

Approaches to Enrique Leff's Environmental Thought: A Challenge and a Venture that Enriches the Meaning of Life

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Context of Leff's Contribution to Environmental Thought in Latin America

After the international call in Tbilisi² (1977) to form a network to develop environmental thinking and education on every continent, the only network that was successfully formed was in Latin America. Enrique Leff coordinated this network with the support of the United Nations Environment Programme, UNEP. In this capacity, Leff has played a central role in stimulating, supporting, and fortifying environmental education, interdisciplinarity, and environmental research in Latin America, particularly in university centers³. Leff has played an important role for developing environmental education and thought not only as an officer at UNEP, but more importantly as an intellectual and philosopher. His extensive work (more than 100 articles and seven books) has succeeded in transcending and forging space for environmental thought, not only in education and environmental philosophy, but also in the areas of economics, sociology, and development. Leff proposes innovative and constructive readings of environmental problems in Latin America, and suggests that these problems are the result of a crisis of civilization, which urges us to re-think the foundations of modern rationality.

Some Previous Considerations

Leff's⁴ first contributions to environmental thought date from the early 1980's. That is to say, Enrique has been thinking, analyzing, and de- and re-constructing thoughts and

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² International Conference on Environmental Education of Tbilisi (Russia), summoned by UNESCO (United Nations Educational, Scientific and Cultural Organization) and UNEP. This was the first important UNEP international Conference and also the foundation of environmental education.

³ See for example his valuable initiative for creating a series of publications in UNEP about Environmental Thought: UNEP Virtual Library <http://atencionprimaria.wordpress.com/2008/02/19/pnuma-biblioteca-virtual/> (accessed 4/4/2008)

⁴ Enrique Leff was born in Mexico. He received his doctorate of Development Economics in Paris, France in 1975. He worked in the fields of Epistemology, Economics, Policy, and Environmental Education. Since 1986, he has been coordinator of the "Red de Formación Ambiental" (UNEP's Network of Environmental Education and Thought for Latin America and the Caribbean). He has been senior researcher of Instituto de Investigaciones Sociales (the Institute of Social Research) at UNAM (Universidad Autónoma de México) since 1986 and he is Level 3 National Researcher of the Sistema Nacional de Investigadores (National System of Researchers) In 1985 he was Director of Programa Universitario *Justo Sierra* (University Program *Justo Sierra*), of Coordinación de Humanidades (Coordination of Humanities) at UNAM. Currently, he is professor of post-graduates of the Department of Political and Social Sciences at UNAM in the areas of Political Ecology and Environmental Policies. He is a member of diverse academic and consultative organizations, among them, del Comité de Evaluación Externa del Instituto de Ecología de

reflections about environmental problems for more than 20 years. His fundamental thesis is: *the environmental crisis is the reflection and the result of the western crisis of civilization and is caused by this civilization's ways of knowing, understanding, and therefore transforming the world.*

All of his work revolves around this central thesis. On one hand, to demonstrate this thesis, and on the other, to propose concrete paths toward a cultural transformation that would contribute to the overcoming of this crisis of civilization. Leff suggests that the profound causes of the environmental crisis are founded in dominant ways of knowing; that is to say, the crisis is rooted in the epistemological bases of modernity. Leff has systematically dedicated himself to proposing and constructing concepts that deconstruct modern suppositions, and at the same time, enable new ways of understanding and apprehending the world.

Before presenting this tightly interwoven web of conceptual proposals, it is necessary to consider the following reflections.

Living in the modern world and being accustomed to fragmentation, and therefore to specialization of knowledge (which constantly presents “objective” proposals, “universal” concepts, and “true” facts, and is mainly preoccupied with explaining the “how” and “what” of things), many existential and experiential aspects have been left behind. The “why,” “for what,” “from where,” and many other questions have become lost along the way. This generates a type of knowledge that is no longer concerned with life and its viability. It is a knowledge that no longer questions “objectivity,” “universality,” and “truth.” In contrast, environmental, social, political, and economic crises, and epistemological reconceptualization within the sciences, are increasingly questioning these assumptions.

Living confined within one way of knowing the world frequently disables one from seeing its (our) limits of validity, and from visualizing other possible ways. This

Jalapa (Committee of External Evaluation of the Institute of Ecology of Jalapa), la Comisión Asesora de la Universidad Autónoma de la Ciudad de México (the Advisory Board of the Autonomous University of Mexico City), el Comité de Sustentabilidad de la Academia Mexicana de Ciencias (the Sustainability Committee of the Mexican Academy of Sciences) and Fondo para la Comunicación y la Educación Ambiental en México (the Foundation for Environmental Communication and Education in Mexico), as well as of Consejo Asesor Internacional del Foro Latinoamericano de Ciencias Ambientales (International Advisory Board of Latin American Environmental Science Law), FLACAM in Argentina. He is a member of the Editorial Board of the publications *Capitalism, Nature, Socialism* (USA); *Ecología Política (Political Ecology)* (España); *Theomai* (Argentina); *Ambiente & Sociedade (Environment and Society)* (Brasil), *Desenvolvimento e Meio Ambiente y Sociedade em Debate (Disinvolvement and the Environment and Society in Debate)* (Brasil); *Ideas Ambientales (Environmental Ideas)* (Colombia); *Ciencias Ambientales (Environmental Sciences)* (Costa Rica); *Revista Iberoamericana de Economía Ecológica (Iberoamerican Journal of Ecological Economy)* (Ecuador); *Gaceta Ecológica y Quivera (Ecological News and Quivera)* (México). He is also a member of the Editorial Advisory Board of the series “Ecologies for the Twenty-First Century” of Duke University, USA.” See http://www.educacionambiental.org.ar/congreso/conferencias/Curriculum/curri_Leff.pdf, accessed 6/10/2008.

confinement obscures the causes and roots of problems. We are prisoners of the economic and instrumental rationality that shaped modernity. This vision of the world “naturalizes” ideas such as “progress,” “development,” “individual” and “ownership,” and forgets the diversity, multiplicity, and heterogeneity of other possible worldviews. The “universalization” of modern rationality as a hegemonic form of knowledge has suppressed, eliminated, and rendered invisible other ways of seeing and knowing the world.

If the environmental crisis is the visible expression of the crisis of civilization caused by its ways of knowing (the epistemological bases which are based on modernity), then criticism should be elaborated in, from and within these modern bases. Accordingly, Leff’s work was inspired by the critical rationalism of Marx, Bachelard, Canguilhem, and Althusser, at the beginning of his work. Leff has not forgotten Prigogine and more recently, investigations about the world, being, and the existential condition of human beings nourished by Heidegger, Nietzsche, Sartre, Derrida, and Lévinas – all European critical thinkers. However, this fact does not mean that Leff is not a Latin American thinker, since his environment and his concerns are clearly Latin American, and he offers *sui generis* readings of these European authors.

Leff makes a great effort to leave modern epistemology and its forms of argumentation behind, exploring other styles of writing that do not have the conventional attributes of science. But it is clear that Leff is not able to leave modernity entirely behind (even if this would be his intention). Rather, Leff wants to demonstrate, from multiple approaches and angles, the flaws of modernity. To achieve this aim, Leff proposes other concepts for re-reading and re-framing the modern ways of knowing that inhibits seeing and understanding the Other (in this case, the environment). Therefore, Leff cannot be read from a narrow or closed perspective. Rather, it is necessary to have an open mind, to be disposed to giving up certain assumptions, and to be prepared to venture towards other possible ways apart from those that are known and established. Without this openness, the chance to understand his radically innovative and inspiring proposals will be lost.

Another fundamental aspect to consider before beginning a possible approach to Leff’s thought is that his proposals about diverse environmental concepts (*environmental rationality, environmental epistemology, environmental knowledge, environmental complexity, dialogue of knowledge*) have their own shades of meaning and characteristics. These concepts can be defined individually; nevertheless, they end up composing a closely interrelated and mutually reinforcing weave. Therefore, Leff’s environmental concepts cannot be fully understood separately.

Perhaps Leff’s proposal can be summarized as follows. Leff recognizes that the roots of the environmental crisis are found in the ways of knowing by which the world is transformed and appropriated. Hence, his work concentrates on the construction of concepts capable of criticizing and bringing to light existing flaws in knowledge. In turn, this criticism makes it possible to visualize new and diverse ways of knowing in order to regain an understanding of the world. Leff attempts the structural creation of an

environmental knowledge in order to construct an *environmental rationality* across a *dialogue of knowledges* from an *environmental epistemology* that permits, for example, the proposal of a *broad environmental education* and *concrete political ecology*. It is about constructing new knowledges and rationalities capable of understanding environmental complexity. Leff's way could also be called a *strategy of political epistemology*.

Approaches to Leff's Thinking

According to Leff, it is necessary to understand "the production of theories insofar as it generates an effect on the knowledge about reality, and at the same time as it induces a transformation of reality."⁵ This means that there exists an inter-determination between processes that take place in the material world and processes of knowledge production, defining knowledge as "a *relation* [of knowledge] that seeks to understand material reality and nature through a correspondence between thinking and reality, between the concept and matter, between the word and the thing" (emphasis added by the author).⁶

From this perspective, Leff proposes epistemology as acting as a strategic function towards achieving a new understanding and a different interaction with the natural surroundings. It is necessary to mention that for Leff, knowledge does not constitute ideological emptiness, but rather that it takes place within a constant fight for power. This confrontation of knowledges makes it possible for a community to gain a certain cultural autonomy, and at the same time allows a production and application of knowledge for technological self-management and appropriation of the land and its resources. In turn, these autochthonous ways knowing enable the maintenance of life-styles and types of production systems for more sustainable ways of living, according to the place.⁷

The object of knowledge turns out to be the structural relationships of reality; therefore, Leff defines scientific knowledge as "the process of the production of concepts – of concrete thoughts – that permits cognitive apprehension of reality."⁸ It is from this basic premise that Leff proposes an epistemological strategy through which an alternative environmental policy can be created. This strategy is understood as "a fight in the realm

⁵ Leff, Enrique, *Ecología y capital, racionalidad ambiental, democracia participativa y desarrollo sustentable (Ecology and Capital, Environmental Rationality, Participatory Democracy and Sustainable Development)*, Siglo XXI, Mexico 1994 [1986], p. 32

⁶ Leff, Enrique, *Racionalidad Ambiental, la reapropiación social de la naturaleza (Environmental Rationality, Social Re-Appropriation of Nature)*, Ed. Siglo XXI, México, 2004, p. 19

⁷ Leff, Enrique (coord.), *Los problemas del conocimiento y la perspectiva ambiental del desarrollo (Problems of Knowledge and the Environmental Perspective of Development)*, Siglo XXI, Mexico, 2000 [1986], p. 36 and Leff, Enrique, *Ecología y capital, racionalidad ambiental, democracia participativa y desarrollo sustentable (Ecology and Capital, Environmental Rationality, Participatory Democracy and Sustainable Development)*, Siglo XXI, Mexico 1994 [1986], p. 78

⁸ *Ibid.*, p. 29

of knowledge against the reductionism of theoretical ideologies generated by a generalized ecology and functionalist pragmatism.”⁹

It is within this context that Leff’s conceptual contributions should be understood. He begins with environmental knowledge, which questions the fragmentation of knowledge in modern science and the (economically and instrumentally) non-sustainable dominant rationality of modernity. This questioning enables us “to talk about the silenced truths, subjugated knowledges, silenced words, and the reality suppressed by the power of the scientific objectification of the world.”¹⁰ Since it does *not* raise the point about the reconstruction “of an unitary logic, of an absolute truth, of one-dimensional thinking, of objective science, of growth without limits, of scientific control of the world, of technological domination of nature, and of rational management of nature,”¹¹ the result is a way of knowing that is not locked up in dogma, nor in totality or absolutism, and even less in logocentrism. Rather, this way of knowing makes possible a new understanding and view of the world, which turns out to be:

“...a project of revision and reconstruction of the world through conceptual strategies and policies that depart from principles and foundations of an environmental rationality, which have been exiled and marginalized by dominant scientific paradigms.”¹²

In this way, environmental knowledge undertakes a critical position in the face of modern knowledge, which revises and reveals the relations that exist between social conditions of knowledge production and the effects that this knowledge has on reality, considering at the same time the power relations that exist in knowledge. In turn, this environmental knowledge requires the support of an environmental rationality, which is understood not as “the expression of logic, but rather as a complex knot of material and symbolic processes, of reasonings and meanings constituted by the conjunction of heterogeneous and diverse social and cultural practices...it is the result of the conjunction of norms, meanings, interests, values, and actions that do not occur outside the laws of nature, but that society does not simply imitate.”¹³ Therefore, it is not about rationality in the modern sense, but rather about a re-foundation of knowledge about the world, which is no longer based on modern logocentric, economic, and instrumental-technological

⁹ Leff, Enrique (coord.), *Los problemas del conocimiento y la perspectiva ambiental del desarrollo (Problems of Knowledge and the Environmental Perspective of Development)*, Siglo XXI, Mexico, 2000 [1986], p. 31

¹⁰ Leff, Enrique, *Saber ambiental: sustentabilidad, racionalidad, complejidad, poder (Environmental Knowledge: Sustainability, Rationality, Complexity, Power)*, Ed. Siglo XXI, PNUMA, CIICH, Mexico, 1998, p. 128

¹¹ Leff, Enrique, *Racionalidad Ambiental, la reapropiación social de la naturaleza (Environmental Rationality, Social Re-Adaptation of Nature)*, Ed. Siglo XXI, Mexico, 2004, p. 244

¹² Leff, Enrique, *Saber ambiental: sustentabilidad, racionalidad, complejidad, poder (Environmental Knowledge: Sustainability, Rationality, Complexity, Power)*, Ed. Siglo XXI, Mexico, 1998, p. 219

¹³ Leff, Enrique, *Racionalidad Ambiental, la reapropiación social de la naturaleza (Environmental Rationality, Social Re-Appropriation of Nature)*, Ed. Siglo XXI, Mexico, 2004, p. 210-211

rationality, but rather on a dialogue between knowledges and the Otherness, having as a main principle difference and diversity.¹⁴

For Leff, environmental rationality occurs through the articulation of ecological, technological, and cultural processes, explicitly recognizing their different specialties, temporalities (two crucial aspects) and specificities, simultaneously considering the principles of cultural diversity and social equity.¹⁵ This articulation will not be measurable, quantifiable, or calculable in modern terms. But it is a key concept for evaluating environmental management and policies, for recognizing inconsistencies in environmental movements, and for offering strategies and generating possible parameters for sustainability.

In order to construct this environmental rationality, Leff proposes, on one hand, three axes *which must support it*:

1. “Ecological conditions of the production process,
2. democratic values,
3. principles of cultural diversity.”¹⁶

On the other hand, he proposes the articulation of four levels of rationality:

1. “A material or substantial rationality, which establishes a system of values that rule social behaviors and orient action toward the construction of a *social rationality* founded on theoretical principles (*environmental knowledge*), materials principles (*environmental rationality*), and ethical principles (*axiological rationality*) of sustainability;
2. a theoretical rationality, which constructs the concepts that articulate the values of a substantial rationality with the material processes that support it;
3. a technical or instrumental rationality, which produces functional and operational links between social objectives and the material bases of sustainable development through actions that are coherent with the principles of material and substantial rationality;
4. a cultural rationality, understood as a system of meanings that constitutes the differentiated identities of diverse cultural systems, which provides coherence and integrity to symbolic, social, and productive practices” (emphasis added by the editor).¹⁷

¹⁴ Leff was inspired by Levinás and Derrida about the concept of Otherness.

¹⁵ See: Leff, Enrique, *Racionalidad Ambiental, la reapropiación social de la naturaleza (Environmental Rationality, Social Re-Appropriation of Nature)*, Ed. Siglo XXI, Mexico, 2004

¹⁶ Leff, Enrique, *Racionalidad Ambiental, la reapropiación social de la naturaleza (Environmental Rationality, Social Re-Adaptation of Nature)*, Ed. Siglo XXI, Mexico, 2004, p. 198

¹⁷ Leff, Enrique, *Racionalidad Ambiental, la reapropiación social de la naturaleza (Environmental Rationality, Social Re-Appropriation of Nature)*, Ed. Siglo XXI, Mexico, 2004, p. 215. The third point has been proposed and developed extensively by Leff in one of his first books, in which he proposes a definition of *eco-technological productivity* that “leads toward a historic and dynamic process of ecosystemic transformations, founded on changing patterns of resource uses, on a process of scientific-

Environmental rationality is understood, therefore, as a transformative process, a social project that arises as an answer to the current unsustainability and irrationality of the world. Therefore, based on an environmental rationality, Leff offers the possibility for evaluating the coherence between the discourse, theory, and ideology of environmentalists' proposals, of environmental management, and of the strategies of environmental social movements of public policies. But this environmental rationality will not be possible if the importance of the dialogue among knowledges is not taken into consideration. The dialogue among knowledges makes the meeting of different rationalities viable. This dialogue enables a hybridization among different knowledges (e.g. scientific, popular, technical, ecological) in a non-hierarchical way respecting and accepting the relations with the Otherness.

It is necessary to underline that coherence between environmental knowledge and rationality is unavoidable for environmental epistemology. This epistemology turns out to be a “journey to achieve a knowledge about what the environment is –this strange object of desire of knowledge– that emerges from the exile to which it was expelled by theoretical logocentrism, and exile placed outside the circle of scientific rationality. An epistemological journey, not an epistemological project.”¹⁸

Environmental epistemology implies re-signifying the meaning of the world and transforming the conditions of ways of being in the world. It requires a policy of diversity and difference in order to give rise to, for example, subjugated knowledges. In order to succeed at this challenge, it will be necessary to expose power strategies that are found in knowledge and are hidden in discourses, for example of sustainable development or of the construction of instruments of environmental management. As Leff clearly says, environmental epistemology “orients the construction of a new object of knowledge of the economy and the construction of a new productive rationality founded in the articulation of ecological, technological, and cultural processes.”¹⁹ In summary, Leff presents an innovative reflection about ways of seeing, knowing, and understanding the world.

Final Considerations

Here I have raised only some of the aspects of the structural and fundamental concepts of Enrique Leff's thought. I have presented them in a synthetic and consecutive fashion, without forgetting that these concepts cannot be wholly understood when presented separately, as they are closely interconnected and mutually reinforce one another. It is

technological innovations, of productive re-organization and of ecosystemic re-structuring” (Leff, Enrique (coord.), *Los problemas del conocimiento y la perspectiva ambiental del desarrollo (Problems of Knowledge and the Environmental Perspective of Development)*, Siglo XXI, Mexico, 2000 [1986], p. 74)

¹⁸ Leff, Enrique, *Aventuras de la epistemología ambiental (Ventures in Environmental Epistemology)*, Ed. Siglo XXI, Mexico, 2006, p. 13

¹⁹ Leff, Enrique, *Aventuras de la epistemología ambiental (Ventures in Environmental Epistemology)*, Ed. Siglo XXI, Mexico, 2006, p. 41

precisely the environmental complexity that puts all these concepts in dialogue, therefore demonstrating their unavoidable links.

Many more specific aspects and clarifications have not been written here. In a space this limited, it is not possible for me to synthesize a work so expansive and demanding. Rather, I invite you to read Enrique Leff, and to think together about the implications and consequences of his work for the multiple and diverse domains of our environmental challenges.

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