

Chapter 3

The Barcelona School of Ecological Economics and Political Ecology: Building Bridges Between Moving Shores



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3.1 Introduction: The Bonding Elements of the Barcelona School

As stated in the introductory Chap. 1 (by Muradian and Villamayor-Tomas), we have identified the following three aspects as the key bonding elements of the Barcelona school of ecological economics and political ecology:

- (i) Paying special attention to the biophysical dimension of the economic system
- (ii) An interest in the political and historical aspects underlying the environmental performance of contemporary capitalism
- (iii) An emphasis on the study of alternative ways of knowing, valuing and organizing social life

In this introductory section, we briefly explain some key concepts and principles underlying these three bonding elements of the School.

The first element (biophysical dimension of the economic system) revolves around the analysis of social metabolism. This concept refers to the processes of material and energy use, transformation and disposal by societies, associated with self-organization, reproduction and maintenance of internal functions and structures (González de Molina & Toledo, 2014). Social metabolism is rooted in the entropic

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nature of the economic process and its consequences in the form of environmental degradation (see Chap. 4 by K. Farrell in this book). Within ecological economics, the social metabolism lens has been used, among others, to evaluate quantitatively the rate at which communities and societies use resources, comparing, for example, hunter-gatherers, agrarian subsistence communities or industrial societies (Fischer-Kowalski & Haberl, 2007).

The Barcelona School has developed a strong quantitative research agenda on social metabolism, epitomized in the Multi-Scale Integrated Analysis of Societal and Ecosystem Metabolism (MUSIASSEM) framework (for a comparison of MUSIASSEM to other frameworks see Gerber & Scheidel, 2018). MUSIASSEM unfolds into a series of concepts and protocols to translate both quantitative and qualitative data into a common language and analyze metabolic processes at different scales of social aggregation. Applications of MUSIASSEM have focused on the metabolic pattern of food, energy, water and their interrelations (see Chap. 10 by M. Giampietro in this book). Other recent applications of social metabolic accounting within the school have featured agri-food systems at the regional scale (Marull et al., 2018; Cattaneo et al., 2018).

The second key interest of the School (political and historical aspects of environmental performance) relies heavily on the notion of ecological distribution conflicts. This concept refers to social conflicts born from the unfair access to natural resources and the unjust distribution of pollution burdens (Martinez-Alier, 2002). These conflicts presuppose some deliberate exercise of cost shifting from polluters, extractive industries or even governments to vulnerable social groups. Cost shifting, a term now well established in the field of ecological economics, has been adopted in the works of Joan Martinez Alier and other colleagues within the school (Muradian & Martinez-Alier, 2001) to refer to those environmental load displacements. This vision questions Coasian expectations that parties infringing environmentally related costs to others would be willing to bargain over compensations for the damages. As put by Martinez-Alier more than 25 years ago, “the issue cannot be resolved by bringing externalities into surrogate markets, but only by social activism against depletion of resources and environmental pollution” (Martinez-Alier, 1995, pp. 70–71).

Ecological distribution conflicts are understood as collective claims against environmental injustices. This type of social conflicts often show that environmental degradation is closely linked to processes of marginalization of impoverished and vulnerable communities. This is indeed the basis of the “environmentalism of the poor,” a proposition claiming that marginalized communities often (though not always) defend the environment because it is an integral part of their livelihoods. The concept emerged as an alternative to influential environmental discourses that aligned environmentalism with either the need to conserve nature in a pristine state at all cost (“cult of wilderness” discourse) or with the hope that technological progress would decouple economic growth from environmental degradation (“gospel of eco-efficiency” discourse) (Guha & Martinez-Alier, 2013). This concept has given visibility to the environmental concerns of rural communities in the global South, as compared to that of environmental movements in the global North.

The third core aspect of concern for the School (alternative ways of knowing, valuing and organizing social life) rests on a post-modern stand towards Western

science. Firstly, this perspective acknowledges that the premises on which science lies, as well as science-policy relations, are embedded in particular historical and cultural backgrounds, and therefore this way of knowing cannot be considered as universal or intrinsically superior in all contexts. Science must be considered as one among several ways of knowing the world. Secondly, science faces inherent limitations in decision contexts characterized by complexity, high uncertainty and high stakes. These limitations can create legitimacy challenges in public decision-making. These two standpoints are expressed in specific theoretical propositions, such as the post-normal science paradigm, as well as in particular research agendas, such as paying attention to the diversity of languages of valuation and to non-Western forms of knowledge.

In this chapter, we explore the connections between these three dimensions. We argue that the theoretical and methodological integration of these areas of concern has been the main contribution of the Barcelona School. By doing so, the School has advanced on creating bridges between ecological economics and political ecology. One of the objectives of the present chapter is precisely to explain the foundations and development of such interaction. In the following section, first we explain the epistemological foundations that in our view inspire the interest around cross-fertilization between ecological economics and political ecology. After, we explore the bridges that have been built between the three dimensions outlined above, including concrete cases of cross-fertilization.

3.2 Epistemological Foundations Inspiring Cross-Fertilization

3.2.1 Ecological Economics as a Place of Convergence and Host of Diversity

The place of inter-disciplinary convergence that has been called Ecological Economics is characterized by the co-existence of heterogeneous analytical approaches and by acknowledging complexity in the way it conceptualizes human-environment interactions. This academic community was the result of a conscious effort to study the biophysical foundation of the economy (Martinez-Alier, 1993). Despite the difficulties it has faced over time, the field has been able to maintain both its identity and intellectual openness, which enables fruitful exchanges with other fields. Debates around the scope of the field and the composition of its epistemic communities are frequent in ecological economics, including calls for epistemological closure (Spash, 2011), for acknowledging sub-fields, such as “institutional ecological economics” (Paavola & Adger, 2005) and “social-ecological economics” (Spash, 2011), or for recognizing academic schools, such as the Vienna Social Ecology School (Fischer-Kowalski & Weisz, 2016; Farrell, 2018) or the Bloomington School (Aligica & Boettke, 2009).

These discussions show that ecological economics has always had moving boundaries, on the intersections between different social sciences but also between them and natural sciences. More specifically, this introductory chapter, and the whole book, aims at recognizing the efforts of Joan Martinez-Alier and other scholars associated with the Barcelona School to connect two related and moving realms of knowledge: ecological economics and political ecology. Indeed, we could state that one of the foundational propositions of the School is that a “fruitful theoretical and methodological frictions” with political ecology and other social sciences is a productive endeavor for ecological economics (see Zimmerman, 2015 for a similar argument with regard to the integration of political ecology and environmental sciences). In sum, adopting ecological economics as a foundational analytical approach has enabled the School to have an open scope and vision, which looks for cross-fertilization among disciplines and methods.

3.2.2 Post-normal Science and the Search for Other Ways of Knowing

The most important contemporary environmental problems usually combine a high level of uncertainty, high stakes (both in terms of entangled values and consequences) and the urgency of the social decisions to be taken. During the 1990s, Silvio Funtowicz and Jerome Ravetz (1993) developed the notion of post-normal science to bring about new epistemological insights about the role and limits of science in supporting social decisions in such context. The core contribution of this set of propositions is the idea of “extended peer community”. Due to the high level of complexity and uncertainty that characterize the decision contexts described above, knowledge holders that traditionally have had high power to influence policy design (e.g. scientists), face serious difficulties to provide both accurate and legitimate inputs to public decision-making processes. In order to solve such democratic deficit in the policy-science interface, the post-normal science framework proposed to shift the source of quality and legitimacy of public decisions from expertise to participation. In a democratic setting, by expanding the community of “peers” (people empowered to voice their opinions and judgments) to non-scientists, public decision processes can gain support (“procedural quality”), even though uncertainties and complexities remain in place.

Post-normal science has been very influential in ecological economics, as well as in the Barcelona school. More specifically, the works around social multi-criteria evaluation (SMCE) and traditional ecological knowledge can be justified by the propositions of post-normal science. SMCE offers a way to integrate different value systems when facing a problem of social choice. This could be done with participatory methods, where criteria selection, weighting and aggregation steps are performed with the voice of a broad group of actors (Munda, 2008). Driven by an interest in the incommensurability of values in the context of environmental

conflicts (Gerber et al., 2012), scholars from the School have also used SMCE in a variety of contexts, including water conflicts (Kallis et al., 2006), energy-related public decisions (Munda & Russi, 2008; Gamboa & Munda, 2007) and coastal resources planning (Garmendia & Gamboa, 2012; Garmendia et al., 2010).

Scholars of the School working on knowledge systems alternative to science, usually known as traditional ecological knowledge, have moved from documenting their erosion to highlighting the factors (e.g., Reyes-García et al., 2014) and processes (e.g., Gómez-Baggethun et al., 2010) that both undermine and reinvigorate them. They have not only undertaken research in the Global South (e.g., Beyei et al., 2020) but also in the Global North, and expanded the scope from an interest from customary forms of knowledge into an interest into digital knowledge and citizen science (e.g., Calvet-Mir et al., 2018).

3.2.3 *The Diversity of Languages of Valuation*

Differences in perceptions and values are often grounded and expressed as multiple languages of valuation (Avci et al., 2010). Ecological distribution conflicts can indeed be also viewed as conflicts arising out of different attitudes and meanings given to nature by different cultures (Escobar, 2006). Multiple languages of valuation derive from the incommensurability of environment values, which presupposes value pluralism (Martinez-Alier et al., 1998). While this renders the values weakly comparable, they are, however, amenable to multi-criteria valuation (Munda, 2008). Languages such as “sacredness,” “community life and livelihood” and “ethnic identity” arise commonly in socio-environmental conflicts in response to a predominantly monetary language that justifies the extraction of the resource at stake (Martinez-Alier, 2002; Avci et al., 2010). Attributing sacred values to nature is a common practice, especially in the Indian subcontinent. Examples are the sacred groves in Khasi hills, the Western Ghats and the Aravalli hills in the state of Rajasthan, where nature is deemed to remain pristine, with even the collection of dead firewood prohibited (Gadgil & Vartak, 1975). “Sacredness” as a language of valuation, for example, has appeared in several distributional conflicts involving access and rights on ecosystems (Gerber, 2011; Avci et al., 2010; Rival, 2010; Temper & Martinez-Alier, 2013). Temper and Martinez-Alier (2013) highlight the case of Niyamgiri Hill in Odisha state of India, which the Dongria Kondh tribe consider as sacred; the hill is considered to be the abode of Niyam Raja. This was the site of a conflict with a bauxite mining company that justified the activity by the monetary valuation of the benefits versus costs of extracting the large quantities of bauxite ore lying under the mountain.

When socio-environmental conflicts occur, and in general when opposing world-views are at stake, making use of an extended peer community could be a way to gain legitimacy in public decisions (Turnpenny et al., 2011). Political ecology scholars follow this premise and have advocated the acceptance of different perceptions and values around conflicts and the need to take them into account through

genuine participatory processes (Adger et al., 2001; Martínez-Alier, 2009). Within the Barcelona School, this has translated into a fair number of applications of social multi-criteria evaluation in situations of conflict (Gerber et al., 2012; Zografos & Rodríguez-Labajos, 2014; Corral & Acosta, 2017; Walter et al., 2016; Corzo & Gamboa, 2018). In a recent application, Corzo and Gamboa (2018) examine the environmental effects of mining liabilities and small-scale mining on peasant communities. After a measurement of critical water quality parameters, SCME was used to reveal key social actors and their perceptions regarding tailing problems.

3.2.4 Activism Mobilizing Science

The interpretation of reality, including the scope and causes of socio-environmental problems and conflicts, is indeed very much dependent on the prevailing worldview in a given social group. There is, therefore, an intertwined relationship between cognition (overarching values framing the way we interpret the world), knowledge and decisions (action). Indeed, ideological frameworks are unavoidable and very relevant across any academic field, but especially among social sciences. It should be an ethical requirement in science to make those ideological positions explicit. An important number of authors of the Barcelona School have not only done so but also engaged in what has been coined as “activism-mobilizing science” (Conde, 2014). This refers to a self-reflective epistemological stand of scholars committed with the co-production of knowledge that can be mobilized in socio-environmental causes and transformations, usually embedded in environmental justice challenges. Such an engagement could be controversial in academic circles, since some authors could argue that it could compromise the commitment with the notion of truth. Nonetheless, this approach has the undeniable merit of making clear and explicit the underlying ideological and ethical basis of the academic work. Furthermore, through activism-mobilizing science, it is also possible to build strategic partnerships with key social actors, gaining insights and points of view that academics usually do not have access to (Tallapragada, 2018). This would be particularly the case in the study of socio-environmental conflicts through the knowledge-based support of social (e.g., environmental justice) movements (McCormick, 2007).

3.3 Building Bridges: Cross-Fertilization Between Ecological Economics and Political Economy

This section provides some examples on how scholars at the Barcelona School have advanced on the development of fruitful interactions between the concepts, notions and approaches outlined above.

3.3.1 Ecological Asymmetries, Distributional Conflicts and the Environmental Justice Atlas

Addressing the interface between social metabolism and environmental justice has been a core concern of the Barcelona School since its origin (Martinez-Alier et al., 2016; see also M’Gonigle, 1999 for a pioneering effort). Ecological distribution conflicts arise from the unequal distribution of benefits and burdens of economic activities derived from changes in the metabolism of societies (Martinez-Alier, 1993; Martinez-Alier & O’Connor, 1996; Martinez-Alier et al., 2016). Social metabolism has been instrumental to illustrate economic and environmental asymmetries and conflicts (see Oppon et al., 2018; Oulu, 2015; Infante-Amate & Krausmann, 2019 for recent examples) and adding precision to the claims of environmental justice organizations and the quantification of injustices (Hornborg & Martinez-Alier, 2016). This approach (combining social metabolism and conflict analyses) has enabled a nuanced understanding of ecological distribution conflicts involving mining, biomass or waste disposal conflicts in Latin America (see the Chap. 11 by M. Perez-Rincón) and other Global South regions (Demaria, 2010; Gerber et al., 2009; Kronenberg, 2013).

The interest in plural values has given visibility to the needs and visions of communities in non-Western cultures and justified the use of multi-criteria valuation techniques in the context of socio-environmental conflicts. The School has also been keen on combining social metabolic analyses with the analysis of the political economy and institutions that govern modes of appropriation, distribution and disposal of materials and energy within societies. The idea of socio-metabolic configurations and their current linkages with capitalism and resource distribution among different social groups captures such spirit of integration of metabolic and political ecology concerns (Muradian et al., 2012; Scheidel et al., 2018). The current ecological crisis has to do with the metabolic configuration of globalized, industrial and capitalist societies, whose dynamics are not only behind the acceleration of resource degradation but also driving the dispossession of large numbers of people from basic living conditions (see Chap. 16 by A. Scheidel in this book).

Scholars of the Barcelona School have developed a fair amount of applications of social metabolic analyses, mostly in the Global South and around the ideas of ecological unequal exchange (EUE) and ecological debt. EUE states that resource exchange between high- and low-income and middle-income nations rich in natural resources is asymmetrical; it increases the economic growth of the former while producing environmental degradation in the latter, in the form of, e.g., biodiversity loss and water pollution (Givens et al., 2019). When measured in calories, for example, the EUE is reflected in a loss of self-sufficiency in food and the quality of diets (higher-rated calories in nutritional terms – such as fruit – are exported and poorly rated calories – such as oils and fats – are imported) (Falconi et al., 2017). Findings from this research program have led some scholars to argue that resource-rich Global South countries are indeed creditors of an “ecological debt” (see Givens, 2018 for a review). This concept was developed initially by Latin American

environmental justice organizations (EJOs), already in the 1990s, but it was uptaken by scholars later on (Martinez-Alier et al., 2014; Hornborg & Martinez-Alier, 2016). Studies in the Latin-American context have indeed profiled strongly within the School (see Chap. 11 by M. Perez-Rincón for a summary). Recent insights from this literature, for example, point to the relationship between the terms of trade between world regions and environmental degradation (Infante-Amate et al., 2020; Samaniego et al., 2017).

Most recent developments within the School around all the above include claims around the existence of a global environmental justice movement (Martinez-Alier et al., 2016). EUE is indeed considered as the underlying source of most of the environmental distribution conflicts in our time (Hornborg & Martinez-Alier, 2016), to the point of equating the theory of EUE to a theory of global environmental injustice that links justice research with global structural dynamics (Givens et al., 2019, see also Chap. 33 by Falconi et al. in this book).

The Environmental Justice Atlas, which has been an integral part of the School since 2012, shows the current interest in ecological distribution conflicts and environmental justice movements around the world. The Atlas, which in essence is a compilation and categorization of socio-environmental conflicts and movements, was designed as a tool to co-produce knowledge between scholars and activists and help denounce cases of environmental injustice, encourage learning and exchange of experiences, sensitize the media, opinion-makers and public opinion, and to put pressure on politicians and policy-makers, among other motivations (Temper et al., 2015). Additionally, the Atlas can be understood as an effort to advance a comparative environmental justice research program that unveils commonalities among conflicts and their connections to the larger systemic dynamics that the EUE theory captures.

Key categories of the Atlas cover the material/metabolic basics of conflicts, ranging from nuclear, fossil fuels, mineral ores and building material extraction to waste management, biomass and land, water issues, infrastructure and built environment, tourism and recreation, or biodiversity conservation; and the types of actors (e.g., extractive companies, governments, local communities) involved in the conflicts and/or movements (Temper et al., 2015). The large number of cases included in the Atlas has permitted a new series of comparative statistics analyses synthesizing patterns of conflict and resistance. Examples include dam-building projects (Del Bene et al., 2018), land grabbing (Dell'Angelo et al., 2021), the role of women or working-class communities (Le Tran et al., 2020; Navas et al., 2022), fossil fuel and low-carbon energy projects (Temper et al., 2020) and a variety of other conflicts (Scheidel et al., 2020).

The large comparative effort carried out under the umbrella of the Atlas can be framed within a broader interest in developing a comparative political ecology of themes traditionally connected with the School, such as traditional ecological knowledge (Gómez-Baggethun et al., 2013; Reyes-García et al., 2019), as well as more recent themes around alternatives to mainstream development (Temper et al., 2018; Villamayor-Tomas & Garcia-López, 2018). It is worth mentioning the work

undertaken on local indicators of climate change impacts (LICCI), which has translated into a series of field data collection protocols with worldwide applicability potential (Reyes-García et al., 2020); and the workaround green locally unwanted land uses (Green LULUs), which has resulted in new methodologies to quantitatively assess and compare green gentrification effects across cities (Connolly, 2019), among other studies.

3.3.2 The Transformative Power of Environmental Justice Movements

Some scholars of the Barcelona School argue that environmental justice movements have the potential to create transformative change beyond specific struggles (Temper et al., 2018; Scheidel et al., 2018; Demaria & Kothari, 2017; Kothari et al., 2019; Villamayor-Tomas & Garcia-Lopez, 2018). In one of the last and most promising contributions in this direction, Scheidel et al. (2018) propose a framework that connects social metabolism configurations with ecological distribution conflicts, the agency of social movements to push for alternatives, and sustainability transitions. As they point out, ecological distribution conflicts of the kind resulting from ecological unequal exchange bring to light conflicting values over the environment as well as unsustainable resource uses affecting people and the planet. Environmental justice organizations are key actors in politicizing such unsustainable resource uses and prefiguring more sustainable alternatives that can ultimately be scaled up and out.

Some works within the School have highlighted the intricate connections between environmental justice movements, community-based natural resource management and commoning processes in the consolidation of sustainability alternatives to mainstream development (see García-López et al., 2017; Villamayor-Tomas & García-Lopez, 2021; Villamayor-Tomas et al., 2022 and the Chap. 19 by S. Villamayor-Tomas, G. García-López and G. D'Alisa in this book). As pointed out by these authors, “commons movements” can help create and strengthen institutions and discourses favoring collective action, up-scaling it horizontally and vertically; while commons institutions and commoning can serve as the basis of social mobilization and a key frame for social movements.

Contributions around alternative ways of organizing the social life have benefited from discussions around the decommodification of nature and languages of valuation. As put by Kallis (2013), mainstream valuation processes, usually encoded in monetary terms, are part of a broader process of commodification, and in turn of the broader process of capitalist expansion into new social and environmental domains. This, however, does not mean that monetary valuation should be totally dismissed, as some forms of monetary evaluations can enhance the weight of environmental values in social decisions, reduce inequalities, and respect other languages of valuation and non-commodified environmental amenities and resources (Kallis, 2013).

Finally, the research on alternative livelihoods is intricately related to previous and current works around knowledge plurality. Much of the School's thinking around alternative social organization finds inspiration from and embodies values encoded in the knowledge and practices of traditional communities (Demaria & Kothari, 2017). Furthermore, as pointed by some scholars from the School, traditional and citizen's knowledge is itself a common good and should be studied and practiced as such (Calvet-Mir et al., 2018; Benyei et al., 2020).

3.3.3 *The Challenge of Degrowth*

Some scholars from the Barcelona School have focused on the possibility of slowing consumption or economic growth as a way to ameliorate self-destructive social metabolic patterns and reduce conflicts and injustices. Proposals around degrowth have been a part of the School since the early 2010s and proponents call both for an equitable and democratic transition to smaller economies (at least in the Global North) and moving away from excessive consumption and extraction (i.e., in the Global South) (Sekulova et al., 2013).

Degrowth and social metabolism thinking are intrinsically connected (Kallis et al., 2014). Sustainable degrowth has been defined "a socially sustainable and equitable reduction of society's throughput (or metabolism)" (Kallis, 2011, p. 874). Social metabolic analyses have also been instrumental in the call for degrowth by raising flags about the limits of growth and the consequences of reaching those limits in the form of resource shortages, price fluctuations, inequality and inefficiencies (Scheidel & Schaffartzik, 2019). In their global analysis of material flows, for example, Schaffartzik and Pichler (2017) show that growth-led capitalist expansion has relied on extractivism, dispossession and the loss of livelihoods in the places of resource extraction. Infante-Amate and González de Molina (2013), in turn, illustrate the disproportionate use of energy by the agri-food system (production, preservation, packaging, and transportation of food) in Spain as compared to the energy that is finally consumed by residents; and plea for a degrowth strategy based on reducing that difference through organic production and re-territorialization of value chains.

Analyses have also addressed the implications, feasibility and desirability of possible trajectories of downscaling growth. D'Alisa and Cattaneo (2013), for example, combine a time and energy analysis of paid and unpaid work in Catalonia and suggest a degrowth strategy based on re-allocating some services and goods from the market to the household and the promotion of work sharing at the household and neighborhood levels. However, Sorman and Giampietro (2013) analyzed the metabolic pattern of a sample of developed countries, and conclude that some assumptions and recipes of the degrowth movement are problematic, including the possibility to reduce working hours and individual energy consumption (see Kallis, 2013 for a response). A common understanding across all applications is that each

socio-metabolic context may require specific degrowth aims and strategies (Scheidel & Schaffartzik, 2019).

Debates within the School around the relevance of degrowth (as compared to “agrowth”; van den Bergh & Kallis, 2012) have also given visibility to a shared interest in the need to move beyond outdated welfare measurements (like GDP) and the importance to advance politically feasible solutions to stall the current consumerism trend. Some of these solutions could be applied to foster a new organization of labor and work time that include shorter average working weeks, more stringent regulations of commercial advertisement or radical efforts (i.e., at schools and media) in consumer information and communication that promote taking advantage of low-cost pro-environmental behavior (van den Bergh, 2011).

Environmental justice and degrowth share the overall concern for justice and sustainability and face the same obstacle posed by growth-led development, but operate in different contexts (Scheidel & Schaffartzik, 2019; Akbulut et al., 2019; Kallis et al., 2018). Subsistence-oriented local communities that struggle in environmental justice conflicts might not think about their struggle as one for degrowth but as one aiming to defend their (sometimes precarious) customary livelihoods (Rodríguez-Labajos et al., 2019). Alliances are however possible. Environmental justice scholars can facilitate information to degrowth groups that document the adverse impacts of growth-led development; and they can provide early warnings of resource shortages, price fluctuations, or shifts in demand that may induce the expansion of the extractive frontier and give rise to new environmental injustices (Scheidel & Schaffartzik, 2019; Akbulut et al., 2019).

3.4 Final Remarks

This overarching chapter aims at giving some logical structure to the present book. It shows the intricate ways that ideas like social metabolism, environmentalism of the poor, ecological distribution conflicts, traditional ecological knowledge, the commons, degrowth or activism mobilizing science are connected with each other and how they conform to a relatively cohesive way of understanding human-environment interactions. It also shows how such interaction can contribute to the social construction of fairer and more sustainable social and ecological futures.

It is worth mentioning that this chapter (and the whole book) does not do justice to all the work that has been carried out by the scholars of the Barcelona School. It does not cover, for example, nascent themes within the School like urban ecosystem services (e.g., Baró et al., 2015), food transitions (e.g., Calvet-Mir et al., 2018), or attitudes and behavior in the context of incentive-based policy instruments (e.g., Drews & van den Bergh, 2016; Moros et al., 2019). We hope that, despite its limitations, this chapter and the whole book will help to connect scholars, both within and outside the School. In that sense, we want to emphasize our commitment with the intellectual openness and heterodoxy of both ecological economics and political ecology, which allows the type of cross-fertilization between disciplines, approaches

and methods here described. The Barcelona School is by no means a “closed space” epistemological or methodologically speaking. On the contrary, as shown here, it is in continuous evolution and committed to building bridges across moving disciplinary shores.

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