbing the private property foundations of sharing, while gaining some economic and normative benefits. Looking forward, the principles of mutualism can be a valuable guide to developing more diversified property practices in areas beyond the sharing economy while also creating value through collaboration, such as urban resource centres or community housing (Bettini 2016; Jackson 2016; Labaeye 2019). Mutualism offers an alternative to the predominant market transactional form and points a way towards co-operativism.

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References

Albrecht P and Huggenberger M (2017) The fundamental theorem of mutual insurance. *Insurance, Mathematics & Economics* **75**, 180–188.

Ansari S, Wijen F and Gray B (2013) Constructing a climate change logic: An institutional perspective on the 'Tragedy of the Commons'. *Organization Science* **24**, 1014–1040.

Arnott RJ and Stiglitz JE (1988) The basic analytics of moral hazard. *The Scandinavian Journal of Economics* **90**, 383–413.

Ault, W (2006). *Open-Field Farming in Medieval Europe: A Study of Village By-laws,* 1st edn. Abingdon, Oxfordshire, UK: Routledge.

Berke D (2016) Products liability in the sharing economy. *Yale Journal on Regulation* **33**, 603–653.

Bettini F (2016) The rise of community land trusts in Europe. Available at https://labgov.city/theurbanmedialab/the-rise-of-community-land-trust-in-europe/ (accessed 15 November 2023).

Birchall J (2010) *People-Centred Businesses: Co-Operatives, Mutuals and the Idea of Membership*. Book, Whole. Basingstoke: Palgrave Macmillan. https://link.springer.com/book/10.1057/9780230295292

Botsman R and Rogers R (2011) *What's Mine Is Yours: How Collaborative Consumption Is Changing the Way We Live*. New York: Collins.

Bradley K and Pargman D (2017) The sharing economy as the commons of the 21st century. *Cambridge Journal of Regions Economy and Society* **10**, 231–247.

By Rotation (nd) Terms. Available at www.byrotation.com/terms (accessed 15 November 2023).

Claeys ER (2014) Productive use in Acquisition, Accession, and Labour Theory. In Penner JE and Smith HE (eds), *Philosophical Foundations of Property Law*. Oxford: Oxford University Press.

Cobb C (2016) Ecological and Georgist economic principles: A comparison. In Farley J and Malghan D (eds), *Beyond Uneconomic Growth*. Cheltenham, UK: Edward Elgar.

Cohen GA (1995) *Self-Ownership, Freedom, and Equality*. Cambridge: Cambridge University Press.

Cole DH, Epstein G and Mcginnis MD (2014) Digging deeper into Hardin's pasture: The complex institutional structure of 'the tragedy of the commons'. *Journal of Institutional Economics* **10**, 353–369.

Cummins JD, Weiss MA and Zi H (1999) Organizational form and efficiency: The coexistence of stock and mutual property-liability insurers. *Management Science* **45**, 1254–1269.

Daston L (1988) *Classical Probability in the Enlightenment*. Princeton, NJ: Princeton University Press.

Dekking FM, Kraaikamp C, Lopuhaä HP et al (2005) The law of large numbers. In Dekking FM, Kraaikamp C, Lopuhaä HP, ***et al*** (eds), *A Modern Introduction to Probability and Statistics: Understanding Why and How*. London: Springer, 181–194.

Demsetz H (1967) Toward a theory of property rights. *The American Economic Review* **57**, 347–359. https://www.jstor.org/stable/1821637

Evans DS (2003) The antitrust economics of multi-sided platform markets. *Yale Journal on Regulation* **20**, 325.

Evans DS and Schmalensee R (2016) *Matchmakers: The New Economics of Multisided Platforms*. London: Harvard Business Review Press.

Feldman M and Chuang J (2005) Overcoming free-riding behavior in peer-to-peer systems. *SIGecom Exchanges* **5**, 41–50.

Getaround (nd) Insurance. Available at https://getaround-assets.gumlet.io/legal/2022-12-22/1_Getaround-UK-Apollo-Third-Party-Motor-Liability-and-Damage-xs-GBP-5K-Certificate-of-Motor-Insurance_22-12-22.pdf (accessed 15 November 2023).

Giaccotto C, Lin X and Zhao Y (2020) Term structure of discount rates for firms in the insurance industry. *Insurance, Mathematics and Economics* **95**, 147–158.

Gray RJ and Pitts SM (eds) (2012) Short term risk models. In *Risk Modelling in General Insurance: From Principles to Practice* (International Series on Actuarial Science). Cambridge: Cambridge University Press, 90–146.

Gunter U (2018) What makes an Airbnb host a superhost? Empirical evidence from San Francisco and the Bay Area. *Tourism Management* **66**, 26–37.

Hardin G (1968) The tragedy of the commons. *Science* **162**, 1243–1248.

https://doi.org/10.1017/S1744552324000296 Published online by Cambridge University Press

Harris SL and Mooney CW (1994) A property-based theory of security interests: Taking debtors ' choices seriously. *Virginia Law Review* **80**, 2021–2072.
Heath J (2006) The benefits of cooperation. *Philosophy and Public Affairs* **34**, 313–351.
Heinsohn G and Steiger O (2013) *Ownership Economics: On the Foundations of Interest, Money, Markets, Business Cycles and Economic Development*. Abingdon, Oxfordshire, UK: Routledge.
Hohfeld WN and Cook WW (1978) *Fundamental Legal Conceptions as Applied in Judicial Reasoning*. Book, Whole. Westport, CT: Greenwood Press. https://www.cambridge.org/core/books/abs/wesley-hohfeld-a-century-later/some-fundamental-legal-conceptions-as-applied-in-judicial-reasoning/B4545D9FEE968E4B9FEA49C248683FAA
Honore AM (1961) Ownership. In Guest AG (ed), *Oxford Essays in Jurisprudence*. Oxford: Oxford University Press.
Hopkin P (2018) *Fundamentals of Risk Management: Understanding, Evaluating and Implementing Effective Risk Management*, 5th edn. London: Kogan Page.
Huurne M, Ronteltap A, Corten R *et al* (2017) Antecedents of trust in the sharing economy: A systematic review. *Journal of Consumer Behaviour* **16**, 485–498.
Jackson KT (2016) Economy of mutuality: Merging financial and social sustainability. *Journal of Business Ethics* **133**, 499–517. https://www.jstor.org/stable/24703718
Kassim ZAM (2012) The primary insurance models. In Gönülal SO (ed), *Takaful and Mutual Insurance. Directions in Development – Finance*. Washington, DC: The World Bank, 21–30.
Kreiczer-Levy S (2024) Property and use in the access economy. *International Journal of Law in Context* **20**.
Kochan DJ (2017) 'I Share, Therefore It's Mine'. *University of Richmond Law Review* **51**, 909.
Labaeye A (2019) Sharing cities and commoning: An alternative narrative for just and sustainable cities. *Sustainability* **11**, 4358.
Leeuwen MHD (2016) *Mutual insurance 1550–2015: From guild welfare and friendly societies to contemporary micro-insurers*. London: Palgrave Macmillan. https://www.cambridge.org/core/journals/continuity-and-change/article/abs/marco-h-d-van-leeuwen-mutual-insurance-15502015-from-guild-welfare-and-friendly-societies-to-contemporary-microinsurers-london-and-new-york-palgrave-2016-pages-xiii-321-including-figures-3-tables-40-75-hardback-7150-ebook/CFB5DA3759BB7C971609E5B22A0846E9
Library of Things (nd) Terms of borrowing. Available at https://www.libraryofthings.co.uk/terms-of-borrowing (accessed 15 November 2023).
Locke J (1690) *Two Treatises of Government: Second Treatise, An Essay Concerning the True Original Extent, and End of Civil Government*. London: Awnsham Churchill.
Love Home Swap (nd) Terms and conditions. Available at https://www.lovehomeswap.com/terms-and-conditions (accessed 15 November 2023).
Martin CJ (2016) The sharing economy: A pathway to sustainability or a nightmarish form of neoliberal capitalism? *Ecological Economics* **121**, 149–159.
McArthur E (2015) Many-to-many exchange without money: Why people share their resources. *Consumption Markets & Culture* **18**, 239–256.
McPeak AA (2016) Sharing tort liability in the new sharing economy. *Connecticut Law Review* **49**, 171.
Merrill TW and Smith HE (2001) The property/contract interface. *Columbia Law Review* **101**, 773–852.
Miceli TJ (1997) *Economics of the Law: Torts, Contracts, Property, Litigation*. Oxford: Oxford University Press.
Mol JM, Botzen WJW and Blasch JE (2020) Behavioral motivations for self-insurance under different disaster risk insurance schemes. *Journal of Economic Behavior & Organization* **180**, 967–991.
Moon H, Wei W and Miao L (2019) Complaints and resolutions in a peer-to-peer business model. *International Journal of Hospitality Management* **81**, 239–248.
Morgan B and Kuch D (2015) Radical transactionalism: Legal consciousness, diverse economies, and the sharing economy. *Journal of Law and Society* **42**, 556–587.
Morgan B and Kuch D (2020) Diverse legalities: pluralism and instrumentalism. In: *The Handbook of Diverse Economies*. Cheltenham, UK: Edward Elgar Publishing. Available at: https://www.elgaronline.com/view/edcoll/9781788119955/9781788119955.00047.xml
Morgan B (2024) Institutional design in commons-based sharing economies: Platform, care and place. *International Journal of Law in Context* **20**.
Nozick R (1974) *Anarchy, State, and Utopia*. New York: Basic Books.
Odierno HS, Kassim ZAM and Gonulal SO (2012) Challenges for Takaful going forward. In Gönülal SO (ed), *Takaful and Mutual Insurance. Directions in Development – Finance*. Washington DC: The World Bank, 129–142.
Ostrom E (1990) *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press.
Posner RA (2014) *Economic Analysis of Law*, 9th edn. New York: Wolters Kluwer Law & Business.
Rejda GE (2011) *Principles of Risk Management and Insurance*, 11th edn. Boston: Pearson.
Rothstein H, Huber M and Gaskell G (2006) A theory of risk colonization: The spiralling regulatory logics of societal and institutional risk. *Economy and Society* **35**, 91–112.

https://doi.org/10.1017/S1744552324000296 Published online by Cambridge University Press

Saccani N, Perona M and Bacchetti A (2017) The total cost of ownership of durable consumer goods: A conceptual model and an empirical application. *International Journal of Production Economics* **183**, 1–13. https://doi.org/10.1016/j.ijpe.2016.09.021.

Schor JB, Fitzmaurice C, Carfagna LB *et al* (2016) Paradoxes of openness and distinction in the sharing economy. *Poetics* **54**, 66–81.

Share Shed (nd) Terms and conditions. Available at https://www.shareshed.org.uk/terms-and-conditions/ (accessed 15 November 2023).

Sheehan D (2017) *The Principles of Personal Property Law*, 2nd edn. Oxford: Hart Publishing.

Sheffi N (2020) We Accept: The Constitution of Airbnb. *Transnational Legal Theory* **11**, 484–520.

Smith HE (2002) Exclusion versus governance: Two strategies for delineating property rights. *The Journal of Legal Studies* **31**, 453–487.

Srnicek N (2017) The challenges of platform capitalism: Understanding the logic of a new business model. *Juncture* **23**, 254–257.

Style Lend. Terms of service. Available at https://www.stylelend.com/terms (accessed 15 November 2023).

Takasaki Y (2011) Do the commons help augment mutual insurance among the poor? *World Development* **39**, 429–438.

Teubner T, Hawlitschek F and Dann D (2017) Price determinants on Airbnb: How reputation pays off in the sharing economy. *Journal of Self-Governance and Management Economics* **5**, 53–80.

Traum AB (2016) Sharing risk in the sharing economy: Insurance regulation in the age of Uber. *Cardozo Public Law, Policy & Ethics Journal* **14**, 511–544.

Turo (nd) Insurance. Available at https://help.turo.com/en_us/detailed-explanation-of-protection-plans-or-uk-hosts-B16_INxV5 (accessed 15 November 2023).

Turo (nd) Terms of service. Available at https://turo.com/us/en/policies/terms (accessed 15 November 2023).

Vazquez CG (2020) The sharing revolution: Changing times call for clarifying tort liability. *Louisiana Law Review* **80**, 623.

Waldron J (1988) *The Right to Private Property*. Oxford: Clarendon.

Wallenstein J and Shelat U (2017) What's next for the sharing economy? Available at https://www.bcg.com/publications/2017/strategy-technology-digital-whats-next-for-sharing-economy (accessed 15 November 2023).

Weber TA (2014) Intermediation in a sharing economy: Insurance, moral hazard, and rent extraction. *Journal of Management Information Systems* **31**, 35–71.

Weinrib EJ and Oxford University Press (2013) *The Idea of Private Law*. Rev. Book, Whole. New York and Oxford: Oxford University Press. https://academic.oup.com/book/4099?login = false

Zhu S (2023) Collaborative property: P2P sharing as property system. In Bettini F, Fischer M, Charles Mitchell KC, et al. (eds), *New Directions in Private Law Theory*. London: University College London Press.

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