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RETRACTED: Engaging the citizen in the circular economy: Transcending the passive consumer role

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The transition to a resource-efficient and effective circular economy (CE) requires the active engagement of all societal and economic actors, including business, civic society, and political actors. Research, so far, has mainly focused on business solutions and policy approaches that enable these solutions. However, very little knowledge has been developed regarding the role of citizens in the CE (e.g., sharer, repairer, or buyer of quality products or second-hand products) and the transformations to everyday life that circularity may require. Therefore, there is an imperative to fill this knowledge gap and provide the insights needed to drive the adoption and upscale of circular practices in the everyday life of citizens. To go beyond existing approaches of consumer research, this contribution proposes the expansion of the methodological arena by integrating theories of socio-cultural (e.g., practice theory, consumption work) and psycho-social (e.g., peer-influence, social proof) nature to complement existing approaches of “behavioral” scope, which have been widely used in economics and policy studies. By identifying the way people relate to CE in their everyday life and the conscious and unconscious actions they are likely to take toward a CE transformation, it is possible to complement the existing knowledge on CE business model innovation and policy interventions so that the “consumer” aspect is better incorporated and not taken simply for granted, as a CE adopter.

KEYWORDS

circular economy, consumption work, sociology of consumption, citizen science, user perspective

Introduction

In the current dominant economic system—as we observe it around us every day—all the products we need are produced, used, and commonly disposed of, contributing to material resource depletion and the accumulation of waste (Haberl et al., 2019). This is the so-called “linear” economy, or the “take-make-waste” approach of production and consumption. The “circular” economy (CE), on the contrary, is an alternative systemic approach to disrupt the unsustainable pathway of the linear economy. In the CE, resources are used effectively and are circulated through successive lifecycles, by extension of product life, reuse, repair, and recycling (Kirchherr et al., 2017).

The transition to a CE appears as a desirable pathway toward developing sustainable, low carbon and resource efficient economies worldwide (IRP, 2018). This has been

highlighted in the strategic policy direction of many jurisdictions, from Europe to Asia and beyond. In the European Union (EU), the CE Action Plan [COM(2015) 614 final] calls all economic actors, such as business and consumers to drive this transition by adopting relevant actions, while the EU, national and regional governments will support these actions by ensuring that the right regulatory framework is in place. However, the enabling actions of CE transition so far have been limited to business operations and no measures or actions were prioritized toward consumers. Only recently, the proposal for a revised Directive (amending Directives 2005/29/EC and 2011/83/EU) about empowering consumers for the green transition [COM(2022) 143 final] showed some engagement of EU policy on consumer actions toward CE, albeit quite underwhelming in its ambition (Maitre-Ekern, 2022).

To date, research has largely focused on the production side of the CE (Camacho-Otero et al., 2018), suggesting that businesses will create solutions while consumers are simply expected to do their part by receiving additional information (Testa et al., 2020) and stronger rights, e.g., a “right to repair” (Svensson-Hoglund et al., 2021). Studies addressing consumers are less common, compared to business and managerial aspects of CE, which severely hampers the potential of a transition toward CE (Hobson and Lynch, 2016). In recent years, significant effort has been observed in research, with consumer-focused studies contributing to narrowing the gap in the consumer perspective in CE. Studies have addressed consumer behavior aspects in relation to specific product groups, such as electronics (Parajuly et al., 2020; Islam et al., 2021) and textiles (Machado et al., 2019; Camacho-Otero et al., 2020), identifying the barriers and drivers of consumers in adopting CE solutions and concluding that there is apparent lack of knowledge especially in the consumer behavior during the use phase of products. This was confirmed in two recent literature review studies about the role of consumers in CE (Georgantzis Garcia et al., 2021; Gomes et al., 2022), reporting a lack of heterogeneity in the theoretical perspectives used, which focus primarily on consumer perceptions and the formation of intentions [e.g., (Boyer et al., 2021; Chun et al., 2022)], falling short of really studying intrinsic behavioral aspects, e.g., the established pre-dispositions and mindsets of consumers, cultural norms and practices. Thus, there is still a missing piece in the extant literature since little is currently known/researched about the significant transformations to everyday life that circularity may involve (Welch et al., 2017; Schulz et al., 2019; Hobson, 2020a).

Consumers have primarily been treated as relatively passive agents, expected to adapt once producers modify their products/offering (Ghisellini et al., 2016; Corvellec et al., 2021), and can be incentivised to choose more environmentally friendly goods and services through tools such as pricing, information, and “nudging” (Welch and Southerton, 2019; Dalhammar et al., 2021). However, such approaches to consumer behavior fail

to consider how consumption is deeply embedded in rhythms and routines in daily life (Wilhite, 2012), in turn co-shaped by infrastructural arrangements (Shove and Trentmann, 2018) and systems of provision (Bayliss and Fine, 2020). Without understanding the entwined dynamics of consumption with the everyday life, circular solutions might struggle to deliver the desired outcomes. Indeed, research has shown that there is a persistent value-action gap even for environmentally conscious people (Moser, 2015; Georgantzis Garcia et al., 2021), who struggle to evaluate “*the best course of action amidst all the other pressures and entanglements*” (Hobson, 2020b). Moreover, new circular solutions may create rebound effects that counteract desirable goals or even increase energy or resource demand (Makov and Font Vivanco, 2018). Given that consumer acceptance and interest have been highlighted as main barriers to the diffusion of circular solutions (Camacho-Otero et al., 2018), more research is needed to understand how social, material and cultural configurations co-shape the ability of consumers to adopt circular practices (Karagouni et al., 2020). Achieving the goals of CE will not be possible without the consumers’ active involvement (Hobson et al., 2021; Jaeger-Erben et al., 2021).

This invites for a novel approach in consumer research and policy perspectives. It is imperative to investigate the conditions under which consumers would be receptive to change and adopt circular solutions, not only as “rational” agents incentivised by appropriately constructed policy instruments, but also in their “unconscious” everyday life experience and habitual behavior. This calls for a multi-level research approach that integrates the “traditional” behavioral aspects of individuals with habitual elements of everyday life which are embedded in the actions and infrastructures that people use to conduct common activities.

One more aspect to take into consideration is as simple as the everyday language we use to communicate mundane things. It is, therefore, important to become concerned about the terms we use and how they affect our thinking and “unthinking” actions, especially those that have cemented the current consumption patterns. Lindahl and Dalhammar (2022) stress the importance of finding terms that focus on what we want to achieve and abandon what leads us into old ways of thinking—precisely the logic we want to move away from. Thus, there is a need to move away from the notion of the “consumer” which has attached connotations of passivity and (over)consumption of convenience/vanity—mostly associated with the linear economy—and embrace the notion of the “citizen” which denotes a concerned individual mostly aware of the boundaries of its community and the resources available to it.

In this contribution, I will briefly present the current literature on what potential roles the citizens can play in the transition to a CE (Section The various roles of citizens in a circular economy); then develop the alternative theoretical perspectives for investigating the potential roles of citizens (Section The missing sociological perspective and

complementary disciplinary approaches); and lastly, I will discuss the evidence for potential future research combining the insights from the empiric and theoretical literature so far (Section The way forward).

The various roles of citizens in a circular economy

Maitre-Ekern and Dalhammar (2019) have elaborated on the different roles of citizens in the CE and have drawn a conceptual “consumer hierarchy” in line with the goals of the CE and sustainable consumption in general. Citizens can take up roles that could prolong the life of a product, share its use among others, or simply avoid the purchase of a product altogether. For instance, a citizen can act as a “conscious buyer” who abstains from superfluous and unnecessary purchases and prefers second-hand or refurbished products. A “sharer” would prioritize replacing physical consumption with a service provision (e.g., product-service system), when available. Others could take the role of a “care-taker,” either by repairing broken products instead of buying new, or making sure to service and update products regularly to avoid malfunction (Dalhammar et al., 2022). For an overview of the identified roles, see Table 1. The categorization is not exhaustive and there is room for further development of citizen roles and their respective actions.

It is not hard to notice in Table 1 that the potential roles of citizens are not exactly “equal” from a sustainability point of view, since some of the identified roles can have varying environmental impacts and resource savings potential than others (Maitre-Ekern and Dalhammar, 2019). According to the established principles of CE (Reike et al., 2018), preferably citizens should aim to avoid unnecessary purchasing, and rather engage in maintenance and repair of existing products. In case the purchase of a product is unavoidable, citizens should prefer products that have a longer expected lifetime and can be easily repaired, or products from the reuse and resale (second-hand) market. When failures occur or products lose their function, citizens should attempt to repair them, or hand them back to the producers for recovery. Also, it is relevant to note that the roles are interconnected. If citizens buy or lease low-quality products, there is little potential for future reuse of these products, due to lack of appeal in direct reuse (second hand) or lack of economic potential for repair and refurbishment activities (Dalhammar et al., 2021).

Citizens are key actors in relation to consumer activities. Nevertheless, in a free market society, it is not common to force citizens to adopt any given consumer role. But usually, the drivers for change can be the appropriate policies that make it more attractive to assume more sustainable roles in society. As wasteful consumption patterns are embedded in social norms and such habits are hard to break, it becomes evident that change is unlikely to take place without appropriately strong policy

TABLE 1 Mapping the roles of citizens in the CE [Adapted from (Maitre-Ekern and Dalhammar, 2019)].

Citizen role	Related CE activities
Beyond the traditional consumer role as a product buyer	<ul style="list-style-type: none"> ■ Avoiding superfluous or unnecessary purchases ■ Preferring products and services from circular business models ■ Appreciate product labels, information and looking after missing information in products ■ Purchasing re-used and second-hand products as alternatives to new products ■ Leasing instead of buying products and services ■ Preferring to focus on the services instead of the products ■ Buying durable, high-quality products ■ Buying products for which spare parts are available and repair information are widely accessible
Product holder/value maintainer	<ul style="list-style-type: none"> ■ Avoiding the replacement of functional products ■ Prolonging the life of products (proper use; maintenance; updates)
Repairer/DIY activist	<ul style="list-style-type: none"> ■ Preferring to repair malfunctioning products instead of buying new ■ Engaging with own repairs, when possible (DIY), and/or communities of repair activities (for example, repair cafés) ■ Actively share knowledge, participate, or host repair workshops etc.
Community actor/sharer	<ul style="list-style-type: none"> ■ Prioritize sharing schemes over commercial leasing or buying of products ■ Engage with Peer-to-Peer (P2P) schemes, enabling sharing of knowledge and resources
Engaged waste manager/re-user	<ul style="list-style-type: none"> ■ Redirecting End-of-Life (EOL) products for direct re-use or preparation for re-use rather than recycling or disposal. ■ Ensuring waste is properly sorted and collected for their intended purpose (e.g., for re-use or recycling)

measures to lead the way (Dalhammar et al., 2022). Moreover, citizens in the marketplace cannot keep being considered merely as the vulnerable party of any transaction that needs protecting, but as an agent of change, whose behavior can create a space for transition for sustainability (Mak and Terryn, 2020).

While citizens, and consumer NGOs, appear to embrace more durable products in the market, it is not entirely clear if in fact they are willing to pay for them (Dalhammar et al., 2021). There is a particularly challenging situation unfolding for people wanting to overcome the current logic of the market that too often comes in contradiction to their personal economic interests. On the one hand, resources and new products are relatively cheap, not reflecting their actual environmental impacts (externalities). On the other hand, activities like repair are expensive due to e.g., high labor taxes. Thus, it often

makes more economic sense to buy a new product rather than repair the old one (López Dávila et al., 2021). Such obvious discrepancies in choice selection need to be overcome in order to establish a hierarchy of citizen actions in line with CE principles.

The missing sociological perspective and complementary disciplinary approaches

The sociology of consumption has gradually diversified, especially in the last decades of the twentieth century when the concept of sustainable development became prominent, and the term “sustainable consumption” entered the research agenda (Evans, 2019). By that time, it had become evident that technological and organizational innovations in production processes were not sufficient to mitigate the environmental impacts of production and to deliver the required reductions in the resource intensity of production-consumption systems. Thus, insights into consumer behavior and lifestyles were considered necessary to complement the existing approaches of production efficiency and resource optimisation (Evans, 2019). Disciplines such as behavioral economics, social psychology and marketing have been primarily utilized to explore drivers of unsustainable consumption and to identify barriers in the uptake of more sustainable ways of living. These approaches, however, have been subject to considerable critique for their emphasis on the attitudes, behaviors, and choices of individuals, considering the consumer as a rational decision-maker who responds to stimuli in the market, disregarding other relevant factors that might have profound influence in their decision-action processes (Shove, 2010). Therefore, further sociological approaches were deemed necessary to fully capture the behavior of individuals, embedded in their socio-cultural and economic contexts (Evans, 2019). This is also relevant in the context of the emerging CE consumption research, which suffers from a lack of heterogeneity in the theoretical perspectives used to capture consumers' circular behavior (Georgantzis Garcia et al., 2021).

An early approach to reconcile the extant sociological research on consumer behavior with sustainable consumption and its associated contextual elements, turned to the development of sociological aspects from theories of practice. Practices—as opposed to individuals—are the primary focus of the social inquiry (Evans, 2019). Social practice theory represents the social world as constituted by socially and culturally shared practices—ways of doing and understanding—rather than an aggregation of individual behaviors. Activities in daily life, such as how we consume products, are the results of taking part in and performing existing and socially defined practices (Røpke, 2009). Practices consist of interconnected heterogeneous elements that may include competences (ways to perform a practice), shared meanings (social and symbolic significance), and materials (things and infrastructures used in practices)

(Shove et al., 2012). Consumption, thus, is conceptualized as the appropriation of goods and services necessary to satisfactorily perform practices (Warde, 2005). Ultimately, practices are interconnected, and changes in one practice might change the trajectory of other practices (Wethal, 2020). Applying these ideas to the study of consumption, Warde (2005) argued that consumption mostly does not occur for its own sake, but within and for the sake of practices.

Since the seminal work of Warde (2005) on consumption and practice theory, the sociology of consumption was dominated by practice theory. However, other very useful and conceptually solid theories have gradually emerged, which can play a pivotal role in understanding and analyzing the role of citizens in a CE. One such approach is the framework of “consumption work.” This is defined as “*all work necessary for the purchase, use, re-use, and disposal of consumption goods and services*” [(Glucksmann, 2016): p. 881]. This framework resonates with a perspective in which the economic and the social are deeply embedded together, since everyday life is situated within a broader, complex sociotechnical system. This approach is acknowledging the unconscious and taken-for-granted work people do, and that these are economically crucial to the wider economic system. Glucksmann (2013) argues that daily activities may be presumed unimportant and not experienced as work but could be classified as such when reviewing their significance for economic activity.

Recently, Hobson et al. (2021) put forward a proposition of integrating consumption work in CE analyses to highlight how the household is an integral part to the functioning of macro-economic systems, and foreground to the various forms of labor performed by households. Applying consumption work in the CE highlights issues of “acceptance” that are not considered in mainstream CE literature, particularly when considering how the abilities and resources required to undertake CE activities are unequally distributed across or within populations (Hobson et al., 2021).

We can see the importance of applying this sociological lens over the research on citizens role in the CE and the adoption of circular activities/business models that are assumed by literature to be self-evidently applied despite socio-cultural norms and perspectives. However, just limiting the social inquiry there might not give the full picture, especially in the highly competitive over-individualistic societies of free-market-type economies. Apart from intrinsic behavioral instances and the habitual norms of practices and consumption work, embedded in the institutional and infrastructural context we live in, the social network and peer influence (extrinsic pressures) might also be of relevance to investigate. How other people affect the individual's behavior? In this respect, the investigation of relevant concepts, such as social proof and peer influence might prove useful.

Social factors like norms and social pressure can play an important role in the adoption of circularity (Singh and Giacosa,

2019). Social norms can have significant impact on behavior, but the degree of this impact may be affected by factors including characteristics of the individual, the implied reference group (peers), and the social and environmental context in which the decision takes place (Farrow et al., 2017). Previous research on social influence revealed that peer influence approaches can be effective in encouraging more eco-friendly behavior (Abrahamse and Steg, 2013; Wolske et al., 2020). Such approaches range from suggesting public commitments to providing group feedback or comparisons to a reference group and social norm provision. However, there is limited evidence on how information directly provided from peers can influence reuse, repair, and buying decisions.

The way forward

The over-reliance on innovative business model solutions and the re-organization of supply chains and infrastructures in the CE literature is leaving out a critical parameter for the ultimate success of any CE endeavor, which is the citizen—the unit of the product/service use. In this contribution, the goal is to set the spotlight on the importance of researching the role of citizen as an enabling factor for CE transition, and to call for a multi- and inter-disciplinary methodological approach into the sociology of consumption. Human beings are very complex and their intrinsic and extrinsic motivations have a multi-layer, partly unconscious, origin that needs to be understood from within the space (individual and social) they occupy.

Current consumption norms are not inherent in people's behavior. It is the result of a long-term process of change in society, a change in paradigm that was driven over the past century by industry and mainstream economics following the industrial revolution and the economic recessions of the twentieth century (Lindahl and Dalhammar, 2022). There is no argument why that consumption paradigm could not be changed again to promote the notion of CE and more sustainable consumption habits. For instance, just about 50 years ago it was widely accepted that people could smoke in public spaces. Today, all European countries have banned smoking in public spaces and almost nobody would argue that passive smoking is not a health hazard. That change of paradigm took place through direct law amendments and extensive awareness campaigns aiming to alter the social norm around smoking and mold a next generation of citizens outside the habit of smoking (Maitre-Ekern and Dalhammar, 2019). Looking at those success stories, the same could be applied in the context of overconsumption and the throwaway habits of current consumers. It would take a firm political decision and a solid strategic approach—backed by CE social science—to make such change possible.

A multitude of methodological approaches would be needed to grasp the complex behaviors of citizens in the transition to CE. This contribution suggested a few research pathways that might open the way to significant sociological findings on the

needed change of consumers, from passive beings to citizens that actively engage in CE and shape the way future production and use of products may develop.

Some first efforts to incorporate the consumption work lens in CE research are already under way with new studies reporting very insightful results on the way citizens see themselves in the alternative paradigm of CE. For instance, in a recent study by Sutcliffe (2022), the findings illustrated that the participants engaged in activities under a CE alternative system of a local, community-based, and self-sufficient community. In that paradigm, resources were utilized and cascaded domestically, reducing the link to economic exchanges that reach beyond the household to reduce and close environmental resource loops. Moreover, it was observed that circular activities required more time and work, leading the participants to note that probably the standard wage labor setting was problematic because it did not leave enough time to engage in circular consumption work.

Insights like these, highlight new perspectives that are not possible to grasp with standard marketing research, and therefore business would most likely fail to provide the circular solutions that people really want and value in a CE transition. Therefore, the importance of integrating such sociological perspectives on CE research would become indispensable for the transition to a CE.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Author contributions

The author confirms being the sole contributor of this work and has approved it for publication.

Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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