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Material culture and the circular economy

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Accounts of the circular economy deal with lives of objects mainly through notions of repair, sharing and re-use. This has led to problems associated with contemporary discourses of circularity including the tendency to focus on goods in isolation, and to overlook longer term trends in demand. Drawing from studies of material culture and practice, in this Perspective article we make the case for a more subtle analysis of practices and “object relations”. This allows us to engage with basic questions about production, consumption, and the constitution of need—questions that should be integral to contemporary debates about the circular economy, but that are sidelined in what remains classically economic discussions of substitution, manufacturing, and waste.

KEYWORDS

circular economy, material culture, object relations, repair, sharing, re-use, material flow

1. Introduction

There are many definitions of the circular economy, but this quotation captures features that are widely shared. According to Stahel, a key figure in the field:

A “circular economy” would turn goods that are at the end of their service life into resources for others, closing loops in industrial ecosystems and minimizing waste... It would change economic logic because it replaces production with sufficiency: reuse what you can, recycle what cannot be used, repair what is broken, remanufacture what cannot be repaired. (Stahel, 2016: 435)

This statement focuses on “goods”; it deals with “economic logic”, with “production” and with “industrial ecosystems”. As with other writing of this ilk, the basic idea is that “loops” can be closed, and resource use minimized through extended life cycles and related “efficiencies”.

Arguments like these have been met with a range of broad-based criticisms. One is that repair, recycling, and remanufacturing all require resources, and that visions of the circular economy end up running counter the laws of thermodynamics (Skene, 2018). In addition, moves toward a circular economy do not in themselves transform patterns of consumption, but rather at worst, play a part in fostering patterns of accumulation (De Decker, 2018; Hobson, 2021).

Interpretations of the circular economy and its wide-reaching political mandate have an impact on the roles of resources and objects in the “consumer” society. As illustrated above, the discourse surrounding the circular economy has largely centered on the lives of objects, with a focus on repair, sharing, and re-use, with the general aim being the efficient handling of matter through systems of provision. This has implications for how the consumer’s role is understood. For example, Hobson et al. (2021) write about efforts to engage households in the circular economy, and to enhance their capacity to use, manage and preserve objects.

Moves like these do the dual job of locating the problem in the hands of the consumer (Rinkinen et al., 2020), and of stripping consumer goods out of context.

This narrow treatment of materiality, we argue, has resulted in debates that overlook longer-term trends in demand and the interconnections between production and consumption. Initiatives have recently been made to address both production and consumption aspects of the circular economy (IPCC, 2023) but in this Perspective article we go further, arguing for an expanded analysis of “object relations”, and for an approach that allows us to engage with fundamental questions about the constitution of needs and systems of provision.

Such topics already straddle different areas of academic debate. As indicated above, the relation between objects and their consumers is central to dominant ideas about the circular economy. It is also important for sociologists and anthropologists dealing with issues of material culture and consumption. In bringing these traditions together we make the case for an analysis that avoids and overcomes some of the problems associated with contemporary concepts of circularity including the tendency to focus on goods in isolation, and to overlook longer term trends in demand.

2. Practices and object relations

There is a long tradition of understanding systems of consumption and production from the perspective of material culture. In his book, *The social lives of things*, Appadurai (1988) writes about the meaning of objects within and as part of complex systems and histories of social and cultural valuation. He argues that judgements of value, and the lives of things are densely interwoven, so much so that it makes no sense to strip an object out of the broader material culture in which it exists.

More pragmatically, objects are rarely mobilized in isolation. In daily life and in use they depend on each other and on an array of background infrastructures and resources that make related practices possible (Shove, 2016). The result is a mesh of what Rinkinen et al. (2015) describe as “object relations”, a term that underlines the point that the histories of objects are entangled with the societies in which they develop. Understanding how objects connect calls for further understanding of extensive networks and material arrangements and of how these evolve. If these ideas are taken to heart, objects, infrastructures and systems of provision and consumption must be treated as part of, and not outside, the wider plenum of practice (Shove et al., 2012; Schatzki, 2019).

It is only by focusing on relations between objects and practices that we can describe and understand the extent as well as the form of material flows (linear, circular, etc.), and to show how these vary and change (Ingold, 2012). This not only implies a more fluid and unsettled understanding of objects, but also a more relational account of the material world (Haberl et al., 2021). Building on these ideas, it is important to ask: “how do materials of all types (resources, appliances, infrastructures) figure in the emergence and transformation of different, but often linked complexes of social practice” (Rinkinen et al., 2020; p. 36)?

As already mentioned, circular economy discussions of repair, sharing and re-use tend to consider objects in isolation, focusing on items like glass bottles (Stahel, 2016), mobile phones (Wieser and

Tröger, 2018) or cars without paying attention to the surrounding network of social-material relations, or to the interwoven histories of consumption and production. For example, in concluding that “cleaning a glass bottle and using it again is faster and cheaper than recycling the glass or making a new bottle from minerals” (Stahel, 2016), Stahel disregards the place of the “glass bottle” in the wider world of food and drink, and in changing systems and infrastructures of provision. Similarly, those who evaluate the relative costs and benefits of repairing, sharing, or replacing a car (Chen and Kockelman, 2016) do so without reference to what Urry (2004) describes as a system of automobility, or to changing patterns of car-dependence (Mattioli et al., 2020).

This kind of purification is necessary if commentators are to evaluate the relative benefits of recycling and repair vs. new production. The problem is that documenting the lifecycle of a product does not reveal the broader status and role of that product in society.

3. Constitution of demand

Those who focus on material culture and consumption foreground questions about the constitution of demand (Rinkinen et al., 2020). As Warde (2005) explains, patterns of consumption arise from, and are rooted in social practices. From this point of view, resource flows are bound up with the long run histories of social life, and with the material arrangements associated with them. Past and present systems of provision, ownership, and design, including the details of repair, sharing and second-hand markets (for example, for buildings, cars, phones, clothes etc.) are part of this dynamic.

The study of fridge freezers by Rinkinen, Shove and Smits is a good example (Rinkinen et al., 2021). This research examines the increasing “need” for freezers and for frozen food in two fast growing cities: Hanoi and Bangkok. As described, the significance of having a freezer cannot be separated from parallel changes in food production, provisioning, and diet. Whether the freezer is second-hand, or not makes little or no difference to this dynamic. Instead, what matters is the ongoing rearrangement of daily practice (shopping, cooking, eating) within and alongside related systems of provision. Similarly, the “need” for a car, for example, is bound up with the emergence of global systems of automobility, and not with consumer desire alone.

In accounts of the circular economy, crucial debates about longer-term trends in consumption and needs are usually missing. Although Stahel and others (see Friant et al., 2020; Jaeger-Erben et al., 2021) refer to “sufficiency” (for Stahel, see the quote in Introduction), this concept tends to be narrowly defined, focusing on the extent to which a second hand, repaired or recycled object is sufficient, i.e., up to the job, or roughly equivalent to the “new” product for which it is substituted. From this point of view, the environmental costs of owning and using fridge-freezers, or SUVs, fade into the background: instead discussions focus on the relative merits of buying these items new or second hand. As with talk of efficiency or of dematerialization, the aim of which is to deliver “the same” service but with fewer resources (Shove, 2018; Hobson, 2020), more fundamental questions about consumers’ “needs” and how they evolve are out of scope.

Theories of material culture and practice provide a means of re-engaging with really basic questions about production, consumption, and need—questions that should be integral to contemporary debates about the circular economy, but that are sidelined in what remains classically “economistic” object-centric discussions of markets, substitution, manufacturing, and waste.

4. Discussion

Ideas about the circular economy and how it works have informed policies that are designed to reduce carbon emissions by closing loops, increasing efficiency, and reducing waste. In bringing this piece to a close we highlight three tendencies in circular economy policies and conclude with a brief discussion of the policy implications of taking a broader view of material culture and practice, and of how this evolves and changes over time.

As we have seen, accounts of the circular economy generally focus on the lives of objects, considered in isolation. This makes it possible to compare and evaluate processes of production, distribution, and appropriation, and to recognize the scattered nature of environmental impact (e.g., Tukker, 2000). Analyses of this kind take heed of the lifecycles of products and resources, but they proceed by stripping objects and resources out of context, and by “obscuring the distinctive social and historical processes of enmeshed material relations and shifting patterns of consumption” (Rinkinen et al., 2020). Policy responses inspired by mainstream discourse on the circular economy do the same.

A second tendency, also evident in efforts to promote a circular economy, is to propose what are expected to be generic measures. For example, the potential to recycle materials is usually taken for granted, and usually seen as an evidently sensible thing to do. This skates over important differences in when and how diverse materials can or cannot be recycled. In so far as this is acknowledged, it is treated as largely technical issue, not as something that varies depending on the complexity and resource-base of the supply chain. For example, in the case of digital technology, recycling the end-product would only recover a small fraction of the input (see De Decker, 2018). This is a simple point but taking a broader view of objects is a necessary step in understanding the characteristics of specific networks and systems of provision, and how they might change. Whilst market specific knowledge is used in planning more circular business models and whilst there might be scope for learning across sectors, material realities and resource flows differ across products and supply chains. What is missing is a style of policy analysis, and a form of policy intervention that is sensitive to these differences, and to how materials “fit” in different systems of provision and practice.

A third still more significant issue is that policies that are intended to foster a circular economy avoid or marginalize fundamental questions about the constitution of need, including the part that policy making itself plays in reproducing unsustainable practices and systems of provision. If the primary ambition is efficient flow and use of resources and goods, then changes in patterns of consumption and reduction of resource use is secondary ambition and treated as such. There is a risk that circular economy initiatives cling on to narrow growth-oriented

notions of demand, without acknowledging the potential of more sufficiency-oriented circular economies.

By contrast, sociological and anthropological theories of material culture, consumption and practice have very different policy implications. As outlined above, these disciplines provide a means of conceptualizing the changing status of material culture, and longer-term transitions in the resources “required” to participate effectively in society. If policy interventions were to be informed by these ways of thinking, policy makers would start by seeking out opportunities for shaping interpretations of normality and need in ways that reduce (rather than increase) resource consumption overall. At a minimum this argues for critical policy reflection and analysis and a willingness to think about how policies across all areas of government constitute taken for granted patterns of demand, in both formal and informal ways (Rinkinen et al., 2020). It also argues for broadening the scope of research to address temporal, spatial and infrastructural aspects of social practices and their connections. For policy makers this implies broader cross-sectoral cooperation.

In our view, concepts from the fields of material culture and practice provide policy makers with a means of going further and of identifying strategies that limit and reduce absolute resource use and environmental impact. To be more specific, focusing on objects as part of systems of provision and practice, and taking heed of the material bases of “ordinary practice” provides a starting point from which to combine analyses of need and normality with some of the tools and techniques associated with the circular economy (e.g., material flows, life cycle analyses).

Data availability statement

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

Author contributions

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

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Conflict of interest

The authors declare 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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