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Environmental problems “do not belong to or respect disciplines but rather need to be addressed with comprehensive and inclusive frameworks” (Moran and Lemos, 2016:2). This recent review paper of future directions in human-environment research is just one in a growing number of studies emphasizing that business-as-usual, i.e. disciplinary research and training of students, stand in the way of finding solutions to ever increasing sustainability challenges related to environmental problems. Future Earth, the now major international research platform on environmental sustainability, concurs: Scientists concerned about sustainability need to get together around a multi-scalar, multi-temporal interdisciplinary research agenda embracing the physical, the biological, the engineering, the humanities, law and the social sciences.

How to operationalize such interdisciplinary human-environment research is however a standing question. The ‘elusiveness’ of this pursuit despite increasing funding and research opportunities like Future Earth is still too pertinent (Roy et al., 2013). Reasons are plenty, but institutional barriers, often within universities and research institutes, represent a real challenge. Overcoming this is not easy and, despite the rhetoric, the privilege of only very few programs, centers, and institutes world-wide.

One research community that has managed to bridge the institutional barriers to interdisciplinarity is the Institute of Social Ecology at Alpen-Adria University Klagenfurt located in Vienna (Austria), also known as the Vienna School of Social Ecology. This very dense, comprehensive and inclusive book is a testament to the research carried out there since the institute was initiated in 1986. Spanning almost 600 pages, leading as well as emerging researchers of the institute present the key scientific approach, concepts, results and methods of the Vienna School.

The book is organized into five parts containing a total of 29 chapters. It is framed by seven introduction chapters setting the ‘conceptual repertoire’ of social ecology as it is practiced at the school. If short on time, these present a substantial introduction to the key themes and are highly recommendable. This is followed by five chapters on ‘empirical approaches’ to socioeconomic metabolism, a central concept for the school. The following six chapters focus on land use and what the school labels the colonization of nature, and how to capture such processes empirically. Here the reader yet unfamiliar with the school’s concept of Human Appropriation of Net Primary Production or HANPP can get her curiosity satisfied. The fourth section introduces a third central concept of the school namely long-term socioecological research, or LTSER. LTSER captures well the prevailing emphasis within the school on multi-scalar, multi-temporal analysis of social systems and ecosystems in order to elucidate their interactions. A final section of the book concerns how engaging with stakeholders and in particular the specific approach of this school can help a transition towards a more sustainable world. An innovative aspect of the book is the so-called Method Précis which are short, non-technical explanations of important methods applied within the school. These are spread throughout the four last parts of the book.

The book is extremely well written and the fluidity and complexity of the writing is impressive. The readability is
further enhanced by plenty of illustrative figures and tables, as well as the personal flair of the chapters. They often read as both personal accounts and scientific explanations and support the sense that the school really is interdisciplinary. The authors are neither navel-gazing subjects nor fly-on-the-wall observers. A box on ‘adventures in social ecology’ in the general introduction to the book is important in this light as it illustrates how research careers, and in particular interdisciplinary ones, are personal journeys full of choices and chance encounters but also often defined by an openness to new ways of doing things. The internal consistency between the chapters is extremely high illustrating better than the seven conceptual chapters that we are indeed dealing with a ‘school of thought’, and that this school has significantly shaped all the authors. No amount of central editing could have achieved this consistency. A little jibe at the book is in place here however because this consistency might also be due to a large overlap of authors. Helmut Haberl and Fridolin Krausmann, two of the editors, are for example lead or co-authors on nine chapters respectively. The same can be said about the references which to a large extend remain self-referential citing the work of the other authors within the book. The latter is a shame as new readers in this field – and the book claims to have classroom potential – could do with a bibliographic guide to the wider field of socio-ecological research.

Nevertheless, the book is highly recommendable to all researchers about to engage in or already deeply immersed in human-environment research. Besides explaining the key concepts of, for example, socioeconomic metabolism and HANPP, the empirical material presented is simply plain interesting and diverse. Land use changes in Africa intermingle freely with alpine tourism and the sewage system of Vienna, to mention just a few case studies described in the book. Accompanying these, thorough explanations of methods, models and measurements enables an understanding of how culture and nature intermingle at an interface shaped by communication, culture, labour, the economy and production, or as the school label this: the colonization of nature. At a meta level, the book provides in my opinion one of the best arguments for how it is possible, as well as strictly necessary, to take the existence of ‘nature’ for granted while also acknowledging the social construction of nature without favoring one view over the other. Using socioeconomic metabolism as a guiding premise the book furthermore illustrates that the biophysical world has limits and that input and output are not matched, and as such the book constitute an important contribution to the fast developing field of ‘sustainability science’ (Kates et al., 2001).

At the Vienna School of Social Ecology interdisciplinarity and multi-scalar, multi-temporal research is clearly not just rhetoric. It is taking place and this book illustrates why this is so important for achieving environmental sustainability. This brings me to my only major ‘critique’ of the book. If we know, and we do, that a major problem for achieving what the school has done in terms of interdisciplinary research is structural constraints found at universities then why does the book not have a chapter on the history of the institute? The book is after-all evidence of how building an institute that brings together researchers with various disciplinary backgrounds can facilitated the creation – over time – of a substantial interdisciplinary school of thought needed for tackling sustainability challenges. Considering the emergence of founding bodies such as Future Earth and a myriad of new institutes like my own (iri-thesy.org) the experiences regarding structure, oppositions, funding, staff compositions etc. of the Vienna School could inform these endeavors and the lack of such a chapter is a shame. Perhaps this could be added in a revised and updated version: surely one such will be due in the future as the school shows no signs of slowing down.

References

