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Marine Biodiversity and Ecosystems

A Tale of Two Sustainabilities

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Time: 2022. 12. 26 Mon. 10:00
Venue: Auditorium, 1st Floor,
Interdisciplinary Research Building
跨領域科技研究大樓1樓演講廳
Host: Dr. Chaolun Allen Chen 陳昭倫研究員

~Attendee must wear mask~
~與會者請配戴口罩~

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Abstract

"If a company takes great pains to reduce by half the greenhouse gas (GHG) emissions associated with the production of one of its products, the company and its customers might be under the impression that it is on the right track in the fight against climate change. However, if these efforts are rewarded with a threefold increase in the product's sales, the total upstream GHG emissions of this product will actually end up 50% higher."

I took inspiration from a case study I read in grad school to come up with this thought experiment, and it has haunted me ever since. I've run it by many of my friends, and some have reminded me that increased sales of a relatively sustainable product would also mean decreased sales of relatively unsustainable ones. But does a unit of a more sustainable product added to the market necessarily mean a unit of a less sustainable product removed from the market? Research has shown that a unit of electricity from non-fossil-fuel sources has been displacing much less than a unit of electricity from fossil-fuel sources, sometimes less than one-tenth of a unit.

It was with this simmering sense of doubt that I went from a diehard believer in technology's ability to tackle climate change to an advocate of fundamental systemic change. In a world dominated by neoliberal capitalism and its insatiable appetite for growth, it would take much longer than the urgency of climate change requires, if ever, for the supply of sustainably sourced resources and manufactured goods to catch up with ever-growing demand. The situation under this business-as-usual approach appears even direr if we take into account potential rebound effects where more sustainable or efficient ways of using resources drive up demand even more, as postulated in the thought experiment.

This suggests to me the danger of our current technocratic approach to sustainability and the importance of interdisciplinary education to the making of a new generation of sustainability leaders. We need coalitions of political leaders who really understand the socio-economic root causes of the multiple crises we're facing and carry out well-rounded strategies to address them. We need teams of infrastructure developers that have as much expertise in biodiversity as in engineering. We need cohorts of business school students who are more interested in the creation of intragenerational and intergenerational well being than profit maximization and the rampant reckless financialization of everything. We need communities of artists and content creators who can instill sympathy and hope in us and make us take action.

We're living in an age where many so-called "value creation" activities are actually activities of value extraction or even destruction for our society and the environment, while many invaluable contributions to our society and the environment are deemed valueless in monetary terms. We need to change that, and we have the ability to change that because change doesn't have to come from above. Since we're the ultimate beneficiaries of change, we might as well be the initiators of change too.