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# **Challenging the existing approach to Business Model Innovation for Sustainability**

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## Extended abstract

### Critiques on the concept of circular economy and circular business models

The circular economy concept has gained prominence on the agendas of policymakers, companies, and academic research (Geissdoerfer et al., 2017). With its growing interest, some progress has been made toward creating business models incorporating aspects of the circular economy (Bashir et al., 2020; Bocken et al., 2016; Geissdoerfer et al., 2020). However, critiques have been raised, too (Blosma et al., 2022; Corvellec et al., 2022; Stål & Corvellec, 2018). Among others, these critiques highlight how circular business model “conceptions are mostly far from holistic and radical, as they fail to address the roots of the persistent problems it aims to solve” (Hofmann, 2019, p. 371).

Experimentation is rightly viewed as a necessary requisite in business model innovation for sustainability (BMiFS) (Bocken & Geradts, 2022; Jørgensen & Pedersen, 2018). However, considering the changes that are necessary to move beyond only reducing unsustainability and towards achieving true sustainability – a radical paradigm shift is required in both how we organize society and how we approach developing the necessary experimental tools for business innovation (Ehrenfeld, 2009; Meadows et al., 2004). It is our contention that given the qualitative nature of the changes required, our existing approaches to experimentation cannot be rooted in incremental change.

Call for a co-emergent approach to change beyond the “(Business) Model” paradigm

“Unsustainability is measurable; it can be managed and incrementally reduced. But sustainability – the possibility of flourishing in the future – is aspirational” (Ehrenfeld, 2004, p. 4). Ehrenfeld goes on to argue that real sustainability is qualitatively different from what we are currently practicing and must be considered something that cannot model based on our existing practices and logic. As such, it is something other than what we have a model for or could even model.

Given this, it is important to critically evaluate current BMiFS approaches to experimentation for their inherent limitations and potential biases. For example, experimentation can be limited by the current dominant

paradigms and assumptions within an organization or industry, leading to only incremental improvements rather than the truly necessary transformative change. Additionally, experimentation may focus on short-term, measurable results rather than engaging with a (different and less) unsustainable future.

Approaches that start with the purpose of developing a “model” have an already determined end in mind. This can keep organizations in a state of problem-fixing or single-loop learning, where given or chosen goals, values, plans, and rules, usually known from past experiences, are operationalized rather than questioned (Argyris & Schön, 1978). Approaching BMIfS in this way inadvertently keeps an organization making incremental changes within the existing framework – even when that framework is known to be critically flawed. This, for example, can be seen with the use of the Circular Business Model – a model that has been critiqued for its real-world inability to come to terms with the impossibility of developing closed and circular systems in an entropic reality (Corvellec et al., 2022). While learning from established “models” in BMIfS can be beneficial in terms of providing a framework for understanding and approaching sustainability in business – it does, however, have the unintended effect of limiting our thinking and leading us to recreate only variations of existing problematic models. This can be problematic when more radical changes are needed to achieve greater sufficiency and regeneration.

“Problems of sustainability are not problems to be solved. They are learning us to a different future ...” (Senge, 2018, 1:03:40). This is a future that will only emerge in the process of developing with it – what he calls “learning us to it” – rather than “leading us to it” as a pre-established model would do. If organizations are to aspire to a flourishing future with an as-yet-unknown regenerative, sufficiency-based economy – then learning needs to stem from an emerging future.

The concept of emergence is critical in this regard and would involve a double-loop learning logic – a more engaged co-evolving open-ended experimental form of enactive learning that questions the very assumptions that govern the task and change the game (Argyris & Schön, 1978). World-making (business model) innovation begins when we let go of existing models, solutions, and problems and believe that new problems and new worlds are possible and can co-emerge with our experiments via a deliberate open-ended process.



Figure : A Feedback Systems Thinking view on (Business Model) Innovation for Sustainability

(Note: A link describes the relationship between cause and effect. A “+”: Change in the same direction; a “-”: Change in the opposite direction; and a “||”: Represents a delay)

### “Developmental” versus “world-making” BMI

For an organization to innovatively meet the challenges of our time, incremental, “developmental” business model innovation (BMI) is no longer sufficient. Approaches to a circular economy need to get more “loopy” – radical, world-making BMI is needed. This can be visualized as illustrated in Figure 1.

The “blue loop” maps a classic basic business feedback - a typical business model logic. It represents the most basic business performance process (Loop 1). Decision makers usually try to close the “Perceived Performance Gap” by comparing their “Organizational Performance” with the given “Performance Target”. An increase in the perceived gap leads to increased “Organizational Action” to “fix” the performance to improve the stability and predictability of the existing business - a balancing loop. It applies to all business forms when conceptualized in a causal loop format. The underlying driver is the dominant economic performance paradigm (BaU), which gets reinforced by improving “Organizational Performance”.

The “red loop” captures a deeper form of learning that is central to responding to today’s challenges leading to a “Change in Kind” - to new worlds (Loop 2). The logic is that “Organizational Action” results in an increasing number of anomalies, which cannot be addressed with existing routines and practices. However, an increase in the “Perceived Performance Gap” (besides stimulating actions) motivates decision-makers to increasingly reflect on their “Aspirational Vision for “True” Sustainability”. Together with an increase in “Constraints”, this supports “Experimentation and Exaptation”, resulting in more “Co-Emergence of Alternative Approaches and Tools”. Consequently, change in stakeholder expectations will increase, and over time, increase the “Sustainability Paradigm Strength”. The variable “Sustainability Paradigm Strength” affects the “Performance Target”. Which of the two paradigms dominate depends on their relative strength, which is a function of the BaU paradigm’s inability to cope with the “Anomalies” affected by today’s increasingly complex “Constraints” generated by “Organizational Action”.

While “Developmental BMI”, or problem-solving and model following, can be beneficial in improving the stability and predictability of the existing business, it is not enough to address the radically non-linear challenges of sustainability. A deeper form of co-emergent and experimental double-loop learning is necessary to lead to a “change in kind” and the co-creation of new and yet unknown worlds. A process of experimental double-loop learning will require new approaches and new techniques that foster both qualitative change and a change that is radically novel.

## The conjoined logic of emergence and exaptation

One of the most promising approaches involves combining emergent processes and the concept of “exaptation”. *Exaptation* is a concept borrowed from evolutionary biology, which refers to utilizing unintended capacities of a physical feature for novel ends. It has been applied to the field of innovation and experimentation to both explain how new ideas and technologies have developed and also to experimentally look at how they can be developed (Andriani & Cattani, 2016; La Porta et al., 2020). Exaptations conjoined with co-emergent processes (via a double-loop learning logic) could be the requisite source of radical qualitative novelty.

The conjoined logic of co-emergence and exaptation can be particularly useful for developing business-based experimental approaches to yet unknown sustainability precisely because it allows for a more exploratory co-

evolutionary approach to innovation that does not require a conceptualizable goal. Rather than starting with a preconceived idea or solution, exaptation encourages experimentation and following unexpected paths, which can lead to more emergent and transformative change. Additionally, it allows for integrating different perspectives and a focus on co-creation with customers and stakeholders, which is crucial for creating BMIFS (Breuer et al., 2018). By embracing exaptation and experimentation, organizations can co-evolve dynamically with new possibilities and are thus better equipped to navigate the ever-changing landscape of sustainability.

## Outlook

Our research aims to further develop the understanding of “loopy” BMIFS, resulting in knowledge for offering a co-emergent alternative that is more context-sensitive and emphasizes an approach with heuristics (vs. rules).

## Keywords

innovation, co-emergence, experimentation, exaptation, organizational learning

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