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An Environmental and Historical Reading of Kant's 'Critique of Teleological Judgement'.

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Preface

I have thoroughly enjoyed writing this thesis. It has provided me with the invaluable experience of studying a Kantian text in-depth, as well as offered an inviting introduction into the world of environmental philosophy. I am very grateful to Professor Pierre Laberge for his kind and experienced hand in guiding this thesis. I would also like to thank my family for their unfailing love, and especially my brother Stefan for his confidence in my work and his frequent rides to the hospital. I must also mention my friend Lise Charlebois, who helped me tremendously with her interesting and helpful conversations. I cannot forget my fiancé Kathrin Krell, with whom I fell in love while pursuing this Master's degree. And finally, I thank the Department of Philosophy here at the University of Ottawa for having provided the opportunity to pursue my interests.

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Introduction

Philosophers may take several different avenues in addressing the tremendous environmental crisis which the world is in, with many of these approaches focussing on the conception of nature and humankind's role within it. Of particular interest to me is the project of understanding how Western culture has arrived at a conceptual position which permits of the current disaster. This is currently being undertaken by a developing group of historical environmentalists, who are re-reading of the history of thought from the perspective of environmental philosophy. This task remains largely incomplete, and in particular Kant's role remains to the best of my knowledge unconsidered, either by the community of environmentalists or by Kantian scholars. This shortcoming is in itself worthy of some note. While, there have been some general studies of parts of the history of thought, in which Kant and Descartes are often mentioned, the analysis is not based on a detailed textual exegesis which might do justice to Kant in his own context.

The *Critique of Judgement* has perhaps received the least study of all of Kant's principal writings. However, due in part to its bicentennial anniversary in 1990, a great deal of scholarship has recently emerged and some excellent research on a largely historical basis is now available. This shortage of commentary in itself warrants another look at this once very influential text, and in particular the second half, namely the 'Critique of Teleological Judgement', which is concerned primarily with the role of teleological explanations of nature. In the first four chapters of this thesis, I shall examine the 'Critique' in its historical context, attempting a just exegesis of Kant's views. I shall devote a chapter to each of Kant's four notions of ends, namely physical ends

(Naturzwecke), ends of nature *(Zwecke der Natur)*, the ultimate end of nature *(letzter Zweck der Natur)* and the final end of creation *(Endzweck der Natur)*.

While this is not the only possible structure for approaching the text, this format does provide a neat reorganization of the material which is otherwise difficult to follow. This approach, which is not evident in previous studies of the text, does much to make Kant's often convoluted discussion possible to follow. Kant often moves from the discussion of one of these four elements to another with adequately informing the reader of his change in focus. This can create the appearance of inconsistences and confusion on Kant's part. By use of this four-fold division many of these apparent difficulties may be resolved.

Hopefully, the historical study will inform the reader before beginning the specifically environmental consideration. In the fifth chapter I shall consider the text from the viewpoint of philosophy of the environment. I shall discuss four points at which Kant seems to posit an excessive anthropocentricism. Given these limitations to the text, I shall then propose the strongest possible version of a Kantian environmental ethic. Finally, I shall consider what I see as the ultimately untenable position of an anthropocentric view of nature. In my view, a humanistic approach such as that which is supported by Kant's view of nature, is always in danger of being coopted by the very pressing needs of humanity.

My understanding of the term 'anthropocentricism' is a value neutral term, as much as is possible given the ultimate position which I take toward it. By this term, I understand the perception and understanding of the world and even the whole of reality as essentially existing for, and having the form which it does, for the sake of

humankind. This term is relatively consistent between its common usage in the Enlightenment era and its usage today, though in some circles it has developed a somewhat negative connotation. In this thesis, when I am critical of Kant's overextension of a reasonable anthropocentricism, I resort to an additional adjective such as 'excessive' to mark the change in value.

The juxtaposition of these historical and environmental perspectives may be considered valuable, not as a means to criticizing the historical Kant, but rather as a means to examining our own contemporary position over against the environmental crisis. The community of scholars who study Kant must, of course, also take into account the implications of Kant's views. This may serve to help us understand more completely the value of Kant's thought as a whole, as well as offer some insight into the basis of the current environmental crisis.

Finally, my environmental examination of Kant's writings must generally be limited to this single text. The ample conceptual material which the 'Critique of Teleological Judgement' provides, requires a study the length of which easily encompasses the possiblities of a Master's thesis. The transitional role of this text between Kant's critical writings taken as a whole, and his later, far more intriguing position or positions in the *Opus Postumum*, makes this text of particular interest. As well, the 'Critique' offers Kant's central consideration of organized nature, which influenced the views of almost fifty years of biologists.[1]

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[1]Reinhard Löw considers the influence of Kant's text on following thinkers in his, *Philosophie des Lebendigen; Der Begriff des Organischen bei Kant, sein Grund und seine Aktualität*. Frankfurt am Main: Suhrkamp, 1980.

Nonetheless, the larger project of considering the Kantian corpus from an environmental perspective remains. I see this thesis as a central preparation for this larger task. Serious consideration of Kant's changing and challenging positions in the *Opus Postumum* and a far more detailed examination of the Enlightenment period within which Kant developed his ideas, are required.[2] Elucidation of these points, among many others, is needed in order to have a suitable picture of those of Kant's views which may arguably be seen as having contributed to our contemporary understanding of the environment.

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[2]Klaus Düsing examines Kant's varying views as expressed in the *Opus psostumum* in Düsing, Klaus. *Die Teleologie in Kants Weltbegriff. Kantstudien. Ergänzungshefte.* No. 96. Hers. Ingeborg Heidemann. Bonn: H. Bouvier u. Co., 1968.

1.1 Scientific developments by the late 18th century.

In the 'Critique of Teleological Judgement' Kant builds upon the work of a number of earlier thinkers. In order to understand the context within which Kant wrote this text, it is necessary to consider some of the more salient trends in science at the close of the 18th century. To this end, I shall begin this chapter with a cursory examination of (1) the notion of 'explanation' following Newtonian physics, (2) the mechanistic view of the organism, (3) the clock analogy in Hume's *Dialogues Concerning Natural Religion*, and (4) the architectonic and historical conceptions of organisms as presented by Linné and Blumenbach respectively. This will serve to prepare the reader for the exegesis and critique of the text to follow.

Until as late as the 17th century, scientific thought was guided by the Aristotelean view of nature, which was conceived of as essentially teleological or goal-oriented. In the modern period, the advent of Newtonian physics, with its strong descriptive and predictive capabilites, brought an end to the predominance of this view. The uniformity and regularity of Newtonian physics interested Kant greatly and he described its metaphysical basis in the *Metaphysical Foundations of Natural Science*

(1786) and the *Critique of Pure Reason* (1781, 1787). However, Kant was aware of difficulties in accommodating living organisms into this causal-mechanical view of the world.[1] His most thorough resolution of this difficulty is to be found in the 'Critique of Teleological Judgement'. Kant's attempt at a union of teleological and causal-mechanical forms of explanation demonstrates his appreciation of the considerable explanatory powers of both forms. This is in contrast to many of his contemporaries and predecessors who often adopted the new causal-mechanical framework with little question.

Corresponding to the acceptance of Newtonian physics, the modern period also experienced a mathematization and mechanization of its world view.[2] This shift was accompanied by a change in the purpose of explanations. Previously, scientific explanations of a natural phenomena had involved explaining *why* they had occurred, which, to use Aristotelean terminology, required the identification of their final causes. Following this shift, explanation came to mean describing *how* the phenomenon occurred, by describing its physical cause.[3] In the 'Critique of Teleological Judgement'

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[1]In 'The Regulative Employment of the Ideas of Pure Reason' in the *Critique of Pure Reason*, Kant already shows himself to be aware of the difficulty of integrating into the causal-mechanical framework the remarkable organization found in organisms. Kant, Immanuel. *Critique of Pure Reason*. Trans. Norman Kemp Smith. London: Macmillan Press, 1929. A 642–668, B 670–696. These citations refer to the A (1781) and B (1787) editions of this first *Critique*.

[2]Löw claims that the history of biology is not to be understood as a paradigm shift from vitalism to physical biology, but rather as a periodically occuring shift between the loss of understandability in mechanistic biologies and a loss in the ability to intervene in teleological biologies. While this periodic process is certainly visible from Löw's study, it remains evident that a tremendous unidirectional shift occurred in the scientific community's view between the 16th and the 20th centuries. While this in no way denies the existence of smaller counter-trends, their almost complete absence from biology's current mechanistic perspective speaks against their relevance during this period. Löw, Reinhard. *Philosophie des Lebendigen; Der Begriff des Organischen bei Kant, sein Grund und seine Aktualität*. Frankfurt am Main: Suhrkamp, 1980. p. 13.

[3]Our current scientific culture continues to embrace this latter view and almost exclusively rejects explanations of *why* as unscientific. I agree with Löw that the support for quantitative over qualitative observation is due at least in small part to the relative usefulness and the potential for exploitation of resources which is rendered possible through this second approach. *ibid.* pp. 76–78.

Kant shows himself to be aware of the differences between these two kinds of explanation as well as very interested in maintaining a role for both in his conception of scientific explanation.

Despite this massive shift, support for a purely causal-mechanical conception of the world was not monolithic or even as uniform as it is in today's scientific community. Aristotelean or qualitative approaches were still pursued in medicine and biology by figures such as Jean Fernel (1497–1558), Andreas Vesalius in his classic *De humani corporis fabrica* (1543), Paracelsus, van Helmont, and Albrecht von Haller (1708–1777).[4] Nonetheless, the rapid and extreme rise of the mechanical understanding of the organism is truly remarkable. The oft-cited view of Descartes' understanding of other animals as having no souls for sensation, emotion or thought is just one example of the extent of mechanization in the conception of organisms.[5] Descartes' position was not unique, however. Lamettrie's 1747 text, *L'homme machine* represented humans as essentially physical beings whose brains were nothing other than an ordinary muscle. Henricus Regius and Thodor Craanen followed Descartes' mechanization in reinterpreting the physiology of the human body using mechanistic and architectural terminology.[6] What emerged was a view of the human body, such as that presented by the physician Hermann Boerhaave (1668–1738), whose work Kant is known to have

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[4]Most names and dates in this section stem from an excellent and detailed summary of the pre-Kantian scientific community interested in biology, beginning with the Ancient Greeks. *ibid.* pp. 20–126

[5]Descartes, René. "Discouse on the Method of Rightly Conducting the Reason." in *The Philosophical Works of Descartes." Vol. I.* Trans. Elizabeth S. Haldane & G.R.T. Ross. Cambridge: Cambridge University Press, 1911. pp. 115–118.

[6]In the pursuit of this new understanding of the human body, empirical falsehoods were sometimes presented as facts, though they were contrary to the otherwise-accepted truth. One example is presented by Löw, who explains that nerve fibres were newly conceived of as hollow tubing which functioned according to hydraulic principles, though this was contrary to the empirical observations of the standard Vesalius text. This new view of nerve fibres was not challenged until into the 19th century. *op cit.* p. 86.

read.[7] Boerhaave's mechanical and hydraulic conception of the human being, today seems more like a description of a proto-automobile than a human being.

I would like to take a moment to note the very considerable extent to which Kant shared the views of his contemporaries, particularly Boerhaave, as regards the mechanistic view of the human body. A selection from Löw summarizes Kant's view of the human body, offering an excellent impression of the extent to which Kant thought biology might be integrated into the Newtonian model.

> Thus, Kant characterizes the human body as a machine through and through, with all of its actions determined by stimulation. The machine is assembled from fibres, and from tubes in which the movement of the fluid elements is to take place. The framework of this machine is rigid with the connections consisting of levers, springs, receptacles and tubes (A.A. II, 152). Heavy perspiration renders the blood thick and sticky, and heat and cold likewise cause the juices to dry out, so that receptacles and nerves become stiff and inflexible (A.A. IX, 317). Kant's theory of respiration was mechanistic as well. ...
> In the theory of nerves Kant similarly pursues this mechanistic angle: the brain is characterized as 'mash', the nerve fibres as hollow tubes containing an easily moved fluid, which we empty by way of work [!].[8]

Kant certainly believed thoroughly in the applicability of the mechanical model to biology. This summary of Kant's views should inform the reader of the state of biological thinking at the end of the 18th century. It should not, however, serve as a criticism of Kant's views, particularly as regards the 'Critique of Teleological Judgement', for Kant does not specifically define his mechanistic views therein. Kant's specific interest is to determine the relative roles of mechanism over against teleology, not to decide on a definitive biological description of the human being.

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[7] *ibid.* p. 84–87.

[8] *op cit.* pp. 139–140. The translation is my own; citations and emphasis are the original author's. One can see that Kant shared this new view of the structure of the nerves.

To this end, Kant makes use of the characteristic analogy of the mechanistic organism and even the mechanistic universe, namely the clock.[9] Here, I only wish to note that Kant was likely influenced in his position on this example by David Hume's *Dialogues Concerning Natural Religion* (1779), which he is known to have read just prior to his completion of the *Critique of Pure Reason.*[10] In the *Dialogues*, Hume critiques the argument for the existence of God from design. His first criticism, which is of interest to us, states that nature and its constituent parts are only very poorly analogically-related to a human-made machine. Hume argues that the universe is far less analogically similar to an object of human design than to a vegetable, with its prominent self-sustaining characteristics.[11] Kant's strongly mechanistic thinking was surely challenged by this argument, and it seems to have further influenced his later thinking in the *Opus Postumum*, in which he seems to seriously reconsider an organic model of the universe.

Other thinkers to have strongly influenced Kant in his writing of the 'Critique of Teleological Judgement', were the Swedish botanist Carl von Linné (1707–78) and Johann Friedrich Blumenbach (1752–1848). Linné's influence stems from his development of the three-kingdom classification system, which for the first time promised to give some significant order to an otherwise seemingly-chaotic living world. In Linné's work, Philonenko understands Kant to have discovered the applicability of

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[9]The importance of this example to the modern period has been noted by a number of commentators. J.D McFarland considers the historical position of the clock analogy in *Kant's Concept of Teleology*. Edinburgh: University of Edinburgh Press, 1970. p. 46., and Alexis Philonenko notes the prominence of this analogy and challenges its usefulness in his "Kant und die Ordnungen des Reellen." *Études kantiennes*. Paris: Librarie Philosophique J. Vrin, 1982. p. 103–104.

[10]See quotation by Norman Kemp Smith in McFarland, J.D. *Kant's Concept of Teleology*. Edinburgh: University of Edinburgh Press, 1970. p. 49, footnote 1.

[11]Hume, David. *Dialogues Concerning Natural Religion*. Intro. Henry D. Aiken. The Hafner Library of Classics. New York: Hafner Press, 1948. pp. 23, 33–34 and 44.

general logic to biology as a system. Linné offered a static picture of the living world, and in this way presented it as a kind of anatomy of the biological system as a whole. In a complementary fashion, Blumenbach introduced the notion of a history of biology or archaeology, as a change in species over time. In this way, Blumebach presented Kant with a metaphorical physiology for the anatomy already provided by Linné.[12] Having completed this brief review, I shall now begin my exegesis of the 'Critique of Teleological Judgement'.

1.2 Physical ends: first definitions.

I shall begin my reading in this section by considering §64 of the 'Critique of Teleological Judgement'. Interestingly, this section, as well as the next, offers several well-developed examples, which is quite out of the ordinary in Kant's writings. Kant procedes here by alternately establishing a set of theoretical points and in turn offering examples of how these points may actually appear. As I hope to show, this structure is of some importance in appreciating the meaning of Kant's examples.

Kant begins §64 by distinguishing between objects whose production is determined by the necessary laws of nature, and objects whose production is contingent over against these laws. Kant informs the reader that, on perceiving an object, reason's natural goal is to assume that the object was produced necessarily according to nature's

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[12] Philonenko, Alexis."Kant et la philosophie biologique." *L'héritage de Kant; mélanges philosophiques offerts au P. Marcel Régnier; Directeur des archives de philosophie.*" Ed. Père Marcel Régnier. Paris: Beauchesne, 1982. pp. 63–64, 68–71. For an excellent summary of the conceptual novelties of Linné's system see, Löw, Reinhard. *Philosophie des Lebendigen; Der Begriff des Organischen bei Kant, sein Grund und seine Aktualität.* Frankfurt am Main: Suhrkamp, 1980. pp. 108–109.

laws. However, there are objects in which it is possible to perceive a unity of principle. This unity cannot be produced merely by the necessary and mechanical laws of nature; indeed, objects displaying such a unity of principle are contingent over against these laws. Such unity depends on a conception having preceded the production of the object, and such a conception may only be held by a rational being. Therefore, the unity, and consequently the contingent nature of the object, must depend on the idea of a rational being with a free will. Such objects are regarded as ends.[13]

With an example, Kant's illustrates this distinction between objects produced necessarily and those with a unity of principle created contingently (according to a conception). A person in a seemingly uninhabited country comes upon a hexagon traced in the sand. The person reflects on the figure, and gradually become conscious of the fact that his conception of it has a unity of principle. His reason goes on to eliminate the possiblity that merely-mechanical and necessary laws of nature, such as determine the wind, rain, footprints of animals, etc., could have produced this unity. It becomes clear that only by way of some conception of the object—to which the object may in turn be compared—can the unity of principle in the figure have been caused. Therefore, the figure must be an end, though of course, the figure cannot be a physical end,[14] as Kant assumes that conceptions can only be generated by reason. The end can only be assumed to be the creation of a rational (human) being.[15] Kant makes use of the

[13]The term 'end' is Meredith's usual translation for the word '*Zweck*'. Meredith 16–17, A.A. V, 369–370. In this thesis I shall use the following translation of the *Critique*: Kant, Immanuel. *Critique of Judgement*. Trans. & Intro. by James Creed Meredith. Oxford: Clarendon Press, 1964. Note that Meredith restarts his pagination at the beginning of the 'Critique of Teleological Judgement". All further Kantian citations from translations will take the same form.

[14]The term 'physical end' is Meredith's usual translation for the word '*Naturzweck*', though he does make occasional use of the term 'natural end' as well. I shall consistently use the term 'physical end'. Meredith 18, A.A. V, 369–370.

[15]Meredith 18, A.A. V, 370.

reference, "*vestigium hominis video*"[16] to emphasize this fact. Indeed, making this distinction between human creations and physical ends is Kant's primary motivation in considering this example.[17]

In Kant's second example in §64 he is primarily concerned with physical ends though the overall purpose is still to distinguish them from products of human ends. His preliminary definition of a physical end is as follows: "As a provisional statement I would say that a thing exists as a physical end *if it is* (though in a double sense) *both cause and effect of itself.*"[18] According to this preliminary definition Kant maintains that nature can sometimes act according to an end, rather than necessarily. He states that although this is incomprehensible, it is not contradictory.[19] By way of exploring the notion of reciprocal cause and effect as stated in this provisional definition, Kant offers a rather elaborate example of a physical end, namely a generic tree. The example is presented in three parts, considering each of the three ways[20] in which this reciprocal relation of cause and effect is manifested in an actual tree.

In the first part of the example, Kant argues that a tree is both cause and effect of itself, when the tree is conceived of as its "genus", or, to use accurate contemporary

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[16]Meredith 18, A.A. V, 370.

[17]Throughout his writings Kant consistently maintains that humankind is the only rational species on earth, as he implicitly suggests here as well. This is a point of some of importance, and one I shall consider below. At this point I only wish to note its presence in the text.

[18]Meredith 18, A.A.V, 370–371. Kant's emphasis.

[19]This point will become clear following Kant's eventual explanation as to how necessary natural laws and contingent ends may, in different ways, both operate in our cognition of nature.

[20]Meredith 18–19, A.A. V, 371–372. There is an apparent conflict between Kant's assertion above that this relation of cause and effect takes place "in a double sense" ("*in zwiefachem Sinne*") and the tripartite division of the example. I take it that this expression, which was only added to the second and third editions of the text, is meant to represent the multiple senses in which this relationality may be at play in organisms, and not as a precise count of these senses of relationality. This is supported by the fact that certain 'higher' animals would only demonstrate a two-fold instance of such kinds of relationality. This last point will become clear following the examination of third part of the example.

terminology, when it is conceived of as its species.[21] Kant effectively states that a tree produces itself as a species. Clearly, in order for an organism which reproduces itself to be seen as both cause and effect of itself in this act, the notion of 'species' must be taken as an abstract object.[22] Thus, when one tree causes the existence of another of that same species by way of reproduction, the tree may be said to be both the cause and effect of itself as a species. This is the first sense of the reciprocal causality mentioned in the definition.

The second sense in which a tree is both cause and effect of itself may not be as clear to the contemporary reader, however. Kant regards the tree's ability to grow or generate, to be a demonstration of the tree acting as cause and effect of itself. Kant has a non-contemporary understanding of generation which involves an organism not only gathering nutritive elements from its environment, but also altering them for use by granting them a distinctive quality. This additional step renders them usable by the plant as nutrition. It is the granting of this distinctive quality on the collected elements which most fully differentiates the generation of a tree from purely mechanical 'growth', such as the inflation of a balloon or the construction of an airplane. Despite this difference, there is no reason to believe that this distinctive quality is anything akin to a 'life force'. It merely represents the difference between the ability of an organism to self-generate, and the ability of mechanical or human nature to create from an external or removed position. Now, the tree produces the material by seeking it out and granting it this distinctive quality, and by this action it is in turn produced by the material. It is in this

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[21]One must understand the word 'genus' or '*Gattung*' to mean roughly, 'a kind of plant or animal', and thus 'species' in modern terminology. The criterion according to which the words 'species' and 'genus' could be applied, were still being made precise at the the end of the 18th century.

[22]Löw, Reinhard. *Philosophie des Lebendigen; Der Begriff des Organischen bei Kant, sein Grund und seine Aktualität*. Frankfurt am Main: Suhrkamp, 1980. p. 142.

manner that the tree, in the second sense, may be said to be both cause and effect of itself.[23]

As the third sense in which a tree is reciprocally cause and effect, Kant posits the self-maintenance of the tree. He argues that the preservation of each part[24] of the tree is dependent on the other parts of the tree being preserved as well. Thus, in having healthy leaves for example, the other parts of a tree are preserved, and these in turn preserve the leaves by offering the necessary support. In this sense, no part of the tree can exist on its own, but rather is both cause and effect of itself in this reciprocal fashion. This first illustration of the third sense of Kant's preliminary statement of ends seems amply clear.

However, in addition to this simple point, Kant includes three other interesting features of a tree which are posited as adding to the notion of a tree being both cause and effect of itself, again presumably in this third sense of being reciprocally supportive between parts.[25] These are the ability of a tree to regenerate itself following an injury, the ability of a tree to compensate for a malformation in one of its parts by means of altering some of the other parts, and finally the possibility of grafting a part of one tree

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[23]Bernhard Rang suggests that by emphasizing this particular difference between organic and mechanical systems, Kant moves the focus of the traditional debate surrounding teleology from the self-maintenance of organisms, to their self-creation. Following this historic discussion, the second of these questions must be addressed before the first. Rang, Bernhard."Zweckmäßigkeit, Zweckursächlichkeit und Ganzheitlichkeit in der organischen Natur; Zum Problem einer teleologischen Naturauffassung in Kants „Kritik der Urteilskraft." *Philosophisches Jahrbuch.*Vol. 1, 1993. pp. 53–54.

[24]Kant does not offer a definition of what constitutes a part at this point. However, it may be assumed from the context that a part is a conceptually distinct element in the physiology of an organism, *i.e.* it plays a determinate and necessary role in the organism. Therefore, I take it that an arm or even a cell is a part, while an atom is not. The exact point of division at which one thing is a part and another is not, must remain somewhat unclear without a sound knowledge of contemporary microbiology.

[25]Löw suggests that these four points, namely the three I shall list below as well as the co-dependence of the leaves on its tree, have nothing to do with the notion of the *whole* of the tree being both cause and effect of itself. I think he is mistaken in suggesting that Kant, by way of his preliminary definition, is considering only the level of the *whole* organism. It seems evident from the first part of this example that Kant has many different levels of cause and effect in mind, from species, through individual organisms, to the parts of such organisms. *op cit.* pp. 142–143.

onto a second tree. As regards a tree following an injury to some part of itself, the tree does cause the lost part to regenerate and, as Kant points out in the case of the leaves, if the part is repeatedly or permanently lost, the tree will eventually die. The case of adaptation to a malformation is similar to regeneration insofar as the tree will also ultimately die if the function of the missing part is not taken up by another part of the tree. There is the same sense of reciprocal support between parts of the tree. In both of these cases however, there is the interesting feature of a time-lag between the regeneration of the injured part or the adaptation to a malformation, and the reciprocal effect of the replaced or adapted part on the tree which caused it. For instance, following an accidental defoliation, the leaves are created before they can demonstrate any reciprocal effect on the generating tree. Similary, an adaptation must be developed before it can have an effect on the rest of the tree. I take it that in these two cases, Kant is assuming identity between a tree when it creates a part and when it is affected by it. Given such an assumption, these cases do seem to be legitimate additions to Kant's example of a physical end being both cause and effect of itself. However, in the case of grafting which is Kant's fourth illustration of this third sense of reciprocal cause and effect, the tree which is being grafted onto does not cause the grafted part (though it does support it afterwards, much as it would support a part it had developed itself). This example does not seem to demonstrate a new dimension of the reciprocal cause and effect which Kant is seeking to demonstrate here. Additional support for the difference between this illustration and the others will be given below.

Before continuing on to §65, it may be interesting to consider why Kant chooses a tree as his example of a physical end, rather than a dog or a human for example.

Philonenko argues on two different occasions that Kant's choice reflects a differing ontology in his system between merely organized beings (plants) and living organisms (animals).[26] Kant notes in his discussion of the third portion of the tree example that a leaf or branch may be seen as parasitic in relation to the tree as a whole. A paw or a hand can certainly not be seen as parasitic in this way.[27] This leads Philonenko to distinguish merely organized beings from living beings, by way of the respective absence and presence of the faculty of desire. Human beings are known to have this faculty, and animals are presumed to have it on the basis of their independent movements. In agreement with Kant's own views, Philonenko places Kant's living *vs.* non-living distinction parallel to the distinction between the animal and plant kingdoms.[28] Kant's interest in making this distinction in his ontology may explain his choice of an example from the plant kingdom. However I think more fundamentally, Kant's primary interest at this point is to distinguish organized beings from mechanical things. Thus it serves Kant well to choose a more simple example of an organized being, by choosing from outside of the group of living beings. A further reason for choosing a tree will become clear in the following chapter. From the content of these illustrations of the tree example one may assume that, "The distinctive character of things considered as physical ends," [29] is that they are both cause and effect of themselves in a number of different ways.

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[26]See, Philonenko, Alexis. "Kant und die Ordnungen des Reellen." *Études kantiennes*. Paris: Librarie Philosophique J. Vrin, 1982. pp. 97-117., and his "Kant et la philosophie biologique." *L'héritage de Kant; mélanges philosophiques offerts au P. Marcel Régnier; Directeur des archives de philosophie.*" Ed. Père Marcel Régnier. Paris: Beauchesne, 1982. pp. 63–80.

[27]Kant's desire to include this separate claim may explain his otherwise-curious inclusion of the grafting example.

[28]This distinction and its basis has beeen noted by other authors as well. See Düsing, Klaus. *Die Teleologie in Kants Weltbegriff. Kantstudien. Ergänzungshefte.* No. 96. Ed. Ingeborg Heidemann. Bonn: H. Bouvier u. Co., 1968. p. 117., and Löw, Reinhard. *Philosophie des Lebendigen; Der Begriff des Organischen bei Kant, sein Grund und seine Aktualität.* Frankfurt am Main: Suhrkamp, 1980. p. 159.

[29]This is the title of §64.

1.3 Organisms *vs.* machines.

As already noted, §65 offers a number of well-developed examples, which I shall consider below. However, at the beginning §65 Kant first offers the reader a reformulation of his first definition: "Where a thing is a product of nature and yet, so regarded, has to be cognized as possible only as a physical end, it must...stand to itself reciprocally in the relation of cause and effect." Kant concedes that, "This is, however, a somewhat inexact and indeterminate expression that needs derivation from a definite conception."[30] It is this derivation which Kant seeks in §65 and which I shall consider below.

Kant begins by making the Aristotelean distinction between the causal connections in efficient and final causes. Efficient causes may be represented as a series of unidirectional connections, in which each element in a series acts as the effect of some preceding cause, as well as the cause of some subsequent effect. This is the view of causality expressed in the Newtonian paradigm and is considered by Kant to involve the nexus of real causes. In contrast, final causes may be represented as a series of connections which one can conceive of as both progressive and regressive. In a series of final causes an element designated as an effect under the progressive view, is also designated as a cause under the regressive view. Such a series of final causes is considered by Kant to involve the nexus of ideal (as opposed to real) causes, with these appellations suggesting that these two are the only possible types of causality.[31] It is such ideal causes which are at work in physical ends.

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[30]Meredith 19–20, A.A. V, 372.
[31]Meredith 20, A.A. V, 372.

In explaining the difference between these sorts of causality, Kant provides an example, and in this instance it again takes some considerable reflection to understand how the example is meant to illustrate the preceding theoretical point. To illustrate a final causal connection, Kant presents the example of a house which is the cause of rental income. In turn the idea of this rental income is the cause of originally having built the house. Kant states that this is an example of a final cause.[32]

Prima facie it seems there is a serious difficulty with this illustration of causality according to an end. Kant does not seem to present a straightforward reciprocal relation as the reader expects from his view of ends as being negotiable in both directions. Whereas A (the house) causes B (the rental income), it is the *idea* of B which causes A. It seems instead, as if Kant is presenting an instance of human intentionality in which the idea of rent causes one to build a house, which in turn earns the desired rent, *i.e.* the idea of rent causes rent, *via* the house. Using the same elements, it would seem that a far better example of a final end would be something like the following: a house earns rent, and this rent is in turn used to maintain the house. This alternative example would form the straightforward reciprocal relation Kant is seeking to illustrate. So, why is Kant presenting an example which is not of this form?

Düsing offers an insightful, and I think correct, explanation. He argues that not only does the idea of rent cause the building of the house (which we accept), but that the actualization of the form of the house is also the realization of this idea. In this way there is indeed a reciprocal relation, though importantly, it is not the straightforward relation one might expect. He writes,

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[32]Meredith 20, A.A. V, 372.

> Since, in the case of a realized form of an object which is an end to us, it is only a matter of the *fullfilment* of the previously conceived concept, Kant can also characterize the concept itself as an end....
> The object is only an end, insofar as it is the realization of the previously represented concept which was the determining ground of my action; the object can only be called an end, insofar as the representation of it causes me to produce an object in reality which conforms to it, *and by means of which this end is realized.*[33]

What is unique to this explanation, and I think to Kant's understanding of this example as well, is that the relationship between the two elements understood as cause and effect is not the same as the relationship between these same elements in the direction of 'effect' and 'cause'. Kant is suggesting the following: the idea of the house is the cause of the form of the actual house in the sense of functioning as a plan. But the reverse relationship is one of the object's form fulfilling the idea, *i.e.* the idea of the house is fulfilled (effected) by the realization of the house's form.[34] According to this explanation the relationship presented in the house example is very much like those presented in the tree example, for the the relationships between cause and effect, and 'effect' and 'cause', are similarly divergent, while nonetheless acting between identical elements.

In his consideration of this passage, Rang claims to accept Düsing's interpretation of the text. I do not think he actually does, however. Rang argues that Kant does the reader no service in presenting this particular example from human action in an attempt to clarify the role of ends in organisms. He maintains that the double sense of Kant's

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[33]The translation and emphasis are my own. Düsing, Klaus. *Die Teleologie in Kants Weltbegriff. Kantstudien. Ergänzungshefte*. No. 96. Ed. Ingeborg Heidemann. Bonn: H. Bouvier u. Co., 1968. p. 96 and p. 97.

[34]Düsing supports this view by way of a quotation from Kant's *The Metaphysics of Morals* in which Kant takes an end to be an object of the free will. "An **end** is an *object* of free choice, the representation of which determines it to an acton (by which the object is brought about)." The English translation is from Kant, Immanuel. *The Metaphysics of Morals*. Intro., Trans. & Notes by Mary Gregor. Cambridge: Cambridge University Press, 1991. Gregor 189, A.A. VI, 384.

understanding of 'end' confuses both true ends such as found in human action, and the circular patterns of causality such as might be found in the oxygen cycle in nature.[35] While I do admit that Kant's formulation of the example invites confusion, I think that Rang's criticisms are misplaced; Rang fails to adequately grasp the uniqueness of Düsing's interpretation (and therefore of Kant's position). Kant's understanding of the house example creates difficulties for Rang because it entails a different conception of human intentionality than his own. For Rang (and us) human intentionality involves a physical creation according to an idea. For Kant. it seems that it is this, *and* the fulfillment of the idea as a result.[36] It seems that Rang's criticism fails to grasp that, in Kant's view here, there is no important conceptual difference between human action and physical ends insofar as their reciprocal cause and effect structure is concerned. It is also not the case that Kant is presenting a failed example of a circular causal chain as Rang suggests. For this to be the case, Kant would have to be posited as being very confused.

Following this house example, Kant goes on to describe in more explicit theoretical terms what is required for a thing to be considered a physical end. As we already know, from the example of human creation, an end is produced according to a conception or idea. Kant maintains that this idea must *a priori* encompass the whole of the thing which it is representing, as well as all of its parts. Similarly in the case of a

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[35]Rang, Bernhard."Zweckmäßigkeit, Zweckursächlichkeit und Ganzheitlichkeit in der organischen Natur; Zum Problem einer teleologischen Naturauffassung in Kants „Kritik der Urteilskraft." *Philosophisches Jahrbuch*.Vol. 1, 1993. pp. 59–61.

[36]I see some merit to Kant's understanding of an idea being the cause of an action and the action being the fulfillment of the idea. While this does not describe human action as we now commonly schematize it, it can be presented as a reasonable and even intriguing sketch, and more relevantly one against which Rang fails to argue.

product of nature, "its parts, both as to their existence and form, are only possible by their relations to the whole."[37] However the difference is that in the case of human creation, this idea or conception is held by an intelligent or rational cause, and realized by its actions. In contrast, if, as in the case of nature, there is no intelligent or rational cause, then there is a second requisite if the object is nonetheless to be understood as a final cause, namely, "that the parts of the thing combine of themselves into the unity of a whole by being reciprocally cause and effect of their form."[38] In nature there is no intelligent cause who thinks the idea. The reciprocity of cause and effect in an organism is not to be understood as one of (efficient) cause as in the case of art, but rather, "as the epistemological basis upon which the systematic unity of the form and combination of all the manifold contained in the given matter becomes cognizable for the person estimating it."[39] This is the first explicit statement that we have encountered which demonstrates that Kant intends physical ends to be based on the experiencing subject's own cognition, rather than in the objects themselves. Indeed in the next paragraph he summarizes this distinction between intrinsic physical ends in art and nature.

> What we require, therefore, in the case of a body which in its intrinsic nature and inner possiblity has to be estimated as a physical end, is as follows. Its parts must in their collective unity reciprocally produce one another alike as to form and combination, and thus by their own causality produce a whole, the conception of which, conversely,—in a being possessing the causality according to conceptions that is adequate for such a product—could in turn be the cause of the whole according to a principle, so that, consequently, the nexus of *efficient causes* might be no less estimated as an *operation brought about by final* causes.[40]

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[37]Meredith 20, A.A. V, 373.
[38]Meredith 21, A.A. V, 373.
[39]Meredith 21, A.A. V, 373.
[40]Meredith 21, A.A. V, 373. Underlining added.

It is clear from this selection that Kant locates the final causes in the cognition of the experiencing subject. I shall return to this central element of the 'Critique of Teleological Judgement' in the following section of this chapter.

Following the quotation above, Kant continues his exploration of the notion of physical ends and their distinction over against human creations. He states that a physical end must be an, "*organized* and *self-organizing being*."[41] The inclusion of this self-organizing element is what ultimately distinguishes organized nature from merely organized human creations. The organized product of a rational being is such that, "every part is thought as *owing* its presence to the *agency* of all the remaining parts, and also as existing *for the sake of the others* and of the whole, that is as an instrument, or organ."[42] However, a self-organizing physical end must have parts or organs which are not only present for the sake of the others, but acutally *produce* the other parts of the same organism and in turn *are produced* by them.[43] This is Kant's key distinction between physical ends and ordinary mechanically-determined products of either nature or humankind.

It is in distinguishing natural physical ends from human physical ends that Kant challenges the validity of the watch analogy.[44] Kant states that a wheel in a watch mechanism may be present for the sake of another mechanical part, but it cannot produce any other parts, nor be produced by them. The production of the watch's parts is external to it, lying in the idea of the the rational being who conceived of it. In an

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[41]Meredith 22, A.A. V, 374.
[42]Meredith 21, A.A. V, 373–374.
[43]Meredith 22, A.A. V, 374.
[44]See section 1.1 of this thesis.

intentional parallel to the tree example above,[45] Kant argues that the watch is also incapable of reproducing other watches by assimilating material from its environment, replacing missing parts, adapting to a missing part, or repairing itself.[46] These shortcomings of the watch correspond directly to the capabilities of the tree already noted.[47] Philonenko argues that Kant not only distinguishes between organisms and mechanisms on the basis of these point, but that it is their interdependence, *i.e.* the reliance of one such reciprocal cause and effect structure on another, which is at the centre of this distinction.[48] I think he is correct in his assessment of Kant's intention on this point, though Philonenko fails to note that this only becomes clear from Kant's parallel discussion of the watch analogy. Finally, the sole ability of a tree which has no parallel inability mentioned in the watch example is the ability to accept a graft, which I already argued above, is a feature of the tree which does not seem to illustrate Kant's examination of reciprocal relationships.

Kant's intention in this section is to distinguish between physical ends and human art, and thereby creating a decisive break with the Cartesian tradition. However, Kant cannot be expected to have considered the further possible distinction between organisms and artificial life. In this context, artificial life may be defined as a human creation capable of the reciprocal and interdependent cause and effect structures listed above. While this is not currently a reality, it now seems very possible. In such an instance, the conceptual difference between an organism and such a human-made

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[45]Meredith 18–19, A.A. V, 371–372.
[46]Meredith 22, A.A. V, 374.
[47]These are reciprocal cause and effect relationships as demonstrated between parts, reproduction, growth, regeneration, adaptation and generation following original defects.
[48]Philonenko, Alexis. "Kant et la philosophie biologique." *L'héritage de Kant: mélanges philosophiques offerts au P. Marcel Régnier: Directeur des archives de philosophie.*" Ed. Père Marcel Régnier. Paris: Beauchesne, 1982. pp. 128–129.

artifact would no longer be entirely clear. I do not think that this possibility creates any serious objection to Kant's distinction between organisms and mechanisms as he understood them. However, in the future it may well entail the acceptance of such human-made 'organisms' as actual instances of life. A further broadening of the definition of life is, of course, caused by the results of genetic engineering.

Kant concludes his examination of the watch example with the following summary.

> An organized being is therefore, not a mere machine. For a machine has solely *motive power*, whereas an organized being possesses inherent *formative* power, and such, moreover, as it can impart to material devoid of it—material which it organizes. This, therefore, is a self-propagating formative power, which cannot be explained by the capacity of movement alone, that is to say, by mechanism.[49]

It is interesting to consider what influence Hume's writings might have had on this passage, and the sections currently under consideration. This seems a good opportunity to quote a summary of the contribution of Hume's *Dialogues Concerning Natural Religion* to Kant's writing as seen by McFarland.

> First, some things in the universe, and perhaps the universe as a whole, cannot be understood on the analogy of a machine, since they appear to be self-organizing; they appear to have an *internal* ordering principle. Secondly, organization, which is the term Hume uses for animal and vegetable life, cannot be accounted for by means of the mechanical laws of natural science alone.... Finally, the cause or causes of order in the universe, including animal and vegetable life, 'probably bear some remote analogy to human intelligence'.... [50]

It seems apparent that Kant was very influenced in his consideration of the watch analogy in particular and in the writing of these sections in general.

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[49]Meredith 22, A.A. V, 374.

[50]McFarland, J.D. *Kant's Concept of Teleology*. Edinburgh: University of Edinburgh Press, 1970. p. 55.

This rejection of the Cartesian model is made perfectly explicit in the following paragraph in which Kant denies the possibility of nature in its organized products being either an analogue of art or life. It is not adequate to describe nature as an analogue of art, argues Kant, because nature organizes itself, rather than being organized from without as is the case in human creations. Equally, nature cannot be seen as an analogue of life, because organized matter would then be required to have a soul, something which Kant rejects because it either makes the situation no more intellegible than without, or alternately, because it places the soul outside of the organism.[51]

1.4 Reflective judgements.

One element of Kant's definitions has been left largely unconsidered. This centres on the notion that *all* of the parts of an organism play a role in relation to the whole. Kant begins §66 with a final definition of an organism in which he emphasizes this point: "*an organized natural product is one in which every part is reciprocally both end and means*. In such a product nothing is in vain, without an end, or to be ascribed to a blind mechanism of nature."[52] In Kant's view, every part of an organism plays an essential role. Kant states that this fact is well known in the scientific community. In their investigations scientists assume, usually implicitly, that the part of the organism they are investigating will ultimately be shown to play an essential role in the organism as a

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[51]Meredith 22–24, A.A. V, 374–375. According to Kant, natural beauty may be considered an analogue of art, but only because it only causes the observer to reflect on the external appearance of the object and not on its underlying organization. In a footnote Kant also suggests that the notion of an analogue of life is to be found in the organic development of a state. This point lies well outside our current considerations.

[52]Meredith 24–25, A.A. V, 376.

whole. This notion functions as a guiding thread for their investigations and may therefore be taken as a maxim of judgement.[53] According to Kant, this maxim of judgement is established on a basis which may be assumed to be universally applicable.

This very strong claim would seem to be prey to any single empirical counter-example, such as the vestigial pineal body which Descartes proposed as the seat of the human soul. However, Kant argues that there is a transcendental basis for such claims which places them beyond the opposition of merely empirical counter-claims. Kant argues that in addition to determinative judgement which he described in the *Critique of Pure Reason*, there is also something which he terms reflective judgement. Like determinative judgement, these judgements are universal. However, unlike determinative judgements, reflective judgements do not inform us about the objects, either as noumenon or phenomenon. Instead, they are universal judgements in the sense that they are made by all rational beings with the exclusion of God if indeed He exists. Our cognition is such that for us humans, certain objects must be taken to be ends.

The elucidation of this notion has begun above and will continue below. Here I only wish to briefly note how Kant discovers a transcendental basis for reflective judgement. Quite simply, Kant notes that the cognition, which is rendered possible because of the application of determinative judgement, remains undetermined, *i.e.*, there remain a myriad of empirical possibilities within the laws of judgement. However, reality

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[53]Meredith 25, A.A. V, 376. That this is the case in the actual pursuit of all of sceince is demonstrated admirably in the case of late 19th century physics, biology and chemistry by August Stadler in his *Kants Teleologie und ihre Erkenntnisstheoretische Bedeutung. Eine Untersuchung.* Unveränderte Neuausgabe der ersten Auflage. Berlin: Ferd. Dümmlers Verlagsbuchhandlung, 1912. See pp. 82–110. This still seems to be the case in contemporary science where the belief that most everything can eventually be explained is common, as evidenced by the frequent use of the expression, "...not *yet* explained...."

as we cognize it, is replete with commonalities (not just agreements according to determinative laws) which permit us to cognize and categorize not only plants and animals, but also kind and types in all aspects of human knowledge. Without such agreements it would be impossible for humankind to function, to learn, or to make assumptions from one situation to another. This additional, empirical degree of agreement between reality and cognizing human subjects is fortuitous, and must be assumed by humankind to exist. Humankind must act as if its knowledge is dependent some purposive agreement between human subjects and reality. This is a point of some interest, for Kant maintains that this agreement is not the result of humankind adapting to the facts of nature, but rather must be seen as if an accomodation on the part of nature to the manner in which humankind cognizes it. Reflective judgement is the function of our cognition which assumes this otherwise accidental agreement to effectively be *necessary*, rather than the result of any coincidence.[54] This is, in short, the transcendental explanation which Kant offers. It creates the basis for the *a priori* idea which, as explained above, lies behind the form of an organism, as cognized by the human subject.[55] In this way, Kant demonstrates that the assumptions which result from reflective judgement are not capable of refutation by merely empirical counter-examples.

In this first chapter I began by establishing the historical and scientific background required for the exegesis of the 'Critique of Teleological Judgement' to follow. I then considered Kant's distinction between human-made ends and physical ends, as well as a variety of examples which sought to illustrate the unique status of the

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[54]For an excellent explanation of this situation, see, *ibid.* 29–43,
[55]Meredith 25–26, A.A. V, 377. See 1.3 of this thesis for Kant's notion of an underlying idea.

latter. Finally, I briefly outlined Kant's understanding of the agreement between reality and the experiencing human subject, which underlies the ontological status of physical ends as a universal and subjective elements in human cognition. This should prepare the reader for the consideration of extrinsic ends in Chapter 2.

2.1 Kant's rejection of dogmatic teleology.

In this chapter I shall consider the extent to which Kant maintains that ends of nature may be said to exist.[1] Kant discusses the notion of an end of nature in §§63, 67, 68 and 82 of the 'Critique of Teleological Judgement'. At first sight his views in these sections may appear to conflict, however following some closer consideration of these sections, I hope to show that this apparent tension may be resolved.

Before beginning, it is important to note that a number of commentators agree that Kant's argument in §63 is polemically motivated. Philonenko suggests that this section of the 'Critique' is intended to counter the naive thesis of physicotheology as proposed by Moses Mendelssohn in his letter *An die Freunde Lessings*.[2] Similarly, Löw notes Kant's resistance to the possibility of hyperphysical arguments entering into the discussion of extrinsic finality, particularly as in the writings of Christian Wolff.[3] And finally, Rang also argues that Kant distances himself from the naive physicotheological

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[1]The term 'end of nature' is Meredith's usual translation for the term *'Zweck der Natur'*.

[2]See pp. 100–101 as well as footnote #11 of Philonenko, Alexis. "Kant und die Ordnungen des Reellen." *Études kantiennes*. Paris: Librarie Philosophique J. Vrin, 1982. pp. 97–117.

[3]Löw, Reinhard. *Philosophie des Lebendigen; Der Begriff des Organischen bei Kant, sein Grund und seine Aktualität*. Frankfurt am Main: Suhrkamp, 1980. p. 199 and 195. The same connection with Wolff is made by Düsing in, Düsing, Klaus. *Die Teleologie in Kants Weltbegriff. Kantstudien. Ergänzungshefte*. No. 96. Hers. Ingeborg Heidemann. Bonn: H. Bouvier u. Co., 1968. p. 122, footnote #57.

position. Rang maintains that the discussion in §63 is intended to create conceptual space for the discussion of physical ends in the following sections. He further points out that this polemic goal causes Kant, in the same manner as his opponents, to fail to distinguish between the notions of a relation of end-means with a relation of an end-requirement.[4] This distinction is of central importance to Düsing's interpretation of the text, though he makes use of different terminology.

Kant begins §63 by informing the reader that material and objective finality, such as one might expect to find in nature, may only be taken to exist under one condition: when, in the judgement of the experiencing individual, the uniformity of the relationship between a cause and an effect is such that the idea of the effect is required in order for the causality to have been possible.[5] Kant explains that this reciprocal cause and effect relationship can occur in either of two ways:

> We may regard the effect as being, as it stands, an art-product, or we may only regard it as what other possible objects in nature may employ for the purposes of their art. We may, in other words, look upon the effect either as an end, or else as a means which other causes use in the pursuit of ends.[6]

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[4] *'Zweck-Mittel-Verhältnis'* and *'Zweck-Bedingungs-Verhältnis'* respectively. See footnote #7 on p. 42 of, Rang, Bernhard."Zweckmäßigkeit, Zweckursächlichkeit und Ganzheitlichkeit in der organischen Natur; Zum Problem einer teleologischen Naturauffassung in Kants „Kritik der Urteilskraft." *Philosophisches Jahrbuch.* Vol. 1, 1993. pp. 39–71.

[5] Meredith 12–13, A.A. V, 366–367. Rang notes that this model of finality is borrowed from the realm of human affairs in the technical world, *i.e.* from instances in which people require a plan or idea which is in turn fulfilled. He argues that this is nothing other than Aristotelean final causality in which efficient causality is neither excluded, nor a sufficient explanation. By the 18th century this developed into the notion of physicotheology, in which it is a divine creator who holds the idea according to which an end may be said to act. See pp. 40–41 of *ibid.*

[6] Meredith 13, A.A. V, 367.

First, such a reciprocal cause and effect relationship may exist when the effect is an art-product,[7] which is merely a demonstration of the inner finality[8] of a physical end. We have already seen this model expressed in the house example in §65. Secondly, a reciprocal cause and effect relationship may involve the creation of an object, which in turn acts as an element in the creation of some other art-product. In this case, the effect of one cause and effect relationship is used as the means in a further reciprocal cause and effect relationship.[9] Kant informs us that this second form of finality is to be referred to as utility in the case of humankind, and adaptability in the case of other beings.[10] He considers these to be instances of purely relative finality and they are his principle focus in §63.

Kant presents a series of examples which are designed to illustrate the notion of pure relative finality in the form of both adaptability and utility. First, Kant offers two examples of adaptability. He explains that spruce trees grow very well in sandy soil, and that this sandy soil has been left behind by the retreat of a primordial sea. He suggests that there exists a potential relationship of finality between the sea and the spruce trees, *i.e.*, one might choose to say that the sea retreated for their sake.[11] The second example of adaptability which Kant offers is of plants which exist for the sake of herbivorous

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[7]Kant's choice of the term 'art-product' or '*Kunstprodukt*' as a label for the expression of the reciprocal cause and effect relationship in an organism may be somewhat misleading. It is merely intended in the sense of such physiological functions as digestion, respiration or growth.

[8]The term 'finality' is Meredith's usual translation for the term '*Zweckmäßigkeit*' and it is often used in such expressions as, 'inner finality' or 'intrinsic finality' which are the possible translations for '*innere Zweckmäßigkeit*', 'extrinsic finality' which is the translation for '*äußere Zweckmäßigkeit*', as well as 'pure relative finality' which is Meredith's translation for '*bloß relative Zweckmäßigkeit*'.

[9]Meredith 12–13, A.A. V, 367.

[10]These are Meredith's translations of the terms '*Nutzbarkeit*' and '*Zuträglichkeit*' respectively.

[11]It is of some interest to the discussion which follows in Chapter 5, that Kant comments here, that his ancestors are frequently blamed, "for having wantonly destroyed" the extensive spruce forests. I only note the presence of this point in the text in preparation for its consideration below. There are some difficulties with the translation by Meredith which I shall also consider below. Meredith 14, A.A. V, 367.

animals, which in turn exist for the sake of carnivores.[12] Again, one might posit the plants as existing for the ultimate sake of the carnivores.

These two cases of adaptability are similar insofar as they both present a series of mutually subordinated members, with one member acting as an end of nature and the remaining members acting as means to that end. Kant argues that these are not instances of an objective finality to be found in the objects themselves. Rather, these are examples of purely relative ends, *i.e.*, the nature of these relationships is accidental, such that there can be no transference of finality from one to the other. For example, while one can say that the sand is the effect of the retreating sea according to causal-mechanical laws, one cannot state that this occured for the sake of the spruce trees. Similarly, even though the grass is an art-product, one cannot state that it exists for the sake of the herbivores, nor therefore for the sake of the carnivores either. At this point, it seems as if Kant has gone a considerable distance toward eliminating ends of nature from his system, and thereby restricting the possibility of finality in nature to instances of physical ends.

Kant's examples of utility offer a more precise sense to the limitation of pure relative finality. Kant's first example is of the accretion of land which is effected through the deposits left after the retreat of a body of water. Kant does not assert that this is indeed an instance of such pure relative finality. Instead, he rhetorically asks whether or not the addition of such extremely useful land may be judged to be an end of nature.[13] In Kant's second example of utility, he considers the situtation of northern peoples who

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[12]Meredith 13–14, A.A. V, 367–368.

[13]Merdith 13, A.A. V, 367. Again, it is of some interest to the discussion which follows in Chapter 5, that Kant explicitly restricts his consideration here to the case of humankind. He disregards the potential gains to either vegetation or other animals from the accretion of this land, arguing that what is gained by the life on land is offset by an equal loss on the part of the sea-life. Therefore, the gain to the land-life is not to be taken into account. I shall consider this argument more closely below; I only wish to note its presence in the text at this point.

succeed in living under trying conditions due to the fortuitous presence of certain features of their environments. In this second example, Kant asserts that it is not possible to argue that, *e.g.*, water washes wood ashore in order for these peoples to use it as fuel, nor that snow falls in the north in order to ease their transportation needs. Indeed, he argues for the audacity of making such claims of nature at all.[14]

At this point Kant seems to have assumed a rather extreme position, namely that relations of finality can only exist internal to an organism. Kant's final consideration of the notion of utility makes clear the untenable nature of claims concerning ends of nature. After offering a series of examples in which humankind uses nature in both trivial and necessary ways, Kant clearly uses the rhetorical tool of assuming the position which he is criticizing. He writes, "All we can say is that *if* we assume that it is intended that men should live on the earth, then at least, those means without which they could not exist as animals, and even, on however low a plane, as rational animals, must also not be absent."[15] At this point in the text, Kant presents this possibility as a rhetorical statement which is clearly meant to be denied. This is in order to establish his conclusion that extrinsic finality, which is dependent on some organized being acting as the end for some other means, can never be definitely asserted. Empirical observation is simply not adequate to make this claim.

Kant concludes that judgements concerning extrinsic finality are not absolute and must always remain hypothetical.[16] This is not the definitive elimination of ends of nature one might have expected from the examples above. Instead, it involves the

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[14]Meredith 15–16, A.A. V, 369. It is clear that Kant is distinguishing his position here from a dogmatic teleology, such as Voltaire so unfairly criticized Leibniz of positing in the novella *Candide*.
[15]Meredith 15, A.A. V, 368.
[16]Meredith 14–15, A.A. V, 368–369.

ontological reduction of the value of such claims, while nonetheless maintaining the possibility of an important role for ends of nature in Kant's system. The exact meaning of Kant's distinction between hypothetical and absolute judgements remains somewhat unclear at this point in the text. Therefore, it is important to skip ahead to read §82 in which Kant's position is made more precise, before passing any final judgement. I shall return to my reading of §§67 and 68 in the section following.

2.2 Extrinsic finality.

Kant begins §82 with a clear explanation of his position on extrinsic finality. He states, "By extrinsic finality I mean the finality that exists where one thing in nature subserves another as means to an end."[17] This definition is conceptually different from his explanation of pure relative finality in §63. Kant qualifies this initial statement in such a way as to exclude the examples presented in the earlier section.

> Now even things which do not possess any intrinsic finality, and whose possibility does not imply any, such as earth, air, water, and the like, may nevertheless extrinsically, that is in relation to other beings, be very well adapted to ends. But then those other beings must in all cases be organized, that is be physical ends, for unless they are ends the former could not be considered means.[18]

Here we can see a change in Kant's view: extrinsic finality exists only in those cases in which there is a proximate or direct relationship of some thing, either organic or inorganic, to some other physical end.

Düsing correctly characterizes this relationship by emphasizing the distinction between it and the relationship between parts internal to a physical end. He explains

[17]Meredith 86, A.A. V, 425.
[18]Meredith 86, A.A. V, 425.

that for Kant, it is the particular *form* of a physical end which distinguishes the relationship of the parts of the organism from ordinary mechanical nature. In the case of extrinsic relationality, it is the *existence* of other organisms and inorganic elements of nature, insofar as they are used by an organism, which is of principal importance. While organic and inorganic elements of nature may be said to *exist* for the sake of some organism, they may not be said to have the form which they do, on the basis of such extrinsic relationality. Their form must always be the result of either causal-mechanical laws in the case of inorganic objects, or the conception of an end in the case of physical ends.[19]

One can see that the examples which Kant considers in §63 are designed to illustrate those situations in which no extrinsic finality may be said to exist. For example, the retreating sea does not act in a final manner, because it only effects the sand which is not itself a physical end. Similarly, the wood is not washed ashore by the sea for the sake of the northern peoples who use it as fuel. Indeed, all of the examples which Kant presents in §63 are arguably instances in which there is no direct or proximate use of some thing by a physical end. Instead, they are all presented such that there exists at least a two-step relation in which the effect of one relationship is used as a means in another. This structure is included in Kant's qualification of his definition of finality in §63.[20] In this particular formulation, the original cause of the intermediate effect (which is in turn taken as a means) is drawn into the relation of final ends. It is precisely the inclusion of this external cause which Kant is seeking to avoid in his own understanding

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[19]Düsing, Klaus. *Die Teleologie in Kants Weltbegriff. Kantstudien. Ergänzungshefte.* No. 96. Hers. Ingeborg Heidemann. Bonn: H. Bouvier u. Co., 1968. pp. 122–123.

[20]Meredith 13, A.A. V, 367. See the previous section of this chapter for a more detailed explanation.

of extrinsic finality. Thus, he will admit that snow is used by northern peoples to facilitate their transportation needs, but not that the snow falls, or has that particular form, for their sake. Similarly, he will admit that sheep eat grass as a raw material, but not that the plants grow in the form which they do for this particular sake. One can now clearly see from the manner in which Kant formulates these examples, that §63 is intended to exclude dogmatic teleology, and that Kant only intends to introduce his own understanding of extrinsic finality at some later point.

In the following paragraph, Kant attempts to clarify his distinction between extrinsic and intrinsic finality, stating that they are entirely different. Intrinsic finality is concerned only with the possibility or form of an object, regardless of whether or not it is in an end in actuality. We may ask to what end an organism exists because, explains Kant, in the case of an organism we have already pictured its creation according to an end, with the idea of that end held by a "creative understanding" in the form of a plan.[21] In contrast, extrinsic finality depends on the actual existence of the natural end. As a result, one cannot ask after the end according to which a natural end was created, for it is created according to merely causal-mechanical means, or is itself also a physical end.[22]

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[21]Meredith 87, A.A. V, 425.

[22]On two separate occasions Philonenko argues for the conceptualization of physical ends such that extrinsic finality is the model describing relations internal to an organism. Philonenko maintains that in the tree example, each part is to be taken as a separate whole. This may certainly be read from Kant's comments regarding the possiblity of grafting and the conceptualization of a leaf as a separate tree unto itself. From this textual basis, Philonenko argues that intrinsic finality may be conceptualized as extrinsic finality internal to an organisms, *e.g.*, as acting between distinct parts of a tree. While extrinsic finality could be conceptualized in this way, there does not seem to me to be any explanatory advantage in doing so. Philonenko himself admits that the difference between these is that intrinsic finality is reciprocal while dogmatic extrinsic finality is not. I do not think there is any clarification brought to physical ends in conceptualizing along these lines. See p. 102 of Philonenko, Alexis. "Kant und die Ordnungen des Reellen." *Études kantiennes*. Paris: Librarie Philosophique J. Vrin, 1982. pp. 97–117., and p. 66 of his "Kant et la philosophie biologique." *L'héritage de Kant:*

The sole exception to this distinction involves the extrinsic finality present in the relationship between the sexual organs of a single species. These organs are clearly designed for the propagation of the species, and their end is to form, "an *organizing* whole."[23] Of course, unlike the organized whole of an individual organism, this whole is not contained within a single body. Kant's attention to the unique status of these organs occasions one final explanation as to why he chooses a tree as his example of reciprocal cause and effect structures in §64. If he had chosen an organism which reproduces sexually as most animals do, and for that matter some trees do as well, his example would have lost much of its immediate explanatory value and become far more complex.[24]

By way of Kant's explanation in §82, I have established the notion of extrinsic finality as involving the direct relation of the use of either an organic or inorganic object by a physical end. It is the proximate nature of this relation and its limitation to the existence rather than the form of the object being used, which distinguishes it from a flat or dogmatic teleology.

2.3 Nature as a system of ends.

In this section, I shall return to an earlier discussion in which Kant extends extrinsic finality to include the whole of nature. At the very end of §66, which we have previously studied in the context of physical ends, Kant writes, "Hence, everything in

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mélanges philosophiques offerts au P. Marcel Régnier; Directeur des archives de philosophie." Paris: Beauchesne, 1982. pp. 63–80.

[23]Meredith 87, A.A. V, 425.

[24]Löw claims to be the first to notice this connection. *op cit.* p. 200.

the body must be regarded as organized, and everything, also, in a certain relation to the thing is itself an organ."[25] This passage is of some interest, for the understanding of the notion of an organ has clearly changed from that of the 'productive organ', as the notion of a part internal to an organism is defined in §65. Here the notion applies to both organic and inorganic objects which stand in a proximate relation of use by a physical end. In contrast to the earlier use of the notion of an organ internal to an organism, its use here is clearly intended without the necessity of a production of the forms of the parts in the relationship. This is in agreement with Kant's later position in §82.

In §67 entitled, "The principle on which nature in general is estimated teleologically as a system of ends," Kant makes a claim very much based on this new understanding of the term 'organ'. After confirming his view of the intent of §63 as explained in the section above, Kant goes on to make a very provocative claim. He states that the conception of physical ends, "...necessarily leads us to the idea of aggregate nature as a system following the rule of ends, to which idea, again, the whole mechanism of nature has to be subordinated on principles of reason."[26] This claim extends the notion of extrinsic finality well beyond that established even by this further understanding of the term organ. Kant is positing ends of nature in situations in which there is no apparent, proximate relation to a physical end. Even the determinative laws of judgement would seem to be subsumed under such a teleological order. Here Kant seems to court the dogmatic teleology which he already discredited so thoroughly.

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[25]Meredith 26, A.A. V, 377.
[26]Meredith 28, A.A. V, 379.

First, I shall examine in what sense Kant understands this extension of extrinsic finality to the whole of nature, and only then consider on what basis he establishes it. Kant suggests that the extension of extrinsic finality, may be considered a maxim which can guide the scientific pursuit of knowledge. The maxim is that, "everything in the world is good for something or other; nothing in it is in vain."[27] Similar to the case of physical ends, this maxim is not intended to interfere with the cognition of nature according to determinative laws. Indeed, these laws are required in order to create the ends of nature at all. The maxim that everything in nature is oriented toward an end merely leads science in its investigations.[27] However, in this case of ends of nature, the use of reflective judgement is more limited than it was shown to be in the case of physical ends. Whereas our judgements of finality are absolute in the case of physical ends, they remain merely hypothetical for ends of nature. This is confirmed by Kant's claim that, "all that we obtain from it [the maxim] is a clue to guide us in the study of natural things."[28]

It is in this vein that Kant examines a series of examples which serve to demonstrate the manner in which scientific investigation could procede by assuming ends of nature, though without being able to make absolute or certain judgements regarding them. Kant explains that the extension of extrinsic finality to include the whole of nature cannot inform us as to whether or not a particular end of nature is created for a specific end.[29] He reconsiders the example of the grass, stating that it is not absolutely certain whether it grows for the sake of the ox, or the sheep or whether it or

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[27]Meredith 28, A.A. V, 379.
[28]Meredith 28, A.A. V, 379.
[29]Meredith 28–29, A.A. V, 379.

anything else in particular is intended for humankind. In considering situations which seem to run counter to humankind's needs, Kant suggests that one could hypothetically posit an end, however. Thus, lice may offer encouragement for one to stay clean which is a way of maintaining sound health. And again, in an example which I shall consider more closely in Chapter 5, Kant writes,

> [T]he mosquitoes and other stinging insects that make the wilds of America so trying for the savages, may be so many goads to urge these primtive men to drain the marshes and bring light into the dense forest that shut out the air, and, by so doing, as well as by the tillage of the soil, to render their abodes more sanitary.[30]

Internal to the human organism, Kant goes on to hypothetically posit tapeworms as a means of compensating for a deficiency in the vital organs, and even dreams are suggested as a parasitic internal stimulation of the vital organs which keeps us alive. Finally, Kant even posits natural beauty as a hypothetically possible end of nature.[31]

It is interesting that the examples from this passage may seem more impossible than those in §63. However, it is important to remember that Kant is putting these examples to a very different conceptual use, namely the pusuit of science rather than any hyperphysical claim. The claim to a specific teleological order underlying them need only be respected as long as it remains useful. It is not, as in the case of physical ends, based upon a necessary and subjective principle of cognition which is transcendentally grounded. Instead, it is established as a guiding idea for science which should be assumed for its usefulness in understanding nature, but which only has the status of a hypothetical claim. In order for claims made on this basis to be absolute, they would

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[30]Meredith 29, A.A. V, 379.
[31]Meredith 30, A.A. V, 380.

have to be established on a similarly transcendental basis, which would lead directly to the hyperphysical, dogmatic arguments from which Kant seeks to distance himself.

I shall now consider how Kant establishes this principle of scientific research. In the first chapter I showed Kant to have demonstrated a transcendental basis for reflective judgments applied to physical ends. Here we are similarly led to ask about the basis of reflective judgements, in this instance made not only of objects involved in relations of extrinsic finality, but even of parts of nature which may have no such apparent relationships. Kant explains that in contrast to a physical end which may be judged on the basis of its intrinsic form, in order to judge an object to be an end of nature, we must know to what actual end it was produced. As in the example of grass which is eaten by a cow, and the cow which is in turn used by humankind, Kant argues that none of these elements of nature, not even humankind, may be taken as existing necessarily. Indeed, he makes the more sweeping claim that it is impossible to determine any product of nature as itself a final end of nature. Instead, one is lead inevitably to the notion of a final end of creation.[32]

> We do not then arrive in this way at any categorical end. On the contrary all this adaptation is made to rest on a condition that has to be removed to an ever-retreating horizon. This condition is the unconditional condition—the existence of a thing as a final end—which, as such, lies entirely outside the study of the world on physico-teleological lines.[33]

[32]As the notion of an final end of creation is properly the topic of Chapter 4 of this thesis, I shall limit my consideration of it here as much as is possible.
[33]Meredith 27–28, A.A. V, 378.

The need to know to what end something exists as an end of nature, leads the experiencing human subject to a supersensible source outside of nature and beyond any final teleological knowledge of it.[34]

Kant argues that it is this necessary progression toward some supersensible goal, which causes us to extend teleological principles from their clear application in physical ends, to things in nature which have a proximate relation to such organisms, and finally on to include everything in nature. He writes,

> For the idea from which we started is one which, when we consider its foundation, already leads beyond the world of sense, and then the unity of the supersensible principle must be treated, not as valid merely for certain species of natural beings, but similarly valid for the whole of nature as a system.[35]

And again, in an earlier passage, Kant states, "we are entitled, nay incited, by the example that nature affords us in its organic products, to expect nothing from it and its laws but what is final when things are viewed as a whole."[36] How then does Kant's argument for this extension of the teleological order to the whole of nature work?

Kant intends the teleological order to extend from physical ends to the whole of nature, thereby uniting both the physical and moral realms by way of a final end of creation. The role of this final end is more properly the topic of Chapters 3 and 4 below. Here I only wish to describe the initial stage of this extension of the teleological realm from physical ends to the whole of nature. Düsing offers what I think is the correct explanation.[37] He notes that in §78 Kant comments on "the endless multitude"[38] of organisms on the earth. Kant uses this central fact as a basis for the hypothesis that the

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[34]This argument will be considered in more detail in Chapter 3.
[35]Meredith 30–31, A.A. V, 381.
[36]Meredith 28, A.A. V, 379.
[37]Düsing, Klaus. *Die Teleologie in Kants Weltbegriff. Kantstudien. Ergänzungshefte*. No. 96. Hers. Ingeborg Heidemann. Bonn: H. Bouvier u. Co., 1968. pp. 121–142.
[38]Meredith 72, A.A. V, 414.

teleological order may be extended to the whole of the world. Arguing from the fact that organisms are to be found nearly everywhere on the planet, Kant implies that this wide distribution forms a net of organic life. In conjunction with the notion of an organ as described above, the whole of nature is in this way drawn into the teleological order. Düsing extends this notion to even suggest a parallel between this community of organisms in the world and any single physical end.[39]

The gist of this claim is certainly supported by Kant's statements quoted above, though the details remain somewhat unclear. Düsing goes on to explain that Kant only explicitly completes this part of the argument for the extension of the teleological order in his *Opus postumum*.[40] To some extent then, the argument in the 'Critique of Teleological Judgement' is incomplete and can only be made complete by introducing writings from later in Kant's life back into the text.

In the *Opus postumum* Kant argues that the systematic unity of all organisms and indeed of the whole earth is a result of their historical emergence from the same source. Düsing offers a detailed examination of Kant's understanding of the history of nature which was developed in texts written before 1790, and understood as background to the 'Critique' and even in some form to the *Opus postumum*. Düsing explains that according to Kant, the development of all organisms and indeed all inorganic nature as well, proceded out of a single original organism,[41] progressively developing into increasingly diverse forms. Linné and Blumenbach's notions of an archetectonic and history of nature are the basis for this development. In this way, there is an historically

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[39] *ibid.* p. 124.
[40] *ibid.* p. 124.
[41] Kant refers to this as the '*Mutterschoß*', meaning 'mother's lap'.

grounded sense in which both the organic and inorganic elements of the world form a teleological unity. I think that in this way Düsing succeeds in explaining how the gap between physical ends and the final end of creation is closed by Kant.[42]

In this chapter I have examined Kant's rejection of dogmatic teleology in §63, his formulation of extrinsic relationality in §82, and his extension of its role to posit as natural ends the whole of nature in §66–68. In Chapter 3, I shall return to Kant's argument for the impossibility of any one organism existing as a final end.

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[42]*ibid.* p. 133–142.

3.1 The impossibility of a thing of nature acting as its ultimate end.

In this chapter I shall examine Kant's notion of the ultimate end of nature.[1] I shall first consider the second part of §82 which was not previously studied, in order to outline Kant's argument for the impossibility of positing any organism, taken purely as a physical being, as the ultimate end of nature. I shall then turn to §83 in order to examine Kant's argument, that human culture acts as this ultimate end, as well as examine his specific understanding of 'culture' as a culture of skill and a culture of discipline.

I shall resume my consideration of §82 where I left it off in the second chapter.[2] Here, Kant once again distinguishes between inanimate matter created according to merely causal-mechanical laws, and contingent physical ends created according to some further design or idea. Up until this point in the text, it has been the *form* of physical ends which has primarily interested Kant; his concern has been with how these objects are formed. In contrast, Kant's focus here switches to the *existence* of these ends. He writes, "For inasmuch as we are compelled to rest its intrinsic possibility on the causality of final causes and an idea underlying this causality, we cannot but think that the real

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[1]This is Meredith's usual translation for the expression *'letzter Zweck der Natur'*.
[2]Meredith 87, A.A. V, 425.

existence of this product is also an end."[3] It is the question of why physical ends exist that Kant sets out to answer here.[4]

It is from this perspective of the existence of organized things that Kant draws a distinction between ordinary physical ends and final ends. While an ordinary end may serve only as a means to some further end, a final end must not be treated only as a means.[5] Therefore, it is not intelligible to ask to what end a final end exists, and in this way, a final end acts as the endpoint for a series of mutually subordinated members.[6] As a result of Kant's distinction between ordinary and final ends, it seems that the possibility of an ontology in which every individual organism exists for its own sake is eliminated.

Rang offers an interesting examination of this point, explaining that Kant is surely aware of two expressions of teleology which were considered possible in ancient Greek and medieval thought. The first involves a directedness[7] in the *behaviour* of some

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[3]Meredith 87, A.A. V, 425.

[4]Düsing makes note of this structural difference in, Düsing, Klaus. *Die Teleologie in Kants Weltbegriff. Kantstudien. Ergänzungshefte*. No. 96. Hers. Ingeborg Heidemann. Bonn: H. Bouvier u. Co., 1968. p. 207.

[5]The term 'final end' is Meredith's translation for the term *'Endzweck'*, which is commonly also used in the expression *'Endzweck der Schöpfung'*, which he translates as 'final end of creation'. However, there is some difficulty in differentiating the terms, 'ultimate end (of nature)' and 'final end (of creation)'. These terms are used as the titles of §§83 and 84 respectively, and on the basis of an interpretation initiated by E. Weil, they came to represent two very different aspects of humanity in Kantian commentary. Their differences will be traced in this chapter and the next. However, Kant is frequently very casual in his use of these terms, substituting one for the other and sometimes combining them in phrases such as, 'final end of nature'. This seems to be the case here as well. Renaut argues that this is because the distinction created by the use of these two terms is not to be taken overly seriously, as they nullify Kant's essential project of unification between the physical and moral realms, undertaken in the *Critique of Judgement*. Consequently, I think that at this point in the text, the term 'final end' may be taken as loosely equivalent to that of 'ultimate end'. See footnote #80 of, Renaut, Alain. *Le système du droit: Philosophie et droit dans la pensée de Fichte*. Paris: PUF, 1986. pp. 92–93.

[6]Meredith 87–88, A.A. V, 426.

[7]Rang uses the excellent term *'Zielstrebigkeit'* to describe this concept. It can only weakly be translated as 'directed', 'purposive' or 'single-minded' behaviour. See p. 51 of, Rang, Bernhard. "Zweckmäßigkeit, Zweckursächlichkeit und Ganzheitlichkeit in der organischen Natur; Zum

organized being toward an end, and the second involves a finality in the *organization* of the organism to gain an end. The first of these is understood in the sense of a striving toward some goal, where the goal is commonly taken to be the self-maintenance of the organism, for its own sake, or for the glory of God. Rang explains that in both of these cases the organism must be able to consciously perceive itself, if only as some vague feeling, in order to strive toward such a goal. Kant very rigorously avoids this first formulation of teleological expression, framing his discussion of finality in the form of descriptions of structures capable of performing some act. In this way, Kant remains perfectly consistent in rejecting the possibility that every organism exists for its own sake and thus acts as a final end.[8] He also avoids the introduction of unsupportable hyperphysical arguments, and is able to provide an explanation of final causality which remains within the bounds of empirical fact.[9]

Having established this understanding of final ends as something more than mere means, Kant goes on to make the very strong claim that in the whole of nature there is no organism, taken as a natural being, which may be considered the final end of creation. Indeed, Kant goes on to make the *a priori* claim that there is nothing in nature, seen as a natural thing, which could possibly serve in the role of even the ultimate end of nature.[10] Kant sets out to prove these claims by way of an example with which the reader will be familiar by now.

Problem einer teleologischen Naturauffassung in Kants „Kritik der Urteilskraft." *Philosophisches Jahrbuch.* Vol. 1, 1993. pp. 39–71.

[8]*ibid.* pp. 51–52.

[9]The notion of an awareness of the ability to set ends is of some importance to the discussion which follows.

[10]Meredith 88. A.A. V, 426.

Kant revisits the example of the food chain, stating that plants seem to exist for the sake of the herbivores, who in turn seem to exist for the sake of the carnivores, and that these seem finally to exist for the sake of humankind. However, Kant goes on to present these relations in reverse, on the basis of a theory provided by Linné. Kant states that it may be argued that the herbivores exist for the sake of the plants by keeping their numbers in check, and that the carnivores exist in order to limit the numbers of herbivores, and finally that humankind exists in order to keep the whole in balance.[11] In the second chapter, I demonstrated that Kant establishes that it is the use to which an organism is put which determines the end of its existence. In positing two opposing explanations of a food chain here, such that all members of that chain are described as means, it is empirically shown that no species seems to act as anything more than a mere means.

Prior to this example, Kant posits humankind as the ultimate end of nature on the basis of its intelligence. "He is the ultimate end of creation here upon earth, because he is the one and only being upon it that is able to form a conception of ends, and from an aggregate of things purposively fashioned to constuct by the aid of his reason a system of ends."[12] However in the food chain example, Kant gives special consideration to the case of humankind on the basis of this extraordinary ability to conceive of ends, and nonetheless concludes that it may not be posited as the ultimate end of nature. He explains that humankind, taken as a physical organism, may not be shown to act as anything more than a mere means.[13]

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[11]Meredith 88–89, A.A. V, 426–427.
[12]Meredith 88, A.A. V, 426–427.
[13]Meredith 89, A.A. V, 427.

Kant goes on to offer some additional empirical proof that humankind, taken in this regard, does not qualify as the ultimate end of nature. He does this by demonstrating that the earth is not hospitable to humankind. Kant states that any system of nature would seem to be based upon, "the soil or the element upon or in which [organisms] are intended to thrive." However,

> [A] more intimate knowledge of the nature of this basal condition of all organic production shows no trace of any causes but those acting altogether without design, and in fact tending towards destruction rather than calculated to promote a genesis of forms, order, and ends. Land and sea not alone contain memorials of mighty primeval disasters that have overtaken both them and all their brood of living forms, but their entire structure—the strata of the land and the coast lines of the sea—has all the appearance of being the outcome of the wild and all-subduing forces of a nature working in a state of chaos.[14]

Kant's theory on the development of the earth is based on what was known as the catastrophe theory, which posited a succession of time periods during which communities of organisms developed. These tremendously long periods were punctuated by global catastrophes in which most forms of life perished, thereby permitting derivations of the few surviving organisms to develop.[15] Kant mentions Camper, a contemporary proponent of this theory who maintained that while most other organisms did not survive these catastrophes, humankind repeatedly did. Kant argues that this is due to humankind's superior intelligence which permits it to adapt to changing conditions. Despite such an ability to adapt, humankind is considerably inconvenienced by these global changes, and for this reason can hardly be proposed as the ultimate end of nature. If humankind were the end for which all other things in

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[14]Meredith 89–90, A.A. V, 427. I shall consider Kant's view of nature as characteristically hostile in Chapter 5.

[15]For a very thorough and fascinating discussion of Kant's views on phylogenesis, in which the role of the catastrophe theory is discussed, see, Löw, Reinhard. *Philosophie des Lebendigen: Der Begriff des Organischen bei Kant, sein Grund und seine Aktualität*. Frankfurt am Main: Suhrkamp, 1980. pp 182–190.

nature were designed as means, then humankind's existence would surely be rendered far easier than it is in actuality.[16]

Finally, Kant states that the ultimate end of nature is required in order for the community of organisms on earth to form a system, encompassing such elements as inanimate matter and natural laws. In this way, Kant's discussion of the ultimate end of nature is essential to his previous assertions regarding the extension of extrinsic finality to include the whole of nature.[17] This point will be pursued further in the context of the final end of creation in Chapter 4. Kant concludes §82 by reviewing his assertion that the reflective judgement concerning organisms is a feature of how we cognize them, not how they are actually generated.[18] By emphasizing this point, Kant secures his earlier views on intrinsic and extrinsic finality, and makes his central point here, namely that humankind, taken as a natural being, may not be considered the ultimate end of nature.

3.2 Human culture: the ultimate end of nature.

I have shown that in §82 Kant rejects the possibility of humankind acting as the ultimate end of nature when taken as a physical being. From the manner in which Kant begins §83, it is apparent that humankind nonetheless plays a special role. He writes,

> We have shown in the preceding section that, looking to principles of reason, there is ample ground—for the reflective, though not of course for the determinant, judgement—to make us estimate man as not merely a physical end, such as all organized beings are, but as the being upon this earth who is the *ultimate end* of nature, and the one in relation to whom all other natural things constitute a system of ends.[19]

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[16]Meredith 89–91, A.A. V, 427–428.
[17]Meredith 89, A.A. V, 427.
[18]Meredith 91–92, A.A. V, 429.
[19]Meredith 92, A.A. V, 429–430.

Since humankind, taken as a physical species, cannot act as the ultimate end of nature, Kant goes on to suggest two further possibilities, both of which nonetheless stem from humankind, namely human happiness and human culture.

Before examining Kant's decision to seek the ultimate end in humankind at all, I shall consider his initial rejection of the possibility of human happiness as the ultimate end of nature. Kant argues that the definition of human happiness changes so frequently, that even if nature were designed to serve this end it could never keep up, as the fickleness of our desires would render it impossible. He also notes that human relations make it particularly difficult to maintain happiness, because human nature is driven to conflict and thereby to unhappiness.[20] And the reader has already been made aware of the many difficulties with which humankind succeeds in surviving on the earth. For these various empirical reasons, Kant rejects the possibility of human happiness acting as the ultimate end of nature.

Following this discussion, Kant offers an explanation for why it is that the ultimate end of nature may be found internal to humankind at all. He states,

> As a single being upon earth that possesses understanding, and, consequently, a capacity for setting before himself ends of his deliberate choice, he is certainly titular lord of nature, and, supposing we regard nature as a teleological system, he is born to be its ultimate end.[21]

Kant seeks the ultimate end of nature in humankind, because it is the only species on earth which is able to set goals for itself. However, Kant qualifies this point stating that, "this is always on the terms that he has the intelligence and the will to give to it [the

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[20]Meredith 92–93, A.A. V, 430. There are many similarities between Kant's discussion of happiness here and in the first section of his 1785 text, *Foundations of the Metaphysics of Morals*. See, Kant, Immanuel. *Foundations of the Metaphysics of Morals* and *What is Enlightenment?* The Library of Liberal Arts. 2nd ed. Trans & Intro. by Lewis White Beck. New York: Macmillan Publishing Company, 1990. Beck 9–15, A.A. IV, 393–399.

[21]Meredith 93–94, A.A. V, 431.

ultimate end of nature] and to himself such a reference to ends as can be self-sufficing independently of nature, and, consequently, a final end."[22] In this way Kant establishes two criteria which the ultimate end of nature must meet. First, the ultimate end of nature must be somewhat independent of nature, while nonetheless being a part of it (after all, it is called an end of nature). The second criteria is that the ultimate end of nature must be directed toward something outside of nature. At this point in the text, Kant does not assert the existence of such a thing, instead he merely suggests its role in the identification of the ultimate end of nature.[23] This second aspect will be discussed more thoroughly in Chapter 4.

On the basis of these two criteria, Kant develops further grounds for rejecting human happiness as the ultimate end of nature. While the ultimate end of nature must remain at least in part independent from nature, happiness is provided solely by the conditions of nature. As well, happiness does not point to anything beyond physical existence, which the ultimate end of nature must also do. For these additional, *a priori* rather than empirical reasons, happiness cannot serve as the ultimate end of nature.

In contrast, humankind's ability to set ends for itself by way of its rational nature, does stem from within itself. Yet as Düsing explains, nature nonetheless plays a central role in fostering this ability in humankind taken as a species. Pointing to Kant's short essay, "Probable Beginnings of Human History", he explains that Kant conceives of nature as drawing humankind from the level of a determined animal to that of a free human species capable of setting ends for itself. Düsing notes that humankind's moral nature emerges from this relation to nature, and that humankind's freedom may only be

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[22]Meredith 94, A.A. V, 431.
[23]Meredith 94, A.A. V, 431.

considered present following the emergence of such rational action on the part of humankind.[24] In this way, the ability of humankind to set ends for itself both partakes of nature without being entirely determined by it, and points beyond itself to something else, namely the moral realm. (Again, more on this second aspect in Chapter 4.) Now, Kant defines culture as, "The production in a rational being of an aptitude for any ends whatever of his own choosing, consequently of the aptitude of being in his freedom."[25] It is the fostering of this ability to set ends freely, which qualifies human culture as the ultimate end of nature. In this way Kant offers an *a priori* basis for placing humankind at the pinacle of nature. As Kant states, "the mere fact that he is the chief instrument for instituting order and harmony in irrational external nature, [is] ruled out."[26] Kant establishes criteria for the ultimate end of nature and finds them met in human culture, particularly in a culture of skill and a culture of discipline.[27]

Before considering these two aspects of human culture more closely, I would like to return to Rang's assertion that it is a lack of awareness on the part of most organisms, which prevents their behaviour from being judged as teleological, and as a result, from these organisms being considered final ends. This is confirmed by Kant's statement in the essay "Probable Beginnings of Human History" regarding humankind as an end of nature.

> And in this way humankind enters into a similarity with all other rational beings, whatever level they might be (III, 22); namely in consideration of the claim to

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[24]Düsing, Klaus. *Die Teleologie in Kants Weltbegriff. Kantstudien. Ergänzungshefte.* No. 96. Hers. Ingeborg Heidemann. Bonn: H. Bouvier u. Co., 1968. pp. 212–216.
[25]Meredith 94, A.A. V, 431.
[26]Meredith 94–95, A.A. V, 431. I shall reconsider this quotation in Chapter 5 below.
[27]The term 'culture of skill' is Meredith's translation for the term '*Kultur der Geschicklicheit*', and he uses 'culture of discipline' for '*Kultur der Zucht*' or '*Kultur der Disziplin*'.

> being an end oneself, in being estimated as such by all others, and in not being used by anyone as merely a means to other ends.[28]

One can see that in addition to the ability to act rationally, humankind is also aware of itself, as Rang suggests is necessary in the case of any final end.

Kant conceives of two specific and different kinds of culture, by means of which he seeks to eliminate the possibility of any general or populist sense of the term.[29] I shall first consider Kant's discussion of a culture of skill, which is to be understood at the level of the entire human species, rather than at the level of any single human being. Düsing explains that a culture of skill develops, because humankind initially finds itself with limited natural resources. Unlike other animals, humankind is relatively ill-equipped for survival on the basis of its physical traits and instincts alone. By outfitting humankind in so minimal a fashion, nature causes humankind to develop some initial skills in order to compensate.[30]

This tendency toward a culture of skill is later augmented by the inequality which naturally occurs between groups. As skills develop among certain groups, others are goaded into improving their skill levels as well. The rational ability of comparison which is part of human nature drives this ability. Now eventually, such inequality may result in

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[28]A.A. VIII, 114. The translations of both the quotation and the title of the essay are my own. The original title of the 1786 essay is "*Mutmaßlicher Anfang der Menschengeschichte,*" and is to be found in A.A. VIII, 107–123. The reference inside the quotation is to the Book of Genesis, Chapter 3, Verse 22: "Then the Lord God said, 'Behold, the man has become like one of Us, knowing good and evil; and now, lest he stretch out his hand, and take also from the tree of life, and eat, and live forever'—". In this essay Kant offers a reinterpretation of the Genesis story, particularly as regards the emergence of evil in human affairs.

[29]Kant writes, "But not every form of culture can fill the office of this ultimate end of nature." Meredith 95, A.A. V, 431.

[30]Düsing, Klaus. *Die Teleologie in Kants Weltbegriff. Kantstudien. Ergänzungshefte.* No. 96. Hers. Ingeborg Heidemann. Bonn: H. Bouvier u. Co., 1968. pp. 217–219. Again, this initial development of human culture is described in Kant's essay, "Probable Beginnings of Human History". A.A. VIII. 107–123.

what seems to be counter-productive conflicts, occurring even at the scale of wars. However, while this certainly is not advantageous for individual human beings, it is productive from the perspective of human history.[31] As Düsing explains, for Kant, history is to be understood largely as political history. Kant takes humankind to be mechanically progressing toward a political situation in which the external freedom of humankind is guaranteed by way of civil constitutions, which limit those actions of citizens which interfere with the freedom of others in the state. Similarly, these republics will someday agree to form a cosmopolitan whole in which their conflicts can also be set aside. This historical process is sometimes aided by war, and more particularly the peace which follows.[32] For Kant, the result is an ordered, political organization of humankind which permits of the best possible moral development. While this has not yet been completed, Kant certainly considers humankind to be on this path. The coincidence of natural history and the history of humankind is grounded in the fact that the organization of nature extends to human nature as well; the two are simply part of the same teleological order, argues Kant.[33] All of this is the outcome of a human culture of skill, and of course, it is to be judged reflectively, not determinatively.

The second form of culture which Kant considers as the ultimate end of nature is a culture of discipline, and it is intimately linked to a culture of skill. The human laws which permit the development of a culture of skill in a constitutional state, also serve to limit certain sorts of human actions and in this way promote a culture of discipline.[34]

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[31]Meredith 95–96, A.A. V, 432–433.
[32]In the text, Kant offers a preview of the more complete position on the possibility of a peace in his 1795 text, *Perpetual Peace*. The Library of Liberal Arts. Ed. Lewis White Beck. Indianapolis: Bobbs-Merrill, 1957. 53 pp.
[33]*op cit.* pp. 219–225.
[34]*ibid.* p. 226.

Yet, in contrast to a culture of skill which focusses on developing the possible human aptitudes, a culture of discipline calls for the limitation of human activities to certain domains.

Kant explains that on the one hand nature provides us with bodies and instincts which serve us well in maintaining our essential animal or biological functions. On the other hand, these same abilities act as an impediment to the development of humanity, for they provide humankind with an avenue for adopting evil maxims, which in turn are a basis of human behaviour. When the sense of pleasure is not used for the limited ends of a sound self-love, humankind taken as a physical species, fosters a sensuous physical nature instead making proper use of merely good pleasure.[35] Kant writes, "The preponderance of evil which a taste refined to the extreme of idealization, and which even luxury in the sciences, considered as food for vanity, diffuses among us as the result of the crowd of insatiable inclinations which they beget, is indisputable."[36] It is these extremes of the senses which Kant argues must be overcome.

The means to overcoming these, "tyrannical propensities of sense"[37] is provided by a culture of discipline. Kant writes,

> we cannot fail to recognize the end of nature—ever more and more to prevail over the rudeness and violence of inclinations that belong more to the animal part of our nature and are most inimical to education that would fit us for our higher vocation (inclinations towards enjoyment), and to make way for the development of our humanity.[38]

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[35]For a discussion of the role of physical nature in the development of evil see Book One of Kant's 1793 text, *Religion Within The Limits of Reason Alone*. Trans., Intro., & Notes by Theodore M. Greene & Hoyt H. Hudson. New York: Harper & Row, 1960., especially p. 21 on the applicability of the notions of good or evil only to humankind, taken as a group rather than any individual person, and the footnote on pp. 41–41 for Kant's notion of good pleasure as a healthy self-love, which fosters self-protection and care.

[36]Meredith 97, A.A. V, 433.

[37]Meredith 97, A.A. V, 433.

[38]Meredith 97, A.A. V, 433.

Kant represents humankind as crude, violent, and perhaps even indecent. However, Kant maintains that by, "conveying a pleasure that admits of universal communication and by introducing polish and refinement into society," the fine arts and sciences can, "make [humankind] civilized."[39] Düsing explains that nature achieves this culture of discipline by way of the beauty it presents, which he argues fosters our appreciation of values higher than those of the physical senses. He links this passage to Kant's discussion in the first half of the *Critique of Judgement* in which Kant writes of the appreciation of the beautiful as the free play of the faculties, which is independent of the desires of sense. Nature fosters a culture of discipline by providing humankind with examples of the beautiful in nature. A similar example of higher values is offered by the fine arts and sciences in their study of the natural world. Nature both internal and external to humankind coincide in a teleological order.[40]

While this explanation is certainly correct, I think it fails to note the additional sense in which a culture of discipline is a restrictive element in the development of human nature. A culture of discipline, promoted by nature and achieved by human will, can help us to develop out of the crude and violent state of nature of which Kant speaks, and into a decent civilized society. A culture of discipline guides human actions away from the domination of its desires, and toward that which is moral. Nature achieves this discipline in humankind by presenting various evils which, argues Kant, "evoke the energies of the soul, and give it strength and courage to submit to no such force, and at the same time quicken in us a sense that in the depths of our nature there is an aptitude

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[39]Meredith 97, A.A. V, 433.
[40]*ibid.* pp. 226–228.

for higher ends."[41] It thus seems that the harshness of nature stimulates humankind to reject all sorts of evils directed at its physical self *and* helps it to find its higher nature. In these two complementary ways, nature develops both the strength of character in humankind to not submit to physical pleasures beyond those which are considered good, and presents examples of higher values for humankind to appreciate outside of itself.

Finally, in a footnote to this passage, Kant considers the notion that humankind should not submit to the forces of nature. He argues that if judged on the sole basis of happiness, no one would decide to live their lives again, for they always stand in a deficit of pleasure. The value in life, argues Kant, stems from what it is that we choose to do in view of the final end of creation, not anything that is done to us by nature.[42] "There remains then nothing but the worth which we ourselves assign to our life by what we not alone do, but do with a view to an end so independent of nature that the very existence of nature itself can only be an end subject to the condition so imposed."[43] Here at the end of §83, Kant offers a further insight into his view of the relation of humankind to nature, which I shall consider further in Chapter 5. At the moment one can see the extent to which Kant views humankind's value as lying in its independence from nature, which is nonetheless promoted by it.

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[41]Meredith 97, A.A. V, 433–434.

[42]Again, this notion is to be found in Kant's consideration of the supremacy of the good will in his, *Foundations of the Metaphysics of Morals* and *What is Enlightenment?* The Library of Liberal Arts. 2nd ed. Trans & Intro. by Lewis White Beck. New York: Macmillan Publishing Company, 1990. Beck 9–15, A.A. IV, 393–399.

[43]See footnote #1 on, Meredith 97, A.A. V, 434.

In this chapter I have discussed Kant's rejection of the possibility of any species of organism, taken as a physical thing, as being the ultimate end of nature. I have considered Kant's basis for the argument that human culture is this ultimate end. And finally, I have described the manner in which a culture of skill and of discipline are affected by nature, in order to bring humankind, in its freedom of action, closer to the final end of creation.

4.1 Moral freedom as the final end of creation.

In this final exegetical chapter, I shall consider Kant's completion of the teleological system in §84, by demonstrating that the group of individual rational beings, taken as moral subjects and aware of the supreme good, is the final end of creation. The reason that the ultimate end of nature can only exist insofar as it is directed toward a final end of creation will also be made clear. I shall conclude by examining how the final end of creation succeeds in uniting the physical and moral realms.

Kant begins §84 by restating the now familiar argument, that the presence of finality in physical ends leads inevitably to a final end of creation. He explains,

> once we have conceived an understanding that must be regarded as the cause of the possibility of such forms as they are actually found in things, we must go on and seek in this understanding for an objective ground capable of determining such productive understanding to the production of an effect of this kind.[1]

Kant argues here for a necessary progression from the existence of any teleological order to the necessary existence of a final end of creation. Now, in the previous chapter, I demonstrated that it is not possible for a final end to act merely as a means, but that it must always also be taken as an end unto itself.[2] In this way, a final end can ground a

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[1]Meredith 98, A.A. V, 434–435.
[2]Meredith 87–88, A.A. V, 426.

system of ends and offer a basis from which all other relations of end-means may be derived. Kant's describes this *a priori* basis, stating that, "A final end is an end that does not require any other end as condition of its possibility."[3] Thus, just as demonstrated in Kant's reversed food chain example, only something external to nature may be considered the final end of nature, for only that which is external to nature may be unconditioned. This has, of course, been previously established.

In the third chapter I noted that human beings have two aspects to their natures, namely their physical and their rational selves. I also demonstrated that it is impossible for any organism including humankind, when taken purely in its physical aspect, to act as a final end. However, in this second, rational aspect of human nature, humankind may be considered the final end of creation. It is humankind's use of reason which permits it to set ends without being entirely conditioned by nature. In Kant's view, human beings are the only kind of organism on earth which can determine ends in this way.

Now, some of these human actions even involve human beings taken as noumenal beings with supersensible faculties of freedom. Human beings are the only beings on earth capable of conceiving of the object of freedom or the highest end, which is the supreme good.[4] They can pursue this supreme good by way of the unconditioned activity of the will, in exercising the faculty of freedom. For this reason Kant states,

> Only in man, and only in him as the individual being to whom the moral law applies, do we find unconditional legislation in respect of ends. This legislation,

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[3]Meredith 98, A.A. V, 434.

[4]The 'highest' is Meredith's translation for the term,'*der höchste Zweck*'.

> therefore, is what alone qualifies him to be a final end to which entire nature is teleologically subordinated.[5]

It is as a legislator of the moral law, that a human being may be considered the final end of creation.

The whole of nature is teleologically grounded on this final end of creation in two related ways. First, nature exists for the sake of this final end of creation, for without it the whole of nature would have no reason to exist. As Kant writes, "an objective ground capable of determining such productive understanding to the production of an effect of this kind...is then the final end of for which such things exist."[6] Second, the whole of nature is subordinated to this end. That is to say, nature takes the form which it does in order to promote the final end of creation. The ultimate end of nature functions as the link between nature as a whole and this final end of creation external to nature. Within physical nature proper, the ultimate end of nature is the fostering of human culture, and it in turn supports the final end of creation by permitting humankind to act in the most free, and therefore the potentially most moral manner possible. In being released from its external conflicts, and from the possible bondage of the physical senses, humankind is able to pursue the highest good.[7]

It is also by way of human culture that the final end of creation succeeds in uniting the physical and moral realms. I have demonstrated that the physical realm is organized so as to promote the goals of the noumenal realm, *i.e.* the organization is

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[5]Meredith 100, A.A. V, 453–436. Note that at this point in the text,, Kant is very much interested in the individual rational human being taken as a moral subject, rather than the human species taken as a whole.

[6]Meredith 98, A.A. V, 434–435.

[7]Düsing notes this dual role of the final end of creation as basis of both the form and the existence of the world in, Düsing, Klaus. *Die Teleologie in Kants Weltbegriff. Kantstudien. Ergänzungshefte.* No. 96. Hers. Ingeborg Heidemann. Bonn: H. Bouvier u. Co., 1968. p. 230.

consistent between both domains. By exposing this consistency, Kant demonstrates that a critical teleological order exists in both the physical and noumenal realms. It is this bridge between the two which may arguably be considered the greater architectonic purpose of the *Critique of Judgement.* Düsing again focuses correctly on the role of the beautiful in nature as reflecting this teleological unity outside of humankind, which in turn causes humankind to feel the wondrous unity of the noumenal self internal to it. In this way the two halves of the *Critique*, and indeed the two halves of Kant's critical philosophy, are shown to coincide in the purpose of demonstrating the union of the moral and physical realms.[8]

Finally, in §84 Kant notes that the final end of creation authorizes humankind to treat nature in such a way that it does not infringe upon the final end of creation. Kant writes, "His existence inherently involves the highest end—the end to which, as far as in him lies, he may subject the whole of nature, or contrary to which at least he must not deem himself subjected to any influence on its part."[9] In this way, Kant establishes humankind taken rationally, not only as the final end of creation, but also its "titular lord" insofar as it is able. Kant clearly seems to be pursuing a thoroughly anthropocentric position as evidenced in this claim. I shall return to my consideration of this point in Chapter 5.

At this point I have completed the exegesis portion of this thesis. In this brief chapter I have considered Kant's conclusion to the system of teleological ends, by

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[8]*ibid.* pp. 231–233.
[9]Meredith 99, A.A. V, 435.

demonstrating human beings taken as rational beings to be the final end of creation. In Chapter 5, I shall take another look at these sections from an environmental perspective.

5.1 Kant's excessive anthropocentricism.

In this final chapter, I shall begin by considering four points at which Kant may be criticized for positing excessively anthropocentric views. Following my assessment of these points, I shall present the strongest possible version of what may be considered a Kantian environmental ethic. This will begin on the basis of Kant's view of other animals[1], and continue by considering a number of Kant's comments which have been presented in previous chapters. Finally, independently of any specifically Kantian context, I shall consider the principal argument which may be levelled against an anthropocentric environmental ethic. This will serve as a balance to the Kantian position, without entering into unhelpful arguments against Kant as an historical figure.

Kant's understanding of reflective judgement emerges from the exegesis above as a significant point of interest. In the final section of Chapter 1 of this thesis, I explained that according to Kant, reflective judgements are universal in the sense that all

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[1] I shall use the expression 'other animals' to designate the group of animals excluding humankind. Although in contemporary usage the inclusion of the word 'other' is not required in order to be understood as designating this group, I feel that it serves to remind readers of our own status as members of the animal kingdom. In addition, Kant himself sometimes makes use of the expression 'other aimals'.

rational beings make them, though not necessarily God, if He does indeed exist. I noted that beyond those structural regularities necessitated by determinative judgements, there is also a range of empirical commonalities or similarities occurring in the natural world which are not necessitated in this same fashion. Kant correctly maintains that these commonalities permit humankind to cognize the world, and in this way to deal with objects, learn about them, make inferences from one situtation to another, etc. Kant argues humankind must act as if these abilities demonstrate an agreement between the empirical world containing these similarities, and human cognition which requires them. It is reflective judgement which assumes the necessity of this agreement. In short, the many similarities in the natural world should be taken as if they are the result of a purposive agreement between it and human cognition.[2]

This is a tremendously audacious claim on Kant's part. It is quite plausible that determinative judgements provide the structure of the world as cognized by all rational beings, and that human beings make such determinative judgements insofar as they are rational beings. This is a feature of cognition itself, and stems from the nature of rational beings. However, Kant is making a far more anthropocentric claim as regards reflective judgements. He argues that the vast degree of commonality between the diverse parts of the world is not the product of cognition, nor exclusively for the intrinsic sake of the parts. Instead, he claims that humankind must act as if the form of the natural world is for the end of human cognition. According to this view, all of nature's many internal agreements must be taken to be as if in part for the sake of a single species, and

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[2]Above, the consideration of reflective judgement was linked to the notion, that every part of an organism has the form which it does for some end. It is reflective judgement which presupposes this fact according to Kant. Meredith 24–25, A.A. V, 376.

independently of any characteristic which it shares with other species, either known or unknown. This seems to me to place an excessive emphasis on the role of humankind in nature. To argue that nature is organized in the fashion which it is, in order to facilitate merely human cognition seems too extreme a claim. I take this to be a vast overextension of the anthropocentric position.

A similar difficulty is to be found later in the 'Critique', as regards the role of the whole of nature in human history. For Kant, human history may be understood as the progression of humankind toward a condition of permanent peace. This is a political situation in which the external freedoms of human beings in a given state are guaranteed by way of a civil constitution. Of course, only those external freedoms are guaranteed, which do not interfere with the freedoms of other citizens. In addition, Kant foresees a cosmopolitan whole in which all states agree to a similar relationship, such that no state interferes with the actions of another. This theory of history has certainly been taken to be plausible, when understood as a human progression to the state of the greatest possible freedom for humankind.

However, as I explained in my discussion of the culture of skill in Chapter 3, Kant understands human history to be intimately related to nature. Kant maintains that human history is promoted in this progression toward a perpetual peace by the whole of nature. Even more provocatively, Kant argues that it is the actual *end of the existence* of the whole of nature to promote this human progression.[3] It seems to be an incredible extension of the role of humakind into the natural world, to suggest that the natural world exists for this human end. Human history seems to progressing on the path toward

[3]Meredith 94–96, A.A. V, 431–433.

a perpetual peace all on its own. It is simply untenable to suggest that every organism, inanimate nature, and even nature's foundational laws, exist for this end of *human* history, when the sum of all human relationships would appear adequate. The difficulty is that Kant is introducing more into the realm of human history than he should, or even needs to in order to develop his theory. This is clearly an excessive extension of Kant's anthropocentric views beyond their credible realm.

I think that Kant's motivation for drawing nature into the realm of human history is founded on his need to ground the system of nature in some end internal to it. Kant's argument for human culture as the ultimate end of nature involves its meeting the two qualifications which he establishes for the ultimate end of nature: namely that it should be somewhat independent of nature while still a part of nature, and that it should point toward a final end of creation which is completely unconditioned. Given Kant's ontology of conditioned and unconditioned beings, these critieria clearly single out humankind.

However, this is only because Kant limits the scope of possibilities, while insisting on providing an explanation for the existence of the whole of nature. First, Kant rejects the possibility of individual organisms acting as final ends themselves.[4] Second, the final end cannot be God alone, because such an hyperphysical argument requires the assertion of elements of reality which lie beyond empirical fact. As Paul Guyer remarks,

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[4]This was demonstrated above on the basis of Rang's explanation of Kant's limitation of teleological explanation to the organization of organisms, thereby eliminating teleological behaviour as relevant in the case of other animals and plants. Kant does this in order to maintain understandability, though as I hope to demonstrate here, he does so at the cost of an excessive anthropocentricism. See p. 51–52 of, Rang, Bernhard. "Zweckmäßigkeit, Zweckursächlichkeit und Ganzheitlichkeit in der organischen Natur; Zum Problem einer teleologischen Naturauffassung in Kants „Kritik der Urteilskraft." *Philosophisches Jahrbuch.* Vol. 1, 1993. pp. 39–71.

> Kant's argument is one of astounding temerity: he revives the argument from design which as he knew full well Hume had so scorned, but only to place our own fundamental purpose of morality rather than any purpose of God's at the center of creation."[5]

And third, Kant does not consider the possibility that organisms exist for no particular reason at all. It is Kant's bold insistence on explaining the system of nature which forces him to formulate an ultimate end of nature and to place it internal to humankind. The basis of Kant's excessively anthropocentric claim stems from his confidence in reason's ability to explain nature at all. In this way, anthropocentricism offers Kant the only avenue for the consequences of his assumption that nature can be explained by humankind.

A further aspect of Kant's anthropocentricism which is worthy of some reconsideration is his view of other animals. More particularly, it is Kant's marked lack of emphasis on the many similarilities between humankind and other animals in the 'Critique' which is of interest. Kant distinguishes humankind from other animals on the basis of freedom, which may only properly be said to apply to the group of rational beings, including human beings. There are two dimensions to such freedom, namely practical freedom which involves the ability of a human being to set its own goals, and transcendental freedom in which the human being is taken to be the moral legislator of its own actions. Other animals cannot be considered to partake of either of these forms of freedom. However, all animals have the technical ability to perceive, react to, and even to adapt to, their immediate environments.[6]

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[5]See p. 164 of, Guyer, Paul. "Natural Ends and the End of Nature: Reply to Richard Aquila." in *The Southern Journal of Philosophy*. (1991) Vol. XXX, Supplement. Ed. Hoke Robinson. pp. 157-166.

[6]For a detailed consideration of Kant's theory of freedom, including its empirical as opposed to intelligible character, see Part I of, Allison, Henry E. *Kant's theory of freedom*. Cambridge: Cambridge University Press, 1990. pp. 11–82. It is this distinction which Luc Ferry argues has been

An excellent example of this may be found in birds who can build nests in a variety of different situations and even with a variety of different materials. This is an example of which Kant would have been aware, and if asked, he would have admitted that animals are indeed similar to humankind insofar as they share this ability to interact sensibly with their immediate surroundings. In addition to this technical ability, some higher animals[7] even have such relatively sophisticated abilities as learning and tool use. For instance, sea otters use stones to break open certain shellfish, and learn this ability from other sea otters.[8] Another example is of chimpanzees who have learned to use twigs which they poke down termite holes—the termites stick to the twigs and are licked off by the chimpanzees.[9] And finally, Darwin writes of baboons who, when attacked by a group of hunters, defended themselves by rolling stones down a hill at them.[10] Even beyond these abilities, there are many other characteristics, including caring for young, sensitivity to pain and pleasure, memory and the tendency to play, which humankind shares with other animals.

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much abused by contemporary thinkers on animal welfare and animal rights, such as Peter Singer and Tom Regan, in their respective arguments for the inclusion of other animals in utilitarian ethics, and the case for animal rights. Ferry, Luc. *Le Nouvel ordre Écologique; L'arbre, l'animal et l'homme*. Paris: Bernard Grasset, 1992. pp. 83–105.

[7]By the term 'higher' animals I designate the group of animals which have a comparatively superior ability to do elaborate things. Curiously, this is not a function of the degree of organization, for the octopus has the most complicated DNA structure of all living things, while clearly not being the most able. This is something which might have surprised Kant.

[8]Bonner, John Tyler. *The Evolution of Culture in Animals*. Princeton: Princeton University Press, 1980. p. 172.

[9]Goodall, Jane. "Tool using and aimed throwing in a community of free-living chimpanzees." *Nature*. 1964. Vol. 201. pp. 1264–1266.

[10]This case stems from Darwin, Charles. *Descent of Man; and Selection in Relation to Sex*. 2nd ed. Akron: Werner Company, 1909. pp. 82–83. In Chapters III and IV of this text, Darwin offers an array of examples with which he seeks to investigate the degree of similarity between humankind and other animals. While some of the examples invite doubt on the basis of their now dubious references, these chapters do present a fascinating study, attempting to show the similarity between humankind and other animals on a wide range of fronts.

The specific examples of interaction with one's surroundings are of particular interest however, insofar as they are analogous to human freedom. In this respect, they would seem to invite mention and comment by Kant in the 'Critique', if only to demonstrate their systematic location in relation to human intentionality. Of course, Kant cannot be criticized for not having known of certain examples. However, I think that the considerable interest of examples such as these, does permit one to call Kant to task for not having considered those examples of animals interacting with their surroundings, with which he was familiar. The ability on the part of other animals to act in a fashion analogous to freedom, would seem to require some more attention than it actually receives in this, Kant's principal work on biological thought.

Kant's understanding of the ethical treatment of other animals offers both an interesting final criticism of Kant's excessively anthropocentric views of nature, and a transition to my discussion of a Kantian environmental ethic in section 5.2. In a series of three articles[11] which draw from a variety of locations in the Kantian corpus, Broadie & Pybus consider Kant's prohibition against the maltreatment of other animals, and argue that despite Kant's best intentions, this prohibition is not ethically grounded. Kant's argument runs as follows: Because other animals are not rational beings they are not ends in themselves, for only rational beings may be considered ends of this kind.[12] As a result, other animals are to be considered physical things, and humankind can have no

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[11]The initial article is written by Broadie, Alexander & Pybus, Elizabeth M. "Kant's Treatment of Animals." *Philosophy*. Vol. 49, 1974. pp. 375–383., with the response by, Regan, Tom. "Broadie and Pybus on Kant." *Philosophy*. Vol. 51, 1976. pp. 471–472., and the counter-response by, Pybus, Elizabeth M. & Broadie, Alexander."Kant and the Maltreatment of Animals." *Philosophy*. Vol. 53. 1978. pp. 560–561.

[12]Of course, this notion of human beings as ends in themselves appears from a somewhat different angle in the discusion of the final end of creation above.

direct moral duty toward them. However, Kant asserts that while one can only have direct ethical duties towards rational beings (read humans), one may also have indirect ethical duties towards the means to such ends. Therefore, one might have an indirect duty toward some thing, as a derivative of some direct duty towards another human being or ourselves. Now, Kant notes that in treating other animals badly we stifle our own feelings of humanity and become hardened in our dealings with humankind. This in turn leads us to treat other human beings badly. Kant therefore argues that we have an indirect ethical duty towards other animals, because of our direct duty to treat other human beings and ourselves well.

Now, Broadie & Pybus explain that for Kant, the violation of a duty entails acting in such a way that one's actions are not universalizable, *i.e.*, it would no longer be possible to act in this way if all rational beings did the same. To do so is to act unethically. However, it seems that the maltreatment of other animals may indeed be universalizable without contradiction. Kant offers only the empirical psychological observation regarding the tendency of such actions to harden us in our relations to others. Broadie & Pybus argue that,

> Even if he is correct in his psychological assumptions, they could not serve his purpose, for whether or not human beings tend to be rendered unsympathetic towards other people by their practice of cruelty to animals is a contingent matter of fact about *human* beings, and not a fact about *rational* beings.[13]

In this way, it seems that Kant in fact has no ethical justification for his prescription that one treat other animals well. Kant's difficulty centres on the fact that there is nothing morally remarkable about animals which differentiates them from other things.[14] He is

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[13]See p. 382 of, Broadie, Alexander & Pybus, Elizabeth M. "Kant's Treatment of Animals." *Philosophy*. Vol. 49, 1974. pp. 375–383.

[14]This is made especially clear by Regan's principal objection that Broadie & Pybus conflate the notions of the maltreatment of other animals and the use of other animals. While they do conflate

left with the mere suggestion that one avoid behaviour which is empirically known to lead one to treat rational beings as means. Kant's anthropocentricism seems to leave him in a counterintuitive position.

5.2 A Kantian environmental ethic.

Kant's view of nature is clearly anthropocentric. The central position of humankind in Kant's system suggests an environmental ethic in which judgements regarding nature are made in relation to humankind. Indeed, Kant's environmental ethic can be shown to centre on the responsibility of one member of the human community to the others. Broadie & Pybus distinguish between the Kantian notions of a duty to oneself and a duty to others. It is with the strong role which duties to others play in Kant's system, that any reconstruction of a Kantian environmental ethic must begin.

By way of developing Kant's environmental position, I think there is a sense in which the maltreatment of other animals may be considered unethical, though this is not the sense which Kant explicitly suggests. There seems to be an exception to the freedom to treat animals as one wishes, if the animal in question is the property of another person. That is, one can argue against the maltreatment of those animals which belong to someone else. In such cases, the animals are the property of another person, and one has an indirect duty to treat them well because of one's direct duty to the other person. This

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these notions, they can do so, as they explain in their second article, because in Kant's ontology there is no difference between them, as other animals are nothing more than means and may therefore be treated in either fashion. Regan, Tom. "Broadie and Pybus on Kant." *Philosophy*. Vol. 51, 1976. pp. 471–472., and the counter-response by, Pybus, Elizabeth M. & Broadie, Alexander. "Kant and the Maltreatment of Animals." *Philosophy*. Vol. 53. 1978. pp. 560–561.

would not be at all different than the indirect duty one might have toward someone else's automobile.

If one considers the group of human laws which determine ownership or the legal use of land, sea, air, minerals and even outer space, it can probably be shown that everything in nature within some range of the earth may be considered legally bounded in this way. However, not every use of nature involves one person making use of a part of nature belonging to another person or being held in common. For instance, surface mines are known to spoil the environment. If one owns the land in addition to the mineral rights, the abuse of the land, which remains a mere thing, would seem to be within the bounds of moral behaviour.[15] The same would seem to be the case for an animal which one owns oneself.

However, Kant does offer some indirect support for the intuitively correct notion that such environmental abuse is indeed ethically wrong, regardless of legal entitlement. When discussing the example of the spruce trees which grow well on the sandy soil left by a retreating sea, Kant writes,

> Now as the ancient sea withdrew from the land, it left behind so many tracts of sand in these northern regions that this soil, so useless for any cultivation otherwise, enabled extensive spruce forests to establish themselves, for whose unreasonable destruction we often blame our ancestors.[16]

The destruction of these spruce forests is considered unreasonable by Kant, because the land cannot be used for other cultivation by humankind, due to the composition of the

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[15]For the most famous and first contemporary argument for the ethical treatment of the land, see Leopold, Aldo. "The Land Ethic." *A Sand Country Almanac*. Oxford: Oxford University Press, 1966. pp. 217–241.

[16]Several aspects of this single sentence are more accurately translated by Pluhar, and it is his version which I have cited here. Pluhar 245, A.A. V, 367. In the original Kant states, *"Nun hat das alte Meer, ehe es sich vom Lande zurückzog, so viele Sandstricke in unseren nördlichen Gegenden zurückgelassen, daß auf desem für all Kultur sonst so unbrauchbaren Boden weitlaüfige Fichtenwälder haben aufschlagen können, wegen deren unvernünftiger Ausrottung wir häufig unsere Vorfahren anklagen...."* Vorländer 229, A.A. V, 367.

soil and its northern location. In Kant's time the land presumably remained both barren and unusable by humans. Insofar as Kant blames his ancestors for destroying the forests, he seems to suggest that there is a direct duty on the part of the ancestors to the generations of humans which follow, namely a duty to preserve the land in such a way that some use may be made of it. Kant implicitly suggests that there is an indirect duty to preserve the spruce forest for some human purpose, *e.g.*, as a forest reserve to be enjoyed or as a site for selective logging. This indirect duty stems from the direct duty to other human beings who follow. This is the ultimate basis for a Kantian environmental ethic. Kant would argue that one should use the environment in such a way that future generations are able to do so as well. To do otherwise, is to act unreasonably or contrary to the rational beings who follow.[17]

This approach is quite useful in protecting the environment, and has certainly been adopted by policy makers, politicians, industry and even some academics. It promotes sustainable development and a reasoned use of the earth. The view has been used to argue for the protection of species of plants and animals, as they may ultimately be useful in the development of pharmaceuticals to save human lives, and for the enjoyment of generations which follow. In some more distant-thinking individuals, it is even argued that biodiversity itself is necessary in order to maintain a stable planetary ecosystem which can remain hospitable to humankind.[18] Indeed, with some reflection,

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[17]Incidentally, this does not offer any ethical basis for the treatment of animals which one owns oneself. In the end, the Kantian system seems to offer no better basis in this regard, than that one avoid behaviours which leads one to treat other rational beings merely as ends.

[18]These arguments are reviewed on pp. 50–54 of, Katz, Eric and Oechsli, Lauren. "Moving Beyond Anthropocentricism: Environmental Ethics, Development, and the Amazon." *Environmental Ethics.* Vol. 15, Spring 1993. pp. 49–59.

one can make the case for the preservation of almost any element of our environment over against its immediate use and destruction.

However, one intrinsic difficulty in maintaining such a Kantian environmental ethic is suggeted by Kant's comment in the context of the extension of extrinsic finality to the whole of nature. He writes,

> [T]he mosquitoes and other stinging insects that make the wilds of America so trying for the savages, may be so many goads to urge these primitive men to drain the marshes and bring light into the dense forests that shut out the air, and, by so doing, as well as by the tillage of the soil, to render their abodes more sanitary.[19]

This is an historical example of a central dificulty which any environmental ethic based on an anthropocentric view of nature must take into account. Among other changes to the environment, Kant suggests the draining of marshes for the sake of the native inhabitants of America. In his view this appears to be a rational move, for it will promote the health of the natives. However two hundred years later, we know that the draining of marshes has massive negative repercussions for the environment well beyond the life which exists in the marshes itself. To drain these giant filters for pollution, both natural and human-made, is to act unreasonably toward future generations who will need them as well.

This comment by Kant demonstrates the very limited knowledge which we must always have of nature. While we now know the effects of such drainage we do not know the full effects of commercial fishing (consider the cod in Maritime Canada), of selective logging, of driving automobiles, or of a myriad of other human actions. As a result, a Kantian environmental ethic must err well on the side of caution. Beyond the

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[19]Meredith 29, A.A. V, 379.

best possible understanding of our environment and a recognition of the calls of scientists to halt our abuse of the environment, humankind must also take into account that which it does not presently know and cannot foresee. The only way to do this is to demand a margin of safety which may be considerable, given the threat of possible damage which may be done to the environment, and the many generations of humankind which may be effected. In order to be reasonable and ethical, a Kantian environmental position must demand such a margin of safety. Given such a sensible approach, a Kantian environmental ethic, based on the notion of protecting the environment for the generations which follow, does present an interesting and supportable approach to dealing with the environment. It is not one with which I agree however.

5.3 The difficulty with anthropocentricism.

By way of a conclusion to the environmental considerations of this thesis, I would like to set aside the specifically Kantian environmental ethic and offer a brief reflection on what I see as the fundamental difficulty with any environmental ethic grounded on an anthropocentric view of nature. The anthropocentric or humanist tradition has been accused of being one of the principal roots of the environmental crisis.[20] It focusses on the centrality of humankind to its own experience of the world,

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[20]Eugene Hargrove offers an interesting attempt to rehabilitate this tradition as a basis for a Western environmental ethic in, Hargrove, Eugene C. *Foundations of Environmental Ethics*. Englewood Cliffs: Prentice Hall, 1989.

sometimes even arguing that humankind cannot help but be concerned primarily with its own welfare.[21]

As I see it, the difficulty with an anthropocentric view of nature stems from the fact that some crucial motivations for treating the environment well are excluded. Central examples of these include any motivation to save nature for its intrinsic value, *i.e.*, any value which it might have independently of the use to which humankind puts it.[22] Also excluded from this view is the notion of care which has been posited largely by feminists in the last decades, but also by many religious thinkers who argue that one must care for the earth which God has given to humankind.[23] These views differ from an anthropocentric environmental ethic, insofar as they do not enter into utilitarian comparisons of needs and demands of currently living human beings with those of future generations of human beings.

When possessed of an anthropocentric view of the environment, it inevitably becomes impossible to adequately protect it, because short-term, perceived and very real needs of existing human beings will always outweigh, or seem to outweigh, those more distant, ephemeral, and argued-to-be-non-existent needs of future generations. It is this

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[21]This view is argued for by Leiss, William. "Instrumental Rationality, The Domination Of Nature, And Why We Do Not Need An Environmental Ethic." in *Environmental Ethics: Philosophical and Policy Perspecitves*. Ed. Philip P Hanson. Simon Fraser University Publications, 1986. pp. 175–179. Also see p. 70 of, Dumas, Denis. "L'écologisme est-il une idéologie? Pour une éthique et une politique de l'environnement à l'aube du XXI[e] siècle." *Instituer le développement durable. Éthique de l'écodécision et sociologie de l'environnement*. Eds. José A. Prades, Robert Tessier & Jean Guy Vaillancourt. Fides, 1994. pp. 65–76.

[22]This position is excellently presented by Taylor, Paul W. *Respect for Nature: A Theory of Environmental Ethics*. Princeton: Princeton University Press, 1986., and Rolston, Holmes III. *Environmental Ethics: duties to and values in the natural world*. Philadelphia: Temple University Press, 1988. For a strong attack on intrinsic value in nature see, Thompson, Jana. "A Refutation of Environmental Ethics." *Environmental Ethics*. Vol. 12, No. 2. Summer 1990. pp. 147–160.

[23]There are a series of articles written in defence of religion's role in caring for the environment, particularly the great westen religions of Christianity, Islam and Judaism, but also native American Indian religions, in Hargrove, Eugene E. (Ed.) *Religion and Environmental Ethics*. Athens: University of Georgia Press, 1986.

failed balancing act which is the fundamental difficulty with making decisions based on an anthropocentric view. There remains no way to properly make the case for nature, because nature is not properly involved in the consideration at all.[24] Of course, the utilitarian issue of balancing the needs of humankind with those of the environment are not much easier. The crucial difference between these two approaches however, is that nature is present for consideration in a fundamentally different way than future generations of humankind could ever be. In this difference nature at least has the possibility of being valued and cared for.

[24]This is the central thesis in, Katz, Eric and Oechsli, Lauren. "Moving Beyond Anthropocentricism: Environmental Ethics, Development, and the Amazon." *Environmental Ethics*. Vol. 15, Spring 1993. pp. 49–59.

Conclusion

In this thesis I have presented the central passages of the 'Critique of Teleological Judgement' which outline Kant's view of final ends. In Chapter 1, I considered physical ends which Kant equates with organisms. I outlined his distinction between such ends and machines, namely the sense in which the parts of an organism are reproductive of the other parts, while in a machine they are not. I also considered Kant's unique explanation of the agreement between the whole of nature and our system of cognition, as well as the role of reflective judgement in assuming this relationship to be necessary. In the second chapter, I went on to consider Kant's rejection of dogmatic teleology by way of his many examples. Following this, I explained Kant's understanding of extrinsic finality as a relationship of proximate use. I then concluded, by demonstrating his extension of this extrinsic finality to the whole of nature taken as a principal of science and a first step in the union of the physical and moral realms. In Chapter 3, I described Kant's argument against any organism, understood as a physical being, acting as the ultimate end of nature. This created the conceptual space for Kant to argue, that it is human culture, understood as a culture of skill and a culture of discipline, which is the ultimate end of nature. And finally, I linked this to my discussion in the fourth and final chapter of exegesis, in which I outlined Kant's assertion that the final end of creation is the group of individual moral rational beings.

This exegesis served to present the context for Kant's views as presented in the 'Critique'. In the fifth chapter, I sought to offer an environmental assessment of Kant's views as representative of the humanist tradition. I considered four points at which Kant

may be called to task for an excessive anthropocentricism. First, in maintaining that in order for humankind to know nature properly humankind must assume there is an agreement between human cognition and the remainder of nature. Second, Kant's inclusion of all of nature in his explanation of human history appears excessive and unnecessary. Third, in his lack of emphasis on the many similarities between humankind and other animals. And finally, in his rather dubious contention there is an ethical basis for the treatment of other animals in his system. I then went on to develop the strongest possible version of a Kantian environmental ethic. I concluded by trying to demonstrate how any anthropocentric environmental ethic is susceptible to the cooptative needs and desires of the human community. I presented, though did not argue for, an ethic of care and an ethic based upon the intrinsic value of nature, as alternatives to a Kantian ethic in this respect.

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