CHAPTER 1

capitalist production and human-nature dichotomy: approaches to ecological thought

As soon as man discards his awareness that he himself is nature, all the aims for which he keeps himself—social progress, the intensification of all his material and spiritual powers, even consciousness itself—alive are nullified.... (Adorno and Horkheimer, "The Dialectic of Enlightenment").

1.1 Introduction

This chapter will examine the manner in which different schools of ecological thought approach the question of human-nature dichotomy which is oftentimes regarded as underlying our destructive treatment of nature. The human-nature dichotomy is not, however, regarded here as only a particular, though dominant, theoretical or even a practical attitude but is sought to be understood in terms of the conditions presupposed or brought about by the capitalist system of production.

We, therefore, start this chapter with the reform environmentalist approach, for in it the human-nature dichotomy can be clearly seen to emanate from the working, or the inner logic of, the capitalist system of production. After that we briefly examine the other approaches to ecological thought starting with culturalist ecology and then go on to discuss the radical ecology approach. We argue that these approaches, unlike the reform environmentalists, do address and even confront the human-nature dichotomy but fail to find a way out of it. In the final section, therefore, a materialist approach to the human-nature relationship will be explored which, it is argued, will lead to the resolution of the human-nature dichotomy.

The task of this chapter is to show that in spite of our power of autonomy from nature we are ontologically in unity with it. That is, humans are also natural beings and this provides the basis for our unity with nature. We however tend to take this as given in the very nature of things, and the problem arises when we overlook this fact leading to serious ecological consequences. Human labour or human transformative activity on nature, however, disturbs this original unity whereby both inner human
nature and outer nature are a consequence of the process of our productive labour on nature. The loss of social unity between inner human nature and outer nature is as much a problem facing present-day uneccological societies as is the loss of the ontological unity between humans and nature.

The fact that the ontological unity between humans and nature holds true in spite of human transformative activity on nature is an important point often missed by the various schools of ecological thought. We thus present the views of reform environmentalism, cultural ecology and radical ecology in order to show how they have failed in different ways to resolve the question of human-nature dichotomy without abandoning modern human science and industry. Finally, in the last section of this chapter we are going to present the materialist conception of the human relationship with nature where we propose a resolution of the human-nature dichotomy.

The search for an otherwise ontologically given unity between humans and nature and the social unity between inner human and outer nature is one of the guiding premises of this work. This chapter will focus on the first, that is, the ontological unity between humans and nature. In the next chapter, however, we find that this unity is no longer something which can be sustained in the face of the social production process, particularly the logic of capitalist production. Hence, besides the ontological unity with nature, any ecological thinking must take account of the unity emanating from human transformative activity: the unity between inner human nature and outer nature. Later we will see that ecological politics cannot confine itself to questions of ontological or original unity between humans and nature and instead must address the question of socially produced unity between inner human nature and outer nature that have mutually transformed each other. This in turn raises the question of social control over society's metabolism with nature as we shall see in the later chapters.

It will be seen here that ecological programmes of action and positions follow from certain philosophical presuppositions about the way humans beings are related to nature. The problem we will be addressing here is to be able to reconcile human autonomous powers as manifest in human labour with our status as natural beings.
Radical ecology, for example, often seeks harmony with nature only at the expense of doing away with the products of human autonomy, that is, human science and industry. We are then told that harmony with nature entails doing away with most of our human transformative powers and going back to nature.

On the other hand, a materialist conception of the way humans are related to nature not only allows the reconciliation of human autonomous powers and nature but shows the interconnection between them. Human labour will be seen to have arisen from deep nature in us, from our character as natural beings. Just as the fact that we are natural beings is given to us from before similarly the deep nature in the world outside of us is given to us as the order of nature which we cannot violate while transforming nature. External deep nature includes the laws and processes of nature that bound and circumscribe human labour.

External deep nature and internal deep nature, which is what makes us natural beings, form a continuous but differentiated whole. This shows the ontologically unity between humans and nature. Human autonomous powers as reflected in human labour and outer nature as transformed through the working out of these powers on nature, together comprise surface nature. Surface nature is entirely the realm of human autonomy. This is the level at which nature is undergoing transformation under the impact of human transformative activity. But it is not just outer nature but also inner human nature which is so transformed at the level of surface nature.

But if surface nature, therefore, captures changes taking place at the level of both inner nature and outer nature under the impact of human productive activity, then we have here an indication of the social unity we mentioned above. For this unity is also between inner human nature and outer nature. But while this unity then corresponds to the level of surface nature, the ontological unity we are discussing here corresponds to the level of surface nature. Coming this far we can now exactly say what this chapter aims to do.

Ecological politics, as we understand it, must address the question of the unity (or its lack) at both the ontological and social levels. But though these two levels are distinct they are inseparable. And this inseparability derives its basis from the
inseparability between deep nature and surface nature. We hope to bring home this inseparability between deep nature and surface nature in this chapter. This is to say that deep nature, our character as a natural being, itself provides the basis for our transformative activity on nature which however is something at the level of surface nature.

Subsequently, we see in the later chapters, under capitalism the transformation of nature takes a form which completely ignores both the ontological unity and the social unity we are talking about. The dichotomy between humans and nature reaches a point where nature is accessed for fulfilling our needs only to the extent that it is the repository of abstract value.\(^1\) This denaturalization of nature, which involves its internalization into the pipeline of the process of the self-expansion of value under capitalist production, means nature starts getting produced under capitalism. The production of nature is achieved under capitalism through the complete dichotomization of humans and nature. The capitalist production of nature represents the culmination of the process of the separation of humans from the inorganic conditions of their social production. Thus the ontological unity between humans and nature, on the one hand, and the social unity between inner human nature and outer nature, on the other, are completely violated by the very working of the capitalist system of production.

While we show in this chapter that the ontological unity between humans and nature does in fact exist it is also to be shown that this unity does not at all mean that humans are subsumed in the processes and cycles of nature. Instead humans have a distinct autonomy from nature as manifest in our capacity for human labour. Human labour is, however, exercised collectively as social labour. Thus the ontological unity between humans and nature need not preclude the possibility for human labour to act as the mediating factor in our relationship with nature. In fact, in spite of capitalist production's impact of dichotomizing human-nature relationship, it is still possible to achieve the social unity we mentioned above precisely because the ontological unity between humans and nature allows for society's relationship with nature to be duly mediated by human transformative activity on nature.

\(^1\) See chapter 3 below.
Besides the point regarding the ontological and social unity and the way in which they are interconnected to each other through the interconnection between deep nature and surface nature, we also make two other points. First is that ontological unity does not foreclose the possibility of human autonomy as manifest in our capacity for human labour. Secondly, society's metabolism with nature is mediated through social collective labour so that the aspiration for social unity itself has a basis in our ontological relationship with nature.

It is precisely by relying on human autonomy or labour as representing human transformative activity on nature that we can suggest the possibility of a unity between inner human nature and outer nature. Under capitalism however the rift between inner human nature and outer nature is so complete that the human subject is taken as it were to exist on its own, from without. This is what we have called the overburdening of the subject. As we shall see in the first section of this chapter, *the production of nature under capitalism presupposes not just the separation of society from its inorganic conditions of production but also the overburdening of the human subject.*

What we want to show here is that human autonomy can be exercised in a way which need not necessarily lead to the overburdening of the human subject even as we engage in the production of our own nature. This means that we can transform nature in an ecological manner without denying the ontological grounding of human labour in nature. As we point out in the first section of this chapter, under capitalism the production of nature turns out to be unecological since the exercise of human autonomy is invariably accompanied by the complete divorce of humans from their ontological unity with nature.

An ecological production of nature is only possible if human autonomy is exercised in a way which does not fail to take account of its ontological grounding in deep nature. The key point then revolves around our understanding of human autonomy from nature. We can broadly identify four positions on this. They can be called the reform environmentalist, culturalist, radical ecology approach (ecological-
naturalist) and the materialist (humanist-naturalist) position. We discuss them consecutively in the different sections below.

We have already made some comments on reform environmentalism above. Both the last two approaches, that is the radical ecology and materialist, invoke nature quite a lot but they have major differences, particularly with regard to what it means to be human or natural. Culturalists, on the other hand, deny that there is something given to us by nature from the outset. For them, everything begins with the fact that humans interpret and perceive the world in ways that rule out any explanation based on any nature-given quality or capacity which we may possess. For them, language and culture provide the universe within which we are to understand all our actions and motivations. Nature is taken to be only the distant limit to our actions that otherwise operate in a world that is culturally given to us from before. For some culturalists, the materiality of nature itself is culturally constructed. To be sure, matter exists on its own but what constitutes 'matter' itself is supposed to be a contested terrain. This later position is, however, not unacceptable to materialists either.

Kate Soper calls the culturalist position nature-sceptic and the last two, that is, the radical ecology and materialist approaches, nature-endorsing. To my mind, the nature-endorsing positions, however, differ quite radically in the way they assign the role to human autonomy. Ecological-naturalists tend to take external nature as the ground on which everything human should be put to test for anything specifically human, not strictly given by nature, is suspect as unnatural. Thus the products of human science and industry are most of the time deviations that humans have made from the ecological path. In fact human society itself might be rejected as something not given by nature and so a candidate for rejection if an ecological crisis is to be averted.

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2 Kate Soper calls the radical ecology approach ecological-naturalism and the materialist or naturalist approach humanist-naturalism. We use them to emphasize the place given by the two approaches to human autonomous powers: the materialist position is humanist to the extent that it does not treat human powers and science and industry as having no basis in deep nature or in our character as a natural being. Both approaches of course invoke and endorse nature as a major vantage point in their discourse. See Kate Soper, "What is Nature?", Oxford, 1995.

3 See Tim Hayward, "Ecological Thought", Cambridge, 1994, pp. 73 - 84.

For humanist-naturalists, nature is not irreconcilable with human autonomous powers. Instead, the latter has a basis in nature and all our powers and industry are the product of the development of our nature-given powers in the course of our productive on nature. There are of course different shades of such thinking wherein, for example, reductionist naturalists argue that the human-nature distinction is one of degree and not of kind. Non-reductionist naturalists, on the other hand, generally hold that humans are different in kind from nature. This means that they are able to account for human autonomous powers without overlooking the nature-given conditions that facilitate and at the same time limit them. Naturalism for the non-reductionists provides a monistic basis for understanding human relation to nature. This enables us to do away with the human-nature dichotomy afflicting most ecological thinking without at the same time denying human autonomy from nature.

Our objective is to show that a materialist or humanist-naturalistic position allows us to conceive of human autonomous powers manifest in our capacity for human labour as leading to a production of nature and not necessarily the domination of nature. The point, however, is that this production of nature can be either destructive or supportive of the life-sustaining capacities of the earth depending on the social relations under which this production takes place. Since then it is not the exercise of human autonomous powers, as reflected in human science and industry, that is in itself the cause of environmental destruction, the way out is not to do away with those powers but to be able to do away with a society that is uninformed by the fact of its absolute dependence on nature.

My suggestion is that the consciousness of our absolute dependence on nature is achieved by providing an ontological grounding to human autonomous powers, that are treated under capitalism as existing by themselves, as self-originating and self-referential. That is, human science and industry that mediate society's relationship with nature have a basis in deep nature, in our character as a natural being. As will be seen in the later chapters, it is in the logic of capitalist production, however, to treat human powers or human science and industry as though they have no basis in nature. An ecological production of nature therefore requires that we do away with the logic of capital itself, what Marx called the process of the self-expansion of value.
What we are suggesting here is of course more than just saying that humans cannot survive without nature, if nature is depleted of its life-supporting potentialities. For, while serious questions about a healthy environment for humanity's survival is at stake today, the ecological debate is not about asking whether we are dependent on nature for our survival or not. For the issue at hand is not merely of our survival but of our human flourishing without destroying nature, to see, for example, whether our powers and capacities can co-exist and flourish in harmony with the life-sustaining capacities of nature.

As we shall see below, while reform environmentalism fails to provide any basis to human autonomous powers and industry, radical ecology tries to regard them as aberrations from our true nature-given self. In their own ways, therefore, both approaches maintain the human-nature dichotomy: reform environmentalism by adopting the logic of capital and radical ecology as a one-sided reaction to it. Culturalist ecology on the other hand also fails to do away with the human-nature dichotomy by being unable to find any natural basis and hence introducing a good amount of arbitrariness to our specifically human capacities and industry.

In this chapter we will examine the different philosophical positions that underlie the major debates in ecological thought. From this we will see, in the next chapter, how a philosophical materialist position leads to an understanding of human labour and autonomy as grounded in our ontological unity with nature and opening the way for a social unity between inner human nature and outer nature. The possibility of the production of nature under capitalism can then make way for a post-capitalist ecological production of nature, once society's nature-transformative activity underlying our social unity is informed or mediated by an ecological thinking expressly taking account of our ontological unity with nature. But that is for later chapters. Let us now turn to reform environmentalism as an expression of the logic of capital.

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5 See Hayward’s, discussion of Ted Benton’s views on human flourishing in Hayward, "Ecological Thought". Of course some radical ecologists question the need for any human flourishing at all arguing that being part of nature is our highest fulfillment and doing otherwise like controlling nature inevitably leads to ecological disaster.
1.2 Reform environmentalism and the logic of capitalist production

In this section here we engage in an immanent critique of capitalism and its accompanying ideology of liberalism. This does not mean that all shades of liberalism are equated with capitalism for there are humanist trends within liberalism. But all said and done liberalism has been historically and in the most fundamental manner, associated with capitalism for it emerged as the apology for capitalism and as the containment of democracy.

Most thinking about the environment today comes from a particular understanding about society itself. Liberal thinkers function with the notion that society was constituted through contract between individuals who were otherwise naturally free and that society itself was born as a means or rather arrangement for maximizing the satisfaction of all the members: greatest satisfaction of the greatest number. It was all a question of otherwise disparate individuals coming together through some arrangement to maximize the happiness of all by sacrificing a bit of each individual's happiness.

Such an understanding of society, however, presupposes humans as liberal individuals before society even came into being. In that sense it sees no necessary connection between the emergence of society and the emergence of humans as part of one and the same process. This meant that the way humans would be distinguished from the rest of nature was by appealing to their individual quality, the quality of a wo/man as an individual, not as a social being. For liberal thinkers, this distinctive quality was the bourgeois individual's rationality: humans were rational, the rest of nature was not. It is of course true that to be human is, among other things but primarily, to be rational. But to take this as the feature which distinguishes us from nature is to be arbitrary and just a retrospective imposition of the quality of the bourgeois individual to all of human history.

This, however, had another effect. Human history was to be understood purely in terms of human ingenuity and cunning in the face of a ho opposed nature so much so that, as Marx pointed out, th "autonomous laws appears merely as a ruse so as to subjugate it under human needs,
whether as an object of consumption or a means of production. This manner of thinking was a clear reflection of the manner in which most social thinking was shaped and conditioned by the specific conditions of the capitalist production system. For under capitalism, the reification of social structures and the extreme form of impersonal mediation of society's relationship with nature veils the actual process of society's metabolism with nature. Nature is then viewed as and in fact becomes, in the actual development of science and industry, merely the counterfoil to human history. Hence the binaries: rational humans and blind nature, thinking mind and extended, dead matter.

Marx identified this separation between humans and nature brought about by capital which tears off humans from their active unity with the rest of nature. For Marx the ontological unity between humans and nature is given from before so that "what requires explanation in not the unity of living and active human beings with the natural, inorganic conditions of their exchange of matter with nature, and therefore their appropriation of nature; nor of course is this the result of a historical process". What needs explanation therefore is "the separation between these inorganic conditions of human existence and this active being, a separation which is posited in its complete form only in the relationship between wage labour and capital". We must then try to find out the "unity of living and active humanity with the natural, inorganic nature" which has been separated under capitalism. This is what we try to do in this chapter by outlining a materialist philosophy from within the Marxist framework. In the next two chapters we try to examine Marx's thesis of "the separation between these inorganic conditions of human existence and this active existence". The separation reaches it peak in the capitalist system of

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7 Whether however it is possible to do away with all forms of impersonal mediation in the organization of production and consumption in society is a question which cannot be dismissed so easily, particularly if we are not rejecting modern science and industry per se for a 'back to nature' stance and instead arguing for an ecological production of nature. For example, Castoriadis argues that "Marx was certainly wrong in thinking that all impersonal mediations have to be abolished. This appears in his critique of the commodity, and also of money..." But Castoriadis is against the capitalist 'market'. "We are living in societies; there is an anonymous collectivity; we express our needs and preferences by being willing to spend that much on that item, and not on something else. This doesn't to mind create any problem. The real problem starts when you say 'market' " (Cornelius Castoriadis, Interview in Peter Osborne, ed., "A Critical Sense: Interviews with Intellectuals", London and New York, 1996, p.14).
8 Marx, Marx and Engels, Collected Works, Vol. 28(Grundisse), Moscow, 1986, p. 413.
production and also in so-called socialist countries where, paradoxically, the logic of capital operated in one way or the other. It will be argued particularly in the last chapter that the problem of ecology is a political problem and ecology definitely has to go beyond the "politics of nature" and address the question of the logic of capital which dictates present day society's metabolism with nature.

The question to be raised here is how can we understand the society-nature relationship from a perspective which separates our "active existence" from the inorganic conditions that enable this existence! The consequence of such a thinking therefore meant that nature was no longer treated as an active force in course of struggling with which we developed our powers and capacities, and became what we are today.

More importantly, in the bid to ahistoricize human nature and eternalize the bourgeois man the qualities that defined the bourgeois man was not to be shown as the product of a long historical and social process centered around the human transformation of nature through which humans transformed themselves. Thus the underlying presupposition is that the qualities of the bourgeois individual existed from the outset of history but could not fructify due to a host of factors. Rationality is taken to be the point of departure of history, as a quality given to humans from without, in which case it is its own starting-point, that is, humans as we know them, with all the basic qualities and powers, are given to us from before. Nature or the inorganic conditions of our existence had not only no role to play in the formation of society or in the course of human history, but humans themselves were defined as possessing powers and capacities that were not the result of any interchange with nature.

The human-nature distinction based on rationality therefore becomes quite problematic and in fact nothing more than the foisting of the particular bourgeois notion of what it is to be human onto human history as a whole. For while rationality is no doubt distinctive of humans and not to be found in the rest of nature, it cannot be taken to be given to humans from without. Rationality itself is a quality historically acquired by humans in the course of their productive intercourse with nature. Our suggestion therefore is that what distinguishes humans from nature is
that humans engage in productive, purposeful and conscious activity and in this process acquire qualities that are specifically human.

The basic process therefore which lies at the very basis of that which made us humans in the first place, is the intercourse between humans and nature. And all of our qualities and capacities have been derived through the interchange of energy with the rest of nature. Our distinctive qualities cannot therefore be understood in isolation from the fact that humans are ontologically dependent on and further have themselves emerged from out of nature through collective productive activity. This is one of the basic premises of Marx's materialism: "men can be distinguished from animals by consciousness, by religion or anything else you like. They themselves begin to distinguish themselves from animals as soon as they begin to produce their means of subsistence, a step which is conditioned by their physical organization." 9

Modern bourgeois society is therefore based on a more or less complete negation of the natural conditions of our active existence. This is, however, not a problem of attitude or lack of respect for nature but follows from the fact that the social process of production under capitalism acts as a veil to man's otherwise "perfectly intelligible and reasonable relations with regard to his fellowmen and to Nature", in a society of associated producers. 10 The process of production under capitalism derives from the logic of the self-expansion of value which internalizes nature into its vortex not as use-value but as (abstract) value, as we shall see in chapter 3. Material production under capitalism therefore has all the potential to ruin the metabolic balance between society and nature, resulting in an unecological production of nature to be examined in chapter 3.

This process of the overburdening of the human subject and the resultant devaluing and objectification of nature led to an extreme reaction from radical ecologists when the destruction of the environment in both capitalist and so-called socialist countries came to be discussed in the 1960s and 70s. The overburdening of the human subject could find its resolution only in the attempt to subsume and sublimate human autonomous powers in 'nature'. Radical ecologists began giving

10 Marx, "Capital", Vol. 1, Moscow, 1986, p. 84.
the call that we should go back to nature and dump industrialism and the domination of Reason.

This overburdening of the subject however has the effect of objectivating nature, in the sense that any possibility of grounding human or societal projects in nature is denied as leading to domination and hegemony. All possible meaning is taken to be very much defined only within the framework of a world of meanings circumscribed within language and the sign. Anything like nature which falls outside of it is rejected as not qualifying as something about which a valid knowledge claim can be made. Hence the rejection of metaphysics and the rootedness of all meaning only in the human world leads to a failure to account for nature in any meaningful manner. The devaluation of nature and the natural or material world as the basis of human actions then has grave implications for any theoretical enterprise which tries to address, and which it must, the question of nature or in particular the question of ecological destruction in the present day world.

In so much of the discourse in critical theory, the futility of the search for metaphysical foundations is emphasized without reservation. Meaning is then to be located, for example in Habermas, in the "philosophical explication of the unavoidable normative presuppositions of communication"11. This is the manner in which we can "recover the meaning of the unconditioned without recourse to metaphysics".12 What needs to be emphasized is that everything that we see around has not been taken up by instrumental reason. Even with the self-expanding logic of capital there is something which is embedded in the given natural and material conditions of human life. Thus to reject everything as the domain of exchange value and to then give up the search for any depth and hence any metaphysic is to go beyond the limits of disenchantment with the world. If then the world is not entirely engulfed by exchange value we can still talk about metaphysic. If not the metaphysic we can at least argue that not all normative principles that underpin society and its functioning are relative and, as Habermas would have us believe,

12 Ibid., p. 9.
communicatively given. And, as Peter Dews points out, even Derrida, the father of deconstruction who sought to show that there is no undeconstructable meaning outside of metaphysics, who formerly "denied that there could be any meaning, truth or history outside of metaphysics", is now displaying a deep tension in his work arising from his otherwise stubborn resistance to the unconditional conditions of the formation of meaning.

Dews writes: "One cannot at one and the same time claim that 'the absence of a transcendental signified extends the field and play of signification to infinity', and also appeal to an unconditionality which is 'independent of every determinate context, even of the determination of context in general'."13 Thus we find that the unconditional provides the structure to human meaning which of course is otherwise given through language and discourse. The transcendental and the unconditional either is displaced in modern societies into the realm of dreams and fantasies, of the make-believe world or is kept out of discourse in the form of an objectivated nature. Ecology is an attempt to reassert the unconditionality not in any originally given nature as such but rather in our particular production of nature. What is not relative what is not given by capitalist system of production or by the specific features of instrumental rationality, in other words, what is given by production in general has to be outlined by us if we are to extricate nature from the both the proponents of the idealism of praxis or those who identify knowledge and truth with metaphysics or with a particular regime of truth.

To define the human-nature distinction in a way which takes the human subject as given from without, which treats the human qualities as given from before and not themselves the product of the interchange of energy with the rest of nature, is a standpoint which follows from the narrow and ahistorical bourgeois approach to the study of human society. In this chapter, we will therefore try to examine the conceptualization of human relation to nature and the human-nature distinction from within Marxist materialism.

13 Ibid., p. 7.
In particular, we will try to show that there is, on the one hand, what can be called deep nature which provides the continuum between humans and nature and, on the other, surface nature which includes both the immediately sensed nature and human autonomous powers that transform this nature. Deep nature extends from external nature to our internal human nature. The internal deep nature derives, as we shall see below, from our character as a natural being, as what Marx calls an objective being. Surface nature in us is simply our specifically human autonomous powers that cannot exist without this deep nature, which extends from within us to external nature, and which is manifest in the built environment around us, the nature transformed by human industry. We develop these ideas in the last section of this chapter, when we discuss the Marxist materialist approach to the ecological question.

We will see that the notion of deep nature provides the basis for our definition of 'nature' as the order of determinations that provide the external and internal limits to our activities on (deep) nature. (cf. Hans Jonas in "The Imperative of Responsibility: In Search of an Ethics for the Technological Age", Chicago and London, 1984, for the problems in failing to make the distinction between deep and surface natures: For while he is critical of the assumption of "the essential immutability of Nature as the cosmic order" by modern man, it does not seem a problem to me so long as this nature is taken to mean deep nature, which in turn means the laws and processes of nature. For there is a level of deep nature which is immutable so far as human action is concerned. By deep nature we understand not just the laws and processes governing dead matter but also the conditions of life on earth, that is, the deeper conditions of life on earth, for example, the water cycles, air composition in the atmosphere, bio-diversity, etc. In short, the point is to conceptualize nature both at the deep and the surface levels in a manner which makes the levels of our possible intervention clear, so that we know at what levels nature is subject to the long or short term effects of human actions. For deep nature at the level of causal processes and laws of nature is given permanently for all of human action, regardless of its scale and possible consequences. Deep nature at this level governs all actions and all processes, both human and non-human, ecological or unecological. At this level therefore we cannot accuse "mortal man's enterprises"
of erroneously believing in "the immunity of the whole, untroubled in its depth by the importunities of man, that is, the essential immutability of Nature as the cosmic order", for deep nature at this level is given to us for all times and is not dependent on human actions. To generalize the reach and impact of human actions on nature to all of material reality, without making any distinction "between the abiding and the changing" in nature, between the conditions brought about by impact of human actions and the conditions within which these actions are played out and permanently circumscribed, would amount to claiming the fragility of all of reality in human action and the blurring of the distinction between the possible destruction of life on earth under human actions and the given deep structures of laws and processes of nature in accordance with which even this act of destruction is circumscribed by deep nature. That is why Harvey argues that "the postulation of a planetary ecological crisis, the very idea that the planet is somehow 'vulnerable' to human action or that we can actually destroy the earth, repeats in negative form the hubristic claims of those who aspire to planetary domination".

Our notion of deep nature particularly the distinction we make between its two levels guards us against any possible overburdening of the human subject and the blurring of the distinction between the permanently given and the historically changeable. Though it is true that there is a level of the constitution and dynamic of matter which is beyond human intervention, such as the mass of energy available on the earth, etc. Deep nature is the web of life in which we are indelibly implicated but which can be both constraining as well as liberating for us. Deep nature does not mean the "planet earth", which "it is materially impossible for us to destroy."

1.3 culturalist approach

We are now going to look into the culturalist approach to conceptions of nature and the way humans are related to it. Culturalists argue that nature is a cultural or

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15 Hans Jonas writes, "man's life was played out between the abiding and the changing: the abiding was Nature, the changing his own works" (Jonas, "The Imperative of Responsibility: In Search of an Ethics for the Technological Age", Chicago and London, 1984, p. 3). But of course Jonas, as we shall see below, does not clarify what in nature is and is not amenable to human intervention. He tries to deny any basis to 'mortal man's' belief in "the essential immutability of Nature as the cosmic order" (Ibid., p. 3).
social construct lacking corporeality and definite, ontologically given reality. Nature stands in this framework as what the agents and actors represent it to be. It is what is signified by our customs, social norms, songs, music, and broadly speaking by our cultural traditions as a whole. Thus nature is a product of convention, linguistically constructed, lacking any given ontological basis in the real world.

One of our principle arguments here is the constructedness of much of the nature that we see around us. But while the existence of an original pristine nature is denied a distinction between human and non-human nature is maintained, for after all nature which exists apart from us is the indispensable condition of our survival and flourishing. Culturalists, however, deny any nature apart from what is discursively given. The point is that there is no natural physically given basis to either our capacities and powers or to what we call nature.

The use of language, for example, is not the result of any biological properties humans possess by virtue of which we learn to speak. Rather language is a given quality of humans which marks an altogether different realm of reality than any biological property that we may possess. The point is that there is no reality except what is encapsulated and captured in language itself. A reality prior to it is not available to us. Reality is structured by humans and there is nothing besides. While this seems to merge the natural into the cultural or human, leading to some sort of monist culturalism, writers like Kate Soper argue that still the human-nature dichotomy remains. She points out that "a concept of the natural as that which is distinguished from the human and the cultural is implicitly at work in any attempt to deny its independent reality, or to have us view nature as itself an 'effect' or 'construct' of culture. Arguments that would assimilate nature to culture by inviting us to think of the former always as the effect of human discourse presuppose the humanity-nature dichotomy as the condition of their articulation." Thus for Soper, culturalist approaches carry within them a dualist approach inspite of their overt attempts to do away with it or at least deny it.

Nature as such, nature which is being destroyed and needs protection, exists, for the culturalists, completely outside of human culture. If nature is, so far as we know

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17 Kate Soper, "What is Nature", p. 39.
anything about it, given purely in discourse, then nature which is not so given, for example, non-human nature, is purely human-independent, which, as a matter of fact, does not exist for the culturalist. It is not being suggested here that depicting nature as a cultural construct is a problem. Rather the denial of a nature apart from what is given in human or cultural construction is what is being contested. As Kate Soper writes, referring to the fact of the cultural constructedness of nature, that "there is all the difference in the world between recognizing the truth of this and refusing to recognize the independent existence of the reality itself or the causal role played in its creation by processes that are not humanly created".18

Someone like Marshal Sahlins who takes a culturalist perspective agrees that biology invariably plays a limiting role to human culture. He recognizes that nature's laws and processes are inviolable for the survival of any species and culture cannot afford ignoring this. He writes, "every species has to conform to it, and any mutation that might seek structurally to do otherwise does so at its peril".19 The point however that he is trying to make is that "a limit is only a negative determination; it does not positively specify how the constraint is realized."20 But the important question is whether the limit ever gets reflected in human culture. Sahlins poses the question: "how then does biology figure in culture?" and he answers: "in the least interesting ways as a set of natural limits on human functioning"21.

Sahlins argues that human perception of the limits imposed by nature are based in the prevailing cultural notions and practices. He writes, "the structure of human perception provides the natural givens of a cultural project".22 But the point is that the natural givens are not manipulable and variable or relative across cultures unless of course one is talking of colour perception or attributing supernatural powers to inanimate objects. For, the laws of nature are inviolable as Sahlins himself has noted above. He however does not refer to human productive activity which would have

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18 Ibid., p. 152.
20 Ibid., p. 64.
21 Ibid., p.66.
22 Ibid., p.67.
brought up the question of the necessary laws of nature. He restricts his analysis to culture as beliefs and ideas and not concrete material practices wherein the natural givens are not manipulable by cultural particularities.

The ramifications of such an approach for ecological thought are quite far-reaching. For as we will now see the culturalist approach keeps the realm of nature, which constitutes the indispensable condition of our existence, outside of its analysis and of anything that the theory can explain or at least can even take note of. Nature as a force with which humans constantly engage with and in that process become what they are -- such a way of viewing nature itself as a shaping and dynamic force does not exist for the culturalists.

For culturalists, "nature" is a constantly changing universe of reference which does not possess anything given to humans from without. "It is through culture and social convention that we learn what nature is. The reading and production of nature is something that is learnt. It is a cultural process and varies greatly between different societies, different periods and different social groupings within any society" Thus environmentalism becomes the result of a particular reading of nature which was not there before but has come to be now because of various cultural shifts in our thinking. "So the environment as a problem came to be created or 'invented' through issues and politics which were apparently not directly concerned with a single unambiguous environment as such"

The culturalist approach emphasizes on the specific manner in which we access the world through our senses. Nature is known to us as it is presented to us through our senses. Our senses are however shaped and molded by discourse, the privileging and under-privileging of one sense over the other. Thus our senses are not a pure medium through which the world is accessed. Instead they are themselves instrumental in presenting nature in a filtered form. As Macnaghten and Urry point

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23 We can see this from Sahlins' understanding of culture: "culture is the essential condition of this freedom of the human order from emotional or motivational necessity" (Ibid., p. 11).
24 For a work which thoroughly examines nature's agency and shows how all human or societal projects are ultimately taken over by nature, the vampire of reason, see Richard James Blackburn, "The Vampire of Reason: An Essay in the Philosophy of History", London, 1990.
26 Ibid., p. 21.
out, "'nature' is not a self-evident set of entities which are simply there, waiting to be 'sensed'. Rather in part nature is constructed through these various senses, especially as they are given form through institutional and media-generated discourses."27 The senses in turn are not a direct product of our physical activity on nature but are given to us as part of a cultural discourse. That is, "why and how particular senses are stimulated is not something that is determined by the physical characteristics of the external environment but is irreducibly determined socially and culturally structured." 28

Post-modernists are of course not challenging merely the notion of nature as a coherent grounding of our ideas and conception about it. They attack the very notion of identity as something objectively given. As Lacan would say, identity, like the unconscious, "is structured like language".29 We note here that post-modernism decentres the human subject, denies all natural basis to humans, reduces nature to a social construct, a text with multiple and varying interpretations and no stable structure, arguing that all our knowledge of nature is merely a way of coping with our quest for power and domination. As Foucault writes, "we should not imagine that the world presents us with a legible face... we must conceive discourse as a violence we do to things".30

One underlying notion of post-modernism, from a Marxist standpoint, is its denial of any unity of the world, its constant harping on knowledge as mere convention, prejudice, habit, cultural practice or simply the 'imperialism of reason'. All knowledge of the world is discourse and there are multiplicity of discourses precisely because there is no one world about which we are talking. This has one important consequence, at least for the Marxist. The very mode of human interaction with the world, practice or purposeful activity, which is supposed to yield knowledge about it is rendered meaningless, for you neither know yourself nor the world you are engaging with as coherent entities. The lack of a "reality as something

27 Ibid., p.108.
28 Ibid., p.108.
that resists us will give way to a belief in the 'constructed' nature of the world'.

Such a culturalist notion of reality "underestimated what men and women had in common as material human creatures, and suspected all talk of nature as an insidious mystification. It would tend not to realize that such culturalism is just as reductive as, say, economism or biologism".

Denial of a reality outside of discourse meant the end of the possibility of any representation, for in that case there is nothing outside of language, signs and symbols. The latter do not represent reality, they make it, or rather, they are reality itself. So nature becomes 'nature', a cultural artifact with no common referent. Post-modernists are however not claiming that consciousness determines being. For the paradigm of consciousness is here replaced by the paradigm of language. "This shift has meant that the focus is no longer on the epistemic subject and the private contents of its consciousness but on the public, signifying activities of a collection of subjects". But it is not just language as the site of a socially constituted meaning which is being proposed by post-structuralists like Lyotard. Rather, any system of coherent meaning is denied for "the subject is replaced by a system of structures, oppositions, and differences which, to be intelligible, need not be viewed as products of a living subjectivity at all". For the post-modernists, therefore, "the destruction of the episteme of representation allows only one option, namely, a recognition of the irreconcilability and incommensurability of language games, and the acceptance that only local and context-specific criteria of validity can be formulated".

While it is correct to point out the cultural baggage that is inevitably carried over in any conception of nature and hence also the violence that representation does to the represented object, it is equally fallacious to then go over to the position that there is nothing beyond the text, beyond the internally constituted meaning of

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32 Ibid., p. 63. Cf. Foucault's textualist dissolution of 'man': "man is in the process of perishing as the being of language continues to shine ever brighter upon our horizon" ("The Order of Things", New York, 1973, p. 386).
34 Ibid., p. 484.
cultural or linguistic systems. As Kate Soper writes, "it is true that we can make no distinction between the 'reality' of nature and its cultural representation that is not itself conceptual, but this does not justify the conclusion that there is no ontological distinction between the ideas we have of nature and that which the ideas are about: that since nature is only signified in human discourse, inverted commas 'nature' is nature, and we should remove the inverted commas."

Thus to the extent that 'nature' as a cultural construct has no external referent and is self-contained, itself the field of internally constituted meaning, we find that culturalist approaches cannot explain our ontological relationship with nature. If nature had no extra-discursive reality, if it is given only in discourse, then we have to assume that it is infinitely malleable. It is of course true that our conception of nature is not constant and given for ever. We can know nature only through our experience and ideas about it. The point however is that these ideas and conception of nature are themselves the result of our conscious practice with nature. Since this practice, our productive activity on nature, is not a discursive act but a necessity imposed by our ontologically determined relationship with nature, our ideas and discourse about nature cannot substitute nature as such.

Viewing nature as no more than what is construed in discourse can moreover lead us to overlook the one nature which underlies all the different 'natures'. Cultural changes may mean the replacement of one 'nature' by another, with an ecological discourse at one point and an unecological discourse at another. While these discourses and the particular dominant conception of 'nature' are themselves partly a consequence of our actual relationship with nature, they may also veil the actual role and place of nature in our relationship with it. Thus the notions of time and space inaugurated by globalisation is supposed to have brought about a fundamental change in the way we perceive nature. It is claimed that "globalisation undermines the dichotomy of 'nature' and 'society' or the division between what is 'natural' and what is 'artefactual'."

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36 Cf. David Harvey: "Any system of representation, in fact, is a spatialization of sorts which automatically freezes the flow of experience and in doing so distorts what it strives to represent" ("The Condition of Post-modernity", Oxford, 1989, p. 206).
37 Kate Soper, "What is Nature?", p. 151.
Writers like Beck and Giddens have however given too much emphasis on the cultural aspects of the ecological question. As a result they are unable to see how the structures of globalisation have in fact ushered in what can be called a culturalist hyperproductionism which tells us on the one hand that 'society' and 'nature' are now sublimated into a globally integrated system so that the nature-society dichotomy has to be jettisoned, while on the other hand, this same system is continuously undermining the natural conditions of production which is where the environmental destruction that we witness today is to be located. This is the main weakness of analyses that focus almost exclusively on the consequences of present-day production processes, of globalisation but not on the reasons why production is organised in this manner in the first place.

The approach is then basically status quoist, taking into account how the environment and our own actions and manner of thinking are getting affected or transformed by the processes of globalisation, and accepting them as almost inevitable and natural. We are only supposed to adjust to the 'new' realities, understand them as having brought about fundamental, irreversible changes in our manners of seeing, perceiving, thinking, feeling, doing and living. Thus even unpredictability of the effect of our activities on the environment, whose scale and intensity depends largely on the structures of capitalist production, is in a subtle way generalized and made to appear politically innocent by putting it into the general category of risk. So for Beck and Giddens, we are living in a risk society. And what is risk? "Risk refers to the dangers we seek actively to confront and assess" But have not humans in all ages experienced risk in one form or the other.

Of course it is true that the environmental risks we face today are unprecedented and enormous compared to all previous societies. But can this one defining feature of society, that of risk, be inflated into a defining category for society as a whole? The shifts in our notions of time and space, the transformation of our sensibilities (39 Callinicos points out how Giddens' ends up presenting financial market ups-and-downs as just an example of the general category of risk: "in classifying the oscillations of financial markets under the general category of risk, Giddens invites us to regard these too as trans-historical features of human existence" (Alex Callinicos, "Social Theory Put to the Test of Politics: Pierre Bourdieu and Anthony Giddens", New Left Review, no. 236, July-August 1999, p. 84). 40 Giddens, "The Third Way: The Renewal of Social Democracy", Cambridge, 1998, p. 64.)
for example, the time-space distanciation proposed by Giddens) and the emergence of new forms of identity and notions of the self are looked upon as features that are definitively given by the system to which we just need to passively adjust. As Kate Soper writes, referring to Beck, "always to view the destruction of nature from the consumer end, as if it were a problem produced by others elsewhere beyond our powers of intervention, is, in a sense, to retain at the very heart of one's critique a misleading view of nature as an 'externality' rather than to see ourselves as permanently within its midst and determining of its context in all our acts of production and consumption"\(^{41}\).

We therefore see that culturalist analysis of environmental problems fail to address the question from the production side and ends up taking the structures that produce them as given. Emphasising too much on how certain institutional and technological changes have come to influence the way we perceive the world, leads to a neglect of our own role in maintaining those structures and what we can do to transform them.

### 1.4 radical ecology approach

We start this section by briefly outlining some of the points around which different schools of ecological thought contest and debate their respective perspectives. From this web of debates, I will draw out the distinctive features of radical ecological thinking.

We can classify the different ecological schools into two broad divisions on the basis of their philosophical presuppositions. On the one hand, as we saw above, is the liberal-reformist approach of the reform environmentalists. On the other hand are the radical approaches of deep ecology, eco-anarchism or social ecology, socialist ecology and eco-feminism.

Reform environmentalists claim that ecological problems can be solved by making changes and modifications within the existing framework of social and socio-ecological relations. They are, in fact, merely environmentalists, and are not ecological for the latter term denotes a much broader meaning. Thus the radicals do

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\(^{41}\) Kate Soper, "What is Nature?", p. 268.
not just call for a major transformation in the way humans interact with nature but provide their own conceptions of nature, society and the relationship between them, that provide an alternative to the dominant conceptions.

Radical ecologists have not however been able to come out of the logic of domination and subsumption in human-nature relationship. For example, in denouncing the thesis of the inescapability of human domination of nature propounded by progressive-left and Marxist ecologists, deep ecologists propose an immediacy in our relations with nature by discarding the achievements of human science and industry. The former position advocates transformation and mastery over nature in order to suit human needs while the latter position wants us to abandon our scientific and industrial powers and only adapt ourselves to, and not transform, nature for our needs and purposes. Crudely put, the choice offered by the two positions is for humans to either dominate nature or choose to get dominated by nature. Either way we are put in a cul-de-sac situation, for the two positions are basically inverted images of each other, as the logic of domination is not abandoned.

The way out of what seems an otherwise pessimistic dominate-or-get-dominated-by-nature condition is to recognize that nature is not just something given to us from without, free from any human impact. Rather, it is what we have made of it, that is, nature as it stands transformed by humans. But as things stand today, we need to see that we do more than just transform nature – we produce it. The nature we have in front of us is not what was given to us at the time of our emergence from the animal kingdom. We have transformed the pristine, untouched nature and have produced, out of it, the nature which stands in front of us today.

The question to be addressed is, then, not whether human domination of nature should be abandoned in favour of a harmonious relationship with nature wherein we adapt ourselves to, and follow the dictates of, and, in turn, get dominated by, nature. The question is not restricted to whether we control and dominate nature for human purposes, or instead give up all our powers and industry and passively identify ourselves in nature’s flow. Going beyond this, my suggestion is that of a more proactive approach which entails taking far greater responsibility for human actions on nature. The paradigm of human transformation of nature is not sufficient to
understand the present level of human impact on nature. We must now, following Neil Smith, talk of production of nature – that humans produce their own nature.\(^\text{42}\) When we say we are producing nature, the responsibility for the degradation of or improvement in its quality comes directly on us.

But the production of nature is not something abstract but is happening today in capitalist society, more than ever before. As Neil Smith writes, “if all societies produce nature at one scale or another, capitalist society has for the first time achieved this feat on a global scale. How else should we conceive of global warming? Global warming was socially produced in the fullest sense, but it resulted not from the control of nature or even control of the social relationship with production but precisely from lack of control – Marx’s ‘rule by the blind forces of nature’.”\(^\text{43}\)

Thus, we argue that both deep ecology and the ‘domination of nature’ thesis, also propounded by some Marxist writers like Grundmann, create a false dichotomy between humans and nature, one in favour of nature, the other in favour of humans.\(^\text{44}\) The production of nature thesis, on the other hand, helps us to do away with this dichotomy and better understand the present state of our relationship with nature. Further, the creations of science and industry are no longer treated as unnatural, inherently anti-nature.\(^\text{45}\) We are also made to realize that the nature we are presently producing is increasingly destroying its life-sustaining capacity. We, therefore, need to produce a different nature, one that respects the principles of ecology.

The question of the status of the structures of modern science and industry vis-à-vis human-nature relationship is, as we have seen, quite pertinent. The point is whether they stand in-between to create the basis for a human-nature dualism or, alternatively, serve only to mediate our relationship with nature in a particular form.

The same question is, however, important when radical ecologists talk about the problem of human self-realization.

Radical ecologists argue that human beings realize their true self when they are in a relationship of immediacy and unmediated proximity with a nature untouched by the human hand. However, this immediate identification with nature is, particularly for deep ecology, supposed to be a purely spiritual or contemplative matter amounting to a suspension of our human capacities, powers and industry. Hence, the nature, through identification with which we are supposed to attain self-realization, is nature which stands in dualistic contrast with human beings. Thus, ecology's understanding of human self-realization betrays not only its abstract conception of nature but also an equally abstract notion of humans as merely contemplative beings.

It will be seen that it is precisely the green attempt to achieve human self-realization through contemplative recourse to an abstract nature, completely purged of human transformative action or labour, which informs their rejection of 'industrialism'. Industrial structures and the transformed nature they have brought about are, therefore, considered unnatural, violative of 'nature'. Hence humans cannot attain their true self by relating themselves to this transformed nature around them.

Humans can realize their true 'nature' or true essence only by identification with 'nature'. Thus, on the one hand, 'nature' is defined without regard to the transformation or production which it undergoes through human labour and, on the other hand, human nature or the human essence is defined without regard to the specifically human capacity for labour. I will argue that, on the contrary, human labour is not only defining or constitutive of humans but that it is only by relating ourselves with the nature transformed or produced by it, and not some abstract 'nature', that we can possibly attain self-realization.

The theoretical presuppositions that underlie ecological thought have definite and determining influence on ecological politics. The plan and programme of action of ecological politics needs to be grounded much more solidly in the concrete reality of our production of nature. This is particularly important in countering,
attacks by reform environmentalists who try to undermine the ecology movement by portraying it as anti-progress, anti-industry, trying to take society back to an idyllic past. The movement does indeed suffer from such regressive tendencies. However, there are progressive, emancipatory features to it as well which we should explore and integrate into any ecological politics. Reform environmentalism is too hidebound and status-quoist to ever recognize this fact.

Thus, on the one hand, the society-nature dualism makes for a politics which calls for the dismantling of the industrial apparatus and the subsumption of our specifically human capacities and powers into the supposed rhythm and harmony of nature. On the other hand, the abstract notion of ‘nature’ might lead one to justify the marketing of green consumerism or even green capitalism which invokes the image of a pristine, untouched nature. Similarly, there is a problem in the invocation of such green values as the search for immediacy in our relationship with ‘nature’, love for our ‘mother’ earth in which our ego should be submerged in order to attain self-realization. This is so because such green values “are inevitably implicated in the construction of particular kinds of ‘moral community’ that can just as easily be nationalist, exclusionary and in some instances violently fascistic as they can be democratic, decentralized and anarchist”.46

There is, therefore, the need to base ecological politics in a view of nature which does not consider human society and its science and industry as an intrusion, a destructive blur on ‘nature’. Modern science and industry are not, in themselves, the actual cause of ecological destruction. At most, they only define the parameters, conditions or scale of destruction. But, they can at the same time be powerful means to sustainably mould nature to suit human needs. That such a moulding of nature would not be destructive can only be ensured by a democratic society based on a rational and democratic organization of production and distribution. And therein we come to questions of democracy, decentralization and planning in society.

The need to democratize all decision making and decentralize production into local arenas has always been one of the core green values. Participative democracy

and decentralization are generally associated with a form of organization which is supposed to create a sustainable and fulfilling relationship to nature. They, however, do not guarantee a necessarily ecological attitude towards nature, particularly if one is not to abandon the industrial apparatus we have at hand. There are several examples of local, decentralized and pre-industrial societies causing ecological destruction even though its scale is nowhere near the ones produced by industrial society.

While democracy and decentralization are, therefore, indispensable for any ecological society, it seems that they have to be balanced with some form of overall rational organization of production and allocation of resources. It seems that an ecological society can be most efficiently organized according to an overall plan which is arrived at through democratic deliberation under conditions free from constraint and power. As James O’Connor has written, “most ecological problems which are both cause and effect of the ecological problems cannot be solved locally. Instead, regional, national, and international planning are necessary.”

To be sure, an ecological society holds before us the promise of a life full of richness, diversity and variety in place of capitalism’s conveyor belt production of bland and commoditized homogeneity along with the destruction of both biodiversity and human creativity. Socialist planning also carries the danger of replicating, in its own way, capitalism’s onslaught on diversity and variety and getting into the rut of mass-produced homogeneous products. It would be equally unecological if a ‘socialist’ production of nature were to set up the same ecosystemic project across otherwise diverse regions without regard to the particularity and uniqueness of their geography and the specific manner in which the people relate to it.

A socialist project of ecological transformation must, therefore, “respect diversity as much of culture and of places as of eco-systems. The richness of human capacity for complexity and diversity in a context of the free exploration of the richness, complexity and diversity encountered in the rest of nature can become a

vital part of any ecosocialist project”. The point then is to rationally organize our intercourse with nature in such a way that both respect for local diversity and an overall ecological plan mutually feed on each other. This has definite implications for the character of political institutions and power structures in any ecological society and hence also the character of ecological politics. On the question of rational and ecological organization of society according to an overall plan, socialism and ecology have a lot to learn from one another.

We, therefore, see that some of the key issues highlighted by radical ecological thought, like decentralization, participative democracy, ecosystemic diversity and localized proximity cannot be accepted uncritically in any ecosocialist project. Of course, they constitute a thorough critique of the present anti-ecological basis of capitalist society and they provide important insights to any socialist politics.

1.5 materialist or monist naturalist approach

Roughly speaking, our monist naturalist position on the question of ecology would be guided by the following comment by Marx: "what Lucretius says is self-evident: 'nil posse creari de nihilo', out of nothing, nothing can be created. Creation of value is transformation of labour-power into labour. Labour-power itself is energy transferred to a human organism by means of nourishing matter”.

The point then is that human transformative activity on nature cannot be grasped without taking account of the basis of labour in nature itself, its power derived from the transference of energy from nature. However, the attempts to take rationality, the rational individual as the starting point of history leads to precisely to such a downplaying of nature. By taking rationality as the starting point of social history, as the starting point of society itself, the natural basis of human power and the fact of our absolute dependence on nature is overlooked.

49 Marx, "Capital", Vol.1, p. 207. Compare the following: "the aim is to reduce to a minimum the realm of nature that escapes freedom, and the essay on 'Traditional and Critical Theory' ventures the prognosis that even objects of sense perception, when they come under social 'control', will lose their 'character of pure factuality'. It is labour that is supposed to extend the compass of our power over nature in this way” (Michael Theunissen in Peter Dews, ed., "Habermas: A Critical Reader", Oxford, 1999, p. 249).
The problem arises however also when it is not rationality but social labour which is taken to be the starting point of history, something done by Critical Theorists.\(^5\) My objective here is to argue that the attempt to liquidate nature into social labour leads to the liquidation of the subject. This is because a system of production lacking consciousness of our dependence on nature, of internal nature in us and instead based on abstract labour, leads to the division of resources and property in the most iniquitous manner due to, for example, the concentration and centralization of capital. Even for realizing our own potential, therefore, it is necessary for us to be able to appreciate our ontological dependence on nature.

Taking social labour as the basis of everything, as the absolute *prior*, leads to an overburdening of the subject. This will be particularly problematic if the specific human subject is characterized by a very objectivating attitude towards nature, for example, instrumental reason. More often, as in the case of Critical Theory, such an attempt "threatens to collapse back into what it originally sought to overcome, into an ontology of nature which is now indeed unquestionably objectivistic.\(^5\) At the very least, it threatens to collapse back into a kind of thinking that prioritizes nature over history, and which inflates the former into an absolute origin. Furthermore, *it is easy to show that this apotheosis of nature lies at the end of an avenue of thought which begins with a certain overburdening of the empirical subject* -- or, more precisely, of the human species as the totality of empirical subjects. This overburdening of the subject inverts dialectically into the inflation of a facticity that is no longer grounded subjectively.\(^5\) Habermas himself makes essentially the same point in a different manner: "The interpretive knowledge of essences, which discerns patterns of meaning, bounces off an objectified nature; and the hermeneutic substitute for it is only available for that sphere of non-being in which, according to metaphysics, the ideal essentialities cannot even gain a foothold."\(^5\)

\(^5\) Such critical theorists try to justify such a position by referring to Marx's first Thesis on Feuerbach. Such an understanding of Marx is however wrong as we shall see below. See for example, John L. Stanley "Marx's Critique of Hegel's Philosophy of Nature", *Science and Society*, Vol. 61, No. 4, Winter 1997-98.

\(^5\) Objectivistic meaning, an ontology of nature where no human meaning can be located, which, since accessible only to a thoroughly discredited metaphysics, is no longer accessible in any meaningful manner to humans.


\(^5\) Quoted in Peter Dews, "The Limits of Disenchantment", p. 8.
the subject therefore only leads to the under valuation of nature. An understanding of human subjectivity which can take account of nature in us can then account for both the working of human productive activity as well as its impact on nature. This would mean that we will able to base our knowledge and truth claims not on any abstract original nature or on some abstract notion of subjectivity but on the historical and evolving society-nature relation.

This means that we cannot take human rationality as the starting point of history. The nature, both outer nature and inner deep nature (our character as a natural being), which lies at the basis of our human nature must therefore be taken as the starting point of history. This involves the notion of pre-human nature. My argument is that Marx had this notion of pre-human nature, that is nature as the basis of human transformative potential, nature as the basis of human labour. That is why Marx understood human labour as a force of nature acting on nature and as we noted above, "labour-power itself is energy transferred to a human organism by means of nourishing matter".

Out here I find it important to defend Marxism as not just a social theory but a philosophy, a world outlook, as well. Marxism's supposed starting-point of analysis is taken to be social labour, that practical-critical activity is the starting-point of human history. Marx is supposed to have no conception of pre-human nature. Such an understanding of Marxism makes it particularly vulnerable to the charge of being anti-ecological. For example, Kolakowski, a well known commentator on Marx, writes, "a typical feature of Marx's Prometheanism is his lack of interest in the natural (as opposed to economic) conditions of human existence, the absence of corporal human existence in his vision of the world. Man is wholly defined in purely social terms; the physical limits of his being are scarcely noticed." In contrast, my

54 On this see John L. Stanley "Marx's Critique of Hegel's Philosophy of Nature" referred to above. Also see my M.Phil Dissertation, "The Classical Marxist Conception of Man's Relation to Nature", Centre for Political Studies, Jawaharlal Nehru University, New Delhi, 1998.
position is that Marxism is a philosophy and not just a social theory and that it takes nature as the starting-point of history, as ontologically prior to all human existence.\textsuperscript{57} Such a position is, as we shall see, crucial in retrieving the ecological core of Marxism.\textsuperscript{58} The materialist position we are here expounding can be taken as essentially following from Marxism itself.

We are now going to present what can be called the monist naturalist position regarding the relationship between humans and nature. Our attempt to present a naturalist position involves \textit{inter alia} showing the similarities we have with other beings of nature, like animals. But our task is to be able to reconcile our capacity for human autonomous work with the similarities we share with larger nature. This is possible since we view nature as itself possessing negativity. Human autonomous power itself becomes a particular, higher manifestation of this negativity in nature. It is in fact such a conception of nature which Marx seems to have in mind when he defines labour as a particular mode of metabolism in nature, in this case between humans and nature.

Along with human autonomous power and negativity in nature we need to address the question of the character of this power. Do we take it as a given datum and concentrate only on the consequences arising out of its use as modern science and industry with no regard to its basis or essential character? But, as the consequences of our actions are unfolding today on a scale greater than ever before, we want to know what is it that underlies our actions, for example, if there is a natural basis to our actions. Of particular interest here for us is the natural basis of our capacity for nature-transformative autonomous action. For the limit on our
actions is not solely the limit on the consequences of our action in which case our actions are taken to be fine so long as they do not damage the environment more than what is regarded as acceptable. In any case, judging our actions only with reference to its impact leaves our actions themselves without any substantive content. In other words, are external natural limits the only criterion for judging the impact or desirability of our actions?

As we saw above, culturalist analysis, in its dualist approach, fails to take account of external nature which, in being irreducible to culture, is taken to be the sole limit to our actions as though nature exists only outside of us. Moreover, even this limit was supposed to be itself culturally constructed. This was the direct consequence of the denial of any reality outside of discourse. Culturalists have to really come out of their world of discourse to be able to take account of the destruction of nature. (Or else it needs to be explained why it is at a particular point in time, say in the 1960s and 70s, that the issue of ecological destruction has come to the fore and not earlier or some other time.)

But even going by the realist answer based on the notion of external natural limits we find that it leaves human autonomous powers without any real basis in the world as though it were working on the world purely as an external force. A human-nature dichotomy is presupposed here though even such a position might lead us to fight for or defend the fact that a life-sustaining nature is indispensable for our own sustenance. Trying to build an ecological argument solely on the fact that it is impossible for us to survive without a life-sustaining nature maintains the human-nature dichotomy at least in as much as the argument it gives for protecting nature is itself instrumentalist or pragmatist -- save nature because we have to save ourselves. While this line of argument has its own strength, it cannot tell us what it is besides the fact that we live off nature that, in the first place, makes us indispensably dependent on nature. It is such an understanding of human-nature relations that leads reform environmentalists to adopt an attitude based on sustainable exploitation of resources.59

The alternative suggested here is that by taking account of our ontological dependence on nature and our autonomy from it we can shed the instrumentalist argument for protecting nature, without at the same time relapsing into a back-to-nature position. We start by arguing that humans are natural beings as well and so there is nature inside us. So if external nature imposes limits on our actions does internal nature also impose such limits? As we call ourselves humans certain things we do may not qualify as a 'human' act. That is, we sometimes judge our actions with a criterion based on limits we have chosen by ourselves, given our mental and physical constitution. These internal criteria are however fluid but not in the sense of being given entirely by discourse. Instead they have a basis in the way we are internally constituted, at one level, as natural beings.

Thus, there is nature in us which is qualitatively different from external nature and yet has its basis in the latter. The point is to realize that human autonomous powers are not given from without as culturalists or even Marxists who subscribe to the "idealism of praxis" tend to believe. Rather they are the result of the development of capacities given to us as natural beings. How can we understand our powers of science and industry, given our character as a natural being? Since we possess the quality of self-consciousness can we not realize that as a natural being we need to protect nature but as a human being we need to uphold our own human nature and, of course, protect whatever we think are its achievements. Internal limits to our nature not only, therefore, allow us to decide the limit to our actions on nature but also the limits to our inactivity or wrongful activity.

We start with definitions of nature and environment. According to Kate Soper, "nature refers to limits imposed by the structure of the world and by human biology upon what is possible for human beings to be and do, at least if they are to survive and flourish". According to Lewontin, the environment is "nature organized by an organism". That is, given the "limits" imposed by the structure of the world and by our own internal constitution, we have organized or transformed this world in ways

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61 Kate Soper, "What is Nature?", p. 34.
determined by our capacities and choices but constrained by that structure. Not only have we then transformed external nature but also our own internal nature. In the course of transforming the external world we have transformed our selves. So human autonomous action builds a world, an environment, by working on, transforming and organizing nature originally given to us. In this process, however, internal human nature also develops, a consequence of the development of our character as a natural being, of the development of our capacities that exist in us as inclinations and tendencies.

Thus nature, both external and within us, organized and transformed in the course of the dialectic of our activity and its own negativity, so that it later develops into a built environment, on the one hand, and our own autonomous powers, on the other, is called environment. Nature is not only outside us but external nature extends into us as well for after all we are natural beings. Both internal and external natures are basic as in they (or rather, it, since nature is not fragmented into external and internal) form the basis and indispensable condition for the habitat we have built and our own human nature which has developed in the process. This nature as we encounter externally and in us, and which provides the basis for our habitat and the development of human nature is what we here call deep nature. Our habitat, that is external built environment, and internal human nature are part of what is called surface nature.

Deep nature is nature at a level we cannot modify or transform as it comprises given structures and causal connections that are given to humans as invariables and constants. We cannot go further than trying to know or discover deep nature's laws and processes and make use of them for our own purposes, to build a house or tap some water source. Deep nature is there in us also as manifest in the fact that we need the world around us to survive, for the satisfaction of our vital needs. But the

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63 It perhaps sounds quite preposterous to include human autonomous powers in the environment. But upon consideration we can see that what we call the environment in ordinary parlance definitely has the connotation of the changes brought about by human autonomous powers. What we are doing now is explicitly including these powers in the term environment.

64 Referring to deep nature, Kate Soper writes, that "nature is invoked in the realist sense not to discriminate between human and non-human being, but as the concept which is common to all animate and inanimate entities, and whose particular laws and processes are the pre-condition and constraint upon all technological activity, however ambitious..." (Kate Soper, "What is Nature", p. 157).
nature that is immediately available to us is surface nature, the panorama of the mix of human and natural life, corresponding roughly to the built environment. The human hand in surface nature derives from our autonomous powers through which we make use of the laws of deep nature for our purposes. Human powers and capacities as manifest in modern science and industry, therefore, bring about changes at the level of surface nature.

I here distinguish two notions of deep nature: one, as the planet earth, which provides the material for our transformative activities on earth; and second, nature as the causal processes and laws that underlie all change and natural processes, that is nature as "essentially a theoretical-explanatory concept". My position is that deep nature in the second sense is above human intervention at all levels. However, the former notion of deep nature, that is deep nature as the material of the earth, which as Harvey points out, is "materially impossible for us to destroy", is I argue amenable to human intervention. This is because deep nature understood as "essentially a theoretical-explanatory concept" cannot exist in itself and definitely operates with matter of the earth. Life on earth is however dependent on not just matter or dead matter but on life-producing matter. Humans can destroy life on earth and they can therefore also destroy not matter as such but matter which produces life, not for all time but at least for the present cycle of evolution whose products we all are.

The distinction between deep nature and surface nature is however for all practical purposes only a conceptual distinction, even though such a distinction does exist. It is, however, very difficult in practice to make this distinction. For one, the nature-culture divide is constantly shifting, determined as it is by both the level and scale of human intervention in 'nature' and the cultural constructs about the human-nature divide. However, what we have tried to do here is to do away with the human-nature dichotomy once and for all. By arguing that there is nature in us just as there are human autonomous powers outside of us, a differentiated continuum is created between humans and nature. The usual association of humans as something apart from and hence the dichotomous other of nature derived from an

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65 Kate Soper, "What is Nature?", p. 159.
understanding of human powers as though they were given from without, without any basis in external nature, not to talk about nature within us.

We thus have deep nature and surface nature. As we see from the diagram, the monist naturalism we here propose locates a deep nature in nature that extends from external nature to humans. This shows that there exists similarities between humans and the rest of nature. At the same time, through the concept of surface nature we are able to show where we need to identify the differences between humans and the rest of nature. For surface nature embodies the interspersing of the human and the natural. Through the concept of deep nature we know we are natural beings and are embedded in external deep nature and even our science and industry with which we try to transform surface nature are invariably bound by the necessity of deep nature. Surface nature however undergoes enormous transformation under the impact of human activity so much so that nothing of the pristine, untouched nature might remain. But this surface nature also includes our own human nature which is itself a product of this transformation of external nature. Surface nature corresponds to Lewontin's definition of environment above, which is nature organized by an organism. Surface nature is inconceivable without human beings but it is itself the consequence of the intercourse of negativity in nature and human activity which is itself a particular manifestation of this negativity in nature.

Our picture of the human-nature relationship attempts to show the ontological dependence of humans on nature, the fact that we are dependent on nature in the very way we are internally constituted as natural beings. Yet we possess powers to transform the world according to our imagination giving rise to second or surface nature. The transformation of the world -- even its destruction -- takes place according to the necessary laws and processes that form deep nature.

Such a conception of human-nature relation serves to make certain points that are of importance in ecological debates. First, it becomes clear that the nature that we are trying to protect is not deep nature but surface nature. It is this nature which is getting polluted, where deforestation is taking place and whose life-sustaining

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67 Ted Benton, for example, argues that humans and animals need the external world for the confirmation and development of their powers and capacities, a point of made by Marx long ago. See Hayward's discussion of Benton in Hayward, "Ecological Thought".
capacity is getting destroyed. Second, natural limits understood "as the order of
determinations" (see above) are only limiting conditions, not determining ones. That
is, given the limits offered by deep nature we can transform surface nature in either
of several ways -- human autonomy has a major role to play here.68

We should here distinguish between two kinds of natural limits. One, is the
limit imposed by deep nature which are basically limits in the sense of given
conditions and laws of nature that have to be kept in mind in order to achieve any
desired consequences. Secondly, there are limits to the character and scale of our
intervention in external surface nature, keeping in mind the life-sustaining capacities
of nature. It is usually the violation of the latter kind of limits which accounts for the
present-day ecological destruction. Kate Soper's definition of nature as the
inviolable limits referred to above does not clarify what she means by limits. But
since she is talking in the context of ecological destruction one presumes she is
referring to the latter kind of limits. Third, human autonomy not only takes account
of natural limits in the sense of necessity inherent in nature but also the limits that it
imposes on itself for its own sustenance. It transposes the limits that it sets for itself
as an absolute limit set up by nature. In fact deep nature knows no limits and it is
indifferent to human actions to the extent that it is inviolable -- its limits are
inviolable. The human urge to protect conditions of life on earth makes us impose
limits to our actions on nature. Thus our understanding of human autonomy allows
us to take account of limits to our own internal nature.

In taking account of internal natural limits on human nature we take a very
optimistic turn. We no longer judge human actions on nature purely by their
consequences on nature but also by the essential character of our actions as
emanating from an ontological dependence on external deep nature.69 The human-
nature dichotomy which conceives of humans as living off nature for which nature

68 Natural limits in the sense of limits to the life-sustaining capacity of nature are however undeniable.
69 Our actions drive from the way we are positioned in or vis-à-vis nature. Arnold Gehlen's insight might be useful here. He writes that "the human being's determination for action is the pervasive structural law of all human functions and achievements, and that this determination results unequivocally from the human being's physical organization: a life form that is physically so constituted is viable only as an acting life form: and the structural law of all human effectuations, form the somatic to the mental, is thereby given" (in Axel Honneth and Hans Joas, "Social Action and Human Nature", Cambridge, 1988, p. 51).
needs to be protected loses its weight and a more grounded conception takes its place or supplements it. Only a materialist philosophy allows us to conceive of this relationship in such a manner that human powers no longer appear as irreconcilable with 'nature'. This approach tells us that nature needs protection not only because it provides us with the wherewithal of survival and flourishing but also because there is nature in our very internal constitution. Further, we are internally not just nature but also human nature so that we need to respect its limits, that is, the extent to which we can deny our humanness by trying to go back to nature. This human nature is what we will call human autonomous powers.

Humans, therefore, possess not only deep nature which would by itself make them creatures fit to be happily subsumed in nature, but also autonomous powers which simultaneously make them irreducibly human and hence not subsumable in nature. It is through the exercise of human autonomy that we have to decide how much human and how much natural we are, and accordingly the line which demarcates the two. Herein of course discourse plays a major role. But discourse itself is structured in society. For though we can, given the limits imposed by deep nature, make use of our autonomy from nature to transform nature to suit our needs, we are not entirely autonomous to do so in always the most rational fashion.

The specific manner and direction in which our autonomy is exercised depends on the relations among humans because humans have to collectively decide the way we relate to nature. An ecological society is one whose relationship with nature is informed by the fact of our ontological dependence on nature, that we derive our vital energies from our character as natural beings, that we have an internal limit to not only what we can do to external nature but also to our own human nature and that our society can be potentially ecological if such an understanding of our relationship with nature, which is already immanent, is made the guiding principle around which our relationship with nature is organized. Thus here we need to free human autonomy from the reified structures that dominate and obscure it from taking account of the fact of our ontological rootedness in nature.

In the next chapter we will see how such a monist naturalist ontology helps in understanding the character of human labour which will help us to understand the
character of surface nature, the built environment that we see around us. In particular we will see that human autonomy as manifest in our science and industry is not irreconcilable with an ecological society provided our already immanent ontological relationship with nature becomes the rationality of that society. Only then is a society possible where human autonomy and natural limits can be reconciled.

Only a society conscious of the power of nature, not only in terms of our non-existence or collapse without it, a concern turned inwards only towards us which seeks to preserve it only for our own sustenance, as though our human powers emerged without having to engage without our active intercourse with - but as a positive force, can lead to an ecological society. For a concern for nature only because we need it for our own survival, or even one which says that we are incomplete and alienated without it(?) fails to take account of the fact that nature is a repository of an active, dynamic force, in constant friction with which, we have developed our powers and capacities. It is in fact only by taking account of the dynamism in nature that we can desist from trying to impose an artificial order on nature and in the process dominate it with the arrogant thought that without this human ordering nature is all random and meaningless. Thus we guard ourselves from what Zygmant Bauman calls the modern urge to dominate through imposing of order.\(^{70}\)

The other thing is that viewing nature as an active force allows us to arrive at two very crucial propositions. First, human power no longer appears as a problem that, or at least its use and abuse, needs to be justified. For, in taking note of our transformative activity, we no longer run into a given, static nature. Rather we then have two forces in active dialectical intercourse with each other, in the course of which humans come to develop their powers even as they discover nature's potentiality and eventually work towards the emancipation of nature. We are also thereby saved of the need to take an abstract, idealist position which ends up

\(^{70}\) Bauman writes that "consciousness is modern in as far as it reveals ever newer layers of chaos underneath the lid of power-assisted order" (Zygmunt Bauman, "Modernity and Ambivalence", Cambridge, 1993, p. 9).
attributing all our qualities to culture and such other human, purely extra-natural constructs.

Secondly, by treating nature as a force in constant intercourse with whom we develop our powers and capacities, we consider nature as something which contradicts us, offers resistance and more importantly is itself a dynamic force awaiting liberation. Nature is not to be protected only because without it we are going to perish but also because at a deeper level we should discover its life-enhancing potentialities and try to find a point of convergence between human subjectivity and, why not, rationality, to reach not a stagnant harmony with nature whereby humans are expected to submerge and get subsumed in nature but an active harmony marked by unity and struggle. This would mean that we do not strive for harmony between two given and largely ossified and abstractly defined entities but one where a creative struggle between the forces of human nature and the forces of external nature leads to a progressive discovery of newer and higher qualities in both humans and nature. 71

That is, humans transform and possibly produce their own nature, but they cannot do this without the exercise of their human faculties. 72 While the mere exercise of human autonomous powers does not yield us a creative production of nature, its exercise and moreover its radicalization, including what Marcuse calls revolutionization of our sensibilities, is a prerequisite to any active, mutually enriching transformation of nature. 73 The preservation of nature has to be a process, an active engagement and perpetually novel intercourse with nature. Nature as a life-generating force cannot be bound up with any preservative or barbed wire, like the official environmentalists (they of course do this to humans also) do nor can, for that matter, humans be bound up by the forces of nature, stultifying all human potential into the unappreciated and unknown laws of nature. Herein therefore we suggest a

71 We of course are not trying to argue that both humans and nature are equally active. Nature of course does not possess subjectivity even though it has its own negativity.
72 The notion of the production of nature will be dealt in detail below, particularly Chapter 3. But we have referred to it above in the Introduction.
73 For Herbert Marcuse, "the liberation of nature is the recovery of the life-enhancing forces in nature, the sensuous aesthetic qualities which are foreign to a life wasted in unending competitive performances: they suggest the qualities of freedom" (Herbert Marcuse, "Counterrevolution and Revolt", Boston, 1972, pp. 60 - 61).
way out of the positions of both the reform environmentalists as well as the radical ecologists.

1.6 Conclusion

We therefore avoid falling into the radical-ecological trap of upholding a naturalism which ends up denying human specificity, calling for a return to some primitive oneness with nature. At the same time we find the reform environmentalist understanding of human powers as though they have no basis in deep nature, in our character as a natural being, equally untenable. It is then crucially important to argue for human specificity vis-à-vis nature without at the same time losing sight of our basic character as a natural being. This is what we tried to do in this chapter, particularly the last section on the materialist approach.

We saw how a materialist perspective can help us tide over the impeccably blind spots of both radical ecology and reform environmentalism without at the same time getting into the culturalist fold which not only overlooks the ontological primacy of nature but denies nature as such. Based on this materialist ontology, we try to elaborate, in the following chapters, an examination of the sources of ecological problems making use of Marx's analysis of capitalist production. We then find that the point is to go beyond the capitalist production of nature in order to ensure what we have called an ecological production of nature.

This chapter has shown that in spite of our capacity for human labour, which provides the basis for our science and industry, we are no less rooted in deep nature. This is because we, or better, our capacities, are the capacities of a natural being. Human labour, as Marx pointed out, is a force of nature acting on nature. This is the ontological unity we have with nature and it is this point that we have tried to develop in this chapter.

But this is a unity which is given to us as we are natural beings. This is in the character of an objective fact. But since we all live and act in societies that are basically, by their very nature, not nature-given entities, this ontological unity is usually overlooked. Societies are organized and function according to their own inner logic derived from the manner in which production is organized as well as a
host of other natural and cultural factors. This, in turn, is so since humans are transformative beings, whose capacities and powers develop along with their needs and the scale of changes they bring in their own surroundings. Hence the question of our relationship with nature cannot be restricted to that of the ontological unity with nature which we have been talking about.

As mentioned above, we must also refer to social unity (or the lack of it): how are we related to a world of our own making, for in making the world by our hands and according to our ideas we also transform ourselves in the process. The question which needs to be then asked is whether our relationship with nature at the level of society as a whole creates a rift between our ontological unity with nature and our belongingness to our societal collective. Or rather, is there such a logic in society which takes us into its fold in such a way that our unity with nature is shattered, so that the fact of our absolute dependence on nature is no longer taken as an important factor worthy of consideration in the organization and functioning of society. The next chapter will delve into some of these questions.

In the next chapter and later we will go into the material conditions that give rise to this dichotomy. Relying on Marx’s insights, we try to discuss the material basis of this dichotomy. It will be seen that we can draw a connection between the generation and perpetuation of this dichotomy and the logic of the self-expansion of value, which is the logic of capital. Viewed in this manner, we find that both reform environmentalist and radical ecological responses to the ecological problem reinforce in different ways the human-nature dichotomy so fatal for society’s ecological metabolism with nature. In particular, reformist environmentalism is largely conditioned by and reflects the specific features of the logic of capital, the process of the self-expansion of value. Radical ecology in turn rejects the logic of capital not by getting the better of it but by harping onto a world which the march of capital has irretrievably buried in our past.

Positively, a materialist position expounded above showed that humans are part of the larger totality of nature and this need not lead to the conclusion that we need to abandon modern science and industry as such for an ecological society to come about. From the aspect of our ontological unity with nature we must now, in the next
chapter, go onto the question of our distinctiveness from nature: the question of human-nature distinction. It is only after addressing this question can we then fruitfully discuss the question of social unity and its relation to the ontological unity with nature. For as we will see later, ecological politics cannot avoid addressing this tension related to harmonizing social control over human metabolism with nature with our ontological unity with nature.