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A contribution to the history and the foundations of ecological economics

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Abstract

In this paper the view of humankind and nature upon which the thinking of Malthus is founded will be reflected on and contrasted with the opposed understanding of his contemporary Wordsworth. We show that the economic considerations of both are based decidedly on the premise of these views, and that their alternative interpretations of the contemporary economy and the relationship between economy and nature may thus be explained. From the comparison of Malthus and Wordsworth we draw conclusions for modern ecological economics, identifying its Malthusian understanding of nature and reflecting on the capacities and limits implied for further research. We ascribe a central role in the conceptual history of ecological economics to Wordsworth and present his philosophical presumptions as a fruitful alternative for ecological economics. Finally, attention will be drawn to the principle importance of the philosophical foundations underpinning this field of research.

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Malthus, Wordsworth, history of economic thought, history of ecological economics, foundations of ecological economics

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1. Introduction

Two thinkers are to be compared in this essay: Thomas Robert Malthus (1766-1834) and William Wordsworth (1770-1850). The comparison leads to new perspectives on the history and foundations of ecological-economic thought. This pertains to three issues in particular: (i) The interrelationship between ecological economics and classical economic theory. (ii) The understanding of nature and humankind upon which research in ecological economics is founded. (iii) The scientific self-image of this field of research. In addressing these points, we adhere to standard definitions and regard ecological economics as a subject which is concerned with the relationship between economy and nature, the causes of modern environmental problems, and enquires after a sustained compatibility of economy and nature (Costanza 1989, 1991; Proops 1989: 60; Faber et al. 1996: 1ff; Edwards-Jones et al. 2000: 3).

The reference to Malthus in ecological economics is not new. This discipline has regularly been seen as standing in the tradition of classical economics (Christensen 1989; Costanza et al. 1997: 19ff; Spash 1999) and in this regard, has also been referred to Malthus (Christensen 1989: 20; Daly 1996: 3f; Costanza et al. 1997: 25f). However, the connection to Malthus has not yet been thoroughly explored. Here, this paper makes a contribution by reflecting on the relationship between ecological economics and Malthusian thought.

Malthus published his most important work *An Essay on the Principle of Population* in 1798. At the centre of this is his thesis that population growth is necessarily restricted by the limitations of the natural environment. Several contributions to ecological economics refer to this premise (see e.g. Daly 1996: 119ff). It should be noted, though, that Malthus' economic thought is framed in a very specific philosophical and theological context, and is thus marked by a specific view of nature and humankind (see part 2). An appreciation of this context and its meaning for Malthus, is necessary for a proper understanding of his economic considerations. In this way, however, the relationship between ecological economics and Malthusian thought is illuminated and also gains in significance.

In order to highlight this and furthermore, to present another horizon for the conceptual foundations of ecological economics, Malthus' views will be compared in this paper with those of his contemporary William Wordsworth.¹ In the same year as Malthus' *Essay*

¹ Our comparison of Malthus and Wordsworth is set against the background of today's ecological economics. Thus, it is not our aim to illuminate all aspects of the relationship between Wordsworth and classical political economy within this paper. On this issue see e.g. Connell (2001).

appeared, Wordsworth published the *Lyrical Ballads* together with Samuel Taylor Coleridge (1772-1834). This is generally considered the beginning of English Romanticism and Wordsworth is viewed as a distinguished poet of this movement.

Like Malthus, Wordsworth experienced the beginning of the modern economy (the industrial revolution) and modern economic thought (the classical political economy). As a result, he was witness to the same economic reality as Malthus; – he provides, however, a very different interpretation. This is a direct consequence of the fact that Wordsworth's considerations on economics are imbedded in an entirely different philosophical context.²

Wordsworth's conception of nature and humankind enable him to offer an alternative account of nature in his considerations on economics, than is possible for Malthus and the classical thinkers in general. He is thus able to gain different insights into the relationship between nature and economy: he recognises a fundamental conflict between humankind and nature inherent in the ideological foundations of the modern economy. As a result of theoretical and philosophical reflections, he considers nature to be fundamentally endangered. Already at the end of the 18th Century, his thinking uncovers possible roots of the modern environmental crisis.³ These are, in his view, already integral parts of the fabric of the modern economy. In this respect, Wordsworth can be regarded an early ecologic critic of the modern economy.

This paper's contribution to ecological economics extends to the following questions: (i) How may a connection between ecological economics and the thought of Malthus be considered? (ii) What is the significance of Wordsworth's perspective for ecological economics? Is his analysis of the relationship between economy and nature, and his account of nature, a more suitable point of reference for ecological economics than the thinking of Malthus? (iii) How is

² With 'philosophical context' we denote Wordsworth's considerations on nature, humankind and God, which he himself characterised as philosophical. His greatest literary project, "The Recluse", – of which he had finished only the parts *The Prelude* and *The Excursion* –, he characterised as „[...] a philosophical poem, containing views of Man, Nature and Society.“ (Wordsworth, *Excursion*, Preface 1814). Wordsworth's sources in the philosophical tradition are, however, difficult to identify. Most of his knowledge seems to come from his interaction with Coleridge and it is thus not easy to denote specific references (Fischer 1974: 23). Nevertheless, several influences from Platonic thought (see e.g. Curtis 1993: 61f), mysticism, English empirism and German idealism can be identified in Wordsworth's writings (see e.g. Stallknecht 2000).

³ We wish to point out that about 1800 there are several critical reflections on the modern economy and modern economic thought within literature. Several poets reflected on these economic developments and were especially concerned with the possible negative consequences for nature. In this respect we should also mention the German romantic poet Novalis (1772-1801) (see Becker/Manstetten 2004), and the American transcendentalist Thoreau (1817-1862) (see Becker 2003). Some further important insights on possible causes of the modern environmental crisis can also be found in Goethe's *Faust* (see Binswanger et al. 1990). Concerning the general meaning of (Anglo-Saxon) Romanticism for environmental thought there is also ongoing research in (Anglo-Saxon) literary theory, labelled *ecocriticism*. For important contributions to this field of research, which also refer intensively to Wordsworth, see e.g. Bate (1991), Coupe (2000) or Mc Kusick (2000).

the philosophical context of the relationship between economy and nature conceived in ecological economics in general? What, for example, is the significance of nature within this discipline? Which implications follow with respect to its scientific status?

We begin our argument in part 2 with an outline of Malthus' view of nature and humankind as well as his theological ideas. Accordingly, in part 3, Wordsworth's general philosophical concept will be introduced. Against this background, the economic considerations of Wordsworth and Malthus – especially their considerations on the relationship between economy and nature – will be analysed and compared in parts 4 and 5. Finally, in part 6, conclusions for the history of thought and the philosophical foundations of ecological economics will be drawn.

2. Malthus: The Opposition of Humankind and Nature as a Result of a Divine Order

The starting point of Malthus' considerations in his *Essay on the Principle of Population* is “the general question of the future improvement of society” (Malthus [1798]1976: 15). Malthus' answer not only includes socio-political and economic aspects, but is also largely founded on philosophical and theological reflections.

At the heart of the *Essay* is the so called *Malthusian law*: For Malthus population expansion and the growth in the production of food follow mathematical paths which imply, by logical necessity, the occurrence of food shortages and the possibility of poverty and deprivation. This is because, according to Malthus, natural laws specify that population growth is always substantially quicker than the growth in agricultural output:

I say, that the power of population is indefinitely greater than the power in the earth to produce subsistence for man. Population, when unchecked, increases in a geometrical ratio. Subsistence increases only in an arithmetical ratio. (Malthus [1798]1976: 20)

This observation necessarily entails negative consequences for humankind and “the general question of the future improvement of society” (ibid: 15):

This implies a strong and constantly operating check on population from the difficulty of subsistence. This difficulty must fall some where and must necessarily be severely felt by a large portion of mankind. [...] The race of plants and the race of animals shrink under this great restrictive law. And the race of man cannot, by any efforts of reason, escape from it. Among plants and animals its effects are waste of seed, sickness, and premature death. Among mankind, misery and vice. (Malthus [1798]1976: 20)

In the last two chapters of his *Essay* Malthus places his considerations within a philosophical and theological context⁴ through which a certain understanding of nature, humankind and God are brought to expression. For Malthus, the world as it is, including the inescapable constraints with which human beings are confronted given the aforementioned physical order of nature, is an expression of god's will:

I should be inclined [...] to consider the world and this life as the mighty process of God, not for the trial, but for the creation and formation of mind, a process necessary to awaken inert, chaotic matter into spirit, to sublimate the dust of the earth into soul, to elicit an ethereal spark from the clod of clay. And in this view of the subject, the various impressions and excitements which man receives through life may be considered as the forming hand of his Creator, acting by general laws, and awakening his sluggish existence, by the animating touches of the Divinity, into a capacity of superior enjoyment. The original sin of man is the torpor and corruption of the chaotic matter in which he may be said to be born. (Malthus [1798]1976: 117f)

Malthus views the *creation and formation of mind* from matter, as a continuous divine process. Hereby, the mind represents the divinely preferred, higher principle which distinguishes itself from lower matter, and is localised in the human being. There is no spirit or mind within nature. Mind especially encompasses human reason, which is able to recognise the physical laws created by divine order, as well as the societal ordering following from this.⁵ Upon this, the enhancement of all intellectual abilities and virtues of humankind are founded.

However, it is not through self-motivation that the mind elevates itself. Its perfection requires external *excitements*. The human being experiences these through nature. His needs compel him to economise and the natural laws which govern the growth in population and food supplies, necessitate and inspire a constant determination to improve the mind. In this respect, the natural laws and conflicting growth rates of population and food production supposed by

⁴ These chapters are only included in the first edition from 1798. In later editions he leaves out most of his theological and philosophical considerations in order to avoid confrontations with the Anglican Church (see Pullen 1981: 44ff). This omission, however, may have led to some misunderstandings of Malthus' economic thought, which is originally based on these views and cannot fully be understood without recognising this framework (Pullen 1981: 39ff). For an encompassing analysis of Malthus' theological thought see Pullen (1981) or Waterman (1983).

⁵ According to Pullen (1981: 41) *mind* has a broad meaning for Malthus, denoting the "intellectual, moral, cultural, aesthetic, and spiritual" capacities of the human being. However, for Malthus, all these capacities are finally based on human reason and on its ability to recognise the laws of nature and thus the divine order of the world.

Malthus – as well as the resulting misery – serve the divine intention to perfect the human mind:

To furnish the most unremitted excitements [...] it has been ordained that population should increase much faster than food. This general law [...] undoubtedly produces much partial evil, but a little reflection may perhaps satisfy us that it produces a great overbalance of good. Strong excitements seem necessary to create exertion, and to direct this exertion, and form the reasoning faculty, it seems absolutely necessary that the Supreme Being should act always according to general laws. (Malthus [1798]1976: 120)

Mind and nature are considered opposites by Malthus. The human being emerges from *the torpor and corruption of the chaotic matter* (ibid. 117) and external pressure is required so that he may, in accordance with the divine intention, rise from the lower state of nature. Without this excitement “*man [remains] as he really is, inert, sluggish, and averse from labour unless compelled by necessity*” (ibid. 120).

Essentially, two aspects therefore characterise Malthus’ view of nature: nature is (i) a faulty and generally negative state of lethargy which needs to be overcome, and (ii) exudes a natural physical order which humankind is necessarily subjected to. This perspective is a variation of the modern age’s understanding of nature. According to Malthus, human mind and nature remain – as already for Francis Bacon (1561-1626) and Rene Descartes (1596-1650) – two disparate and opposed entities, whereby it is the human mind which represents the higher principle. According to Bacon, however, humankind can – and indeed should – rely on the capabilities of his mind to govern, control and use nature through reason with the assistance of science and technology (Bacon [1620]2000: 221, (II; 52)). This comprises the idea that science and technology are ultimately capable of entirely liberating humankind from dependency on nature and thus from all misery, such as hunger and illness (Schäfer 1999: 102ff; Faber/Manstetten 2003: 101).

In contrast, Malthus does not only view the laws of nature as the possibility to govern and control nature, but also as essential and unavoidable conditions of human life. Humankind is able to recognise and utilise the laws of nature; it is precisely this which stimulates human reason and is therefore a necessary incentive for its improvement. However, in Malthus’ view, nature can never be overcome. The restrictions compelled upon humankind by the Malthusian law must, by necessity, remain ever-present, in order to ensure a continuous extraction of mind from lethargic matter, and to encourage humankind in the development of its reason as well as in its virtuous conduct. In this respect there exists a certain constant confrontation

between nature and mind, nature remaining an ultimately unconquerable restriction on human activity.

3. William Wordsworth: The Initial Unity of Nature and Humankind in a Common Divine Origin

The disparity between Wordsworth's philosophical convictions and their implications for the assessment of the relationship between humankind and nature, and the position defended by Malthus, can be highlighted through their differing perspectives on the child. For Malthus, the original (natural) state of humankind is unsatisfactory and incomplete. Only through the advancement of reason does humankind achieve an elevation from nature and reach an appropriate state of human existence. In this sense, Malthus also considers a child as originally incomplete. The mind, i.e. the reason of a child is not yet developed; the child is attached to the lower state:

It would be a supposition attended with very little probability to believe that a complete and full formed spirit existed in every infant, but that it was clogged and impeded in its operations during the first twenty years of life by the weakness, or hebetude, of the organs in which it was enclosed. (Malthus [1798]1976: 118)

This negative valuation by Malthus is opposed by the esteem in which Wordsworth holds the child. For the latter, the child still exhibits an immediate proximity to the divine spirit, which prevails in all nature and from which the soul of the child arises. Thus, it has originally an immediate connection to the divine spirit which is only lost in the course of its development. This is exemplified in Wordsworth's *Ode: Intimations of Immortality From Recollections of Early Childhood*:⁶

Our birth is but a sleep and a forgetting:/ The Soul that rises with us, our life's Star/ Hath had elsewhere its setting,/ And cometh from afar:/ Not in entire forgetfulness,/ And not in utter nakedness,/ But trailing clouds of glory do we come/ from God, who is our home:/ Heaven lies about us in our infancy!/[...] The Youth [...] still is Nature's Priest,/ And by the vision splendid/ Is on his way attended;/ At length the Man perceives it die away,/ And fade into the light of common day. (Wordsworth [1807]1936, 58-78)

Wordsworth holds that a divine spiritual principle prevails equally in nature and the human being, a principle upon which both are founded and to which the soul of the child is still directly connected. This spiritual principle is not identical to reason, which can only be

⁶ For the meaning of childhood for Wordsworth see also books I and II of *The Prelude*.

attributed to the human mind and not to nature. According to Wordsworth, each individual removes themselves from the original divine source through the development of reason. Only in the memory of one's childhood and the interaction with nature can one re-approach this divine principle once more on a new level of reflection.

This "active" principle, which entwines humankind and nature, is demonstrated in the creative power of the human mind. By this is meant its ability of creative production: its capability of bringing forth inventions, art, new thoughts and ideas. This ability is also found in nature, which itself is a continuous expression of evolution and of constant creation:

To every Form of being is assigned [...] / An active Principle: -howe'er removed / From sense and observation, it subsists / In all things, in all natures; in the stars / Of azure heaven, the unenduring clouds, / In flower and tree, in every pebbly stone / That paves the brooks, the stationary rocks, / The moving waters, and the invisible air. / [...] from link to link / It circulates, the Soul of all the worlds. / [...] and yet is revered least, / And least respected in the human Mind, / Its most apparent home. (Wordsworth, Excursion, IX 1ff)

Man's creative productivity is therefore an expression of his initial unity with nature.⁷ Its perfected realisation, however, requires a close interrelation of humankind and nature:

I seemed [...] to have sight / Of a new world – a world, too, that was fit / To be transmitted and made visible / To other eyes, as having for its base / That whence our dignity originates, / That which both gives it being, and maintains / A balance, an ennobling interchange / Of action from within and from without: / The excellence, pure spirit, and best power / Both of the object seen, and eye that sees. (Wordsworth, Prelude 1805, XII 370ff)

Thus, Wordsworth emphasises an important aspect of the human being: its talent for creativity and its potential to create. In contrast to reason, which is considered a solely human capability, the creative ability is also ascribed to nature. Humankind's creative power and that, which is revealed in nature, coexist in an unrepealable relation to one another, because humankind's creative power requires orientation, i.e. it requires a point of reference. It is not a divine power, independent, absolute and capable of creating out of itself. It is a dependent and derived power, which needs orientation on – and interaction with – nature in order to revel in the initial (divine) power of creation. This orientation of humankind's creative capacity enables a perfection both of humankind and of nature. In this sense, nature is for Wordsworth an initial point of reference for the human mind. It provides orientation and also – in accordance with the pantheistic views of the young poet – always refers the mind to the divine

⁷ See also Stallknecht (2000) or Becker (2003: 128ff).

origin, the ‘one life’ and divine unity of all being. There exists, therefore, an inner mutuality between nature and humankind.

Malthus’ and Wordsworth’s basic views about humankind, nature and the interrelation between them, are clearly very distinct. From this distinction two different interpretations of the economy and its relation to nature follow. These will be discussed in parts 4 and 5.

4. Malthus and the Accordance of the Liberal Economy with the Natural Order of the World

For Malthus there exists an opposition between the human being and nature, founded in logical, ever-present and divinely ordained natural laws (see part 2). Economic activities and structures should take into account the laws which govern nature and humankind. For Malthus, the liberal economy of the time is a precise expression and direct consequence of the divine and natural order of the world.⁸ In this regard, the social and economic structures are no longer an expression of the times, but become timeless. Thus, economic laws are revealed in these structures, which follow by necessity from the divine order of the world. Malthus highlights this in a criticism of William Godwin’s vision of an ideal society in which equality and prosperity guarantee the equal well-being of all members (Godwin 1793)⁹. Malthus rebukes this vision, propagating that it is irreconcilably in confrontation with the laws of nature:

And thus it appears that a society constituted according to the most beautiful form that imagination can conceive, with benevolence for its moving principle instead of self-love, and with every evil disposition in all its members corrected by reason and not force, would, from the inevitable laws of nature, and not from any original depravity of man, in a very short period degenerate into a society constructed upon a plan not essentially different from that which prevails in every known State at present; I mean, a society divided into a class of proprietors, and a class of labourers, and with self-love the main-spring of the great machine. (Malthus [1798]1976: 75)

⁸ This individualistic-mechanistic view of the economy Malthus has in common with Adam Smith. Both, furthermore, share the view that within the economic sphere there exists a (natural) order similar to the existence of the laws of nature, and that this is an expression of the divine order of the world.

⁹ The discussion of the ideas of William Godwin (1756-1836) characterises chapters X-XV of Malthus’ *Essay*. The main work of reference is Godwin’s *Enquiry Concerning Political Justice* (1793). In this work Godwin develops a vision of an ideal and just society, which is based on human reason and in which all people are equal. Such a society, he argues, is actually prevented by the existing social structures of his time and especially by the institution of private property.

Thus, for Malthus, the natural order of society, which functions akin to a *great machine* with *self-love* acting as the central driving force of human activity, is a logical consequence of *the inevitable laws of nature*. The same applies to the existence of rich and poor and to a certain degree of deprivation, from which the latter cannot be spared (see Malthus [1798]1976: 74; 115; 121). In Malthus' view, neither the fundamental characteristics of the economic sphere of his time in general, nor the misery of the working class in particular, were an expression of human error or social misguidance, but essentially a consequence of the natural order of the world.¹⁰

5. Wordsworth's Discovery of an Inherent Conflict Between the Modern Economy and Nature

Wordsworth's economic views are in stark contrast to the theory developed by Malthus and the consequences derived from these.¹¹ For Wordsworth, the economy of the time was by no means an ordained order which is in accordance with natural laws. The economy and its effects, particularly the existing social disparity, were specific and man-induced characteristics of the age:

*Alas! what differs more than man from man!/
And whence that difference? Whence but from
himself?* (Wordsworth, *Excursion*, IX 206)

Wordsworth observes the transformation occurring in his time as a result of the modern economy and modern economic thought. He recognises in these an entirely new and previously unknown form of human commerce and economic activity, with unpredictable repercussions:

*An inventive Age/ Has wrought, if not with speed of magic, yet/
To most strange issues. I have
lived to mark/ A new and unforeseen creation rise/
From out the labours of a peaceful Land/
Wielding her potent enginery to frame/
And to produce, with appetite as keen/
As that of war,
which rests not night or day,/ Industrious to destroy!* (Wordsworth, *Excursion*, VIII 87-94)

In his characterisation of the economy of his time Wordsworth concentrates on three features: (i) the pace, (ii) the unforeseeability and (iii) the ceaseless dynamism of the ongoing

¹⁰ Within the scope of this paper we can not present and discuss Malthus' economic and political thought in more detail. For this, see e.g. Winch (1987), Blaug (1991) or Hollander (1997).

¹¹ Wordsworth knew the first edition of Malthus' *Essay* from 1798 (see Wu 1993: 94; Connell 2001: 18ff). Although there is no explicit reference, some passages in Wordsworth's work can be seen as a reaction to Malthus' ideas (see e.g. *Excursion* IX 205-328 or *Prelude* XII 85ff; see also Connell 2001: 41ff).

economic transformation, the description of which suggests, through the allusion to war, a destructive potential.

From where does this destructive potential of the modern economy originate? For Wordsworth, this negative potential is a consequence of modern economic man's alienation from nature. Through this alienation he loses the orientation on nature which is necessary for the fruitful unfolding of his creative power. The loss of orientation especially holds for economic activity, which Wordsworth regards as a specific expression of human creational power. Economic activity thus becomes characterised by an excessive and endless production of goods. For Wordsworth, the modern economy abandons the reference to nature which is essential to orientate humankind's production on the (divine) origin of creative potential which is exhibited in her. The place previously held by an orientation on the creativity of nature is vacated and replaced by the orientation on profit:

Men, maidens, youths,/ Mother and little children, boys and girls,/ Enter [the fabric], and each the wonted task resumes/ Within this temple, where is offered up/ To Gain, the master-idol of the realm,/ Perpetual sacrifice. (Wordsworth, Excursion, VIII 180-185)

Such a lack of orientation on nature and its replacement by an alternative orientation on profit, leads to a loss of the inner point of reference for creational and productive action and to an unrepentant production. The desire for profit is unlimited. From it, a limitless production emerges. The consequences of a loss of orientation on nature in economic action is exemplified by Wordsworth's description of London and its yearly market:

[...] there, see / A work that's finished to our hands, that lays,/ If any spectacle on earth can do,/ The whole creative powers of man asleep./ [...] What a hell/ For eyes and ears, what anarchy and din/ Barbarian and infernal – 'tis a dream/ Monstrous in colour, motion, shape, sight, sound./ [...] / All out-o'-th'-way, far fetched, perverted things,/ All freaks of Nature, all Promethean thoughts/ Of man – his dulness, madness and their feats,/ All jumbled up together to make up/ This parliament of monsters. Tents and booths/ Meanwhile – as if the whole were one vast mill –/ Are vomiting, receiving, on all sides,/ Men, women, three-years' children, babes in arms. [...]

O, blank confusion, and a type not false/ Of what the mighty city is itself/ [...] / To the whole swarm of its inhabitants –/ An undistinguishable world to men/ The slaves unrespited of low pursuits,/ Living amid the same perpetual flow/ Of trivial objects, melted and reduced/ To one identity by differences/ That have no law, no meaning, and no end –/ Oppression under which even highest minds/ Must labour, whence the strongest are not free. (Wordsworth, Prelude 1805, VII 650-707)

Here, an excessive and unrepentant production becomes apparent, which is completely estranged from any orientation on nature.¹² Wordsworth sees in this a destructive potential of the modern economy: it can unleash, for humankind as well as for nature itself, destructive forces if it produces solely in reference to itself, without orientation on nature.

On the one hand, human beings themselves become pawns in this form of economy with its unbounded dynamism:

Our life is turned/ Out of her course, wherever man is made/ An offering, or a sacrifice, a tool/ Or implement, a passive thing employed/ As a brute mean, without acknowledgment/ Of common right or interest in the end;/ Used or abused as selfishness may prompt./ Say, what can follow for a rational soul/ Perverted thus, but weakness in all good/ And strength in evil?
(Wordsworth, *Excursion*, IX 113-122)

On the other hand, however, it is Wordsworth's particular achievement to recognise that it is not only humankind, but also nature which is abused and potentially endangered:

I grieve, when on the darker side/ Of this great change I look; and there behold/ Such outrage done to nature as compels/ The indignant power to justify herself;/ Yea, to avenge her violated rights./ For England's bane. (Wordsworth, *Excursion*, VIII 151-156)

As a result of his concept of nature and humankind, Wordsworth therefore observes an unnatural conflict between humans and nature in the economic structures of his time. Accordingly, he regards the modern economy as a new form of alienation from nature. In contrast to Malthus and the political economy of the time, Wordsworth does not view nature as a framework of restrictions and conditions on human development and economic activity, but explores the interchangeable relationship and ultimate unity of humankind and nature in a divine origin. Only in this light does Wordsworth analyse the role of the economy for humankind and nature.

These perspectives enable Wordsworth to examine the effects of the modern economy on humankind and nature in a manner not possible for the political economy of the time, particularly not for Malthus. Wordsworth not only observes the threat that the modern economy imposes on people's lives, but at the same time also the related negative impact of this form of economy on nature. This insight is primarily an abstract one, not one founded on the actual observation of environmental damage. It follows substantially from Wordsworth's

¹² For further discussion of this issue see also the comparison of Wordsworth's critique of the excessive way of city life and George Gissing's *The Nether World* (1889) in Hertel (1997: 162ff).

analysis of the foundations and structures of the modern economy, based on his understanding of nature and humankind. However, precisely this gives Wordsworth's thinking a special relevance for ecological economics.

6. Implications of the Comparison of Wordsworth's and Malthus' Perspectives for Ecological Economics

The considerations of Malthus and Wordsworth are based on very different philosophical and theological foundations. Their different understandings of the relationship between human beings and nature, and ultimately their whole economic conception, arise out of this disparity. From the comparison of Malthus and Wordsworth, it becomes apparent that the enquiry into the relationship between the economy and nature, which is at the centre of modern ecological economics, depends substantially on the underlying image of humankind and nature. While Malthus viewed the economy of the time as a logical result of the natural order of the world, Wordsworth identified in it a moment of alienation between humankind and nature. This makes Wordsworth's considerations an important source of historic thought for ecological economics.

At present, however, much of ecological economics is based on an image of nature which is best described as Malthusian. In particular, this is expressed in the important discussion surrounding the significance of the laws of thermodynamics for the relationship between economy and nature. Following Georgescu-Roegen (1971), the second theorem of thermodynamics plays a key role in ecological economics. With respect to this, a necessary restriction and limitation of economic processes is derived as a result of the physical laws of nature (see Daly 1980, 1996; Faber et al. 1995; *Ecological Economics* 22 (1997), Special Issue). The guideline of Malthus' image of nature is reflected in these considerations in as far as nature is also comprehended as an objective structure abiding given laws, which confronts humankind with a necessary condition and absolute outer limit of his economic activity¹³ (see also Isenmann 2003).

This is clearly a very important insight concerning the relationship between economy and nature. Ecological economics has thus revealed a necessary determination of the economy

¹³ These considerations within ecological economics, however, are based on modern scientific laws. They are, therefore, in a certain sense stricter than the considerations of Malthus, whose "law" is somewhat intuitive – based on limited observations.

through the laws of thermodynamics. This determination has been recognised as a central aspect of the relation between economy and nature, and its consideration as a necessary condition of sustainable development. However, this perspective denotes only *one* aspect of the relationship between economy and nature. There are other aspects which can not be recognised within the thermodynamic view of nature. The thermodynamic perspective thus leads to a restricted idea of compatibility between nature and economy: a juxtaposition of economy and nature, based on a limitation of economic activity. In this perspective other and further-reaching ideas of compatibility are difficult to conceive.

These restrictions become especially apparent and problematic when the human actor, in an economic context, is concurrently interpreted as a *homo oeconomicus*, i.e. as a selfish and rational utility maximiser.¹⁴ He is then forced to restrict his own self-interest, wherever the limits of nature place an external constraint upon him. A compatibility of economy and nature then only appears to be possible if the *homo oeconomicus* surrenders his self-interest in face of these external constraints, which are placed upon him by nature's boundaries. An alternative idea of compatibility, based on an inner unity of both, seems to be unthinkable in the context of the *homo oeconomicus*¹⁵ and the Malthusian view of nature.

That this understanding of the human being, nature and economy is not sufficient for an encompassing modern enquiry into the compatibility of economy and nature becomes evident from Wordsworth's ideas. The differences between Wordsworth's and Malthus' views highlight the fact that, on the basis of a Malthusian comprehension of nature and economy, neither the causes of modern environmental problems may be fully understood, nor an encompassing compatibility of economy and nature achieved. At the same time, Wordsworth offers a further important perspective on this issue. His considerations point out that a conceptualisation of sustainable compatibility has to be related to a different understanding of nature, humankind and the economy.

Wordsworth considers nature as a point of reference for humankind. Not by turning away from nature does humankind fulfil its destiny (as by Malthus), but by turning to and

¹⁴ This view of the economic actor is to some extent in accordance with the view of Malthus: He also regarded the human actor as guided by self-interest. For a further discussion of the historical development and the philosophical implications of the view of the human actor within economics since Adam Smith see Manstetten (2000).

¹⁵ That the *homo oeconomicus* is not sufficient for ecological economic research has already been recognised and discussed. Several contributions concerning the understanding of the human actor within ecological economics have been made. For this issue see especially Faber et al. (1997), Söderbaum (1999), Siebenhüner (2000), Nyborg (2000), Jäger/Janssen (2000), Gintis (2000), and Faber et al. (2002).

orientating itself on her. This orientation on nature is, for Wordsworth, an essential condition of a good life. With this perspective, Wordsworth abandons the modern understanding of nature put forward by Bacon and Malthus, in as much as humankind and nature are not viewed in conflict with one another but in harmony.

In this regard nature no longer remains an outer restriction for humankind (as by Malthus), but represents a source of inner orientation. For Wordsworth, a good life is inseparably connected to an interrelationship with nature. This requires an encounter with and a respect for nature. Respect for nature is not merely based on external norms or an unexplained, inherent value of nature, but is an integral aspect of human existence and a good life. This means a self-understanding of the human being, which directly entwines the perfected being of humankind with an orientation on and respect for nature, could become part of a suitable understanding of the human actor in ecological economics (see Becker 2003). In his pursuit of economic activity, he would appreciate nature as an integral feature of his good life. From this perspective, nature is more than just a consumption good or factor of production, serving human purposes or representing a physical condition of economic activity. Instead, nature is elevated to humankind's point of reference and with that, also serves as an orientation for his economic activity.¹⁶

Given the above, Wordsworth's economic considerations may be ascribed an important position in the history of thought on ecological economics: Wordsworth explicitly concentrates on the significance of the economy for nature and the relationship between nature and humankind. He addresses the compatibility of economy and nature, and develops the idea of an orientation of economic activity on nature. On the other hand, Wordsworth criticises the economic view of his time and its philosophical foundations – particularly the classical economic view. He observes specific and new structures in the modern economy which cause an inherent alienation of humankind and nature: the individual pursuit of profit and a primary orientation on self-interest. A crisis in the relationship between humankind and nature is seen to be the result. With this, nature is no longer appreciated as a point of

¹⁶ The idea of an orientation of the economic process is also an underlying concept of modern Industrial Ecology. Here natural structures and systems are regarded as potential models for economic systems (see e.g. Frosch/Gallopoulos 1989; Ayres/Ayres 2002). This holds for example for circular flow processes. However, Wordsworth's idea is different. It is not an outward orientation as in Industrial Ecology, but an inner orientation on nature. Orientation on nature is not an orientation on objective structures but is rather meant as a creative process based on an encounter with and respect for nature. This idea of an orientation on nature is thus combined with an understanding of the human being which makes such an orientation sensible. In this respect, Wordsworth's considerations may help to clarify some philosophical problems of Industrial Ecology's concept of nature (for a further discussion of these philosophical questions see Isenmann 2003; 2003a).

reference, but becomes an object of the economic process. For Wordsworth, this leads to a loss of the good life: Human actions become groundless and excessive and the human being a mere object of the economic process.

Wordsworth offers an alternative understanding of nature which leaves behind the confined structures of the modern economic understanding, and precisely through this, enables a remarkable insight into the causes of modern environmental problems. These lie in the alienation of modern economic man from nature, in the separation of his economic production from its original creational orientation on her. However, this insight is repressed as long as ecological economics operates only within a Malthusian understanding of nature and exclusively takes the homo-oeconomicus approach. Ecological economics is therefore in need of a critical reflection on its own (often subconscious) understanding of nature and the human actor, in order to avoid unconsidered presuppositions, which are inadequate or too narrow for success in its research task.

In the considerations presented here, the importance of a philosophical foundation of ecological economics is demonstrated. Such a foundation is essential in an interdisciplinary field of research which encompasses as many aspects as ecological economics aspires to. Every scientific line of study is built upon presumptions, and in the case of ecological economics these include such fundamentals as the understanding of nature and humankind. These inevitably entail a philosophical dimension. As a result, philosophy and the humanities in general, should be an integral part of ecological economics. Not in the sense that they should replace scientific research, but in the sense that they should shed light on the context in which the scientific research in ecological economics is set.

Ecological economics should therefore include philosophical and ethical questions far more rigorously in the scope of its study. It should represent a discipline which portrays its foundations, especially its philosophical presuppositions, in a particularly explicit way, and allows for, and encourages, critical reflection of these presuppositions.

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