

## Barriers and enablers around radical sharing

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Multiple social and ecological crises are currently unfolding, the tackling of which requires a thorough understanding of their interlinkages and root causes. More sharing of essential resources while increasing access to valuable goods and services, especially for the most vulnerable in society, has been proposed as an effective strategy to reduce environmental and social damage. However, a more reflective approach to sharing is needed to make sure that it does not worsen some of the issues that it aims to address. In this Personal View, we outline the principles of radical sharing, which highlight the salience of environmental limits, access to essential goods and services, and non-exploitative relationships. Furthermore, we discuss key enablers and barriers to radical sharing and a more successful integration into sharing practices that prioritise needs satisfaction for all within planetary boundaries. Critical perspectives on the sharing economy need to account for the role of power, politics, capitalism, and citizenship alongside the more widely discussed issues around exploitation, discrimination, and greenwashing.

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### Introduction

Humanity is now facing multidimensional ecological and social crises. The planetary boundaries approach has helped to define a safe operating space for human thriving and fair shares, warning about the transgression of boundaries related to climate change, loss of biosphere integrity, land-system change and altered biogeochemical cycles (ie, phosphorus and nitrogen).<sup>1,2</sup> Social deprivation is also looming large with substantial income inequality and poverty,<sup>3,4</sup> environmental risks to public health due to pollution and climate change<sup>5</sup> and life expectancy declines even in relatively affluent areas.<sup>6</sup> No country is yet providing a sufficient social foundation for basic human needs while at the same time remaining within sustainable levels of resource use.<sup>7</sup> In this process of destruction of homelands, livelihoods, and communities, all areas are exposed to some risk of environmental impacts but vulnerabilities are distinct and inequitable.<sup>8</sup> Addressing these social and environmental crises requires an engagement with provisioning systems, by which we mean “interlinked complex physical and social systems that mediate the ways in which resources are extracted and transformed into the material and cultural things that contribute to needs satisfaction.”<sup>7,9</sup>

Sharing and cooperation have long defined the basis of community relationships as a means to maximise chances of survival and collective wellbeing.<sup>10,11</sup> Increased sharing of resources within and across households has been suggested in the literature as an important approach to reduce environmental effects while improving people’s wellbeing.<sup>12–14</sup> However, sharing practices are not sustainable by default, and any deliberative effort to enhance social and environmental wellbeing must critically consider the strong barriers to sustainability. The research on sharing has formed distinct clusters that are relatively disconnected (eg, on the sharing economy, collaborative consumption, commons, fractional ownership, and distribution).<sup>15–18</sup> This fracturing of research on sharing has led to ambiguity around the purpose of the sharing agenda. This Personal View aims to re-emphasise the importance of improving the wellbeing of people and the planet in the sharing agenda

by providing a more detailed conceptualisation of the radical sharing approach. This Personal View maps important enablers and barriers around radical sharing, offering our views of measures and developments that could support sharing practices in advancing human and planetary wellbeing. We define enablers as principles, institutions, values, and practices that support the realisation of radical sharing, and barriers as those that impede it.

Concepts of sharing usually emphasise sharing resources with others based on values such as equality, care, community, and mutuality.<sup>18,19</sup> Sharing has potential to forge positive social ties, both as a type of communication (eg, online sharing of information) and as a type of distribution (eg, offline sharing of material goods); and when that potential is not realised there is a tendency to use terms other than sharing to describe the process.<sup>18,19</sup> A broad range of consumption practices have been discussed as forms of sharing, including renting, borrowing, and lending; bartering; swapping; redistributing; gifting; and buying previously used items.<sup>20</sup> However, definitions and content of sharing vary,<sup>16,20,21</sup> where some include and others exclude profit-oriented interactions,<sup>19</sup> the exchange of money (eg, commodity exchange),<sup>19</sup> careful account keeping,<sup>22</sup> and redistribution through centralised means<sup>23</sup> as forms of sharing. At the same time, the sharing economy has become an umbrella term for various initiatives that often include a degree of market exchange. A broader notion of sharing thus covers various forms of provisioning systems.<sup>7</sup> In this Personal View, we describe principles and tendencies around the shared use of resources, including more traditional forms of sharing (eg, sharing within the household and small community), but also centralised redistribution (eg, public services) and market initiatives (eg, digital sharing economy platforms). For example, shared use of resources in transport could take various forms through state provision (eg, public services such as sharing of road infrastructure and state-owned public transport), market provision (eg, car rental), community provision (eg, car cooperative or community bike schemes) and household

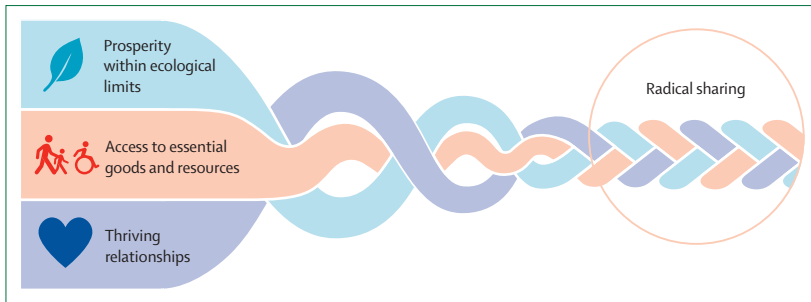


Figure 1: Principles of radical sharing

provision (eg, ride sharing within the household). By keeping a broad scope, we believe that our reflections have relevance for various definitions around sharing and the sharing economy.

There are numerous examples of sharing initiatives and platforms that are socially and environmentally damaging.<sup>14–16,20</sup> Rather than advocating for more sharing, we highlight key principles under which sharing demonstrates potential to support a broader socio-ecological transformation. We develop a vision for radical sharing, rooted in priorities around environmental stewardship, human need, and care as a fundamental part of social change. This vision aims at opening rather than closing the discussions around what types of sharing are most socially transformative and supportive of human thriving. Similarly, the list of enablers and barriers is non-exhaustive and could benefit from further elaborations and classifications.

### Search strategy and selection criteria

We searched databases, such as Web of Science and Scopus for articles published between Jan 1, 2000 and July 31, 2023. The search was conducted between Jan 1, 2021 and July 31, 2023. The searches were done on titles, keywords, and abstracts in English, focusing on the literature on sharing with implications for environmental effects, access to goods and resources, and thriving relationships. We adopted two sub-strings: capturing various search terms around sharing (eg, “sharing”, “platform economy”, “collaborative consumption”, “commons”, and “consumer cooperative”), and its social and environmental implications (eg, “environmental impact”, “carbon footprint”, “sustainability”, “access”, “community”). This Personal View is not a systematic review and the relevant literature captured in our search is non-exhaustive.

### A vision for radical sharing

In *Braiding Sweetgrass: Indigenous wisdom, scientific knowledge and the teachings of plants*, Robin Wall Kimmerer presents a powerful metaphor for sustainability, using the three rows of a hand-woven traditional black ash tree basket.<sup>24</sup> The first row symbolises ecological wellbeing and planetary limits, without which there can be no

“basket of plenty”.<sup>24</sup> The second row symbolises the importance of human needs. Planetary limits should be considered alongside guaranteeing access to essential goods and resources for everyone, now and in the future.<sup>7,25</sup> The third row, the quality of community and relationships, is key to balance the basket as it underpins both ecological and social wellbeing.

We base the vision for radical sharing on these three principles (figure 1). First, radical sharing is sharing that reduces resource use, resource scarcity, and waste generation, while supporting the embedding of societal activity within planetary limits. Second, radical sharing supports adequate social foundations through enabling access to essential goods and resources such as adequate nutrition, health care, housing, security, and decent living conditions.<sup>25,26</sup> Finally, radical sharing builds on strong caring relationships between humans and non-humans. Strong interpersonal and communal relationships are needed to “balance the basket”,<sup>24</sup> heal our relationship with the living world, and further sustain harmonious sharing and cooperation. Sharing norms and practices are instrumental in establishing the social conditions for adequate distribution of essential resources, as they generally target what people value and would like to keep—ie, what is essential.<sup>22</sup> Thus, sharing has a crucial role for thriving social relationships beyond the transfer of objects that people can easily part with.<sup>22</sup> We can only enable access to essential goods and resources within ecological limits when the social conditions for that are present.

Thinking along these lines of radical sharing is not new. Several authors have drawn distinctions between more—or less—radical types of sharing, for example, those that highlight the implications of the profit principle<sup>19</sup> and the dominant economic value orientation<sup>20</sup> for sharing. The emphasis on re-establishing non-exploitative relationships between humans and non-humans, and the significance of stewardship, cultural practices, and access to essential resources and livelihoods is prominent across Indigenous communities.<sup>8,11,27</sup> At the same time, these principles are well grounded in sustainability literature through the concepts of environmental thresholds, limits, and fair shares;<sup>1,2,7</sup> social foundations and human needs;<sup>7,25</sup> sustainable welfare;<sup>28</sup> consumption corridors;<sup>29</sup> and degrowth and sufficiency values<sup>12,30</sup> to list just a few. However, with our conceptualisation we seek to make a contribution by explicitly combining the three dimensions of ecological wellbeing, need satisfaction, and thriving relationships in the definition of radical sharing. We hope that this three-dimensional conceptualisation of radical sharing can support the more successful integration of these principles into online and offline sharing practices.

The vision of radical sharing that we put forward in this Personal View seeks to enhance societal and ecological health and wellbeing directly by guaranteeing basic needs satisfaction within planetary boundaries,

promoting non-exploitative relationships, and protecting vulnerable human and non-human beings. This vision is realistic and operational, yet it also faces crucial barriers of existing power and resource imbalances. Not all sharing practices fit this vision. For example, ride-hailing platforms and apps that displace public transport, and increase vehicle registration and deadheading miles (ie, travel distance without a passenger) also tend to enable racism, exploitation, and superficial social relationships<sup>16,31</sup> or escalate physical and emotional health risks,<sup>32</sup> which clearly contradict the principles of radical sharing.

In the following sections we cover each of the three principles: (1) sharing that provides prosperity within ecological limits, (2) sharing that supports access to essential goods and resources, and (3) sharing that nurtures thriving relationships. Within each principle, we discuss powerful barriers and enablers of such sharing, including physical, social, and economic factors and dynamics. Supporting factors can foster radical sharing, while inhibiting tendencies reduce the general capacity of sharing to enhance social and environmental wellbeing or present barriers to the emergence or upscaling of radical sharing. We summarise important barriers and enablers in figure 2.

### Sharing that provides prosperity within ecological limits

#### Enablers

##### *Economies of scale*

The mechanisms of some sharing practices help to reduce environmental impacts. Economies of scale at the household, community, market, and state level act as such a mechanism, reducing resource requirements per unit through shared consumption. For instance, previous research shows that when the number of people per household increases, less domestic energy and associated greenhouse gas emissions are generally required to fulfil personal needs for living space, heating, appliances, and tools.<sup>33–37</sup> The mechanism of economies of scale is thus a motivator for sharing as it reduces associated environmental burdens per person in the context of limited carbon budgets and resources. Evidence highlights that sharing within and between households tends to reduce air and nutrient pollution,<sup>38,39</sup> greenhouse gas emissions,<sup>33,34,40</sup> ozone layer depletion,<sup>41</sup> and the effects on resource consumption and biodiversity<sup>34,40,42</sup> due to economies of scale. Increased intra-household and inter-household sharing could contribute to easing ecological pressures in these areas, whereas global trends of smaller household sizes and rising individualism reduce this potential.<sup>33,34,43</sup>

##### *Adequate infrastructures, landscapes, and technology*

Adequate physical infrastructures, landscapes, and technology help to reduce consumer demand through improvements in the durability of goods and assets, their repair and maintenance,<sup>44</sup> shared properties (eg, apartment

	Sharing that provides prosperity within ecological limits	Sharing that supports access to essential goods and resources	Sharing that nurtures thriving relationships
Enablers	<ul style="list-style-type: none"> <li>• Economies of scale</li> <li>• Adequate infrastructure, landscape, and technology</li> <li>• Sharing and sufficiency values</li> <li>• Collective provisioning</li> </ul>	<ul style="list-style-type: none"> <li>• Public services and commons</li> <li>• Social norms around levelling</li> <li>• Cooperative democracy</li> </ul>	<ul style="list-style-type: none"> <li>• Mutuality</li> <li>• Community proximity and trust</li> <li>• Solidarity and care</li> <li>• Autonomy</li> <li>• Inter-connectedness</li> </ul>
Barriers	<ul style="list-style-type: none"> <li>• Rebound effects and growth</li> <li>• Enclosure and concentration</li> <li>• Affluence and consumption norms</li> </ul>	<ul style="list-style-type: none"> <li>• Private property norms</li> <li>• Homophily</li> <li>• Inequality and exploitation</li> </ul>	<ul style="list-style-type: none"> <li>• Commodification</li> <li>• Individualism</li> <li>• Competition</li> </ul>

**Figure 2: Enablers and barriers around radical sharing**

Includes physical, social, and economic enablers and barriers across the three principles of radical sharing.

buildings), and the use of idle capacity<sup>14,45</sup> (eg, communal sharing of equipment). Some infrastructures and landscapes are more conducive of the sharing that reduces environmental impacts. For example, mixed land use developments, public infrastructure, and population density provide more efficient and equitable public access to goods and services<sup>46,47</sup> as well as support community engagement and social cohesion.<sup>36,48,49</sup> Public transport and sustainable housing infrastructures are long lasting and, when accepted, promote desirable consumption patterns through positive behavioural lock-in (ie, establishing sustainable behaviours as the default through appropriate infrastructural and technological contexts).<sup>50</sup> Countering trends include preferences for housing in low-to-medium density suburban areas, short-term urban planning,<sup>50</sup> and rigid infrastructure that discourages sharing (eg, housing designs that incentivise individual residents to live in overly large homes).<sup>33,35,51</sup>

##### *Sharing and sufficiency values*

The sociocultural context in which consumption takes place can also strongly influence the uptake of sharing and sufficiency values.<sup>45</sup> For example, social norms around *lagom* (ie, just the right amount) in Scandinavian societies contribute to the widespread acceptance of community-based forms of living and redistribution of resources from more to less wealthy members of the community.<sup>45</sup> The presence of such values and norms makes it easier to publicly accept and embed sharing in everyday practices.

##### *Collective provisioning*

Collective provisioning of essential goods and services (eg, through universal basic services<sup>46</sup>) that is sufficiency-oriented and democratic could also support sharing as a visible and institutionalised example.<sup>4,46</sup> Such public provisioning has the potential to pioneer sustainability practices at a wide scale and reduce demand for short-term solutions and downstream interventions aimed at tackling harmful consequences for ecological and human systems.<sup>46</sup> Nevertheless, it is essential that such provisioning explicitly considers local and global environmental limits.<sup>4</sup>

## Barriers

### *Rebound effects and growth*

The analysis around the ecological benefits of household and communal sharing tends to focus on first-round effects.<sup>16</sup> However, cost savings (among users) and extra income (among service providers on sharing platforms) are examples of rebound effects that can stimulate new demand and increase environmental footprints.<sup>14,52–54</sup> Therefore, sharing can lead to additional resource consumption through added service requirements (eg, driving to a shared tool library) or the substitution of activities with low environmental impacts (eg, using a shared electric scooter instead of walking).<sup>14</sup> These potential negative environmental impacts of sharing act as a barrier to radical sharing, working against its environmental objectives. The general logic around sharing suggests that when shared consumption reduces idle capacity of goods, the consumption of goods is more efficient<sup>17</sup> (eg, sharing an under-used vehicle and thus reducing the overall number of vehicles that need to be produced to meet travel demand). However, a primary focus to reduce idle capacity can have problematic consequences if it is not guided by the overall intention to reduce environmental impact.<sup>14</sup> For example, the availability of low-cost ride-hailing services can increase total travel demand and hence also fuel demand and greenhouse gas emissions when there is a substantial increase in deadheading miles.<sup>14,31</sup> At the same time, sharing that creates rebounds through cost savings can have positive social effects for disadvantaged people (eg, those in energy or transport poverty) who are then enabled to better fulfil their human needs. Increased consumption by some groups in society could also be more than compensated for by reductions of luxury consumption (ie consumption that is unnecessary for needs satisfaction and that contributes to transgressing planetary boundaries).<sup>35</sup> The evidence on possible rebound effects indicates that environmental benefits of sharing can be strengthened if contextual policies are in place that prevent an overall increase in resource use.

On a macro level, the potential for rebound effects is highest in growth-seeking and profit-seeking contexts. In capitalist societies, there is an economy-wide necessity for producers to continually accumulate and re-invest profits to expand production as a precondition for the stability of the economic system.<sup>4,29</sup> Related commodification and profit making arise as general tendencies that allow for expansion, in which goods and services (eg, housing, education, and health care) previously provided by non-market actors (eg, state, community, and household) are incorporated into the market logic.<sup>4</sup> Various mechanisms to stimulate demand and realise profits, including advertising and planned obsolescence, seek to reduce the utilisation time of goods and, therefore, act as barriers to sharing and its environmental benefits.<sup>4,29</sup> Thus, sharing and other forms of material efficiency that reduce consumption and production constitute a fundamental contradiction to growth imperatives.<sup>4,51,56,57</sup> Without

addressing economy-wide rebound effects, sharing initiatives are unlikely to reduce overall resource use in the absence of concrete limits to resource consumption.<sup>57,58</sup>

### *Enclosure and concentration*

The enclosure of essential goods and resources refers to the dispossession of people from common resources such as common land in both legal and physical terms.<sup>4</sup> Such enclosure dynamics reduce the potential for resource sharing and enable the extraction of profit on the basis of ownership and control.<sup>4,59</sup> When societies impose limits on production and consumption (eg, as a means to stay within planetary boundaries), consumption gains among some groups or individuals inevitably require consumption losses among others.<sup>59</sup> That is, restricting opportunities for expansion for environmental reasons could encourage private actors to make more powerful claims over existing resources—eg, through extending and exploiting control over (artificially) scarce assets.<sup>59</sup> In a context of politically enforced limits on resource use, additional policies would hence be required to constrain the concentration of ownership, thus limiting this potential barrier to sharing. The economic concentration of ownership also translates into political control, which can hinder sharing and its environmental potential. Concentrating political power can encourage actors to oppose redistribution efforts, advance their economic agendas, and weaken environmental policy.<sup>60</sup> On a macro level, opposition from special interests have been identified as the largest obstacle to achieving carbon targets.<sup>61</sup>

### *Affluence and consumption norms*

Social norms around affluence and consumption can also be a key barrier to sharing that reduces environmental impact. Affluence drives biophysical resource use directly through encouraging more consumption, but also indirectly through driving consumption norms away from sufficiency and sharing.<sup>62</sup> Striving for high social status often drives conspicuous consumption and associated environmental degradation. Some positional goods are only precious when others are excluded from their use;<sup>12</sup> the desirability of scarcity in this context directly diminishes the potential for sharing. Attitudes of carelessness towards products have also affected sharing economy activities, in which the deterioration rate of goods can be higher than in the case of private ownership.<sup>63</sup>

## Sharing that supports access to essential goods and resources

### Enablers

#### *Public services and commons*

Sharing extends “the circle of what is valued”<sup>22</sup> and so can be a powerful lever to enhance access to essential goods and resources. Public services and commons can enable need satisfaction and shared use of resources by disentangling the provision of essential goods and services from private income and consumption. Such

shared consumption also allows for pooling risks in the context of social and environmental hazards (eg, through the provision of collective health insurance). People with the lowest incomes are more reliant on public services and the commons as they can less easily substitute public with private consumption than those with higher incomes.<sup>4,59</sup> Therefore, people with the lowest incomes will also struggle disproportionately if public goods and services deteriorate.<sup>59</sup> Proposals around universal basic services have extended the principles around public provisioning from common areas such as health care and education (embodying the concept of social citizenship<sup>46</sup>) into other necessities, including child and adult care, public transport, domestic energy and access to the internet. Such proposals around public provisioning highlight the potential integration of sustainability, human need satisfaction, and solidarity.<sup>46</sup>

#### *Social norms around levelling*

Norms around levelling refer to enabling social conditions that support equality and undermine lasting dependencies as they prevent accumulation of resources, including the accumulation of power.<sup>22</sup> Evidence from nomadic foraging groups suggests that sharing is often initiated by making a demand (rather than waiting for an offer), an approach maintaining both human needs and individual autonomy.<sup>64</sup> Such social norms are particularly important to motivate sharing of essential, valued and even scarce resources. Sharing is compromised in the context of gated communities, hoarding, and large inequalities, particularly when it prevents access to essential goods and resources.<sup>22</sup>

#### *Cooperative democracy*

Cooperative democracy (eg, through food, housing, and health cooperatives) can also offer collaborative and equitable means of fulfilling people's needs through access to nutritious and affordable food,<sup>47,65</sup> social and cooperative housing,<sup>66,67</sup> and health equity. Energy cooperatives and community projects play an important role in the transition towards renewable energy systems and the local acceptance of such systems.<sup>68</sup> Consumer cooperatives—including platform cooperatives<sup>16</sup>—can further encourage community development and economic self-sufficiency and adopt guiding principles on serving the needs of their members.<sup>65</sup> A commitment to direct democracy supports cooperation among end users in pursuit of a common cause, enabling mutual trust, community, group learning, self-governance and autonomy, and a transformation of social norms and routines,<sup>17,34,65–69</sup> all of which are relevant for sharing.

#### **Barriers**

##### *Private property norms*

Scaling up sharing is faced with hegemonic cultural and social norms around privacy and private property rights,<sup>4,19,51</sup> attachment, and loss aversion.<sup>70</sup> Norms of

private ownership and control have crucial implications for the reorganisation of social provisioning in an equitable manner. The dispossession of people from the commons (eg, enclosures of common land) drives inequality, particularly when it results in the exclusion of people from access to essential goods and resources.<sup>4,71</sup>

Activity on sharing economy platforms is largely associated with selling access to privately owned goods or services, where sharing takes place in exchange for money. Although platforms grant access to goods and services, there is no transfer of ownership and control, making shared goods excludable and rivalrous.<sup>17</sup> This trend has been criticised as creating new forms of inequality, polarisation of ownership, as well as accumulation and underutilisation of crucial resources.<sup>17</sup> Supported by strong network externalities, sharing economy platforms also exhibit dynamics towards concentration and profit extraction.<sup>71</sup> Furthermore, the sharing economy has been criticised for the invasion of market relations into previously non-monetised domains of everyday life,<sup>16,72</sup> particularly in the context of the growing power of leading platforms.

##### *Homophily*

The logic of homophily dominates sharing platforms and initiatives,<sup>16,53</sup> when the circle of what is valued only extends to those of similar backgrounds, values, and interests. Homophily thus intrinsically limits the potential for sharing. The sharing economy literature documents segregating tendencies around class, race, and gender on platforms, including non-profit sharing.<sup>16,73</sup> Moreover, platforms tend to systematically exclude those in most insecure and precarious situations (eg, when high cultural capital is a precondition for successful participation in free sharing platforms).<sup>53,73</sup> As long as sharing is reserved for White, educated, and wealthy individuals, it further privileges these groups above others and cannot be disentangled from structural racism and inequality.<sup>27</sup> This logic can be contrasted to societies with a high incidence of sharing, in which initial periods of sharing that might privilege some (eg, close kin) are followed by subsequent periods of further and indiscriminate redistribution.<sup>22</sup>

##### *Inequality and exploitation*

Sharing economy companies such as those involved in ride hailing and home sharing have also been implicated in cases of mistreating workers, enabling racism, and discriminatory activities (eg, racial disparities in earnings or dismissals)<sup>15,16</sup> and contributing to physical and mental health damage (eg, stress, fatigue, and health hazards).<sup>32</sup> The power of platforms over workers has resulted in the transfer of risk from firms and governments to individuals and has made working conditions more precarious (ie, insecure and low paid), particularly for workers with low education.<sup>16,63,71</sup> The rapid expansion of under-regulated and underpaid work is also negatively

influencing traditional working conditions.<sup>32,63</sup> Precarious work and the erosion of working rights are active barriers to the needs satisfaction potential of the sharing economy, both among users and employees. In addition, systemic reproduction of social inequality and exploitation arises from the appropriation of surplus value, for example, in the unequal control of essential assets<sup>4,29</sup> and value appropriation by platforms.<sup>71</sup> Due to strong network externalities, sharing economy platforms exemplify tendencies towards natural monopoly, in which they appropriate value from user-generated ratings.<sup>71</sup> Thus, rather than disrupting centralised institutions as the rhetoric of the sharing economy suggests, large platforms have reduced the market for small and local enterprises.<sup>63</sup> Another driver of inequality is the so-called Piketty effect of the sharing economy, in which capital owners (eg, home owners in popular tourist destinations) profit most as returns on capital are much higher than returns on labour.<sup>10</sup> The distribution of wealth among individuals is especially uneven when rents for regular housing go up in neighbourhoods where home sharing through tourism-focused or short-term let platforms is common.<sup>10</sup> These tendencies reduce the potential of sharing platforms to support equal distribution of valued resources and instead create the conditions for inequality and exploitation.

## Sharing that nurtures thriving relationships

### Enablers

#### *Mutuality*

Sharing requires mutuality, but not in the form of calculated and expected returns.<sup>22</sup> Although material and immaterial sharing often flows both ways, it can be non-equivalent or uneven.<sup>22</sup> For instance, regarding mutuality across generations, children often care for their parents but not in the same way that parents cared for them when the children were growing up. However, expectations exist as to what constitutes an appropriate exchange. At the same time, mutuality can act as a key enabler of sharing as the accumulation of small debt relations are crucial for strong social relationships.<sup>12</sup>

#### *Community proximity and trust*

Community proximity can support sharing as proximity makes sharing easier and builds trust; however, it is important to note that proximity alone is not sufficient for a community to flourish.<sup>51</sup> Cooperation and new social arrangements typically evolve in repeated encounters and shared work that generate a collective sense of solidarity and stewardship.<sup>51,74</sup> Communal dining and shared meals bind and endow community relations, and encourage sharing of ideas, skills, trust and resources, support, and local action.<sup>67</sup> The social significance of co-production has also been emphasised, with social relations being more meaningful and supportive where people are more directly involved in community decision making.<sup>51</sup> However, physical

proximity can also overwhelm and exacerbate discomfort and hence hinder sharing. The COVID-19 pandemic showed how fears of potential infection can profoundly reduce sharing of goods and services and erode the foundation of the sharing economy, particularly among small face-to-face initiatives.<sup>16</sup>

#### *Solidarity and care*

Transcending social divisions requires solidarity and care in duty of individual and social transformation.<sup>75</sup> The call to act, care, and hold ourselves and others accountable emerges as a central driving force in new collective movements.<sup>27,75</sup> Genuine community and sharing require the honest recognition of difference within a framework of broader shared values and beliefs that unite people.<sup>51</sup> Such sharing supported by common understanding does not necessarily exclude strangers.<sup>71</sup>

#### *Autonomy*

The integration of individualistic values such as autonomy into sharing practices can greatly enhance the social feasibility of sharing. For example, autonomy has been an important value in many Indigenous societies that have embraced sharing, where differences of wealth had little effect on individual freedom.<sup>74</sup> The cultivation of more social understandings of freedom (eg, free-connection)<sup>29</sup> is key, where living and governing together requires negotiating boundaries around personal and shared possessions, space, and time.<sup>23,67</sup>

#### *Inter-connectedness*

Perceptions of inter-connectedness (breaking down the distinction between individual and others) can enable sharing because sharing with others can then be experienced as an act of care rather than a sacrifice. For instance, within households people normally consider their family as their extended self, so sharing with them is like sharing with yourself.<sup>19</sup> Shared possessions in the household might entail both responsibility (eg, maintenance) and rights (eg, access), when nurturing, care, and love are given freely, with no debt attached and no expectations of calculated reciprocity and exchange.<sup>22</sup> Beyond the household, the experience of inter-connectedness is also rooted in the understanding that nature's sharing of precious resources (eg, the atmosphere, land, living space, and nutrients) sustains life on the planet; and that ecological and human flourishing are mutually dependent.<sup>24</sup> As humans, we are dependent on the stability and the provisioning of the Earth system.<sup>1</sup> Such understanding of kinship which includes human and non-human community can guide consumption towards human needs, in which people consume neither more nor less than what they require to thrive. Calls for strengthening of inter-connectedness should also engage with the violence that has already disproportionately affected many Indigenous communities and their essential kinship-with-nature connections.<sup>8</sup>

## Barriers

### Commodification

There are several barriers to sharing, which nurtures non-exploitative relationships. The increasing domination of individualist and privatisation logics has limited such sharing in various ways<sup>43,76</sup> (eg, through changes in living arrangements, the value of personal possessions, and the erosion of communities). The commodification of relationships (eg, privatisation of home work or child care) can have positive effects such as professionalisation, improvement of child protection, and social mobility, as well as paid working opportunities. However, commodification can also weaken social adhesion, which supports sharing.<sup>12</sup> The expansion of the commodity domain has also allowed for production and consumption to grow more distant from each other, making it easier for consumers to ignore or even accept exploitative conditions in production processes within and across countries.<sup>12</sup> Studies find that most sharing economy users do not wish to engage in social bonding, especially on large platforms in which participation is driven by economic incentives.<sup>63</sup> These studies indicate that the commodification of sharing acts as a barrier to more radical sharing.

### Individualism

Individualism fosters a view of self as self-directed and separate from others.<sup>43</sup> Rising individualism, alongside rising affluence and marketisation, has clearly inhibited the shared use of resources and reliance on community for needs satisfaction.<sup>43,62</sup> However, restoring a culture around sharing does not necessarily entail a rejection of individualistic values, but rather their transformation and integration alongside principles of radical sharing. Common practices can renegotiate and integrate individualistic and collectivistic values to reflect adequately shared limits and priorities and restore the culture around sharing.

### Competition

Competition at different levels of the economy acts as a key challenge to sharing. Competition which generates and reinforces differences in opportunities, resources, and power between people undermines solidarity and cooperation, which are essential for radical sharing.

## Conclusion

Current discourses around the sharing economy assume that sharing contributes to improving environmental outcomes, access to needs satisfaction, and social bonding. However, challenges remain to realise these benefits in practice.<sup>16,72,73</sup> Sharing has transformative potential if it is supported by wider efforts<sup>57,77</sup> to incorporate environmental limits, social foundations, and care into everyday life. Radical forms of sharing will not emerge passively due to various barriers such as tendencies towards structural inequalities and exploitation, commodification and

environmental degradation, self-interest, and materialism, which largely shape the current sharing economy. Recognising these interlocking economic, social, and physical contexts and their systemic implications<sup>4</sup> is crucial to address the barriers around radical sharing.

Our discussion of the vision as well as enablers and barriers around radical sharing aims at opening rather than closing the conversation around the design of sharing activities and the sharing economy, which simultaneously accounts for ecological limits, essential access, and thriving relationships. Opportunities to unlearn and reshape habitual and cultural practices, values, and institutions and foster a new culture of cooperation and living together is crucial to transform ourselves and society.<sup>4,29,64,75</sup> Throughout human history, human beings have shown capacity to reinvent social relationships and organisations.<sup>74</sup> Radical sharing can also draw inspiration from investigations of operational and institutional design principles to govern common resources and promote successful collective action—eg, Elinor Ostrom's design principles for governing commons.<sup>78</sup> Importantly, the design of appropriate sharing initiatives and institutions would require learning from history, experimentation, and adaptation in consideration of social and ecological damage, response, and limits.

Bringing about the vision for radical sharing would in all likelihood require a real struggle. It would simultaneously require a shift away from private and concentrated power, competition, and existing relations of exploitation on a global scale. Designing and upscaling radical sharing will also require addressing power imbalances and confronting vested interests at the individual, corporate, and geopolitical level that have hugely profited from the current setup, lobbied to prevent environmental policies, and worked to discredit scientific evidence and shift social norms.<sup>77,79</sup> It is these interests and other systemic building blocks that fundamentally undermine the possibilities for radical sharing. Therefore, critical perspectives on the sharing economy need to account for the role of power, politics, capitalism, and citizenship beyond the more widely discussed issues around exploitation, discrimination, and greenwashing. Rather than distracting from targeting powerful emitters and polluters, addressing radical sharing is a lever for a socioecological transformation.

### Contributors

DI contributed to conceptualisation, investigation, writing of the original draft, and funding acquisition. MB contributed to conceptualisation; writing, reviewing, and editing; and funding acquisition.

### Declaration of interests

We declare no competing interests.

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