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The Manfred Max-Neef Thinking: A Deep Economy Rooted in the Eco-philosophical Perspective of the Deep Ecology[1]

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Introduction

The work of Manfred Max-Neef (1932-2019) has left us an invaluable legacy that we are now just beginning to unveil. In our paper, we aim to introduce the work of this very radical, and challenging, Chilean economist-ecologist thinker to an English speaking audience by demonstrating the connections between his thought and that of the more widely-known, Norwegian eco-philosopher, Arne Næss' (1912-2009) concept of Deep Ecology. We propose that there are such strong connections between the two to suggest that Max-Neef's economic thought moves beyond the field of conventional ecological economics towards developing, what we have termed, "Deep Economics".

At the heart of the encounter of these thinkers and their thoughts lays a philosophy based on two key dimensions, 1) biocentrism and 2) the intrinsic value of life. In this philosophical encounter, there are existential connections such as the love and passion that both authors had for nature, their personal commitment with environmental movements, Indigenous peoples, and other initiatives that seek to establish a more sustainable world. Both authors have been regarded as radical intellectuals and activists, engaged in deep criticisms of conventional science. In particular, they both argued that traditional economics and ecology are trapped in epistemological and ontological reductionisms, where scientific-technical knowledge and human-centered values (anthropocentrism) are seen as the only ways to address and solve ecological problems.

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Arne Næss was a widely regarded philosopher, who upon retiring from academia, turned his attention to eco-philosophical concerns, developing his own philosophical system which he termed "Ecosophy T" (Næss 1989). This philosophy is an attempt to systematize values and principles that he considered fundamental to addressing socio-environmental problems. All those principles were systematized in the Deep Ecology Platform (DEP), which he coauthored with George Sessions,that would later become central to the Deep Ecology Movement (Bugallo 2015, 2018).

Max-Neef came from the field of economics. He had experience working in large multinational corporations and international organizations. An experience that, as he noted, moved him from initial enthusiasm to increasing uneasiness (Max-Neef 1986). In particular, he was very disappointed by the insufficient solutions economics offers to the great problems of society such as the growing social inequality, pollution, and natural resources depletion. From this, Max-Neef drew a deeper connection between the socio-ecological crisis and the conventional (classical and neoclassical) economics, which does not acknowledge that we all live on a finite planet, where there are other non-human living beings that deserve our respect, love, and care.

Confronting conventional economics, Max-Neef began to build an economics that serves people and life, and not the other way around. He criticized the notion of development based on the Gross National Product (GNP) and the misleading idea that human needs are infinite. Thus, he laid the foundations of what will be the notion of Human Scale Development (HSD), which he presented for the first time in 1986. The HSD framework was not based on purely economic theories. It was framed in terms of philosophical and ethical perspectives that deeply critique the values, beliefs, and ideology that support unsustainable practices in modern societies. These perspectives (so strange to classical and neoclassical economics) require a transdisciplinary methodology, where a respectful dialogue between scientists, experts, researchers, and non-academics is needed. For Max-Neef, this is the only way to understand the complexities of life and the inner connections between economy, society, and nature.

This is why we believe that Max-Neef offers us a 'Deep Economic" perspective which, embracing the eco-philosophy of Næss´ Deep Ecology, transcends the field of ecological economics. It is our, that both Deep Economy and Deep Ecology are two sides of the same coin, called *Oikonomy* in the Aristotelian sense, meaning "the art of living well". We are convinced that Max-Neef´s legacy deserves a wider audience and more sustained academic interest. It is this goal, which this present work aims to address.

In the following article, we will begin with a discussion of the biocentric traditions upon which both Max-Neef and Naess draw and how it informs their respective thought. We will then move onto a discussion of how both thinkers see a key element of their thought to involve a principle of "reverence for life", which requires that we question the ultimate needs and goals of human existence. In the later part of this essay, we will make the case that Max-Neef pursues a more detailed investigation into the question of human vital needs than Naess, before demonstrating, how in comparison with other proposed ecological economics, Max-Neef's economics are truly deep.

Biocentric Traditions and their Influence on Max-Neef and Næss' Thinking

Biocentrism, broadly put, is the notion that humans are part of and intimately connected to the natural world and that human interests and values should reflect this broader membership and the respect for wider non-human nature, in contrast to the more predominantly held anthropocentric position, which sees humans as elevated above the rest of nature. Biocentrism is considered a worldview, analyzed in diverse studies addressing the ecological crisis (Agar 2001; Max-Neef 2014; Naess 1973; Naess & Sessions 1986; Rolston 1989; Taylor 1981, 1983). This concept has a long history, not simply restricted to Western cultures, but one which can be found in both Oriental and Indigenous thought.

Just to mention few references in the Oriental world, we have Buddhism and Jainism (Henning 2002; Trelinski 2010); Daoism (Paper 2001), and Confucianism (Tucker 2001, 1993) among others. Roughly speaking, we can observe that these cultures and religions are built on a conception of human beings not separated but integrated into nature, a philosophical principle inherent to the deep ecological perspective of Arne Næss. "Buddhism and Deep Ecology focuses on the Buddhist view of 'One' world that is home to all known life", says Henning (2002, p. 13). Talking about a "new economics", Max-Neef (2014) introduced the notion of "happiness", referring to the Buddhist vision of it. "True happiness is the product of a total sense of connectivity with our world, with nature, with our communities and its people, with our culture and our spiritual heritage" (2014, p. 3).

Simon James, in his paper "Zen Buddhism and the intrinsic value of nature" (2003), discusses the conception of Buddhism as an environmentally friendly religion. As James argues "Some writers draw attention to the fact that Buddhism does not hold that humans are elevated above the rest of the natural world by virtue of their possession of a soul (…) the religion is not infected by the 'anthropocentrism' or human-centeredness that marks, say, Christian

approaches to nature (2003, p. 143). Even more, Buddhism recognizes the interdependence between nature and humans, preventing any type of exploitative and dominative practices towards nature (Henning 2002; James 2003; Max-Neff 2017). Thinking about the ecological crisis, Tucker (1993) affirms the need to refer to the great traditional religions of East Asia in order to build a new ecological consciousness that will help us solve the problems of the contemporary world. "More recently, Tu Wei-Ming has written on the need to go beyond the "Enlightenment mentality" by exploring the spiritual resources of the global community to meet the challenge of the ecological crisis" (Tucker 1993, p. 150).

Located in Latin America, we find the biocentric worldview in the notion of *Pachamama* (Mother Earth), which is central in the life and practices of Indigenous people (Gudynas 2015, 2010; Zaffaroni 2012; Martínez 2012; Boff 1996). *Pachamama* is considered an alternative vision to anthropocentrism, as long as it offers an inclusive socio-ecological idea of "sacred" Mother Earth as a being with its own rights" (Weber & Tascon 2019; Tola 2018). This is a notion central in the new Constitutions of Bolivia (2009) and Ecuador (2008), which "similarly express a transition from an anthropocentric view on natural resources to a more bio-centric one" as Lalander said (2014, p. 150). Indeed, "this alternative vision puts ecological, socio-cultural, spiritual, and political dimensions of an alternative path of development into play and suggests a new ethics of development" (Weber & Tascón 2019, p. 849). A new ethics that questions the commodification of the material world and the Western partition between humans and nature. From a critical perspective, Aymara Scholar Yaneth Apaza Huanca (2019) argues that from the Aymara culture, the concept of Pachamama has altered the definition and understanding of the environment from an anthropocentric to a biocentric perspective, promoting some mechanisms to defend the rights of nature. Indigenous jurist Nina Pacari (2009, p. 32) explains that in the Andean cosmovision:

> All beings of nature are invested with an energy called *samai* and, as a consequence, they are living beings: a rock, a river (water), a mountain, the sun, the plants, that is, all beings are alive and also enjoy being part of a family, and feel happiness and sadness as human beings do (Tola, 2018, p. 29).

The enactment of the new Bolivian (2009) and Ecuadorian (2008) Constitutions, where Mother Earth became a subject of rights (Gudynas 2015; Hidalgo-Capitán & Cubillo-Guevara 2014), has motivated intense (academic and non-academic) debates on whether they embody the essence of Indigenous cosmovision or they became a neocolonial-legal mechanisms that ultimately increase subordination to capitalist powers (Gutman 2021;

Weber & Tascon 2019; Apaza Huanca 2019; Tola 2018; Lalander 2014). Beyond those debates, the notion of *Pachamama* is expressed in diverse practices of the Indigenous people of the region: music, dance, painting, agriculture, rituals, and so forth. For instance, the Bolivian poet Manuel Céspedes Anzoleaga (*alias* Man Césped), believes that the land should have no owners, and we have to value life beyond simply its utilitarian use. Moreover, Man Césped considers all other living beings as his brothers, and aspires to be part of nature (Gudynas 2002, 2012). In the same vein, the Mapuche poetry of Adriana Paredes Pinda (2005) and Elicura Chihuailaf (2006) are embedded in a biocentric worldview, as illustrated in the following Paredes Pinda's poem (2006) "*En este Suelo Habitan las Estrellas*" (On this Ground Stars Live), where the ancestors and nature (sky, stars, water, ground, moon) are "One".

En este suelo habitan las estrellas	*The stars live on this ground*
En este cielo canta el agua de la imaginación	*In this sky the water of imagination sings*
Más allá de las nubes que surgen	*Beyond the clouds that arise*
De estas aguas y estos suelos	*From these waters and these soils*
Nos sueñan los antepasados	*The ancestors dream of us*
Su Espíritu -dicen- es la Luna Llena	*His Spirit - they say - is the Full Moon*
El Silencio: su corazón que late.	*The Silence: his heart beats*[2]*.*

Like the notion of *Pachamama*, the concept of *Sumak Kawsay* represents a biocentric way of living of Indigenous people of the Andes (mainly *Quechuas* and *Aymaras*), who seek to live in harmony with communities, nature, and all other living beings. The goals of *Sumak Kawsay* are social equity and environmental sustainability (Hidalgo-Capitán and Cubillo-Guevara 2014). Translated into Spanish language *Sumak Kawsay* means *buen vivir* or *vivir bien*, and in English translation it means "living in plenitude". This concept has been taken up by a variety of social movement, activists, and even government officials, such as former Presidents Evo Morales (Bolivia) and Rafael Correa (Ecuador).

[2] We make an almost literal translation, making it clear that the poem was not originally translated and that poems, most of the time, need to be adapted and it must be approved by the author. That is why we include the original (Spanish) version.

> David Choquehuanca (2010), an Aymara activist and Bolivian Minister of Foreign Affairs until 2017, described buen vivir […] as 'to reclaim our life in complete harmony and mutual respect […] with mother nature, with Pachamama where we are all part of nature and there is nothing separate'. For Ecuadorian indigenous activist Mónica Chuji (in Lalander, 2014, p. 154), buen vivir implies an understanding of nature as an inherent part of the social fabric rather than a factor of production (Tola 2018, p. 31).

In the context of Aymara culture, *Pachamama* and *Suma Qamaña* or good living depart from "the Western concept of the environment; "this is its great contribution: a way of understanding Nature as a 'interrelated whole", as Aymara Scholar Apaza Huanca (2019, p. 9) shows us in her great work on the Aymara identity and its understanding of *Pachamama* or Sacred Mother Earth as a non-western epistemology. In other words, it is

> A system of knowledge and living based on the communion of humans and nature and on the spatial-temporal-harmonious totality of existence […] This notion is part and parcel of the cosmovision, cosmology, or philosophy of the indigenous peoples of Abya Yala" (Walsh 2010, p. 18).

In this philosophical context, *Pachamama* and *Sumak Kawsay* became icons of the new social movements that dispute development models and resist extractivism in Latin America (Svampa 2019; Tola 2018; Gudynas 2009).

In North America, the notion of biocentrism can be tracked back in the Nineteenth century, in the works of Thoreau [1854] (2008) and Emerson [1836] (2004). A more contemporary reference is Aldo Leopold with his book *A Sand County Almanac* (1949), which had a strong influence in the works of conservationists and environmentalists around the world, as Gudynas (2015) recognized. Leopold (1887-1948), a forestall engineer, was the first thinker in proposing the critical need to enact a "land ethic", which lays in the foundation for contesting the anthropocentric visions in the academic and political fields.

In the broad scientific debate, authors such as the eco-philosophers Warwick Fox and George Sessions use the concept of ecocentrism with a similar meaning of biocentrism (Bugallo 2015; Sessions 1995). That conceptual distinction goes beyond the scope of our paper; therefore, we will not enter in that debate. Instead, we underline the fact that biocentrism is not only a concept of great importance in the works of Max-Neef and Næss but it also became a moral principle that guided their criticism of anthropocentric and utilitarian ideologies that permeate the thinking and the unsustainable practices of the modern world.

Biocentrism in the Thought of Naess and Max-Neef

In the case of Næss, amidst the 1960´s, his work can be considered a reaction to the perspective of what he terms "shallow" environmentalism, whose followers were concerned with the increasing industrial and chemical pollution in the urban areas of the United States of America after World War II (Foster 1999; Lerner 2012; Sessions 1995). Under Næss´ biocentric perspective, "shallow" environmentalists were identified as anthropocentric, as far as they only referred to the fate of and the impacts of chemical and industrial pollution on human life. However, even before this, the biocentric-anthropocentric dispute was already in the air. Sessions (1995) mentions a debate that occurred in the nineteenth century, between John Muir (a naturalist identified with the US National Park System) and Gifford Pinchot (the first head of the US Forest Service), as a historical precedent in the split of that two worldviews. While Muir questioned the legitimacy of "Lord Man´s rules" over nonhumans and its fragility (Jones 2018), Pinchot argued that wilderness and other species were just "resources" to serve humans; for him wilderness had no value for its own sake (Sessions 1995).

Indeed, this discussion was at the center of Næss´ original distinction between "shallow" and "deep" ecology (1973). Basically, the shallow ecology/ecologists address just the effects of ecological problems (pollution and depletion of resources) from a scientific and technological perspective, without asking for the profound social and cultural causes of those problems. Neither do they question the ideologies or the political and economic systems of the industrial-modern society, which Næss considered the roots of the ecological crisis. By contrast, deep ecology/ecologists worry not only about the effects of ecological disasters, but also with the cultural, political, and ideological principles that support anti-ecological practices. It is said that the deep ecology embraces a biocentric worldview that promotes sustainable ways of life, in harmony with nature and all its living entities (Bugallo 2015; Speranza 2006; Rozzi 2007). From a philosophical perspective, the shallow ecology is trapped in an epistemological reductionism, seeking only scientific evidence and technical solutions to ecological problems. In contrast, deep ecology goes beyond epistemology to address the ontological and ethical dimensions of the environmental crisis, in the belief that human beings are not separated from nature and that the respect for life must transcends the realm of humans to reach all ecosystem and life forms in nature.

In the case of Max-Neef´s work, the influence of biocentrism came from different contexts, either academic or non-academic. In Latin America, for example, Max-Neef had

inspirational experiences, as a "barefoot economist", with Indigenous people such as the Mapuche in Chile, Quechuas and Aymaras in Ecuador, as well as peasants in Colombia and artisans in Brazil. As he said,"it was enough to change the course of my life, not only as a professional, but as a human being as well" (Max-Neef 1992, p. 22). This meant contesting the dominant economist´s "tendency to oversimplify […] 'technical objectivity' at the expense of losing a moral vision, a sense of history and a feeling for social complexity" (Max-Neef 1992, p. 21). From these "barefoot" experiences, Max-Neef was inspired to develop a philosophy which embodied the notions of *Pachamama* and *Sumak Kawsay* in a new ethic of development that integrated ecological, social, cultural, spiritual, and political dimensions. Taking the words of Josef Haid (1992) we can say that it is a "philosophy of the side of life" of which Max-Neef expressed his great concerns,

> We have not apprehended the notion that, being a part of life, we are part of the only scientifically provable miracle- actually the greatest of all miracles- is something that should profoundly preoccupy us. […] Not only have we not grasped the idea, but taken life and all that goes along with it for granted, we act as if everything we destroy and everything we predate were mechanically reversibly. […] The forest I destroy is not a forest that was there while I was here. That forest is part of me, and I am part of her. We are all inseparable partners of a whole (Max Neef 2016, p. 2-3).

It is a philosophy similar to the ideals of *Sumak Kawsay* and *Pachamama*, which from a non-Indigenous point of view, as Durán Lopez (2011) argues, can be found in proposals such as the HSD of Max-Neef that focus on the satisfaction of the fundamental human needs.

From a Western-academic context, the biocentric influences Max-Neef had can be traced back mainly in the works of German idealist philosophers like Schelling (1775-1854) and Goethe (1749-1832), as well as the North American Aldo Leopold (1887-1948) and, of course, the Norwegian Arne Næss (1912-2009). Combining that philosophical influences with his background in economics and work experience (in multinational corporations and international organizations), the Chilean thinker began to question the ideological foundations of development models, driven by the conventional economy with anthropocentrism as one of the main axes of these foundations. "The indisputable fact is that (classical economics holds) human beings, especially men, were placed above nature for the exclusive purpose of serving them. The mandate was not to integrate, but to subdue nature. So, it stimulates arrogance and disdain for the environment", said Max-Neef (2017, p. 13). It is with this realization that the work of Max-Neef became increasingly identified

with developing the concept of an ecological economy, which contests the thoughts of classical and neoclassical economics.

Even though biocentrism became prominent in the environmental studies and debates, anthropocentrism still has a strong presence, even in critical perspectives like ecomarxism and ecosocialism (Foster 1999, 2000, 2002; Gorz 2011; Kempf 2007; Löwy 2011), Latin-American environmental sociology (Leff 1986, 2014) and not to mention the thoughts of classical and neoclassical economics, emphatically proposed by Adam Smith (1723-1790), David Ricardo (1772-1823), Hayek (1899-1992), and Milton Friedman (1912-2006). These thoughts are the main target in the biocentric-critical thinking of Max-Neef. For instance, in his books *From the Outside Looking in: Experiences in Barefoot Economics* (Max-Neef, 1992)*; Economics unmasked: from power and greed to compassion and the common good* (Smith & Max-Neef, 2011); *Economía Herética. Treinta y cinco años a contracorriente* (Max-Neef, 2017).[3]

The Chilean thinker does not consider economics a science, it is rather a discipline obsessed with mathematical models. As he said, "if it were a science the economists would behave as scientists (…). If the models or theories do not work, they would discard and search for alternatives" (Max-Neef 2014, p. 5). Unfortunately, that is not the case of conventional economists; they based their works on three principles that govern the discipline: 1) obsession for economic growth and consumption; 2) negative impacts (on people and nature) are external/exogenous to the economic processes; therefore, it is not responsibility of economy; 3) loss of heritage (natural or cultural) is considered an increase in income/economic growth. Altogether, those principles would result on devastating effects on people and nature (Cruz et al 2009; Max-Neef 2014, 2017).

With a great sense of uneasiness toward conventional economics, Max-Neef elaborated deep insights into economics, drawing close connections between economics, society, and nature. Within those connections, the author raised philosophical questions such as "What is the purpose of life?" These are the kind of questions ignored by mainstream economists, indicating their difficulties understanding the complexity and beauty of life; hence, the real world. However, for Max-Neef, the answers to these questions are invariably linked to the rest of nature "As a first approximation, I suggest that life is probably the result of nature

[3] There is no English version of this Max-Neef´s book. However, the book compiles some of the author´s works written in English like **1)** Max-Neef, M. A. (2005). "Foundations of transdisciplinarity". *Ecological Economics*, 53(1), 5-16. **2)** Max-Neef, M. (2010). "The world on a collision course and the need for a new economy". *Ambio*, 39(3), 200-210. **3)** Max-Neef, M. (2014). "The good is the bad that we don't do: Economic crimes against humanity: A proposal". *Ecological Economics*, (104), 152-154. **5)** Parts of the book Max-Neef, Manfred. 1992 From the outside looking in: Experiences in "barefoot economics. Atlantic Highlands.

[…] Without nature there would be no life, and without life the entire cosmos would be meaningless" (Max-Neef 2017, p. 179).

Though they come from different disciplines, Max-Neef from economics and Næss from philosophy, the two share the conviction that ecology is not limited to reflections and actions for a balanced and healthy environment with the aim of achieving only the well-being of humans. Rather, it reaches all forms of life and ecosystems that make up nature. This thought reveals a clear influence of the Land Ethic of Aldo Leopold (1949), in that it extends ethics from human spheres (individual relations, individuals and social relations, and social organization and individuals) to relations between humans and nature (non-human life). An extension that Leopold (1949) understood as an ecological evolution that can be studied only by philosophers. In addition, this ethics implies the recognition of interdependence between human beings and nature, evolving towards cooperation. In Leopold´s words "The ecologist calls these symbioses […] The extension of ethics to this third element in human environment is, if I read the evidence correctly, an evolutionary possibility and an ecological necessity" (1949, p. 172 – 173). From this perspective, biocentrism involves a decentering of human cosmological importance, placing them as another part of the complex assembly of life. Thus, all forms of life (human and non-human) are viewed from an egalitarian basis, as Næss and Max-Neef claim across their works.

The Intrinsic Value of Life: Eco-philosophy in the Foundation of Max-Neff´s Deep Economy

Given that Max-Neef's biocentrism involves a vision of the world that articulates critical thinking about economics, we argue that his work encompasses an Eco-philosophy, entering the field of axiology (values) to address the root causes of environmental crisis (Mendie and Eyo 2016; Pratt et al 2000). Eco-philosophy is a field intimately associated to environmentalism, a movement with great influences from the insightful works of Rachel Carson (1962), Aldo Leopold (1949), and under principles such as "human-nature interdependence" and "human-nonhuman cooperation". It is also a field from which environmentalists intended to answer some fundamental questions such as, "do we, human beings, have the rights to deplete nature in name of our own welfare?" "what impacts do human practices have on nature?". "what is our moral obligation to 'the lives of others' (human and nonhuman entities)?" Critically, the answers to these questions can be framed in what Leopold (1949) considered an extended ethic (land ethic), based on a moral principle of "respect for life, for all forms of life". In Leopolds' own words, "land ethic changes the role of *Homo sapiens* from conqueror of the land-community to plain member

and citizen of it. It implies respect for his fellow-members, and also respect for the community as such (1949, p. 174). It is a principle that Næss expressed as "the flourishing of human and non-human life on earth have intrinsic value" (1989, p. 29).

The idea of "intrinsic value" has been the subject of solid philosophical debates (Herguedas 2006; Zimmerman 2001; Callicott 1995; Fox 1993). "Many eco-philosphers have difficulties with this notion, especially regarding what has been said about ourselves and the connections to the Self of nature" (Næss 1989, p. 11). In a broader sense, it has an internal connection with the principles of interconnectedness and cooperation between humans and nature. This is expressed in the Næss´ argument, starting with the following question:

> What, then, actually exists independent from us? The value is not so much independent from our evaluation -be it material or aesthetic in nature. Gestalt entities in nature are things to be respected for their own sake, simply because they are there and near to us. Like friends -we should never use them as only a means to something else (1989, p. 11).

On this basis, Næss developed his concept of the "ecological self". The ecological self is a self-realized human being who extends their care and love to "others", whether humans or nonhumans: A Self-realized human with empathy toward the world as a whole. A self-realized human whose existence is "in" and "with" the vast community of "others" (Bugallo 2015; Leff 2014; Devall 1995; Fox 1995; Mathews 1995, 1991; Næss 1995, 1989).

Although the philosophical notion of the intrinsic value of life is not explicit in Max-Neef´s work, we would argue that Næss' Ecological Self, with its extended ethic, is at the center of an eco-philosophy from which the Chilean thinker elaborated a critical vision of economics, as profound as his analysis on the ecological crisis. Indeed, in his work on transdiscipline, Max-Neef stated that at the value level, the concern for life,

> Goes beyond the present and the immediate. It aims at generations yet to come, at the planet as a whole, at an economy "as if people matter". While making explicit a global concern for the human species and life in general, the organizing language–as suggested by Schultz–should be some kind of deep ecology (2005, p. 8).

Thus, it is an eco-philosophy where "reverence for life" became a principle of value articulating the five postulates of what he called a new economics (Max-Neef 2016). It is this eco-philosophy which transforms Max-Neef's proposal from environmental economics towards what we call deep economics.

How does Max-Neef's Deep Economics relate to Næss's Deep Ecology?

First, there is no way to understand Max-Neef's thinking unless we recognize the internal links he had established between conventional economics and the ecological crisis. In particular, the ideological and philosophical principles that govern the perspectives of mainstream economics. It is in that sense that the perspective of Max-Neef, addressing the ecological crisis, transcends the fields of economics and ecology to highlight philosophical issues such as "what is the place of human beings in nature?" or "what should the limits of human intervention in the biosphere be?" "What is our responsibility for the ecological crisis?" "What can we do to solve this crisis?" Basically, the answers to these questions are framed in the DEP, through which Næss (1989) also asked for the profound reasons of "why" and "how" we have reached the current ecological crisis (Speranza, 2006).

The DEP and its eight principles[4] had been subject of extensive analyses and criticism (Francisco 2015; Wolff 2010; Belshaw 2005; Foster 2002; Ferry 1994; Gore 1992). In this platform we identify three pillars from which we draw the links with Max-Neef´s Deep Economy: 1) **Biocentrism**: life is understood in a broader sense (human/nonhuman); human beings have no right to reduce the richness and diversity of life, because all forms of life have intrinsic value. 2) **Human impact on the biosphere**: the expansion of human non-essential human demands is having an excessive destructive impact on nature and must be reduced. 3) **The need to do something**: urgent social, political, economic, and ideological changes are needed instead of looking forward only to improve the economic-human wellbeing (Bugallo 2015; Max-Neef 1986). The spirit of the DEP is at the center of Max-Neef's intellectual, philosophical, and political trajectory. In particular, his break with the economic establishment and "barefoot experiences" with Indigenous and subaltern peoples in the Ecuadorian jungle and with Brazilian artisans living in poverty. Rich stories described in his book *From de Outside Looking In. Experiences in "Barefoot Economics"*

[4] **The eight principles are**: **1)**. The well-being and flourishing of human and nonhuman life on Earth have value in themselves (synonyms: inherent worth, intrinsic value, inherent value). These values are independent of the usefulness of the nonhuman world for human purposes. **2)**. Richness and diversity of life forms contribute to the realization of these values and are also values in themselves. **3)**. Humans have no right to reduce this richness and diversity except to satisfy vital needs. **4)**. Present human interference with the nonhuman world is excessive, and the situation is rapidly worsening. **5)**. The flourishing of human life and cultures is compatible with a substantial decrease of the human population. The flourishing of nonhuman life requires such a decrease. **6).** Policies must therefore be changed. The changes in policies affect basic economic, technological, and ideological structures. The resulting state of affairs will be deeply different from the present. **7)**. The ideological change is mainly that of appreciating life quality (dwelling in situations of inherent worth) rather than adhering to an increasingly higher standard of living. There will be a profound awareness of the difference between big and great. 8). Those who subscribe to the foregoing points have an obligation directly or indirectly to participate in the attempt to implement the necessary changes. (Næss & Sessions, 1984) [online] http://www. Deepecology. Org./platform. htm.

(1992). As he said, “It is simply a book about life, where human facts and feelings-those of others as well as my own-have replaced abstract statistics. I do, however, theorize a little (mea culpa) in some interludes included in the text” (p. 22-23).

These three pillars of the DEP are crystallized in Max-Neef’s thought and framed from an ecological economics’ perspective. For example, in line with the 3rd principle of DEP, saying “humans have no right to reduce this wealth and diversity (of life), except to meet vital needs, with responsibility (Næss 1989, p. 29), Max-Neef argued that "no economic interest can be under any circumstances above reverence for life"(2017, p. 175), which should be understood as “life in an integral, non-technical way to encompass things biologists can classify as non-living entities: rivers (watersheds), landscapes, cultures, ecosystems, ´the living earth´ (Næss 1989, p. 29). Here, the “reverence for life” becomes a moral principle that must guide any ecological/alternative economic proposal.

Likewise, for Max-Neef, there is no way of respecting life without having an organic vision of the world, which “is characterized by non-linear interconnections between living entities. This means that the individual and the community make themselves and they required one and the other at the same time” (Max-Neef 2017, p. 188). To understand these interconnections, Max-Neef is convinced that we need more than a scientific vision. As he suggested, we need a transdisciplinary organic perspective that combines reason with intuition, matter with spirit, ethics with esthetics and beauty with truth (Max-Neef 2005, 2017). Transdisciplinary research promotes a dialogue between different academic disciplines and non-academic individuals/groups. These can be social movements, community leaders, unionists, or politicians, believing that they can contribute relevant knowledge (Olivé 2011; Lanz 2010; Max-Neef 2003, 2005). A dialogue through different types of knowledge (scientific or non-scientific) can help us move from knowledge to understanding, where understanding involves us in the problems we address. Because, as Max-Neef (2005) argues, we cannot understand something we are not part of.

> Knowing is not the same as understanding. Here goes one example. Suppose that you know everything that can be known about a human phenomenon called Love. But you will only understand Love, once you fall in love. You can only understand that of which you become a part, when the Subject that searches and observes becomes inseparably integrated with the Object searched and observed (Max-Neef 2005, p. 15).

Being “part of” means a new ontology that challenges the traditional epistemology, where the scientists must be separated from the object/problem they study. Being “part

of" also implies an ethical dimension and moral principles to guide any kind of research, such as respect for all forms of life and respect for any kind of knowledge. Therefore, transdisciplinary not only means a dialogue between different areas of knowledge, but also an egalitarian perspective where no discipline, knowledge or people are in a higher position. As Morandín Ahuerma et al (2018) maintain

> The dialogue of knowledge is the communication of Being with the knowledge (self-knowledge) and the Self with the Other (alterity); it takes the risk of dissolving certainties and gives the opportunity to find "what is yet to be thought" (2019, p. 7).

From a transdisciplinary perspective, Max-Neff gave us a deep understanding of the ecological crisis, navigating in the depths of the traditional economy to reveal the philosophical foundations that, above all, put the market, profits, and consumption as axes of development, have devastating social and ecological consequences. To sum up, eco-philosophy combined with a transdisciplinary approach (as a tool for assessing human impact on nature) and the urgent need to "do something" to solve the ecological crisis are the fundamental pillars of what we identify as the Deep Economy of Max-Neef. A new type of economic theory in which the obsessive concern with the growth of GNP becomes one of the main focuses of Max-Neef's criticism.

Deep Economy: Economic Growth, Human Needs and Development

The GNP is considered by conventional economists the "holy grail" of human development and progress. However, from the perspective of Deep economics, GNP is in no way synonymous with human well-being or progress, but rather the cause of serious socio-environmental degradation. Max-Neef said "economic growth is having disastrous effects on a global scale. Poisoning the biosphere; exhausting the natural resources; generating deep inequalities and destroying the habit of many species" (2014, p. 86). For Næss, "GNP supports irresponsible and unsolidaric resource consumption and global pollution" (1989, p. 114). At the center of those critiques lays the idea that the economy must be at the service of the people and life, and not people and life at the service of economics (Cruz et al 2009; Max-Neef 2017; Næss 1989).

The dialogue between Max-Neef and Næss capitalized by eco-philosophical perspectives have profound ontological, ethical, epistemological, methodological, and political implications. Indeed, Smith & Max-Neef (2011) argued that after centuries of economic

growth, a large part of the world's population has less than the minimum necessary to live a safe and dignified life. Economic growth has not improved their lives. Moreover, GNP is degrading nature and encourages population growth, which in a near future threatens human and non-human life (wars to control water or food; deforestation; and extinction of species). “Economic growth and population growth are responsible for the ongoing degradation of the life-supporting capacity of the world – the only world we have; the world where our great grandchildren will have to live (Smith & Max-Neef 2011, p. 71).

This scenario poses a great deal of responsibility on governments, policy makers, scientists, and humanity generally. Our future is at risk unless we value life in a non-conventional way. This is a big change that claims for a transformative science and practical knowledge (Spiering & Barrera 2020; Scheidewind et al 2016a, b) that guide us toward a new social contract with the earth (FILAC 2020; Jennings 2016; Castaño 2014; Salazar & Lopez 2001; Serres 2004; Castillo & Ceberio 2017).

From this perspective, Max-Neef noted the urgent need to rethink development as conceived under the conventional economy. For centuries, the notion of development was related to monetary-economic processes focused on the dynamics of the free market, which “presents itself as a purely instrumental issue of greater efficiency and not as a political issue facing different interests and power relations. A reductionist vision criticized from its creation until today" (Cruz et al 2009, 2022). Max-Neef’s deep economy is among these criticisms. In particular, there is a concept that synthesizes his criticism: Human Needs. This concept was developed within the framework of HSD that Max-Neef first presented in 1986 with his colleagues Antonio Elizalde and Martin Hopenhayn. “The basic postulate of HSD is that development refers to people and not to objects” (Max-Neef et al 1986; Cruz et al 2009). It means that development must be concerned with people´s wellbeing and with the “art of living well”. Central to this thought is the idea that “HSD concentrates on and is sustained by the satisfaction of fundamental human needs” (Cruz et al 2009 2023). Under this framework, the notion of human needs was demystified as “infinite” and directly related to environmental sustainability (Vita et al 2019; Fromm 2013; Jackson 2005; Max-Neef 1995). From this understanding of development and human needs, knowledge should no longer be a tool to master and exploit nature, but a way of seeking sustainable ways of living that improve people´s quality of life without exhausting nature.

The notion of Human Needs and the ways in which we satisfy those needs (satisfiers) are expressed in a matrix of Fundamental Human Needs and Satisfiers, where Max-Neef classifies and differentiates, on the one hand, there are needs according to axiological categories, referring to all things we value, such as *subsistence*, *protection*, *affection*,

understanding, idleness, *creation*, *identity*, and *freedom*. On the other hand, there are what he refers to as existential needs referring to the meaning and purpose we have in society, according to ways of *being*, *having*, *doing*, and *interacting*. At the core of this matrix lays the belief that human needs are not only satisfied with traded-market goods and services (satisfiers), but have desire for meaning and connection. Nor can GNP be an indicator of complete satisfaction of human needs. "As for Aristotle's *oikonomy* not all satisfiers are traded or obtained through the market, having thus an exchange value associated. Many non-traded (and sometimes non-tradable) social and ecological goods are fundamental to ensure human subsistence and wellbeing as well" (Cruz et al 2009, p. 2024).

Beyond the complexity of this matrix, which has motivated a large number of discussions and methodologies to implement it (Spiering and Barrera 2020), we want to underline the fact that Max-Neef goes beyond Næss in further elaborating what human needs are, by answering the question of "what a vital need is"? As Alicia Bugallo (2015) argues, Naess' distinction between vital and non-vital needs is vague in that what can considered be vital in the context of one society can become trivial in another. This problem, she argues, is addressed in the thought of Max-Neef, which holds that while vital/fundamental human needs are universal for, how these needs are addressed and satisfied can change according to cultural context. Furthermore, the satisfaction of one need must be understood within a systemic framework, where deprivation or satisfaction of a need will impact in the whole system of needs, as well as on general human well-being (Bugallo 2015; Cruz et al 2009; Elizalde 2003; Max-Neef et al 1986). By combining axiological and existential categories of needs, Max-Neef shows us how conventional perspectives have been restricted almost exclusively to the sector dominated by having (Bugallo 2015), thus becoming the only dimension that counts in the structure of the GNP in every country and society. But having is only one of the dimensions by which human needs are realized. It requires a complementarity with the dimensions of being, doing and interacting, which are equally served and improved through the right satisfier (Cruz et al 2009, p. 2024). Nonetheless, having is the key dimension that counts in the structure of the GNP in every country and society.

In this way, Max-Neef confronts reductionist approaches that ignore the complexity and multidimensionality of the human needs and aspirations. He also underlines the misunderstandings of the diversity of satisfiers consumed by cultures and human beings, and the different forms of deprivations and poverty we can discover as soon as we transcended those approaches. We must therefore abandon the chrematistic, market-centered perspective of economic processes that have shaped the very idea of development.

Transdisciplinary approaches are, as Max-Neef understood it, the best path toward transcending the reductionists/quantitative analyses of human needs to reach comprehensive/qualitative perspectives on the complex relations between development, nature, human needs and quality of life. As good as this proposal may sound, the path is not "easy". Proof of that is the lack of real solutions to the current ecological crisis and the persistence of approaches identified with the so called "green" or "eco capitalism", which are convinced that it is under the capitalist system where the environment is most effectively protected. From a critical point of view, such approaches cannot escape the anthropocentric visions, either in its strong or weak versions, as classified by Aldunate (2001).

To illustrate this trend, we refer to the only reference/book we find with the title "Deep Economy" by McKibben (2007). We do not intent a comprehensive review of this book, but rather to contrast this deep-economy proposal with that given to us by Max-Neef. McKibben's argument revolves around the following questions: "Is your life good?" and count on the answer to mean something, then you'll be able to move to the real heart of the matter, the question haunting our moment on earth: (2007, p. 34) Is more better?" An issue that targets the US economic growth, based on the argument that more growth is no longer making people wealthier and happier. On the contrary, growth is conspiring against the physical limits of the planet and risking our life. McKibben therefore affirms the need for a basic shift, which means a big shift toward a "deep economy" that raises questions about human satisfaction and societal durability. He explicitly points out that he took the concept of deep economy from environmentalists, who demand a deep ecology to better understand the ecological crisis.

"We need economics to mature as a discipline", McKibben writes (2007, p. 3). Nonetheless, that maturity does not mean moving away from the foundations of classical economy, "abandoning Adam Smith or doing away with markets. Markets obviously work" (McKibben 2007, p. 2). This is clearly, a profound difference with Max-Neef´s deep economy. For instance, in the book *Economics Unmasked* (2011) Smith & Max-Neef stated that "While [Adam] Smith felt sympathy for badly treated workers, it never entered his head that they might be his equals as human beings (...) He felt that they should be treated decently, but the thought that they might have intrinsic human value was far beyond him, said Smith & Max-Neef (2011, p. 28). The market economy, preached by classical and neoclassical economists, is so far away from "the art of living well" (*oikonomy* in the Aristotelian sense) and much in "the art of goods and services exchange" based on value of exchange (*krematistiké* in the Aristotelian sense) (Cruz et al 2009; Max-Neef 2014). From this critical understanding, markets do not work well to address fundamental human and

environmental needs. Indeed, throughout history, market-centered focused economies have pushed a large part of the world's population to live in poverty, while threatening all forms of life in the planet (Max-Neef 2014, 2017).

Without questioning the internal dynamics of markets, McKibben's deep economy loses depth to focus its attention on human survival, amidst the terrifying future we face. In assessing global warming, he said, "James Lovelock, the British scientist said he believed the "tipping point" had already passed (…). Before this century is over, billions of us will die from the effects, he predicted (McKibben 2007, p. 229-230). From our understanding McKibben does not go deeper in explaining what he considers a "deep economy" and distinguishing it from a "shallow economy", as Næss does with his "deep ecology". It seems to us that his idea of "deep" means only the urgency of changing the way economists evaluate the impacts of economic growth on human´s well-being and happiness. Furthermore, McKibben recognizes that "such change is neither liberal nor conservative" (2007, p. 2). We would add, nor as radical as deep ecology is considered by authors like Merchant (2005). Instead, McKibben's claims are deeply concerned about human well-being. It is made clear in his question "Is more better?" meaning "Is more economic growth better for humans and their happiness?

Final Words

In this article we advance the preliminary theoretical reflections of our research on Max-Neef's work related to human scale development. From this research we argue that Max-Neef's proposal goes beyond ecological economics to become a Deep Economics, in line with the Eco-philosophy of Arne Næss's Deep Ecology. The meeting of Deep Economy and Deep Ecology has existential connections such as the love and passion that both authors had for nature, and their personal commitment to environmental movements, Indigenous people and other initiatives confronting the socio-ecological crisis. Both authors have been considered radical intellectuals and activists, involved in deep criticisms of conventional science, mainly economics and ecology.

Both in Manfred Max-Neef and Arne Næss accounts, biocentrism and the intrinsic value of life (human and nonhuman) became the axes of their analyses of the current ecological crisis, as well as their proposals for a more sustainable world. The integration of these philosophical and ethical principles makes a difference between what we call Max-Neef's "Deep Economy" and other economic proposals related to the ecological crisis. For

example, the work of McKibben (2007), an effort that, from the point of view of Næss´s Deep Ecology, can be characterized as a “shallow economics”.

It is our argument that both, the Deep Economy and Deep Ecology, are two sides of the same coin of “the art of living well”. However, we know that a deeper analysis of Max-Neef's deep economy is needed if we are to develop a comprehensive framework from which researchers can move forward on successful studies and conclusions. It is our contention that Max-Neef´s legacy deserves more and deeper reflections. For now, take our work as it is: “a work in progress”.

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