

## CHAPTER 15

# Can Abstract Ideas Generate Change? The Case of the Circular Economy

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## Takeaways for Leading Change

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There is enthusiasm for transforming our economic model from a linear to a circular one. However, solving this wicked problem is a tall order: The socio-institutional environment in which this transformation must be driven is complex. There are also complexities, discrepancies, and conflicts of interest related to circular economy (CE) thinking itself. Even though the change towards the CE is complex and contradictory, the concept of the CE offers a good objective to pursue. CE thinking is a change provoking framework for actors to orient their action or practices. The promotion of the CE illustrates how outlining visions and identifying targets of change supports the change making process and provides guidelines for the actors involved. Nevertheless, the spread and internalisation of the concept remains critical for change making. If enough actors internalise, accept, and support the idea of change to some degree, it is quite probable that they will orient their actions accordingly. Analysing how an abstract concept such as the CE can – or cannot – generate change teaches us important lessons about how major changes can be realised.

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Transforming the current unsustainable economic model is perhaps the most complex problem of our time. The economy is overstepping the biophysical boundaries of the planet, and the way in which the economy is presently structured has caused grave environmental problems. However, enacting systemic change geared towards more sustainable alternatives is challenging. There are numerous actors and conflicting interests nested in the way our economies work, and such a change could tip the balance in terms of who loses and who gains. Allocation of resources, which lies at the heart of the economy, creates added complexity. The reallocation of resource flows has the potential to create distrust and cause major harm. For example, if food prices would rise significantly as a result of structural changes to the economy. The task of guiding it onto a sustainable path is a wicked problem – relentless, unconstructed, and cross-cutting.

This chapter discusses the circular economy (CE), which offers one possible way to solve the wicked problem of steering the economy

in a more sustainable direction. The underlining objective of the CE is to change the logic of how the economy works. The purpose of this chapter is to analyse the change making that CE thinking provokes. The promotion of the CE illustrates how abstract ideas can lead to change: it shows the way in which it is possible to generate momentum for large-scale change in a complex contemporary society. I use the notion of CE thinking to refer to the logic and change making objective upon which the CE model is based.

In following sections, I explain what the CE is and how it has become a topical concept. After that, I will discuss why making the transformation towards a CE is challenging in contemporary societies, and why it is difficult to change the old ways of doing things, even if they can be

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seen as sub-optimal or unsustainable. I will then present the concept of ideological steering, which offers a more specific framework for analysing how an abstract idea such as the CE can generate change. Finally, I will discuss how the promotion of CE relates to the dynamics of change, the internal and external challenges of CE, and the implications for leadership for change.

## What is the Circular Economy?

To me, the circular economy is probably the next step in the evolution of environmental ecology, where the economy and the environment really embrace each other and change the world (Sitra, 2015).

The above statement reflects the abstract hopes and visions that shine through in the CE discourse. The citation is from Johanna Pirinen, Director of Corporate Responsibility of Konecranes, a large Finnish company. She participated in a panel discussion that discussed the opportunities and challenges of the CE in practice (Sitra, 2015). Her message is strong, hopeful and forward looking; but at the same time quite abstract. What does it actually mean for the economy and the environment to embrace each other? Furthermore, why should they embrace each other? The message is primarily about environmental problems and sustainability issues that derive from how our economy currently operates (Boulding, 1966; Steffen et al., 2015). Lately, the CE has been presented as a way to tackle these issues (e.g. Andrews, 2015).

On a general level, CE thinking concerns remodelling the economic system. The CE is the opposite of the currently prevailing model, the *linear economy*, which is based on the logic of “take-make-use-dispose”. This logic does not consider sufficiently the material boundaries of the planet. The linear economy rests on the assumption that there is plenty to “take” and always space for “disposal”. For the linear model to thrive, the material throughput requires continuous acceleration, which means growing amounts of “taking”, and, at the other end, growing amounts of “disposing” (Andrews, 2015; Jurgilevich et al., 2016; Webster, 2013).

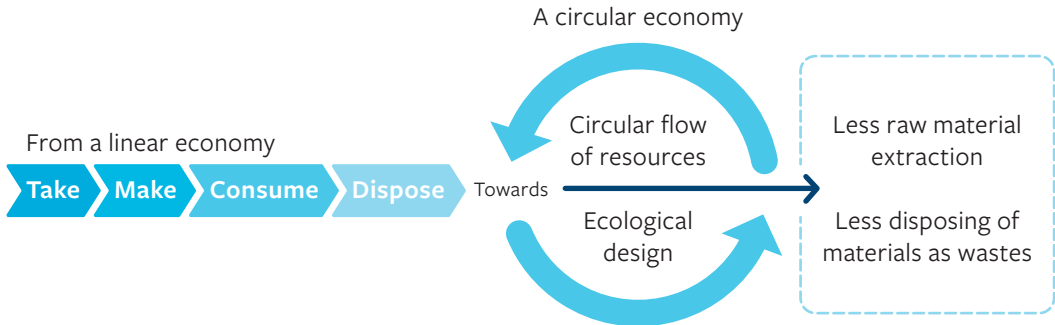


FIGURE 1. The CE aims to bend the logic of production and consumption from being open ended towards a closed loop

The aim of CE thinking is to move from open-ended material flows to closed material flows. This means resources that are brought into the production and consumption system – into the system of “making and using” – should stay there for as long as possible. This should result in much less raw material extraction and much less disposal of materials as waste. The practical means of achieving this objective derive from two thematic sets: the first is the ecological design of products and services. The second is the utilisation of end-of-life products and materials (i.e., sustainable waste policy). The change provoking setup of CE thinking is illustrated in Figure 1.

The scientific contributions to the CE stem from disciplines like environmental economics, ecological economics, industrial ecology, systems theory, performance economy, and cradle-to-cradle thinking (Andrews, 2015; Ghisellini, Cialani, & Ulgiati, 2015; Gregson, Crang, Fuller, & Holmes, 2015; Silva, Stocker, Mercieca, & Rosano, 2016; Webster, 2013). The shared factor of these schools of thought is their concern for the sustainability of the current model of production and consumption.

In this chapter, I will analyse the general mechanism of how an abstract concept like the CE can generate change. To do so, I will utilise the concept of ideological steering (Meadowcroft, 2007). Moreover, I concur with Femma Blomsma and Geraldine Brennan (2017) that the CE is an umbrella concept, which Paul Hirsch and Daniel Levin (1999, p. 200) define as

“a broad concept or idea used loosely to encompass and account for a set of diverse phenomena.” The CE as an umbrella concept acts as a framework that gathers other helpful and like minded concepts beneath it. Under the same umbrella-like, change making objective, tools and practices can together create greater momentum for change. Yet, as this chapter shows, change does not necessarily come easily.

## Creating Momentum for Societal Change

For an abstract idea to generate societal change, a set of divergent and influential actors need to mobilise behind it. Lately, CE thinking has been gaining such momentum across Europe. The idea has been promoted actively by the European Union (EU), with the European Commission presenting a CE policy package in 2015. The European Commission does not see the CE only as a large-scale structural change to guide the economy onto a sustainable track. It also views it from the standpoint of the competitive advantage, business opportunities, and job creation.

In Europe, the CE started to make its way into public discourse as a result of promotion by the Ellen MacArthur Foundation. Since its establishment in 2010, the foundation has probably been the most influential promoter of CE thinking (Hill, 2015). In Finland, Sitra, the Finnish Innovation Fund, has been similarly involved. Sitra is a public foundation supervised by the Finnish Parliament; its objective is to promote the economic prosperity and the future success of Finland (Sitra, 2017a). One of themes Sitra has chosen for its future-oriented work is the promotion of a “carbon-neutral circular economy” (Sitra, 2017b). Sitra promotes this through project funding and publishing reports presenting the CE in a positive light (e.g., Sitra, 2015; 2016). Creating momentum for change also involves organising seminars in which influential actors participate. When the EU published its CE policy package, Sitra held a seminar on the topic at the prestigious Finlandia Hall in Helsinki. Speeches were given by European Commission Vice-President Jyrki Katainen, Finnish Minister of Agriculture and Environment Kimmo Tiilikainen, Member of European Parliament Heidi Hautala, and co-president of the Club of Rome Anders Wijkman, to name a few (Sitra, 2017c).

Clearly, there is a buzz around the idea of the CE, but prestigious seminars and speeches from the upper echelons of society count for nothing unless change happens at the grassroots level. If CE thinking is to break through, the still-abstract CE discourse must translate into actual changes in the practices of production and consumption. The most obvious example of these practices is recycling. Other examples include waste utilisation, turning products into services, sharing economy practices, and ecological product design. The latter means that products should be designed to be updatable, easy to repair, and pollutant free. Furthermore, they should be reusable and/or minimize the amount of waste created during their life cycle. Digitalisation opens up opportunities for the creation of forums where actors can exchange goods. One of these is the ResQ Club (2017), which is a smart phone application that enables restaurants to offer their leftover meals at a discount to prevent food going to waste.

## Locked into the Old Ways of Doing Things

In this section, I will discuss the complex socio-institutional playing field where the transformation towards the CE is being driven. As the previous section showed, there is momentum for change. But when considering the agenda of CE thinking, the magnitude of the change required is huge. Changing the prevailing logic of how resources are moved and channelled in the economy is a tall order (cf. wicked problems). Such change is challenging for two reasons. First, the old ways of doing things – the incumbent technologies and practices – are likely resistant to change. Second, the socio-institutional environment where change is driven is complex.

The contemporary socio-institutional environment has become more complex and polycentric from the perspective of power distribution. This also relates to the transition “from government to governance.” In practice, this means that instead of control and coercion, administrations nowadays use subtler ways of steering society. This is because power has been distributed horizontally and vertically. This has led to increased complexity in the ways in which societal development is steered. The verticality of power distribution means the nation state is no longer the undisputed

nexus of power. Instead, the importance of the local and global has grown (for example, cities and the European Union). The horizontal distribution of power means that numerous institutions other than the nation state's administration and policymakers have a say on the direction in which societal development should be steered. These actors include corporations, interest groups, social movements, researchers, and think tanks, and they often have diverging interests. The polycentric power distribution and the differences of interests enhance the role of dependencies and networks between actors in the process of steering societal development. It is unlikely that a single actor can define the direction of development. Instead, the objectives of development and means to proceed must be negotiated by different actors. This is not an easy process, since change is not in the interests of all parties (Evans, 2012; Meadowcroft, 2007; Pierre, 2000; Pierre & Peters, 2000).

The concept of lock-in explains why the old ways of doing things enjoy huge advantages compared to radically new technologies and practices. It illustrates types of difficulties change makers are up against, as change must take place in grassroots level practices to steer production and consumption onto a sustainable track. First, incumbent practices and technologies are already familiar and tested. They might also have a pre-established infrastructure, a network of suppliers and customers and suitable regulations in place (Meadowcroft, 2009). Second, the parties behind incumbent sociotechnical practices have political leverage, as James Meadowcroft (2009, p. 329) notes:

Economic actors associated with established technologies are not enthusiastic about alternatives that would render their competencies obsolete. And since economic strength (investment, income, exports, employment) can be converted into political influence, they can place substantial hurdles in the path of nascent rivals.

The complex socio-institutional environment and advantages possessed by established practices suggest it is difficult to steer the development of contemporary society towards the type of change envisioned by CE thinking. There are many influential actors in contemporary societies who

have something at stake in societal development. While some actors are satisfied with the way things are and might directly or indirectly obstruct attempts to deviate from the status quo, others promote different ways of doing things. In addition, some actors might promote a quite specific type of development, for example, framing development in a way that directly benefits themselves. When talking about change of such a huge magnitude, there are bound to be parties from each type.

Overturning the old ways of doing things is hard even when incumbent technologies or practices are sub-optimal. When talking about societal change, there is no such a thing as a clean slate; change always unfolds against some sort of an inherited setup (Lähde, 2013). This inherited setup has a defining history. It is nevertheless possible to create momentum for large scale change in complex and polycentric societies. The following section introduces the concept of ideological steering, which shows how momentum for change can potentially produce results in complex contemporary societies.

## Ideological Steering: The Interplay Between the Concrete and the Broad

Ken Webster (2013), Head of Innovation at the Ellen MacArthur Foundation, has listed six temptations to be avoided when talking about the CE. The first one hits at the heart of James Meadowcroft's (2007, p. 311) concept of *ideological steering*:

■ Temptation#1 is to be too concrete. (Webster, 2013, p. 545)

According to Webster (2013), the problem of being too concrete is that it can narrow the view of the issue. On the other hand, being too broad can result in being too vague. The concept of ideological steering encapsulates the interplay of the concrete and the broad in terms of efforts to steer societal development. Meadowcroft (2007, p. 311) defines ideological steering as “the development of sets of inter-related ideas that



influence activities at all levels.” Ideological steering shows how concepts such as sustainable development (SD) and the CE use their abstract and overarching nature to their benefit. These concepts can exceed the lines of political positioning, but they can also work as a framework for building political arguments. In this way, a set of ideas can create consensus and provide ammunition in debates. To illustrate, sustainable development is commonly defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987, p. 41). That definition rises to the level of the “common good,” and it is easy to agree with and difficult to directly argue against. Still, there is plenty of room for debate about SD. Declarations of the “common good” type do not answer the question of how SD is to be achieved.

For ideological steering to work, abstract and overarching concepts that provoke change need to be accompanied with other, more concrete concepts. These clarify the direction of societal development. The more concrete concepts reveal how change could be achieved and what it would look like in a specific context. While the interplay between the broad and the concrete is important for furthering change, it is essential for actors in some degree internalise and accept ideas related to change. The internalisation of ideas can manifest as commitments towards change. Widespread acceptance and commitment to change can enable the utilisation of more concrete instruments to further development. These concrete instruments include for example, adjusting regulation, creating new institutional actors, funding, and collaborating in different ways (Meadowcroft, 2007).

When analysing the promotion of the CE from the point of view of ideological steering, the same kind of logic applies as with SD. The objective of the CE is to bend the linear “take-make-use-discard” economy into a circular one, and in that way to make the economy sustainable. It is easy to endorse this objective and difficult to directly disagree with it. However, the objective of the CE does not in itself reveal how such change should be pushed through. This is where the concrete comes in, which in the case of the CE means the practices of recycling, ecological design, waste utilisation, etc. It should also be noted that when the discussion moves from general level declarations to the specifics of change making, there

is bound to be more debate concerning the direction of change. It is not problematic to declare that the needs of the present should be fulfilled without undermining the future generations' ability fulfil theirs, or that the resource flows of our economy should be closed. However, when considerations move towards how and where the change should manifest, conflicts of interests occur.

## Ideological Steering of the CE in Finland

For abstract ideas like the CE to generate change, it is essential that different actors to some degree internalise and accept the idea of what the concept is aiming to do. Only after that can the actual change – whether it is conceptualised as social, material, institutional, or structural – be pushed forward. The concept of ideological steering resonates with the idea of relational leadership discussed in this book. In ideological steering, leadership is not viewed as a capacity of individual entities, but as a relational event between actors that takes place in the influencing processes where social order and change emerge. In this section, I discuss the promotion of the CE using ideological steering as a theoretical prism. I highlight some examples showing how actors from different sectors of society relate and align around the concept in the Finnish context.

The first step is for change provoking concept needs to spread among the actors. In Finland's case, this is what the Sitra does by publishing reports and organising seminars about the benefits of the CE. In the last few years, the CE has become topical in public discourse (Lavikainen, 2015). However, for the internalisation process of CE thinking to work, the message about the CE needs to appeal to a different type of actor. In fact, the general level discourse about the CE aims to appeal with both a *push* and a *pull* message.

The push side of CE thinking involves pushing actors away from the practices of the linear economy. CE thinking does this by pointing out two sets of sustainability issues related to the linear economy. The first set highlights that our planet has biophysical boundaries and our economy should stay within those boundaries or else there is a risk of collapse. The

other set of sustainability issues deals with environmental problems that are the consequence of human activity – for example, climate change. These sustainability issues are grave; they are transnational in nature and are commonly accepted scientific facts (Steffen et al., 2015; Boulding, 1966). The key to underlining sustainability issues is to show the linear economic model to be irresponsible. This is done by outlining grave, scientifically proven problems of the “take-make-use-dispose” economy. To enhance the push side message, the effects of sustainability issues on businesses are also emphasised. For example, resource scarcity can make prices volatile. Consequently, when the irresponsibility of the linear economy is highlighted, the next reasonable step is to start thinking about how to change this unsustainable arrangement. Nevertheless, this sort of shaming is probably not the most efficient way to generate change. It is the pull side of CE thinking that increases the probability of change taking place.

The pull side is more positive in tone than the push side. The pull towards the CE involves showcasing the opportunities generated by change. These include estimates of how many new jobs would be generated and how much added economic value will be created by the transformation to the CE (Sitra, 2015; 2016). This affirmative message is especially appealing to public sector actors, who are essential for the change towards the CE. Public sector actors are important for two reasons. First, they have access to large amounts of resources that can be channelled into the change making process. A good example of this is the framework program introduced by the Finnish Ministry of Environment, which finances development projects for nutrient recycling practices and technologies (Ministry of the Environment, 2018). The resources can also be something other than money, such as information, utilisation, or access to networks (Farla, Markard, Raven, & Coenen, 2012). Second, the public sector has the power to change regulations, which is one of the most influential ways of changing the structures of production and consumption. It is the nation state that has the power to change regulations, although in the EU countries, some legislative powers have been devolved to EU governing bodies (EUR-Lex, 2018).

In addition to new jobs and added value for the economy, promoters of the CE speak about the business opportunities the change towards the CE could create. These in turn entice grassroots level economic actors to

add inputs from CE thinking to their business model – or, in the best-case scenario, to provoke them to change their entire business model to follow CE thinking. Talk about new business opportunities can be appealing to economic actors because they work in a competitive environment where new ways of doing business can provide a competitive edge. However, business opportunities need not to be simply about competition. For example, the Confederation of Finnish Industries published a CE promoting report titled *Take a Leap into Circular Economy! Together Towards New Growth* (2016), which introduces businesses operating according to CE thinking. The main point of the report is to encourage actors to discover CE business opportunities by crossing the established lines of industry – in other words, to cooperate with actors from unfamiliar fields and to create new businesses in line with CE thinking as a consequence of expanding networks. The main message of the report is cooperation, not competition.

Overall, public discourses on the CE are mostly positive. It is framed in terms of solving the issues of sustainability and creating opportunities that generate economic activity and “economic goods,” such as new jobs, added value, and business opportunities. Fundamentally, the ideological steering of CE involves creating enthusiasm for the CE among different types of actors and involving them in transforming the economy according to the CE principles.

## Struggles in Turning the Linear Economy Circular

There are also challenges that complicate the capacity of this abstract concept to generate change. In this section, I discuss the incongruities between CE thinking and material reality, the insincere use of the concept of CE, and the struggle over how far the CE should extend.

At the level of material reality, the CE discourse has cultivated concepts like the “closed loop” and “zero waste society.” In reality, both ideas are practically impossible. The problem with the “closed loop” is that matter and energy dissipate. This means a totally closed system is impossible (Boulding, 1966; Georgescu-Roegen, 1977). In contrast, a “zero-waste society” is possible, but we would then need to call waste something else.

After all, waste is the name for matter we put in rubbish bins. Since waste is a classification, the class could be named something else, but that would not change the fact that the economy produces overflow (Boetzkes, 2016; Hultman & Corvalles, 2012). In defence of these concepts, we should bear in mind their objective is to work as idealisations to which our production and conception system should aim as closely as possible.

The way in which the CE has been ideologically steered has its pros and cons. The clear merit of the CE is that it has spread efficiently among actors. Arguably, this is largely because the general idea of CE is easy to agree with. Despite being a somewhat abstract concept, it nevertheless gives strong indications of what kinds of measures should be taken and in what direction societal development should be steered. Besides, the abstractness of CE gives actors the opportunity to shape the idea of the CE to suit their own perspectives. Of course, this malleability also introduces risk.

An abstract concept can be used “insincerely” to designate practices that are not really about the change but more about maintaining the old ways of doing things. The concept of “greenwashing”, which refers to presenting a practice as “environmentally friendly” even if it is practically not, is already well discussed (see Seele & Gatti, 2017). The abstractness of CE means that some actors may claim a practice to be a form of CE, even when it hardly is. Valenzuela and Böhm (2017) have discussed “CE washing” as a related concern. They ask whether companies promising to take back their older products for recycling might actually be counter-productive from a CE perspective: the take-back promise might relieve consumers of feelings of guilt associated with buying a new product sooner than necessary. The problem in this case would be whether the “take back and recycle” promise increases the amount of consumption and decreases the life-cycle of the products.

The possibility of “CE washing” is not the only struggle concerning CE thinking. Another major issue derives from the push and pull perspectives

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**The take-back promise might relieve consumers of feelings of guilt associated with buying a new product sooner than necessary.**

that promote CE. Grave sustainability issues push towards change, while new possibilities pull towards change. However, there is a discrepancy between the two. In order to resolve issues of sustainability, there have been serious calls to cut the total amount of material production and consumption; to abandon the fetishism of economic growth (Kallis, 2011); and to make the economy fit the biophysical boundaries of the planet (Steffen et al., 2015). However, when discussion focuses on the opportunities presented by the CE (new jobs, added value to the economy, and business opportunities), it implies economic growth, and thus the greater utilisation of resources. In the worst case, it means we continue to overstep the biophysical boundaries of the planet despite achieving a CE (Hobson & Lynch, 2016). To make matters more complex, there is another issue to consider: if the change towards the CE did happen, when it would be “ready”? What would be the grounds to declare the CE has displaced the linear economy?

## Discussion

This chapter discussed whether the circular economy as an abstract concept can generate change, and how it could do so. It is thus also necessary to discuss what kind of change we are dealing with here. Does the CE involve planned, emergent, evolutionary, or revolutionary change? Arguably, it involves all of them, but also none, since the linear economy is the dominant paradigm, and the promotion of the CE is about provoking change.

There are obviously features of *planned change* in the CE. For example, some companies have started to do business according CE thinking (e.g., Confederation of Finnish Industries, 2016). To create or to change a business model to fit the lines of CE thinking requires planned decision making, reasoning, and action. There are also concrete step-by-step plans to turn Finland into a leading CE practitioner by 2025. Sitra (2016) has published “a road map” report on how this objective could be reached, which very much resonates with ideas that change can be planned.

However, the change towards the CE can also be conceptualised as an *emergent change*: If we examine the CE in a wider societal context, we see that it is multi-level, multi-actor, nonlinear, and non-finite in terms of

its timeframe. Even though in the CE promotion speeches the message is articulated in terms of the fixing the system, in reality change making is about adjusting a number of points in the system. In that sense, the promotion of the CE is about *evolutionary change*, where the key words are continuity, incrementalism, adaptation, and adjustment. Currently, the aspect of *revolutionary change* in the CE discourse remains normative: some critical voices argue that the change towards the CE should be more radical than it now seems to be.

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