

## Socioecological transitions and global change: trajectories of social metabolism and land use

Edited by Marina Fischer-Kowalski and Helmut Haberl

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*“One England blots out another. The mines had made the halls wealthy. Now they were blotting them out, as they had already blotted out the cottages. The industrial England blots out the agricultural England. One meaning blots out another. The new England blots out the old England. And the continuity is not organic, but mechanical.”*

(from *Lady Chatterley’s Lover* by David Herbert Lawrence, The 1928 Orioli Edition reprinted as Bantam Classic Edition 1983, pp 167–168)

One does not usually read *Lady Chatterley’s Lover* to be enlightened about socio-ecological transitions and land use. Yet by chance, I was reading D. H. Lawrence historically scandalous novel (to be precise, its “Complete and Unexpurgated 1928 Orioli Edition”) and *Socioecological Transitions and Global Change—Trajectories of Social Metabolism and Land Use* at the same time. Both were an exciting read, and, to my surprise, *both* are about the transition of agrarian to industrial societies. Lawrence lets his protagonist, Connie (“Lady Chatterley”), give a highly passionate, emotional and insightful account of this transition. The book edited by Fischer-Kowalski and Haberl is no less spirited, but also extremely disciplined. Fischer-Kowalski, Haberl and their authors use a pioneering set of methods that can be dubbed “ways of accounting the metabolism of society” to analyse not only the English transition, but those in other parts of the world and less long gone, as well as contemporary. These efforts are undertaken not only for curiosity’s sake, but to gain

knowledge that could help shape possible post-industrial transitions into a more sustainable world.

The transition from an agrarian to an industrial society is often viewed in monetary terms. The book by Fischer-Kowalski and Haberl, as well as the novel by D. H. Lawrence, take a richer perspective. Lawrence makes transparent the emotional turmoil that transitions can bring about in people who witness them, and with this he illuminates how profound, disturbing and yet unspecific, or impossible to clearly grasp societal changes can appear. Here are some of Connie’s thoughts about the colliers, who are visible agents of the industrial transition she witnesses:

*“Creatures of another reality, they were elementals, serving the elements of coal, as the metal workers were elementals, serving the element of iron. Men not men, but animals of coal and iron and clay. Fauna of the elements, carbon, iron, silicon: elementals. [...] Elemental creatures, weird and distorted, of the mineral world! They belonged to the coal, the iron, the clay, as fish belong to the sea and worms to dead wood. The anima of mineral disintegration!”*

(D. H. Lawrence 1928: *Lady Chatterley’s Lover*, pp 171–172)

Fischer-Kowalski and Haberl’s collection of works undertakes an analysis of this “mineral disintegration” observed by Connie. They take meticulous account of materials and energy flows through society during the transition from agrarian to industrial. In this way, the book sees beyond monetary indicators, and is a logical next step after J.R. McNeill’s comprehensive, also “beyond monetary” analysis *Something New Under the Sun: An Environmental History of the Twentieth Century World* (McNeill 2001). While McNeill’s book is an exciting and

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overwhelmingly rich read, it seems one man alone cannot fully integrate all aspects of our history, even if adding a long ignored and essential aspect: the environment. In his review of McNeill's book, Joel Cohen concludes: "The science that integrates the human and natural history of the Earth remains to be created." (Cohen Joel 2001). Fischer-Kowalski and her team have laid an eminent stone in the foundation of this science by taking the integration of human and natural history one step further.

The book is not popular science writing. That means it is rather heavy stuff. Do not expect to fly over it, but if you lack the time, tables and graphs will help you extract a little of its essence quickly. My favourite sections were the introductory chapter and the synopsis, both lead-authored by Fischer-Kowalski, and written in her enthusiastic, dense and elegant style. A slow read for me—as a clear line of thought weaves easily through the complexity of it all, the writing's turns and loops lost me sometimes, but I remained thirsty for its meaning. So I re-read and paused to think outside my particular box—in hindsight time well spent, as I now feel better equipped to think about plausible scenarios of our future. Unlike some more accessible popular texts, these guiding and concluding chapters do not get carried away by their own dynamics, reinventing wheels and taking credit for it—which is a great risk when writing on pressing global issues of this complexity. Rather they are rooted deeply, broadly and firmly in the relevant literature, no matter its publication time or origin. This seems Fischer-Kowalski and colleagues' "code of honour" and contributes a great deal to the credibility and usefulness of this book.

As the reader's curiosity is satisfied again and again by hands-on data and analyses of specific cases, the book also stays in touch with today's all-encompassing and pressing global challenge of transitioning into sustainable societies while experiencing and causing global change. Considerations about "possible futures" are firmly grounded in a detailed understanding of present day and past observations. The wealth of data collected is impressive, and saves all authors in this book from making overconfident, sweeping statements about where the world is going or should go. Nevertheless, the authors have the confidence to provide a well-informed perspective on today's world in the concluding chapter, which defines a playing field, players and scenarios for further thought and exploration.

In this concluding chapter, Fischer-Kowalski et al. also spell out four determined political efforts needed to find a more sustainable future; their goals in brief are: (1) solving the climate change problem, (2) restricting resource use and solving distributional problems, (3) finding a less material and energy intense infrastructure, and (4) protecting last pristine wilderness areas and biodiversity. Suggesting these efforts is not new, and there are already many out there who invest their lives in these goals. But while we strive for these changes, Fischer-Kowalski and Haberl provide a methodology that helps us monitor the momentum and direction of our current transitions. Surely their "toolkit" for analysing agrarian/industrial transitions needs to be amended and adapted for the transitions of today and tomorrow. However, by analysing in detail past transitions that might have seemed impossible to many who were in them as they occurred, Fischer-Kowalski and Haberl also give hope and inspiration for today. Connie who witnessed the agrarian/industrial transition of England definitely was at wits' end about her future—more than we have to be about our's:

*"What would come after? Connie could not imagine. She could only see the new brick streets spreading into the fields, the new erections rising at the collieries, the new girls in their silk stockings, the new collier lads lounging into the Pally or the Welfare. The younger generation were utterly unconscious of the old England. There was a gap in the continuity of consciousness, almost American: but industrial really. What next? Connie always felt there was no next. She wanted to hide her head in the sand: or at least, in the bosom of a living man."*

(D. H. Lawrence 1928: *Lady Chatterley's Lover*, pp 170–171).

## References

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