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Narrating expectations for the circular economy: Towards a common and contested European transition

David Lazarevic[a,b,*], Helena Valve[a]

[a] Finnish Environment Institute, Environmental Policy Centre, Finland
[b] KTH Royal Institute of Technology, Department of Sustainable Development, Environmental Science and Engineering, Sweden

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ABSTRACT

The European Union (EU) has set its sights on becoming a circular economy, envisaging a transition that implies systemic changes in natural resource transformations and material flows; and offering a response to what is commonly labelled as the 'take-make-dispose' conventional economic model. What does the transition toward a circular economy entail and what can it do? This paper analyses the emergence and mobilisation of expectations that are shaping the EU transition to a circular economy. It traces the narrative elements through which the circular economy is configured through an analysis of position papers presented to inform the debate on the European Commission's circular economy package. Expectations for the circular economy are articulated as: (1) a perfect circle of slow material flows; (2) a shift from consumer to user; (3) growth through circularity and decoupling; and (4) a solution to European renewal. Extending boundaries of what is 'in' benefits actors driving the circular economy as, in the short-term, they can actively support a deliberately vague, but uncontroversial, circular economy. On the one hand, the expectations present a strong sense of a collective 'we', on the other hand we are yet to see the contentions and contestations being full playing out.

1. Introduction

The circular economy operates as a concept that articulates a socio-technological future radically different from the one existing today. It has been proposed as a response to what is commonly labelled as the 'take-make-dispose' conventional economic model [1,2]. It is framed as a reassuring discourse [3], and *the necessary transition* from the current linear economy by its prominent promoters [1,4,5]. According to the Ellen MacArthur Foundation (EMF)—which describes itself as the "global thought leader, establishing circular economy on the agenda of decision makers across business, government and academia" [6]—the circular economy is, in its oft-quoted definition, "an industrial system that is restorative or regenerative by intention and design. It replaces the 'end-of-life' concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse, and aims for the elimination of waste through the superior design of materials, products, systems, and, within this, business models" [7; p. 7].

From an industrial ecology perspective, the circular economy is a pursuit that goes beyond a pure material focus. The primary concerns of industrial ecology are to improve the metabolic pathways of industrial processes and material use, dematerialise industrial output and systematise patterns of energy use, and create closed-loop industrial ecosystems [8]; thus, radically departing from the present day linear economy and its modes of coordination. Hence, increasing the amount of recycled materials in the economy has a significant energy reduction potential due to the energy avoided during various product life cycle stages (see Ref. [9]).

Despite its orientation to what is yet to become, the concept of circular economy evolves and operates here and now. The ideal is used to urge change and to mobilise resources. The expectations the concept brings together carry persuasive and performative power [10]. This is its key positivity; by describing how things could and should be, the circular economy makes visible the dystopian, yet often taken-for-granted, features characterising the prevailing economic orders.

At the same time, the concept, and its growing popularity, begs for analytic attention. Gregson et al. [11; p. 119–220] suggest the circular economy to be a "diverse bundle of ideas which have collectively taken hold" which has "more often been celebrated than critically interrogated". Likewise, Hobson [3] highlights the lack of attention to the socio-political implications and possibilities for radically shifting production-consumption-use-waste practise. So, what ideas is the circular economy concept bringing together? Furthermore, when establishing its position in the policy landscape, what actors and

* Corresponding author at: Finnish Environment Institute, Environmental Policy Centre, Finland.
E-mail address: david.lazarevic@ymparisto.fi (D. Lazarevic).

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positions does the concept bundle and unbundle; and at what level, and in what terms, is the concept—and the future economy—rendered political?

We ask such questions and investigate the making of the circular economy at the European level, as this is, precisely, the level of ambition for reinvigorating of the European economy. In July 2014, the Barroso led European Commission (EC) published its communication *Towards a circular economy: a zero waste programme for Europe* [12]; a programme outlining its steps to move toward a more circular economic model. In December 2014, this package was withdrawn by the new Juncker Commission with the promise of proposing a 'more ambitious' package in the end of 2015. A public consultation was held between the 28th of May and the 20th of August 2015, accompanied by an EC stakeholder consultation conference on the 25th of June, and the new *Closing the loop – An EU action plan for the Circular Economy* package was released in December 2015 [5].

In what follows, we take part in teasing out the normativity of the circular economy concept by examining the position papers through which stakeholders contributed to the public consultation. We treat the papers as interventions that participate in the discussion over the European circular economy through the narrative elements they utilise [13]. The elements, as specified by narrative policy analysis [13], provide us analytical resources by which to study the shaping of circular economy ideals and *expectations* [10]. The expectations bring futures into being while presenting pathways through which change is to be achieved. We propose that the expectations do political work, mobilising resources and scripting actions into the present [10]. However, since the future is necessarily selective, providing room for some modes of production, economic activity and lifestyles instead of others, the expectations are unlikely to be entirely consistent. Therefore, we take as our task, also, to analyse how the descriptions of the European circular economy organise social and political space. In other words, in what terms the expectations potentially diverge or become contested?

This twofold strategy enables us to map the expectations as 'bundle of ideas', but also to grasp how the ideas are given flesh or even contested. Previous work on expectations and narratives are used as a framework to explain the colonisation of the future [10], and by whom, through the making of future expectations, and the how this colonisation is tempered and brought back to the here and now. We do so by, firstly, very briefly outlining the academic and organisational underpinnings of the circular economy. Section 3 introduces the theoretical context (the sociology of expectations, narrative structures and the role of narratives in socio-technical transitions) and the methods employed in the document analysis. In Section 4, we outline the problem setting, the overarching narrative structures and the topics that were raised and contested. The 'interruptions' or counter-narratives of interest, for example, tend to point to particular concerns that need to be kept in mind when the European transition is to be enhanced. Moreover, by placing the narrated expectations in relation to academic literature, we critically examine the performative, world-shaping-role of the ideas and ideals the circular economy concept bundles together.

2. Academic and organisational underpinnings of the circular economy

Theories underpinning the conceptualisation of circular economy have been present since the 1960s, and although the ideas behind the circular economy have been on the policy agenda since the 1990s [14], only recently has it caught the interest from decision-makers [12,15] and the business sector [16]. A recent review of the circular economy [17] has shown that the ideas entangled within the concept have roots in several disciplines including ecological economics, environmental economics and industrial ecology.

Boulding's [18] seminal 1966 *Spaceship Earth* essay espoused the notion that a closed earth and sphere of human activity would necessitate all outputs of consumption to be constantly recycled. This line of thought was continued by ecological economists, such as Georgescu-Roegen [19] who proposed a fourth law of thermodynamics, where matter, like energy, becomes progressively unavailable. Although controversy surrounded this proposition—the application of the law of entropy to matter [20]—the message that economic systems must contain the maximum possible amount of recycled and renewable material remained valid [21]. The circular economy is often justified through environmental economics; arguing that the environment provides amenity values, a resource base for the economy, a sink for residual flows and a life support system, and that to keep these functioning unpriced or under-priced services should be internalised in the economy [22].

Beyond these conceptual underpinnings, industrial ecology is suggested to have the greatest practical influence on the development of the circular economy concept [11,22]. Industrial ecology has been defined as "the study of material and energy flows resulting from human activities" providing "the basis for developing approaches to close cycles in such a way that the ecological impact of these activities is minimized" [23; p. 13]. The oxymoronic term is rooted in the premise that industrial system can be envisaged as ecosystem [24]. Indeed, Frosch and Gallopoulos [25], two of the intellectual founders of the field, draw attention to the predominantly closed loop metabolisms of biological systems; emphasising the analogy between the way biological systems *are*—"… wastes are in turn food for other organisms" [26]—and the way industrial systems *ought to be*—"material in an ideal industrial eco-system are not depleted any more that those in a biological one" [25; p. 146].

Several other concepts are entangled within the circular economy[1] (see Ref. [4]), such as: cradle to cradle [27], the performance economy [28], biomimicry [29], natural capitalism [30], the blue economy [31], and regenerative design [32], of which we will briefly outline the first two. Cradle-to-cradle—a term popularised by Braungart and McDonough [27] yet coined by Stahel in the 1970s [33]—is another concept in which mainstream promoters rely heavily upon. This concept advocates the idea of 'waste equals food'; drawing on the analogy "Horses eat grass and produce dung, which provides both nest and nourishment for the larvae of flies. … Waste equals food" [27; p. 92]. The performance economy is related to the objective of creating "the highest possible use value for the longest possible time while consuming as few material resources and energy as possible" [28; p. 128]. The concept highlights the need to shift to servicisation, whereby revenue is derived from providing services as opposed to selling goods, thereby slowing down and reducing the volume of material flowing through the economy [34].

Although the origin of the term 'circular economy' has been ascribed to many authors, and despite that descriptions include a range of meanings and associations [35], it was the EMF who, in 2013, most powerfully, launched their repackaging of the concept (see Ref. [16]). It is one of the growing number of intermediary organisations, and heroes [36], that are working with and around the circular economy [3]. It has also popularised the term through the publication of high profile reports (e.g., [1,4,16,37]), their online news and opinion platform 'Circulate',[2] the CE100 innovation platform,[3] and the Disruptive Innovation Festival[4]; making the EMF one of the most influential intermediaries around the circular economy. However, as noted by Hobson and Lynch [38; p. 20], the EMF view is "only one 'story' of how societal transformations can and should take place".

[1] In the field of environmental policy, circular economy also links to concepts such as material efficiency and the green economy.

[2] See http://circulatenews.org/.

[3] See http://www.ellenmacarthurfoundation.org/ce100.

[4] See https://www.thinkdif.co/.

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