
A Circular Bioeconomy ? A revisit of its supposed genealogy

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Abstract

Since 2018, the concept of a "circular bioeconomy" has become a clear horizon for European public policies on bioeconomy (European Commission, 2018). As productive sectors evolve or reorganize around the use of biomass as the primary resource for non-food applications, it is worth examining how bioeconomy can concretely align with the objectives promoted by advocates of the circular economy.

The circular economy is currently a shared goal among diverse actors in industrial, political, and activist domains (Winans et al., 2017 ; Korhonen et al., 2018 ; Corvellec et al., 2022 ; Giampietro, 2023). It offers a compelling promise: the integration of production and consumption activities into natural or technical cycles, reducing resource consumption and minimizing environmental impacts. However, similar to the enthusiasm surrounding the bioeconomy concept, the apparent consensus around the circular economy and its objectives is not self-evident.

It is remarkable and surprising to note that one common thread among the multiple definitions and variations of the circular economy is the systematic reference to David Pearce and R. Kerry Turner's 1990 book, *Economics of Natural Resources and the Environment*. This work is recognized as one of the key theoretical foundations of the circular economy and its connection to sustainability models.

We propose revisiting this seemingly well-established genealogy to take a critical perspective. This will lead us to analyze how Pearce and Turner depict the controversy between K. Boulding (1966) and N. Georgescu-Roegen (1966) during the 1960s and 1970s on the recyclability of matter. While Pearce and Turner appear to side with Georgescu-Roegen in this debate, they actually distort his argument. Indeed, they execute a dramatic shift in perspective, positioning the circular economy as a conceptual innovation characteristic of emerging ecological economics, whereas for Georgescu-Roegen, it belonged to a standard economic framework that denies reciprocal interactions between the economy and the environment.

The concept of bioeconomy has been subject to a "hijacking" (Vivien et al., 2019). The same, therefore, applies to the circular economy. What, then, do you think has happened to

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the circular bioeconomy ?

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