Chapter 9
Implications of the Biocultural Ethic for Earth Stewardship

Ricardo Rozzi

Abstract The biocultural ethic affirms the vital value of the links that have coevolved between specific life *habits, habitats*, and communities of *co-in-habitants* ("3Hs"). The conservation of habitats and access to them by communities of co-inhabitants is the condition of possibility for the continuity of their life; it becomes an ethical imperative that should be incorporated into development policies as a matter of eco-social justice. The conceptual framework of the biocultural ethic recognizes that there are numerous communities (inhabiting cities, rural, or remote areas) with cultural traditions that have ethical values centered in life, sustainable practices, and low environmental impact. It also recognizes agents that have values centered on short-term profit, non-sustainable practices, and disproportionately high environmental impact. Therefore, it would be technically and ethically right to define and enforce differential responsibilities among social groups, corporations, and nations that are contributing to the negative socio-environmental impacts that we face today. We have now reached a state of "plutonomy" that is dividing the world into two blocs: the wealthy 1 % of the world's population that owns 50 % of the world's wealth, and "the rest." To achieve Earth stewardship, this trend needs to be overcome by (i) changing the current regime of plutocracy towards one of more participatory democracy that ceases to be indifferent to the well-being of the majority of human and other-than-human living beings, (ii) reorienting the current habits of plutonomy, and its associated consumerism and land-grabbing practices, towards habits of stewardship, and (iii) broadening the prevailing perspective of ecosystem services toward an ethical concept of sustainable co-inhabitation. By more precisely identifying the diversity of Earth stewards, their languages, values, cultures, and practices in heterogeneous habitats of the planet, as well as the specific agents that are mostly responsible for current socio-environmental problems, the biocultural ethic can significantly contribute to orient clearer collaborative and supportive ways for a responsible and intercultural Earth stewardship.

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9.1 Introduction

The conceptual framework of the biocultural ethic links life habits with specific habitats and communities of co-in-habitants ("3Hs"), thereby emphasizing the great heterogeneity of the human species and its interrelationships with biodiversity (Rozzi 2012). Consequently it demands a change in language from a prevailing reference to the human species as a whole for causing "humanity's unsustainable environmental footprint" (*sensu* Hoekstra and Wiedmann 2014) toward a language that names and distinguishes specific human groups or individuals who have negative or have favorable environmental impacts. Complementarily, the biocultural ethic's conceptual framework discloses philosophical concepts and ecological practices for Earth stewardship that are still little known within academia, global discourses and decision making (Callicott 1994; Rozzi 2001; Berkes 2007, 2012). The previous chapters in this book offered a characterization of ecological worldviews and practices in Asia, South- and North-America. In this chapter I explore two sets of questions.

First, if there is a plethora of ways of conceiving and practicing Earth stewardship that have so much to offer to sustainability practices and global ecological discourses, such as those reviewed for Latin American schools of thought and living cultures (see Chap. 8 in this volume), why do they remain ignored? If there are so many cultural traditions and Earth stewards whose life habits imply a low ecological footprint and promote a sustainable life, why do we face a global environmental crisis today? To start answering these questions, I use the coupled Earth Stewardship/Biocultural Ethic's conceptual framework developed in Chap. 8 to examine: Who are the *stewards* that are most responsible for sustainable practices and who are the *human co-inhabitants* that are most responsible for the current excessive environmental footprints of humankind? Which *stewardship* and other *cultural habits* drive sustainable forms of co-inhabitation and which drive the largest unsustainable environmental footprints? In which locations or *habitats* do these unsustainable habits mostly take place?

The second set of questions explores what can the biocultural ethic, and more broadly environmental philosophy, contribute to the conceptual and practical framework of the Ecological Society of America's (ESA) Earth Stewardship Initiative (*sensu* Power and Chapin 2009; Chapin et al. 2011a, b, 2015, in this volume [Chap. 12]). Some concepts associated with Earth stewardship have elements in common with those proposed by the biocultural ethic. At the same time, some of the philosophical concepts of the biocultural ethic are incommensurable with those of the Earth Stewardship Initiative, and more importantly with those prevailing in today's global discourse. The identification of these incommensurable concepts enables a critical analysis of the prevailing global discourse of governance, while disclosing alternative ecological worldviews and practices of living cultures that can contribute to Earth stewardship. In this chapter I will analyze three core incommensurable concepts by using binary opposition to terms that, explicitly or implicitly, prevail in the

global discourse: (i) democracy versus plutocracy, (ii) stewardship versus plutonomy, and (iii) biocultural co-inhabitation versus ecosystem services. Then, I will discuss the need to recover philosophical language and practices in order to foster intercultural dialogues, negotiations, and collaborations at multiple scales, with diverse stewards and languages, interacting in diverse local realities confronted with narrow economic prevailing global discourses, and forms of governance.

To conduct this analysis I will continue coupling the "3Hs" of the biocultural ethic with the three main components identified in Chap. 8 (Rozzi 2015, in this volume) as essential for an Earth Stewardship Initiative: Habitat/Earth, Habit/Stewardship, co-in-Habitants/Stewards. In addition, I will analyze this coupling from the perspectives of three families of ecological worldviews (involving traditions of ethic and philosophical thought, understood in a broad sense), that inform the biocultural ethic: (a) Amerindian ecological worldviews, (b) non-mainstream Western philosophies, and (c) contemporary ecological-evolutionary sciences. In turn, the biocultural ethic and Earth stewardship encompass a transdisciplinary endeavor (involving science, policy, economy, law, history, aesthetics, religion, ethics) that takes place at the interface of multiple institutions and practices. For this reason, the biocultural ethic incorporates an institutional, social-political, infrastructural-technological realm, in addition to the biophysical and symbolic-linguistic-cultural realms of reality analyzed in the previous chapter (Fig. 9.1).

9.2 Democracy Versus Plutocracy

Earth stewardship entails not only sciences but also governance (Steffen et al. 2011, p. 754). This adds a layer of complexity that limits, or modulates, the implementation of recommendations derived from the work of ecologists and other researchers committed to the Earth Stewardship Initiative. Regarding governance limitations for the implementation of an Earth stewardship as a "strategy for social–ecological transformation to reverse planetary degradation," (Chapin et al. 2011b, p. 44) former presidents and other ecologists of the Ecological Society of America (ESA) have critically observed that:

> Although the serious degradation of the Earth's system is widely recognized by the scientific community, governments are frequently reluctant to adopt policies that would radically reduce the rates of change and degradation, for fear of the *economic costs*. Aggressive actions that are taken now, however, are likely to be much less costly than the costs of failing to act (Stern 2007; NRC 2010). Institutional inertia and *cultural habits* are additional impediments to action. (Chapin et al. 2011b, p. 45; emphasis added)

For changing cultural habits, philosophy can make a valuable contribution: to clarify language and a cultural mentality embedded in it. Criticism such as that made by Chapin and collaborators suggest that ecological information is available, but decision making is governed ultimately by narrow economic interests. However, as they point out, even for economic reasons it would be wiser to include ecological information in governance decision making. The question is: how can we achieve institutional and cultural changes that make this possible?

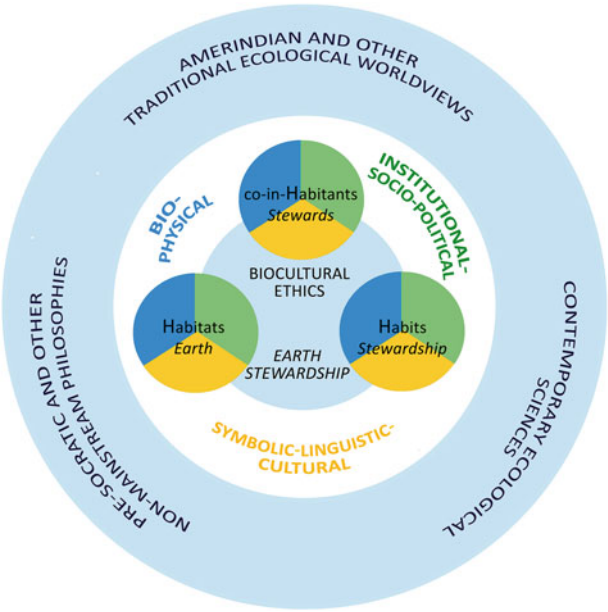

Fig. 9.1 The biocultural ethic affirms the vital value of the links that have coevolved between specific life Habits, Habitats, and communities of co-in-Habitants ("3Hs"). In the inner level of this figure, the core components of the biocultural ethic are matched with the core components identified for Earth stewardship: Habitat/Earth, Habit/Stewardship, co-in-Habitants/Earth Stewards (see Chap. 8 in this volume). The intermediate level illustrates that each of the core-components is constituted by biophysical dimensions (*blue*), symbolic-linguistic-cultural dimensions (*yellow*), and institutional-socio-political, infrastructural-technological dimensions (*green*). The green color, a blending of *blue and yellow*, indicates that the biocultural ethic requires that the particular biophysical and symbolic-linguistic–cultural dimensions are carefully considered by the institutional, policy, and infrastructure dimensions. The external *circle* is based on comparative philosophical analyses, which focus on three families of ecological worldviews that inform the biocultural ethic: (a) Amerindian and other non-Western ecological worldviews, (b) pre-Socratic and other non-mainstream Western philosophies, and (c) contemporary ecological sciences. The biocultural ethic fosters inter-cultural dialogues and practices among heterogeneous, rich cultural traditions and communities of Earth stewards (which are often overlooked in academia and socio-environmental policy-making). The *circular* forms in the figure indicate that both scientific and traditional ecological forms of knowledge and practices (including its multiple components and interactions) are dynamic; they have changed historically, and I emphasize that they can change today to orient forms of inter-cultural Earth stewardship

A first philosophical clarification is that: if decision making is governed ultimately by economic interests and the power of the wealthy, then the governance regime should be called plutocratic rather than democratic (cfr. Lutz et al. 2007; Freeland 2012). *Plutocracy* (Gr. *ploutos* = wealth; *kratos* = power or rule) defines a society ruled by the small minority of the wealthiest citizens, a form of *oligarchy* (Gr. *olígos* = few), while *democracy* (Gr. *dêmos* = people) defines a society ruled by the majority of people. Former U.S. president Abraham Lincoln concisely defined democracy as the "government of the people, *by* the people, *for* the people" (Lijphart 2012, p. 1; emphasis added). Democracy exhibits a variety of formal institutions

and forms of organization, but all of them suppose consensual deliberation and decision making processes based on the best available information and arguments (see Dussel 2003). In this sense, a genuine democracy should attend to the concerns expressed by Chapin et al. (2011b) and other members of the ESA. However, this type of democratic process is often aborted, and democracy is reduced to a simple voting mechanism that ends up legitimizing the plutocratic regime (Borrero 2002; Winters 2011a). We can conclude that rather than by a democratic regime, today we are governed by a plutocratic regime (Winters 2011b).

Clarification of language and of a cultural mentality helps to diagnose problems that limit the implementation of environmental policies. The problem is not democracy, but the plutocratic regime of democracy. Colombian environmental lawyer José María Borrero, with reference to Latin America, has developed a critical evaluation of the current status of democracy, the participation of communities, types of dialogue, and levels of respect for social and economic differences. In his book *Imaginación Abolicionista* ("Abolitionist Imagination"), Borrero (2002, p. 129) states that in the collective mindset "political participation is increasingly deceptive, and becomes a trap." It gives the impression of broad popular participation, when in fact decisions are made by small but powerful economic minorities. Borrero (2002, p. 130) illustrates this deception with a graffiti found in the streets of Cali in Colombia that conjugates the verb "to participate" in the following manner:

Yo participo	I participate
Tú participas	You participate
Él participa	He participates
Ella participa	She participates
Nosotros (as) participamos	We participate
Vosotros (as) participáis	You (plural) participate
Ellos deciden	They decide

The conclusion of this graffiti is supported by cases such as the Yasuní Biosphere Reserve in Ecuador and the conflicts between the U'wa and Occidental Petroleum (Oxy) in Colombia (see Box 8.2 in this volume). Borrero's criticism is that democracy has been transformed into mere mechanisms for election and legitimization of governments. Democracy is reduced to competition among groups of elites, and citizens are treated as consumers for a political market. The tradition of citizen participation in Latin America is further discouraged by "administrative corruption, clientelism, bossism, and the lack of political and judicial security" (Borrero 2002, p. 131).

Borrero's conclusion concurs with the analysis developed for Brazil and South America. Viola and Basso (in this volume [Chap. 24]) caution that "when the plutocratic links reach such unbearable levels that corruption scandals become common, the resort to populism – another common discourse in the region – does not bring any relief." Plutocracy goes hand in hand with short-term thinking focused on quick profits that become more important than the ecological destruction of the Earth and humanity. After the Earth Summit Rio+20 held in Brazil in 2012, Viola and Basso

lament that "short-term thinking in climate change consideration leads to South American failure to adopt the vanguard position that would be expected from a continent that leads in low carbon assets."[1] In North America, environmental lawyer William J. Snape, III has called on to the government of the United States to ratify the UN Convention on Biological Diversity (CBD, Snape 2010, see also Jamieson 2014). The United States is one of the only three countries worldwide that has not done so:

> What is missing in the US is any urgency to seek durable solutions to many of these problems. How this has come to be is a modern lesson in the power of oligarchical segments to take over political parties. In other words, old guard corporate users of the Earth's biological resources will not succumb lightly to new economic-ecologic paradigms that weaken their power. (Snape 2012, p. 3)

The evidence provided by ecological sciences as well as environmental law allows us to conclude that in order to achieve the ESA Earth Stewardship Initiative's central goal of "shaping of trajectories of change in coupled social–ecological systems at local-to-global scales to enhance ecosystem resilience and promote human well-being" (Chapin et al. 2011b, p. 45), *it is indispensable to change the current plutocratic regime toward a democratic one*.[2]

The clear distinction between plutocracy and democracy, and a reinforcement of the latter over the former form of governance, will enhance intercultural and interregional dialogues and negotiations at a planetary scale, which today are fostered by social networking, linked to communication and information technologies. This clarification and change in governance regime are necessary steps toward implementing Earth Stewardship and other international environmental initiatives (e.g., CBD) that better acknowledge and respect the linguistic and cultural diversity of communities, with their environmental and social interests, embedded in their ecological worldviews and practices.

9.3 Stewardship Versus Plutonomy

Will Steffen and collaborators (2011, p. 757) have lucidly argued that an effective Earth stewardship "can be built around scientifically developed boundaries for critical Earth System processes that must be observed for the Earth System to remain

[1] For example, in March 2008, the Brazilian House of Representatives passed a bill to change the law that governs forests. This change in legislation that could undermine authorities' power to halt deforestation was passed despite the established scientific facts that deforestation causes 15 % of global greenhouse gas emissions, and 75 % of Brazil's (Tollefson 2011).

[2] My conclusion concurs with Barry Commoner's concept of "ecodemocracy," which demands new social obligations to guide the course of both environmental improvement and economic development through democratic governance and make decisions that today are normally made on purely private economic grounds, such as profit maximization, by corporate managers. Commoner (1990) emphasized that the environment (whether local or planetary) is a sovereign social responsibility that takes precedence over the private interest in exploiting it.

within a Holocene-like state." However, current humanity's global ecological footprint exceeds Earth's annual biocapacity. Since 2007, humanity is annually consuming one-and-a-half times the biocapacity of the planet (Hoekstra and Wiedman 2014). A coupled Earth Stewardship/Biocultural Ethic's approach emphasizes that to amend this unsustainable path it is necessary to assess the:

(i) biophysical capacity of the planetary *habitat* to sustain life (Earth's carrying capacity),
(ii) cultural *habits* that influence human impact, and
(iii) human *co-inhabitants* that are most responsible for this impact.

In their article "The Anthropocene: From Global Change to Planetary Stewardship," Steffen et al. (2011) offer an analysis that is useful to assess differential responsibilities for the initiation of non-sustainable paths that have led to overshooting of the biocapacity of the planet. In terms of the spatial location (or habitat), they show that major ecological footprints have been generated in the Global North. In terms of the temporality, they affirm that ecological footprints have exponentially grown since the 1950s, at the "beginning of a second stage of the Anthropocene… after the Second World War – sometimes called the Great Acceleration" (Steffen et al. 2011, p. 755). They estimate human impact with reference to population and affluence (as an indicator for consumption). Since 1900 the world population has grown 3.9 times, from 1.8 to 7 billion (Table 9.1). During the same period, the world's Gross Domestic Product (GDP) has grown 30.6 times, from 1.8 to 55 trillion US dollars. This suggests that the increment in the rate of consumption is the most important factor in having surpassed the planet's biocapacity. Additionally, Steffen et al. (2011) state that while "developing" countries account for most of the population growth during the twentieth century and today contribute 5.9 billion to the 7 billion of the world population, "developed" countries (countries belonging to the OECD, Organization for Economic Cooperation and Development) are most responsible for the growth in GDP and today account for more than 75 % of the world's GDP. Based on these trends, they conclude that:

> Consumption in the OECD countries, rather than population growth in the rest of the world, has been the more important driver of change during the Great Acceleration, including the most recent decade. (Steffen et al. 2011, p. 757)

Table 9.1 World population and Gross Domestic Product (GDP) (Data provided by Steffen et al. (2011, p. 756) to show the "Great Acceleration" in growth that has taken place since 1950. Below, I added the rates of growth (GR) for Population and GDP, and the ratio between both)

Year	Population (billion)	GDP (trillion US $)	Population × GDP
1900	1.8	1.8	3.2
1950	2.5	5.3	13.3
2011	7.0	55.0	385.0
Interval	**Growth rate (GR-Pop)**	**Growth rate (GR-GDP)**	**GR-GDP/GR-Pop**
1900–1950	1.4	2.9	2.1
1950–2010	2.8	10.4	3.7
1900–2011	3.9	30.6	7.9

For a more precise diagnosis of the agents mainly responsible for global environmental change, our analysis of Steffen et al. (2011) conducted with the biocultural ethic's conceptual framework allows us to achieve three core conclusions:

(i) Regarding the temporal and spatial location (or *habitat*), the most dramatic change has taken place since the 1950s in the Northern Hemisphere.
(ii) Regarding the mechanism (or *cultural habit)*, the main responsible factor is the growth in affluence and consumption rates.
(iii) Regarding the social groups (or *human co-inhabitants*), societies of developed countries are those that have most contributed to global environmental change and, directly and indirectly, to the gestation of the Anthropocene.

With the conceptual framework of the biocultural ethic we are compelled to further distinguish among the levels of affluence by different sectors of the population. First, at a global scale, intercontinental analyses reveal great disparities in the proportions of the world population and total wealth (Table 9.2). North America and Europe are the richest continents; they concentrate 54 % of the global wealth, but have only 15 % of the world's population. On the poorer extreme, Africa has 10.7 % of the world population but only 1.5 % of the global wealth. Based on the data provided by Table 9.2 (see columns for the ratios *WW/WP* and *GDP/WP*), we can estimate that on average, a North American person participates 52 times more in the global wealth and 23 times more in the global GDP than an African person.

The figures of the intercontinental analysis are still too general, because within each continent and country there are also great inequalities and hence consumption differentiation. For example, in the United States of America the richest quintile (20 % of the population) possesses 84 % of the country's wealth, while the poorest quintile possesses only 0.1 % of this wealth (Norton and Ariely 2011). Furthermore, the richest 1 % of U.S. Americans holds nearly 50 % of the country's wealth. An equivalent concentration of wealth also is found at the world level.

The World Economic Forum (2013) reports that the richest 1 % of the world population owns 50 % of the world's wealth, i.e., *70 million people own US$ 115 trillion* (Table 9.3). In contrast, the poorest 50 % of the world population owns just

Table 9.2 Percentages of the world's population (WP), wealth (WW), and Gross Domestic Product (GDP), and WW/WP and GDP/WP ratios (Data based on Davies et al. (2007))

Continent	% World population (WP)	% World's wealth (WW)	% World GDP	Ratio WW/WP	Ratio GDP/WP
North America	5.2	27.1	23.9	5.2	4.6
Europe	9.6	26.4	22.8	2.7	2.4
Oceania & Others	3.1	3.7	5.4	1.2	1.7
Latin America	8.5	6.5	8.5	0.8	1.0
Asia	52.2	29.4	31.1	0.6	0.6
Middle East	9.9	5.1	5.7	0.5	0.6
Africa	10.7	1.5	2.4	0.1	0.2

Table 9.3 Wealth owned by different segments of the world's population (Data based on the World Economic Forum (2013))

Number of people	% World population	Wealth owned	% of the World's wealth	Average wealth owned per capita	Number of people that, combined, own the equivalent to one of the world's 85 richest people
85	0.000001 %	$2,300,000,000,000	1 %	$ 27,058,823,529	1
70,000,000	1.0 %	$115,000,000,000,000	50 %	$ 1,642,857	16,471
3500,000,000	50.0 %	$2,300,000,000,000	1 %	$ 657	41,176,471
6930,000,000	99.0 %	$115,000,000,000,000	50 %	$ 16,595	1,630,588
7000,000,000	100.0 %	$230,000,000,000,000	100 %	$32,857	823,529

1 % of the of the world's wealth, i.e., *3,500 million people own US$ 2.3 trillion*.[3] On average, each of the individuals belonging to the poorest 50 % of the world population owns US$ 657. Noticeably, the total amount owned by the bottom half of the world's population is the same as the amount owned by the richest 85 people in the world. On average, each of the 85 world's richest persons owns the same amount as owned by 41,176,471 people who belong to the bottom half the population (Table 9.3).

In summary, the data reported by the World Economic Forum (2013), Credit Suisse (2013), UNICEF (Ortiz and Cummins 2011), and the United Nations University and the World Institute for Development Economics Research (UNU-WIDER, Davies et al. 2007) show that just 0.000001 % of the world population owns the same amount of the world's wealth as 50 % of the world's population. Given this extreme concentration of wealth, the responsibility in terms of human consumption and impact cannot be presented in general terms of the human species *Homo sapiens* or *Humanity* in general. However, most publications analyze the problem in these terms. For instance, in the review article "Humanity's unsustainable environmental footprint" published by Hoekstra and Wiedmann (2014) in *Science* magazine, the authors conclude that:

> the various components of the environmental footprint of *humanity* must be reduced to remain within planetary boundaries. (Hoekstra and Wiedmann 2014, p. 1117; emphasis added)

Given the marked wealth gaps, it is technically misleading and ethically unjust to continue analyzing current challenges in terms of *humanity* in general, without defining differential responsibilities (Box 9.1). As philosopher and economist Amartya Sen (1997) has critically observed, the 1 % of the world's population is richer than ever, more powerful than ever, controlling the political and economic systems. The widening gap between the rich and non-rich has rapidly grown during the post-war Great Acceleration, and today we have reached a state of *plutonomy* where the majority of the wealth is controlled by an ever-shrinking minority, dividing humanity in two blocks: "the plutonomies, where economic growth is powered by and largely consumed by the wealthy few, and the rest" (Kapur et al. 2005, p. 1).

The economic growth of a plutonomic society becomes dependent on the fortunes of a wealthy minority (Box 9.1). However, as Canadian writer and politician Christine Freeland (2011) cautions, we are not merely living in a plutonomy, but a plutocracy, a form of oligarchy. The wealthy display "outsized political influence, narrowly self-interested motives, and a casual indifference to anyone outside their

[3] A similar figure is provided by Credit Suisse (2013), which reports a global wealth of $240.8 trillion. Share of wealth for the richest 1 % is 46 % (amounting to $110 trillion), and for the bottom half of the population is 0.71 % (amounting to $1.7 trillion). The United Nations Children's Fund (UNICEF, Ortiz and Cummins 2011, p. 12), and the United Nations University – World Institute for Development Economics Research (UNU-WIDER, Davies et al. 2007), offer complementary analyses whose global percentages are similar regarding wealth gaps at global scale.

Box 9.1. Mapping World Plutocracy

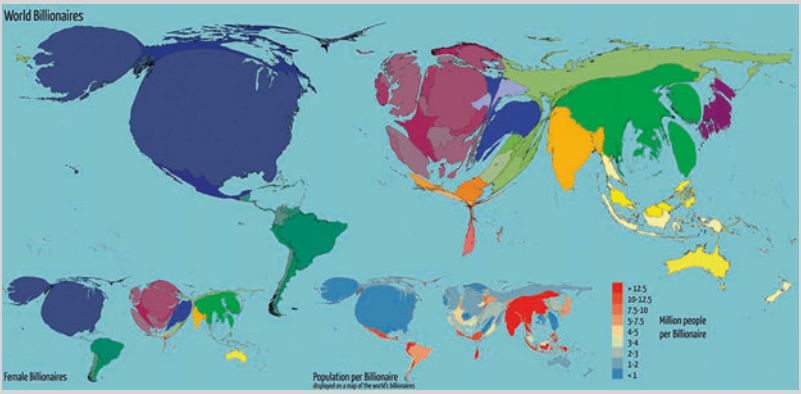

Fig. 9.2 The world's billionaires map (Figure reprinted from Hennig and Dorling (2013, p. 38), courtesy of John Wiley and Sons)

The wealth distribution shown in the above world map depicts the geographical area of each country multiplied by a factor associated with the country's number of billionaires as reported by Forbes magazine on March 7, 2012. Alaska looks very large in this map because it is transformed in one piece with the rest of the USA – although, it is likely to be much smaller in terms of its share of the billionaires within the country. According to Henning and Dorling (2013, p. 38), in 2012 "there were 1153 billionaires across the globe (this figure includes families, but excludes fortunes dispersed across large families where the average wealth per person is below a billion). The total wealth of the billionaires was US$3.7 trillion – as great as the annual gross domestic product of Germany. Top of this league table is the US with 424 billionaires, followed by Russia (96) and China (95)." Henning and Dorling (2013, p. 38), underline that "much of the wealth of billionaires is held offshore and their wealth is the tip of an iceberg of hard-to-tax personal assets. In a Tax Justice Network report, James Henry estimated the overall global offshore financial assets held by the world's richest to be between US$21 trillion and US$32 trillion (out of the total global wealth, estimated at US$231 trillion). Nearly half of these offshore assets are owned by the world's richest 91,000, just 0.001 % of the global population."

The map at the bottom left modifies the map on the top by considering only the number of women billionaires, who represent less that 10 % of the world's billionaires. Countries are shaded by the same colors in top and bottom left world maps to allow visual comparison between the sizes of total billionaires versus female billionaires. The map at the bottom right depicts the proportion of non-billionaire people per billionaire in each country; e.g., in the USA one

(continued)

Box 9.1. (continued)
billionaire can be found for every 740,000 people (dark blue), while in India one billionaire is found amongst every 26 million people (dark red).

In summary these three maps by Henning and Dorling (2013) depict: (i) *inter-hemispheric inequalities*, with a marked bias against the Southern Hemisphere, (ii) *gender inequalities*, with a marked bias against females, and (iii) *intra-continental* (and intra-country) *inequalities*, with the largest wealth gaps in Latin America (especially, Mexico, Colombia, and Chile), Africa, and Asia, where for each billionaire there are more than 12.5 million non-billionaire people.

For an Earth stewardship initiative, a main problem derived from an accumulation of power and wealth is its association with a current state of economic self-absorption and lack of socio-environmental responsibility. In 2005 three analysts at Citigroup, one of the major investment banking corporations, generated a report called "Plutonomy: Buying Luxury, Explaining Global Imbalances" (Kapur et al. 2005). They began by stating that today "the world is dividing into two blocks – the plutonomies, where economic growth is powered by and largely consumed by the wealthy few, and the rest" (Kapur et al. 2005, p. 1). They concluded their report by positing that:

> We hear so often about "the consumer." But when we examine the data, there is no such thing as "the consumer" in the U.S. or UK, or other plutonomy countries. There are rich consumers, and there are the rest. The rich are getting richer, we have contended, and they dominate consumption. As the rich have been getting richer, so too stocks associated with the rich have performed exceptionally well. Our Plutonomy Basket, generated returns of 17.8 % per annum, on average, from 1985. If Plutonomy continues, which we think it will, if income inequality is allowed to persist and widen, the plutonomy basket should continue to do very well. (Kapur et al. 2005, p. 30)

Kapur et al. (2005, 2006) have claimed that their plutonomy index outperforms the stock market. Noam Chomsky (2012) has critically analyzed how plutonomy does so by advancing the idea that money does not just represent a store of value, a medium of exchange and a unit of accounting, but also the power to claim the labor of others and natural resources in commodity form. In terms of the Citigroup analysts:

> In a plutonomy there is no such animal as "the U.S. consumer" or "the UK consumer", or indeed the "Russian consumer". There are rich consumers, few in number, but disproportionate in the gigantic slice of income and consumption they take. There are the rest, the "non-rich", the multitudinous many, but only accounting for surprisingly small bites of the national pie. Consensus analyses that do not tease out the profound impact of the plutonomy on spending power, debt loads, savings rates (and hence current account deficits), oil price impacts etc., i.e., focus on the "average" consumer are flawed from the start. (Kapur et al. 2005, p. 2)

(continued)

Box 9.1. (continued)

It is critical to note that plutonomy is indifferent to the *rest of humans* as well as to the *rest of non-human living beings*. A main socio-ecological problem is the association of the accumulation of wealth with unrestricted consumerism and a governance regime of indifference toward those who are irrelevant to plutonomies today, "the rest." A main ethical problem is that under plutonomic regimes, the value of capital is placed above the value of the life of "the rest" who represents the vast majority of human and non-human beings. In order to avoid the commodification of the labor of non-plutonomic humans and the life of other-than-human beings, it is necessary to change narrow economic discourses, structures, and policies that today override fundamental ethical values and ecological scientific understanding and advice, hindering the implementation of an urgently needed Earth stewardship.

own rarefied economic bubble" (Freeland 2011, p. 2). Plutonomy (from Greek *plouton* = wealth; *nomos* = rule or law) is a combination between plutocracy and economy, and Freeland critically states that:

> The rise of the new plutocracy is inextricably connected to two phenomena: the revolution in information technology and the liberalization of global trade. Individual nations have offered their own contributions to income inequality—financial deregulation and upper-bracket tax cuts in the United States; insider privatization in Russia; rent-seeking in regulated industries in India and Mexico. But the shared narrative is that, thanks to globalization and technological innovation, people, money, and ideas travel more freely today than ever before. (Freeland 2011, p. 14)

The unregulated free market has allowed some persons (individuals or corporate entities)[4] to accumulate unlimited wealth (Piketty 2014). The excessive accumulation of wealth and lack of limits on the free market and associated consumption

[4] A *legal person* is a subject of rights and obligations that exists, not as an individual but as an institution that is created by one or more individuals to fulfil a social objective, which may be for profit or not for profit. Hence, along with individual people there are also legal persons which are entities that the law accords and recognizes as having legal personality and, consequently, the ability to act as legal persons – that is, the capacity to acquire and to hold real estate of all kinds, to incur obligations and to engage in legal actions. In the case of the United States of America, *corporate personhood* is a legal concept in which a corporation may be recognized as an individual in the eyes of the law. This doctrine forms the basis for legal recognition that corporations, as groups of people, may hold and exercise certain rights under the common law and the U.S. Constitution. For example, corporations may contract with other parties and sue or be sued in court in the same way as natural persons or unincorporated associations of persons. Richard Watson (1992) concisely discusses the historical origin of corporate persons and the legal and moral implications for environmental ethics. He criticizes that: "Corporations are not responsible moral agents. They cannot reciprocate. They can have no primary rights because they cannot fulfill any duties. It is suspected that the concept of legal personhood for corporations is a device to allow actually responsible persons to escape punishment" (Watson 1992, p. 27).

rates create three types of difficulties to implement an effective Earth Stewardship: (a) ecological, (b) ethical, and (c) political problems.

(a) Regarding ecological problems, Steffen et al. (2011) have shown that a main cause of exceeding the limits of the biosphere is the increased consumption by the developed countries, consumption made possible by unlimited wealth accumulation – as if natural resources were unlimited and planetary boundaries were nonexistent. From the ecological perspective, it is problematic that the neoliberal free market regime does not sufficiently attend to the core concept of planetary boundaries (Chapin et al. 2011b; Steffen et al. 2011). The incorporation of the concept of *biophysical limits* (at the scale of the biosphere as a whole as well as of regional *habitats*) into economic and governance policies is a necessary condition for implementing Earth stewardship. The notion of limits has a long history in the concept of the economy of nature introduced by Linnaeus in the seventeenth century, and was extensively developed by ecological economics in the twentieth century. Limits on rates of consumption and accumulation of wealth challenge neoliberal free market theoretical assumptions and practices of production and consumption. Under the current neoliberal free market regime, risks and negative externalities (e.g., oil spills, and other forms of pollution and environmental damage) are often absorbed by communities of humans and other living beings, while monetary gains receive less taxation and are accumulated by persons (individuals or corporations) who commercially consume, use, and/or deteriorate "human and natural capital." This double standard involves not only economic problems, but also raises ethical and political issues.
(b) Ethically, the notion of limits has a long history in the philosophical roots of Western civilization, religious traditions, and Amerindian ecological worldviews. Aristotle develops an ethics based on the mid-way point; nothing in excess. This rule shares core concepts implicit in many religious traditions, including the Buddhist middle-way and the Christian values of solidarity and distributive equity. Furthermore, austerity, reciprocity and equality are values that are shared by the ecumenical community. Mary Evelyn Tucker (this volume [Chap. 27]) identifies six key "values for human-Earth flourishing" that are shared by world religions: reverence, respect, restraint, redistribution, responsibility, and renewal. In the tradition of Latin American liberation theology, Roy May (2002) and Guillermo Kerber (2011, p. 192) underline that "to regain a healthy relationship with all creation it is necessary to address, and not be indifferent to a world divided by extreme consumerism and starvation." Among Amerindians worldviews, equity and reciprocity among humans and nature are also core values for cultures such as the Quechua and the Aymara (see Sarmiento, in this volume [Chap. 5]; Mamani 2000, and in this volume [Chap. 6]). Additionally, the notion of limits and respect for others is a cornerstone of the ethical formulations substantiated in the ecological sciences, such as the land ethic of Aldo Leopold, who stated that "an ethic, ecologically, is a limitation on freedom action in the struggle for existence. An ethic, philosophically is a

differentiation of social from anti-social conduct. These are two definitions of one thing" (Leopold 1949, p. 202). The incorporation of the concept of *ethical limits* into cultural habits and socio-environmental policies is a second necessary condition for implementing Earth stewardship.

(c) In the political realm, the ethical imperative indicated by Aldo Leopold "to correct anti-social behaviors toward socially appropriate ones" coincides with a central concept of Aristotle. The ancient Greeks called *idiōtēs* people whose behavior put personal interests above the collective interests of the citizens of the Greek *polis* (or nation-state). Aristotle was relentless about the need to punish those *idiōtēs*, or idiots in order to sustain a democratic regime. Only if the idiots paid their fines, served their sentences, and corrected their unbalanced self-interested behavior, could they remain in the polis as citizens. If they did not, then the idiots were exiled. Aristotle affirmed that they should lose their citizenship because the *polis* could not be sustained in the presence of people taking only privileges but not respecting their obligations as citizens. The restoration of the judicial system capacity to sanction exacerbated, self-absorbed, individualism (such as the *idiōtēs* by Aristotle) is a third necessary condition for implementing an Earth stewardship.

Under a plutocratic regime (national and international), nation-states and citizens often do not have the ability to sanction violators of environmental, economic and social laws. Colombian sociologist Isaías Tabasura-Acuña (2006) discussed this problem in the case of the conflict between the U'wa and Oxy (see Box 8.2, in this volume), and many other Latin American and other regional cases could be mentioned. To enforce penalties on those that cause environmental and social damage, it is necessary to change the plutocratic regime. In turn, the change from plutocracy to democracy would favor the enforcement of national and international environmental regulations, as well as agreements of co-responsibility for the management of hotspots of biological and cultural diversity that are critical for the sustainability of life at local and global scales (see Chaps. 2, 3, 6, 7, 8, 27, and 28 in this volume). The biocultural ethic extends the community of citizens beyond the Aristotelian *polis*, and the modern nation-state, to include all human beings, involving diverse genders, languages, and human societies, as well as considering the well-being of all other living beings that constitute communities of co-inhabitants.

Through our analysis of *stewardship* versus *plutonomy*, we can conclude that Western philosophical and theological traditions, Amerindian ecological knowledge and practices – ancestral and contemporary – as well as ecological sciences provide a basis for restoring the concept of limits to the prevailing global economic system. This is essential in order to overcome the current indifference of plutonomy to ecological, social, and ethical boundaries within which economic activity unfolds. In consequence, *to open novel biocultural pathways toward Earth stewardship and sustainable co-inhabitation, it is essential that the prevailing economic system be amended so that it ceases to be indifferent to the well-being of the majority of human and other-than-human living beings*.

9.4 Biocultural Co-inhabitation Versus Ecosystem Services

The notions of stewardship and co-inhabitation have relevant ethical and ontological differences. Stewardship, as conceived by the initiatives of Earth and Planetary stewardship (Chapin et al. 2011a, b; Steffen et al. 2011), is based on a notion of ecosystem services where human subjects administer goods and services of ecosystem objects and processes. Consequently, the only subjects (active agents with their own interests) are humans (see Naeem 2013). Biodiversity and ecosystems are viewed as passive objects without intentionality or interests. Under the prevailing perspectives of ecosystem services, these objects are managed with a utilitarian ethics, to produce the greatest good for the greatest number of people, and for the longest time. This utilitarian ethics has a long and influential history in the philosophy of conservation and rational use of resources inaugurated by Gifford Pinchot at the beginning of the twentieth century (see Norton 1991). Later, at the end of the twentieth century, it also became the central school of ethics for the concept of sustainable development envisioned by the Bruntland Commission report, *Our Common Future* (WCED 1987). The utilitarian ethics that has inspired Pinchot and Bruntland supposes an ontological split between human-subjects and nature-objects that has a long history in Western philosophy (see Morin 1990). As environmental philosopher Irene Klaver underlines:

> The dualism between *subject* and *object* has been pervasive, deeply imbedded in Western thought, and at the root of a variety of interlocking dualisms, such as *activity* (or agency) versus *passivity*, resonating in *culture* versus *nature*. A dualistic mindset comes with a value attribution, with an implied sense of *superiority* (culture, agency) versus *inferiority* (nature, passivity) and hence an implied legitimation for use, domination and exploitation. The *inert material* or *natural object* is waiting for the *human intentional subject* to do something with it. It became the basis for a *Western conception of passive nature, ready to be used by culture.* (Klaver 2013, p. 93, emphasis added)

In contrast to utilitarian ethics, the concept of co-inhabitation proposed by the biocultural ethic is based on an ontology that considers all living beings as active subjects with their own interests (see Rozzi 2013, pp. 26–28). Recent scientific discoveries have determined that even invertebrates have the capacity to feel pain and stress (Horvath et al. 2013). These invertebrates actively seek and build their own habitats (Contador et al. 2014), and exhibit behaviors that seek pleasure and avoid pain (Barras 2007). Contemporary sciences provide an avalanche of evidence supporting the continuity of biological nature between humans and all living beings. Therefore, it is more appropriate to conceive living beings as a community of active subjects with their own interests with whom we co-inhabit – and not merely as "natural resources" that we rationally manage to only get goods and services.

The ontology of the biocultural ethic has ancient roots in Western philosophy. Aristotle considered all living beings as having a soul. Soul (Lat. *anima*) means spirit, and spirit (Lat. *spiritus*) means breath. According to Aristotle, plants and animals (humans and other-than-humans) have a vegetative soul; that is, all living beings breathe, grow, and reproduce. The Aristotelian view is consistent with the scientific theory of the unity of life. In the nineteenth century it was discovered that all living beings are made of cells, and during the twentieth century it was demonstrated that all living beings, including humans, share a fundamental genetic

basis. These Western philosophical and scientific worldviews offer a conceptual framework to understand the implications of Amerindian concepts such as *Pachamama* (see Mamani-Bernabé 2015 in this volume [Chap. 6]) not as folk curiosities, but as worldviews consistent with cutting-edge scientific knowledge. Like the Aymara worldview contained in the concept of *Pachamama*, Western philosophical and scientific worldviews enable us to consider the community of living beings as a community of active subjects with their own interests. Comparative analyses of Amerindian, philosophical, and scientific forms of ecological knowledge generate a congruent and complementary understanding that invites us to revise the dualism between human-subjects and ecosystem-objects established by a utilitarian ethics that prevails in the logic of ecosystem services. Modification of this dualism could extend the concepts and practices of Earth Stewardship towards forms of intercultural dialogue and interspecific co-inhabitation. This biocultural modification would enlarge the human community of stewards participating in Earth stewardship practices, as well as broaden the community of human and other-than-human co-inhabitants considered in the analyses of life well-being.

9.5 Concluding Remarks

In an era of rapid socio-environmental change, it is technically misleading and ethically unjust to ascribe responsibility to humanity in general. The biocultural ethic's conceptual framework contributes to an Earth stewardship initiative by more precisely identifying the diversity of Earth stewards as well as the specific agents that are mostly responsible for current socio-environmental problems and by demonstrating the need to question, clarify, and change language, governance regimes, and life habits in order to effect cultural transformations. Framed in the tradition of liberation philosophy (see Chap. 8 in this volume), the biocultural ethic involves two methodological steps: (a) to *liberate* diverse forms of thinking from being encapsulated by colonizing global conceptual frameworks; (b) to *reaffirm* languages, forms of thought, ethics, and cultures that are marginalized from global discourses and media.

Regarding the first methodological step of the biocultural ethic, it is critical to transform the state of indifference toward the diversity of life and cultures that prevails in global discourses today. Governed by a plutocratic regime, global discourses are centered on a free market culture. In this chapter I have highlighted the distinctions between democracy and plutocracy, stewardship and plutonomy to better understand the current state of absorption in a consumerist culture not as a trend that is inherent to "human nature" (as it is often portrayed), but as a particular and recent cultural trend in human history. To achieve Earth stewardship, this trend needs to be overcome because it alienates global society from complex, multifaceted, dimensions of human culture and other-than-human life.

Regarding the second methodological step, the biocultural ethic provides a conceptual and methodological framework to discover the richness of ecological values and forms of knowledge grounded in the worldviews of Amerindian cultures, Western philosophical and scientific traditions of thought, as well as everyday practices of urban and rural organizations and socio-cultural groups, which are essential for

an Earth stewardship initiative that is inclusive and effectively incorporates socio-environmental justice into it. In order to achieve the recovery of understanding and valuation of biocultural diversity, in this chapter I have highlighted the need for a change of language to more precisely name and identify particular (1) Earth habitats at planetary and ecosystem scales, (2) habits of stewardship or co-inhabitation, and (3) Earth stewards or co-inhabitants.

(1) *Regarding the Earth habitats,* the biocultural ethic's conceptual framework clarifies that the main drivers of the Anthropocene have accelerated since the 1950s, and have mainly originated in the Northern Hemisphere. The impact, however, reaches worldwide. Several chapters of this book document a diversity of active Earth stewards who oppose this trend. However, these Earth stewards face growing challenges for maintaining their stewardship habits in their traditional places or habitats in the Northern and the Southern hemispheres. Today, transnational and national economic actors are acquiring 'empty' lands, often in distant countries, which can serve as sources of alternative energy production (primarily biofuels), food crops, mineral deposits (new and old), and reservoirs of environmental services (Borras et al. 2011, 2012). In their article "The Anthropocene: From Global Change to Planetary Stewardship," Steffen et al. (2011, p. 739) point out that "the new economic giants of Asia move to secure food resources in non-Asian territories;" therefore, land grabbing represents a rapidly growing twenty-first century driver of social-environmental problems. Social scientists have criticized land grabbing as a form of neocolonialism:

> Some of this *land has been cleared of existing inhabitants* and users but not yet put into production; in many cases buyers and investors are simply preparing for the next global crisis (Borras et al. 2011, p. 209; emphasis added)

Land grabbing and other forms of concentration of land ownership are a major driver for the rapid rates of rural–urban migration in Africa, Asia, and Latin America, since the mid-twentieth century (Fig. 9.3). For the native habitats, this migration causes a loss of ancestral human stewards or custodians of the land. For the displaced people, this migration causes a loss of everyday contact with their communities of co-inhabitants and diverse life habits. In the cities, displaced people frequently lose their autonomy and lack access to basic services, such as food, water, shelter, and sanitary conditions. They face extreme poverty conditions that are rapidly expanding in the marginal neighborhoods of metropolitan areas. To confront these policies that imply social and environmental injustice, the 3Hs formal proposal of the biocultural ethic is grounded in the notion of *ethos* as habitat. Then, the biocultural ethic links the habitats with the life habits and the identity, autonomy, and well-being of the co-inhabitants (humans and other-than-humans). The conservation of habitats and access to them by communities of co-inhabitants is the condition of possibility for the continuity of their life, and becomes an ethical imperative that should be incorporated into development policies as a matter of eco-social justice. Consequently, the conservation of habitats and access to them by communities of co-inhabitants provide a basis for indexes of sustainability and well-being that broaden the current emphasis on GDP and monetary indicators to measure the nations' success or levels of poverty (see also Kubiszewski et al. 2013; Costanza et al. 2014).

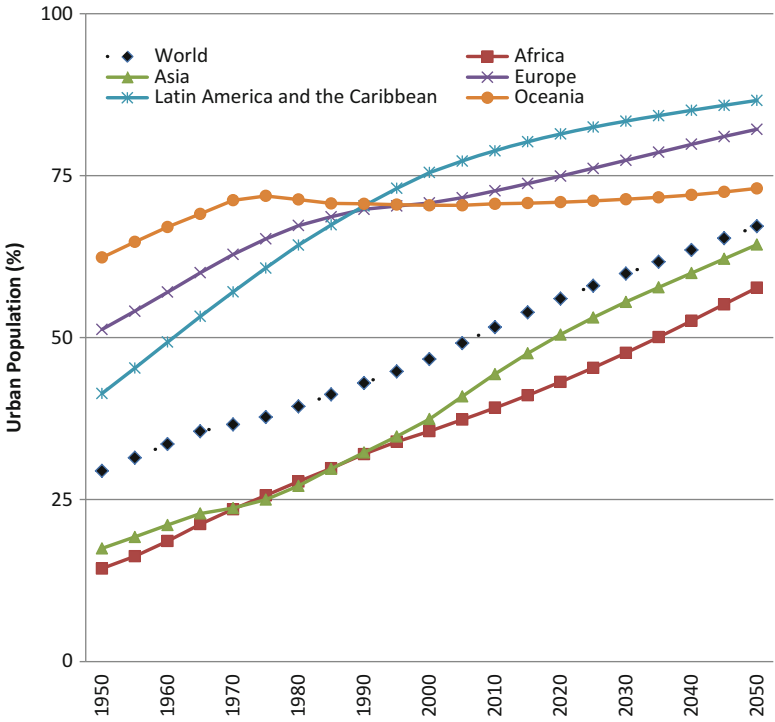

Fig. 9.3 Relative percentages of urban populations in Africa, Asia, Europe, North- and South-America, Oceania, and the world since 1950, including estimated percentages until 2050 (Data from Heilig (2012))

In summary, on the one hand, to conserve and have access to a habitat is the condition of possibility of exercising the role of steward of the land, or Earth. On the other hand, it is not ethically acceptable to accumulate territory and not properly administer the land to the interest of the community of co-inhabitants.

It is important to understand that the habitat includes not only its biophysical dimension (the biosphere at a global scale, sensu Vernadsky; see Huggett 1999), but also its cultural and symbolic-linguistic dimensions (the logosphere at a global scale, sensu Krauss 2007), and its socio-political, institutional, and technical dimensions (the technosphere, sensu Naveh and Lieberman 1990). Changes in one dimension imply changes in the other dimensions (see Fig. 9.1). The concentration of wealth and ownership of the habitats generates a replacement of very diverse life habits and communities of co-inhabitants by a few plutonomic, consumerist habits involving the well-being of a minor fraction of the co-inhabitants. This process leads to a non-sustainable and unjust process of biocultural homogenization, which oppresses the majority of human and other-than-human co-inhabitants (Rozzi 2013). Fortunately, given that history is not linear, but instead it is dynamic and complex, global society is not condemned to continue its path towards biocultural homogenization. Today, a greater precision in the language used to identify the diversity of Earth stewards, practices of land stewardship in heterogeneous habitats of the planet, as well as the specific

agents that are mostly responsible for current socio-environmental problems, can significantly contribute to orient clearer collaborative and supportive ways for a responsible and inter-cultural Earth stewardship.

(2) *Regarding stewardship and other cultural habits,* the biocultural ethic's conceptual framework adds clarity to the Earth Stewardship Initiative in two complementary directions: (a) better understanding and valuing a plethora of sustainable ecological worldviews and practices, and (b) better identifying that the main *cultural habit* driving global environmental impact is the growth in consumption rates and affluence. In its current style and magnitude, the consumerist habit has a very recent history (triggered after World War II), and is affordable to only a small fraction of the world population (Ortiz and Cummins 2011). Religious, philosophical, and Amerindian ethics criticize this *consumerist habit,* because it does not contribute to a flourishing life of those who have too much nor of those who have too little. Those who are irrelevant to plutonomies today, "the rest," represent the vast majority of human and other-than-human beings, and they are not passive victims or objects; instead, they are active subjects with beauty, creativity, dignity, and solidarity. To transform reductionist, individualist, and selfish behaviors and values embedded in prevailing, hegemonic, narrow economic discourses, the biocultural ethic fosters intercultural dialogues and practices, based on partnerships among the majority of overlooked, heterogeneous, rich cultural traditions and communities of Earth stewards. Toward this aim philosophers can act as translators and initiators. In terms of environmental philosopher Irene Klaver:

> Translating various concerns along multiple perspectives opens up new situations and affords us the freedom of ongoing new beginnings. It is crucial to an understanding of the various viewpoints, positions, places and experiences of others. Environmental philosophy enlarges the category of the "other" beyond human beings. It enlarges ethics in the direction of ethos, resonating with "habitat," "inhabitants," and "habits" (Rozzi et al. 2008). It questions certain mentalities and provokes and evokes different modes of knowledge and experience, to enhance cultural imagination into environmental imagination. (Klaver 2013, p. 91)

Philosophers contribute to "pluralizing" human natures. This plural understanding of human natures fosters intercultural forms of Earth stewardship at multiple scales by including the diversity of Earth stewards, their cultural habits and languages, interacting in complex and often non-linear ways in the context of diverse local realities confronted with increasingly prevailing global discourses and forms of governance. The biocultural ethic recovers the archaic meaning of the Greek term ethos, and interprets it ecologically in terms of "habitats" and "habits" of communities of human and other-than-human co-inhabitants (Rozzi 2013). By conducting comparative ethical analyses of (i) pre-Socratic and other non-mainstream Western philosophies, (ii) Amerindian and other non-Western ecological worldviews, and (iii) contemporary ecological-evolutionary sciences, it introduces into Earth stewardship an intercultural philosophical language that broadens the prevailing spectrum of normative ethics that emphasize utilitarianism and deontology, or more recently virtue ethics (see Bina and Vaz 2011; Jax et al. 2013). The biocultural ethic asserts values, virtues, and forms of ecological knowledge that are complementary to those preponderant ethical

schools. For example, it is interesting to note that the pre-Socratic notion of ethos by Heraclitus resonates with the Andean Amerindian notion of *Pacha* (see Rozzi 2015 [Chap. 8] in this volume). For the Aymara culture the *Pacha* [= cosmos] is all what exists; everything is of the *Pacha*, and all is in the *Pacha* (Mamani and Quispe 2007, p. 21). *Pacha* encompasses time and space, and *Aka Pacha* (the space here and now) or planet Earth welcomes all living beings that inhabit it (Mamani and Quispe 2007, p. 13). The Aymara worldview understands cosmos as a totality in which humans participate, and co-inhabit with other beings. Aymara ethics does not accept the notion of "the rest;" the *Pacha* includes all beings. It implies an ethics that is congruent with a tradition of virtue ethics, which is oriented toward the flourishing of each living being according to its talents. If the harmony of co-inhabitation is ruptured, Aymara ethics demands reconciliation in order to restore equity to the *Pacha*. With a complementary perspective based on a scientific understanding, Chapin et al. (2011b, p. 52) state that "given the pace of environmental deterioration and the increased recognition that this path is untenable, society should seize the opportunity to reorient its relationship to the biosphere." As much as the Aymara perspective, the scientific ecological worldview that sustains the ESA's Earth Stewardship Initiative is interested in the sustainability of the biosphere and human well-being.

Intercultural comparisons disclose differences and commonalities; intercultural dialogues build partnerships for bioculturally diverse but synergic forms of Earth stewardship that are informed by ancient philosophical schools of thought and forms of traditional ecological knowledge, as well as by cutting-edge sciences. The comparative analysis conducted with the biocultural ethic's lens discovers that the Heraclitean notion of ethos, Aristotelian ethics (and the neo-Aristotelian concept of good life, eudaimonia), Amerindian ecological worldviews and contemporary evolutionary, ecological and biogeochemical sciences provide an understanding that transcends the dichotomy between human-subjects and natural-objects (or passive resources to be used). This biocultural understanding demands and requires an ethic of responsibility and reciprocity, where the provision of services should flow from ecosystems to humans and also from human to human and other co-inhabitants of ecosystems.

(3) *Regarding the stewards or human co-inhabitants*, not all humans are equally responsible for generating the Anthropocene, and having surpassed the biocapacity of planet Earth. Today's degree of responsibility is associated with a degree of accumulation of wealth and power. In addition to the degree of responsibility associated with wealth, it is necessary to distinguish between socio-environmentally responsible stewards and irresponsible agents with an unbalanced self-interested behavior (*idiōtēs* in terms of Aristotle), who are indifferent to the collective interests of citizens. However, it is necessary to not only have a more precise diagnosis of the agents mainly responsible for environmental changes at local and global scales. It is also essential to foster stewardship habits and build on the capacity to aspire to a broad arrange of values and practices that favor the flourishing of the life of each member of the community of co-inhabitants. Complimentarily, it is also necessary to recover the capacity to sanction the agents that cause major negative environmental impacts.

For implementing an Earth stewardship it is indispensable to overcome the current state of impunity in which *idiōtēs* gain power; instead, nation-states and citizens should recover their capacity to enforce laws, and sanction their violations. It is not Mankind or the human species as a whole that is responsible for causing the Anthropocene and the current unsustainable environmental footprints, as it has been mostly portrayed for over a century. However, it is the whole humanity and community of life who is in peril due to the actions of a few specific agents, who need to be reoriented. To achieve Earth stewardship, omitting this specification in the diagnosis of global environmental change would be a mistake as serious as a physician that treats a patient with an infectious disease and blames microorganisms in general for this disease, instead of identifying the specific organisms that are actually responsible for the infection. As Aldo Leopold (1949, 258) stated, "health is the capacity of the land for self-renewal. Conservation is our effort to understand and preserve this capacity." A biocultural approach to Earth stewardship helps to achieve a better diagnosis of specific threats and a better identification of opportunities that already exist in many communities for conserving the health of the land and the people.

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