THE CONTINGENT NATURE OF LIFE

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The Contingent Nature of Life

Bioethics and Limits of Human Existence

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Introduction

The development of bioethics has presented us with an ever increasing number of very different discussions over the last four decades. Bioethicists were initially concerned about questions of reproduction, end of life, organ transplantation, and a broad range of moral problems raised by the forward march of the life sciences. Meanwhile these sciences grew to be a major influence in nearly all areas of our lives. Biotechnology has brought about considerable changes in agriculture, plant breeding, pharmacy, veterinary medicine and medicine in general. These scientific and technological changes in turn are having a profound influence on economy, law, politics and culture. The life sciences are now certain to change our world in important ways.

Because of their potentially all-pervasive and highly diverse impact, bioethical discussions concerning the life sciences are no longer simply about ethical guidelines or legal regulation of concrete technologies. Certainly, the on-going debates concerning rules and regulations are complicated – and becoming more so. Nevertheless, bioethics cannot be restricted to these topics – they cover but a fraction of the social and personal consequences of bio-technological change. The life sciences drive us to rethink long-time-honoured concepts of humanness, of personhood, of nature. Bioethics therefore needs to develop an understanding of the impact those changes have on the conceptualization of the ethical dimension of the life sciences.

The normative framework we might use for the evaluation of the life sciences is itself a matter of dispute. Not only are we confronted with a variety of ethical theories – a challenge for ethics in general – but also with very specific conceptual issues arising in the more specialized area of bioethics. It seems unavoidable therefore to choose a much broader perspective for an adequate discussion of the moral dimension of the whole impact of the life sciences.

The focus of this book is the notion of "contingency". Why? Because it seems as if the self-imposed mission of the life sciences amounts to a declaration of war on a specific characteristic of nature in general and of human nature in particular. Key words here are: imperfect, uncontrollable, largely (and perhaps permanently) unknowable, that is to say: contingent. Nature and Life are like deities fond of surprising us. And surely the unpredictable nature of life is what makes it so exiting. But at the same time it sets the limits for regulation and control. The contingency of life is a challenge for medicine and technology. Life sciences seem to broaden

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the possibilities of control to an extent that the contingency of life and nature is no longer self-evident. Today's very broad diagnoses raises a lot of serious questions. Are they valid diagnoses? Are the life sciences really defying the contingency of our existence? Or are they only manipulating us with utopian promises? And if contingency is really being challenged, why should we worry about it? After all, contingency is just a disturbing factor in our worldview, is it not? Or should we say that the contingency of our natural existence provides us with important sources of meaning and motivation? Is contingency essential for a meaningful life and way of life? To focus on contingency is to explore a notion that is of crucial importance in many cultures and religions and, simultaneously, a driving force in the life sciences.

This volume presents several perspectives on current debates in bioethics. It is part of a series of research activities that were discussed at a number of conferences supported by the European Science Foundation. The first volume of this series was published in 2006 under the title *Bioethics in Cultural Contexts*. That book had a methodological focus and was a collection of papers about different approaches in bioethics. The present volume concentrates on some fundamental philosophical concepts crucial to bioethics. The title, *The contingent nature of life. Bioethics and the limits of human existence*, refers to some of the ethically most challenging theoretical ideas touched by the life sciences.

The first section, "Contingency of life and the ethical", explores the different dimensions of how the contingency of life, and especially human life, is relevant to ethical discussions. The aspiration of the life sciences as a global enterprise is *knowledge* about life and nature and, concurrently, the development of methods for *intervention* in life and nature. These sciences challenge the contingent aspects of the natural environment and of the nature of humans. Life sciences are driven by the idea that we are about to achieve a far more powerful and specific influence on natural processes than ever before. However, biologists are very careful about promising control over the biological basis of human beings and their life conditions. The genetic determinism that seems to be a necessary presupposition for the project of the life sciences is highly controversial. In the discussions, the notion of "contingency" is on the agenda again and is an index of the highly complex relationship between life sciences and the philosophical self-interpretation of human beings. The main goal of this section is to identify the new dimensions of our philosophical concepts of nature, life and contingency in the context of the life sciences, and to explore to what extent this influences ethical debates. Changes in our understanding of nature and life will change the limits and scope of human existence. Therefore this section is also closely linked to the issue of the first conference at which the notion of "finitude" was very prominent.

In the second section, "Ethical theories and the limits of life sciences", several papers deal with the challenge issued by the life sciences to our normative frameworks. It is the task of ethical analysis to provide us with a justification of the principles by which we morally evaluate the life sciences, and to determine moral limits in a transparent and non-arbitrary manner. This task of ethical reflection is, however, challenged by the life sciences in several respects. The impact of the life sciences on our concepts of personhood, human nature, vulnerability and the like is not only

important for the self-interpretation of human beings from an anthropological and hermeneutical perspective, but is also significantly influential for normative concepts. On the one hand the nature of ethical reflection and moral judgment are much debated. Bioethical discussions have forced us to reflect more deeply on how ethical evaluations are made, how to combine empirical and philosophical reflection, and how to come to concrete but philosophically defensible judgments. On the other hand, concepts of moral protection are questioned in view of new fields of activity such as intervention in human procreation and reproduction. In this context the issue came to be: what needs to be morally protected after all? Debates on moral protection and moral rights refer to aspects of human existence that may deserve protection. Moral protection presupposes vulnerability, need, capacities and desires as possible objects of protection. Therefore this section contains conceptual and philosophical reflections on these notions.

The contributors to this volume did not want to remain on a purely philosophical level. The aim was to effect a linkage, a combination of fundamental, conceptual reflections and concrete bioethical debates. In the section "Cases of limits" such interfaces with concrete debates are explicitly made, and the majority of papers deal with issues concerning human reproduction. Human reproduction seems to be an area in which the developments in the life sciences touch the most private and intimate areas of human existence. In this context, but also in other areas of bioethics, we meet with sometimes acrimonious discussions of the meaning of freedom, autonomy and informed consent. Although in this section special attention is paid to human reproduction, the implications discussed are much broader in scope.

Particularly important for the discussion about the limits of human existence is the impact of the life sciences on people with disabilities. Accordingly, the section "Abilities and disabilities" addresses this topic. The life sciences are exploring possibilities to ease disabled people's burdens, to enhance their lives, ultimately to get rid of disabilities altogether. Throughout the world, however, there are disability movements that in many respects consider the new developments as constituting a challenge. The impact of these developments on the identity of people with disability, their need for social recognition, the extent to which societies owe them justice and respect have all received too little attention in bioethical debates. For future bioethical work the implications of the life sciences for thinking about and living with disabilities should be a central topic. This section aims to identify some of the issues that need to be put on the research agenda.

In the last section, "Others' views: Intercultural perspectives", several scholars offer insights into how different cultures may perhaps converge in our bioethical debates. There is no doubt that cultural traditions, whether from Asia (especially China), Israel, Russia or other parts of the world, are putting their indelible stamp on bioethics. The different roles of the family in different cultures, different concepts of individuality or concepts of nature are each in their own way framing the debates in nearly all areas of bioethics. However, it is only very recently that the importance of an intercultural perspective has been acknowledged. The papers in this volume present a variety of interesting perspectives to open the philosophical discussion on the intercultural dimension of bioethics.

It was the goal of the editors to offer a variety of perspectives and a diversity of approaches. We are convinced that for a discussion of the ethical and philosophical dimensions of the life sciences an interdisciplinary debate involving a broad range of approaches is urgently needed. We hope that this volume may contribute to a more intense debate on the cultural importance of the life sciences.

We want to thank several people. First of all the participants of the two conferences in Davos (2001) and Doorn (2005) who made the discussion about the philosophical perspectives of the life sciences a really exciting experience. We would also like to thank the European Science Foundation for its financial support of those conferences.

For the conference in Doorn we also want to offer our sincere thanks to those who provided additional funding: Utrecht University, the Utrecht-Leiden research institute for philosophy ZENO, the Netherlands School for Research in Practical Philosophy, the Netherlands Organization for Scientific Research, the Royal Netherlands Academy of Arts and Sciences, and the International Association for the Promotion of Cooperation With Scientists from the New Independent States of the Former Soviet Union (INTAS). Our special thanks go to all those who participated in the organization of the conference: Anna van Dijk and Lenka Chludova, and especially Stephanie Roels who for months did a tremendous job organizing the conference. During the preparation of the book, Frederike Kaldewaij and Gerhard Bos have spent a lot of time and effort supervising the editing of the manuscripts. We would also like to thank Fritz Schmuhl of Springer Publishing for his support. Finally we would like to thank two anonymous reviewers of the manuscript; their suggestions certainly helped to improve the quality of the texts.

Part I
Contingency of Life and the Ethical

The Value of Natural Contingency

Ludwig Siep

1 Contingency as Imperfectness

Despite the recent increase in the occurrence of natural catastrophes, of which only a part is caused by human activities and forms of life, human control of natural processes is increasing in many spheres of the natural world, especially in the realm of living organisms. From the time of Francis Bacon and the New Science through the Enlightenment and the Rationalization Processes of the nineteenth and twentieth centuries there has been little doubt concerning the value of human control of natural processes. Just as in the metaphysical tradition, natural contingency was considered as something imperfect and disadvantageous for human beings.

This view remains unshaken as it relates to some areas of natural processes and events, like the mentioned catastrophes, and also to human health. Today, the attempt to eliminate contingency has reached the threshold to an improvement of natural processes including human reproduction and individual genetic outfit. However, these possibilities begin to cast doubt on the traditional "contempt" of contingency and the aim of complete control of natural processes. Even concerning *animal* breeding the attempt to secure results by cloning the optimal stock animal is not beyond doubt and criticism (cf. Siep 1998: 191–198). There are three main reasons for those doubts and for a possible re-evaluation of natural contingency: *Firstly*, control implies responsibility and this may generate severe problems in interpersonal and intergenerational relations. *Secondly*, technical forms of breeding may reduce biodiversity. *Thirdly*, the ideal of a completely foreseeable process of natural events may deprive human beings of valuable life experiences with events and circumstances that are independent of their wishes and expectations.

In the following, I will discuss these problems within the broader framework of the philosophical conditions of an evaluative view of nature (for the following cf. Siep 2004b). Such a view existed in pre-modern metaphysics and survives in the common sense of present times. But the "scientific image" regards nature as completely value-free. Values seem to be generated by individual wishes and private

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evaluations. The pluralism of modern societies seems to be based on the privacy, subjectivity and irrationality of values. This, however, may be a view which cannot account for common value experiences and the possibility of rational deliberations guiding public decisions on technical options concerning natural processes and events.

Before I turn to the questions of subjective and objective values, however, I will try to clarify the concept of "natural contingency" to some extent.

2 The Meaning of Natural Contingency

Natural contingencies may have a broad range. The seaquake which devastated the brim of the Indian Ocean was unforeseeable and therefore contingent as to human knowledge and expectations. This does not mean, of course, that it had no causes or did not follow laws of nature. But its exact location in time and space and the size of its effects could not be predicted. In the following, I will not discuss the logical, epistemological and ontological questions of necessity and contingency. By contingency of natural events and processes I understand the quality of such entities to be uncontrolled and unpredicted by human behaviour and knowledge. Earth- and seaquakes are still contingent in this sense, since their exact occurrence in time, the location of their focus, their size and effects are beyond control and precise prediction. Since this use of "contingency" is related to possible human prediction or control, the difference between stochastic processes and those explainable by "classical" Newtonian physics is not of crucial importance here. Not all processes explainable by classical physics are predictable or controllable. Therefore human beings cannot be held responsible for the failure or lack of action to predict, prevent or control them.

The same is true for genetic mutations and for the results of gene-mixing within the process of natural sexual reproduction. However, these particular processes can be influenced by human action – perhaps they could one day be completely replaced by artificial combination of "parental" genes, by cell nucleus transfer or by other yet unknown technical procedures. Thus we have to distinguish between processes beyond human control and others which may either be left uncontrolled and contingent or be replaced by technical procedures.

To a certain degree, the concept of nature and the concept of contingency depend on each other. The very meaning of "nature" seems to be "independent of human will and wishes" – even if for most natural processes and objects there is not a great deal of naturalness left over in modern times. These processes and objects are influenced by human behaviour and since this behaviour depends to a great extent on wishes and voluntary decisions, the whole distinction between nature and culture, artificial products and natural beings seems to break down. However, there is still an important difference between processes and beings *directed* by the human will and those who are – unintentionally and sometimes by many detours and side effects – merely *influenced* by human behaviour. This difference pertains even to the human

body and its completely or partially uncontrollable processes compared with those we can direct voluntarily.

If "natural" means at least partly uncontrollable, it may follow that nature as a whole is contingent. But according to the common use of the concept it is certainly not contingent that the sun rises at a time which we can predict exactly and that the earth repeats its movement with long-enduring regularity. Even if this, as Hume pointed out, is not a logical or conceptual necessity, and even if it may be changed by some cosmic catastrophe, it does constitute a series of events and processes which are explicable, predictable and reliable. In contrast, by "contingent" we understand only those processes and their outcomes which are not only independent from our will, but also unpredictable by our best available knowledge – leaving open the question whether some of them may be in principle beyond human knowledge and control.

According to most of the *traditional* views, natural contingency had no ultimate reality. In the teleological conception (which despite the rise of mechanical physics lasted up to the first decades of the nineteenth century), nothing was without purpose in nature. If the purpose was unknown or not yet understandable, this was due to a limit in human understanding, either temporary or in principle. Since the very concept of an organized living being was not possible without the presupposition of its intentional production – as Kant maintained in his third critique – an infinite understanding and will had to be presupposed (cf. Kant 1968: 398ff.). In the Aristotelian conception, there was at least room for a sphere of irregular and unpredictable processes in the sub-lunar sphere, but this was a sphere of imperfection and futile striving for the perfection of the supra-lunar movements and bodies.

Starting with the new science and philosophy of the sixteenth and seventeenth centuries, it was argued that this imperfection had to be improved by human science and technology. For thinkers in the Calvinist tradition such as Bacon or Locke this was even a divine command whose fulfilment would be assessed at the Day of Judgement (cf. Locke 1959: 360–362). Contingency of natural processes remained something negative and to be overcome throughout the age of enlightenment and the technical and industrial era. Fichte referred to the "last convulsions" of a nature not yet conquered by the autonomous human will (Fichte 1968: 268f.).

However, with the theory of evolution, with classical and modern genetics, with the evolutionary view of the cosmos, perhaps also with the theory of chaotic natural and artificial processes, the realm of contingency seems to grow. On the other hand, the techniques for manipulating and controlling natural processes are improving with increasing speed.

It is a well-known cultural and historical phenomenon that the value of goods and processes becomes apparent just at the time when the quantity and accessibility of them is reduced dramatically. Rousseauism, Romanticism and other pro nature movements started with the peak of the Enlightenment and the early phase of industrialisation. And the twentieth century ecological movement was fuelled by the growth of mega-cities, industrial (and therefore predominantly mono-cultural) agriculture and the serial mass-production of technological goods. It seems that the

new biotechnical possibilities raise awareness of potential losses in biodiversity and spontaneity. Correspondingly the discovery of the value of cultural diversity may be a reaction to the rationalization processes of the twentieth century, concerning urban planning, administration reforms, global business, entertainment and mobility.

Before the possibility of technically optimizing life processes existed, contingency, spontaneity, non-repeatability, unpredictable variation etc. belonged to their distinctive features. Of course, some of these processes resulted in deformations causing suffering to organisms and their environment. Many of the "copy mistakes" in the process of gene-directed development of animal and human organisms lead to severe illnesses or disabilities. But there are other processes and their outcomes which many human beings regard as valuable, such as diversification, individualisation and also the contingent composition of individual genomes which no one has to take responsibility for.

Before discussing further the value of such aspects, however, I will briefly turn to some general questions concerning values, particularly the value-character of natural properties.

3 Nature and the Status of Values

Like modal logic, epistemology and ontology, value theory is a broad field which I can only touch on here. There is a longstanding and ongoing discussion in value theory and meta-ethics concerning ontological and epistemological options. The three main options in value ontology are realism, projectivism and versions of a relational theory of value. In epistemology different sorts of value-subjectivism and -objectivism are defended. I have discussed some of these options elsewhere (see Siep 2004b: Ch. 3; cf. also Quante 2003: 95ff.). Here I confine myself to some sketchy arguments for a relational theory of values which can lay claim to intersubjective and intercultural approvability. I start with three examples of commonly accepted values: justice, health and biodiversity.

1. It is certainly not easy to defend the value of justice as objective against the positions of projectivism and subjectivism. It is a standard argument of nineteenth and twentieth century historicism and legal positivism that there have been almost as many conceptions of justice as there are political constitutions and systems of positive law. But the value of justice is not simply a question of convention. It is tied to social and natural facts and to basic conceptions of culture or community, even if they are controversial. Justice, as Aristotle observes, has to do with special sorts of equality (cf. *Ethica Nicomachea* 1131 a 10ff.). There must be some equality between deed and punishment or burden and benefit in joint action. If criminal justice is a cultural successor of injury and revenge, as for instance Mill suggests, there must be a coherent relation between natural events, cultural criteria and their narrative or rational legitimization (Mill 1993: 53f.).

   One could extend this argument regarding virtues in general (regarding the following cf. Siep 2005: 83–98): The origins of virtues are very likely narratives

about praiseworthy and exemplary deeds and characters – such as the Homeric or Babylonian epic poems. They contain rather precise descriptions of "virtuous" deeds. Instead of being derived from ideas or fixed norms, virtues are discovered by describing particular actions and reactions regarded as appropriate, as successful and exemplary solutions of social problems or as astonishing manifestations of human faculties. In the cultural process, virtues gain ever more stability and independence from the "mental states" of their "executors" as well as their observers. Virtuous actions are "incorporated" in the behaviour and physiological states of a body. At the same time, they belong to a social world of public rules and interactions. The reactions of a virtuous or non-virtuous person can be to a certain degree foreseen and relied on by other persons – in analogy to natural events following laws of nature. The social world can be regarded as a second nature with its own laws and in many respects connected with the order of the "first" nature.[1]

2. Turning to the second example and to a more "natural" value, there is little question, that "health" is a personal and social value of almost universal acceptance. Of course, human beings can abstain from fulfilling their bodily needs, but that does not diminish the general value of many natural properties of the body and its environment for typical human beings. The same is true regarding illness as a means to moral or artistic virtues: What may favour valuable dispositions in some people does not represent a value in itself and is usually an obstacle for the achievement of many normal values and expectations.

   To achieve and preserve health is a social aim of many communities pursued in institutions such as hospitals, medical professions, health care systems etc. Of course these institutions can have very different shapes and degrees of complexity, specialization, professionalism, financing, technology, and so on. But health is a common goal and a firmly established value in most societies. It has a natural basis in conditions and functions of the human body. To be sure there are different cultural and theoretical concepts of health and different social standards of expectations concerning the normal faculties of a healthy human being. But they have to be related to physiological states and functions. One may call health a supervenient value-relation with a basis in physiological, mental and social facts. It is not simply a social fashion or a private wish which could be projected on every possible state of a value-free social or natural "reality".
3. My third example is the value of biodiversity. This will take us closer to the value of natural contingency. Skipping over the problem of how to quantify and measure biodiversity (cf. Gutmann and Janich 2001: 3–27; Kim et al. 2001), I understand it simply as a variety of forms of life generated by the process of evolution. In recent discussions a common distinction is made between natural varieties in species, genes and ecosystems (cf. Janich 2001). Now these varieties are valuable at least in the following respects: *Firstly*, valuable for non-human living beings regarding their survival and fitness, *secondly* valuable for ecosystems, and *thirdly* for human beings in different respects – among them medical, agricultural and aesthetical.

A projectivist will argue that all three respects depend on human wishes and valuations. Against this it may be argued, *firstly*, that whether something is good for a non-human living being or an ecosystem, meeting human needs or improving fitness depends on many biological properties "in the world". A considerable extent of biodiversity seems to be among these properties.

Secondly, the response that the existence of something in nature is only valuable if human beings like, want or esteem it, presupposes a strong anthropocentrism. In my view this is hard to match with an evolutionary perspective and with the semantic of "good" in the ethical sense. Of course, conscious judgement and verbal expression is only possible for human beings. But other beings have their own way of valuing or realising valuable relations. To argue that only human beings "create" goodness by their valuation sounds like a secular version of the view that the world exists only for the sake of human or moral beings.[2] And the ethical meaning of "good" is certainly not, "to be valued or preferred by human wishes", but "worthy of being esteemed, approved, striven for etc.".

To be sure, biodiversity may be judged as valuable for human beings because it serves human needs and therefore possesses value in a more than private sense (for the following cf. Siep 2004a: 17–24). But to what degree biodiversity is good for human beings in this respect is a question much discussed in recent ecology. It may be argued that human needs could be met with much less diversity than that which recent international conventions seek to protect. Similar doubts have been raised as to the degree of economic profit to be drawn from biodiversity for the pharmaceutical industry. And even tourism may continue with much less than the current level of natural biodiversity.

Nevertheless, as some recent comments even from law experts have pointed out, since the conferences of Stockholm and Rio the international documents show a trend towards "protecting nature for its own sake" (Wolfrum 2001). Perhaps this tendency shows that the value many religions and cultural traditions have seen in the natural diversity of the cosmos is about to be rediscovered by humanity. This would be another example of becoming aware of a value in the very historical moment in which it is endangered by human activity as never before.

In order to defend such a position one has to argue that the value-free conception of nature in the sciences is not the original and not the only objective perspective on nature. Rather, it is only one type from the manifold perspectives human beings can develop. In all of these perspectives evaluative moments are included, even in the sciences they cannot be completely eliminated. These implicit evaluations may either be developed to a conscious and rationally defensible form, as in aesthetics, ethics and to some extent in politics. Or they can be diminished for the sake of neutral methods of research and experimentation. But these research methods themselves are tied up with values such as truth, sincerity, fairness etc. And they serve values like the prediction of events, technical applicability, the improvement of medicine etc. They presuppose discoveries of what is valuable for human beings and of course also settlements about which individual wishes should be allowed or forbidden.

Such discoveries and settlements can be the result of common experiences in the process of the cultural formation of values and norms. The structure of experiences supporting or changing common values is another subject which I can only touch on here. Collective cultural experiences are of a character quite different from methodical experiments or observations in the sciences. They involve shared feelings of suffering or relief, commonly accepted interpretations of historical events, convincing theoretical reflection, critique or justification of values – and, of course, processes of the enactment and change of laws or law-like conventions, sometimes of a global range.

4 Valuable Aspects of Natural Contingency

Let me draw some consequences from these reflections regarding the value of natural contingency. Human evaluations of natural objects and processes may depend on a broad range of perspectives. Such objects may serve basic human needs or may derive their value from cultural perspectives in art, religion etc. But, in a long-standing intercultural perspective, they may also have been regarded as belonging to a good shape of nature to be maintained and protected for itself. One may argue that the very concept of "good" in its ethical sense has been developed in view of a shape of nature as "cosmos" in the evaluative sense. That is, as a state of the world which could be universally affirmed and regarded as worth to be attained.

Now natural contingency is certainly a relationship between things and processes on the one hand and human cognition and will on the other. It is characterized, as we have seen, by a special kind of independency regarding these human faculties. This contingency and its results may be considered good or bad. As recent experiences show, it does not seem rational to regard natural contingency as intrinsically bad in the way many metaphysical and scientific positions have done in the past. Some natural processes and events are good for human beings *just because* they are uncontrollable and unpredictable. But others are bad due to the same property and the resulting impossibility to prevent them or protect oneself against them. It is possible that the contingency of processes like bisexual reproduction in mammals may have positive and negative value regarding different aspects of their outcomes. Thus what is needed is a perspective which can distinguish between valuable and negative aspects of such processes. In other words: an evaluative perspective on nature beyond private wishes or tastes.

There seem to be three principal positive effects of the contingency of reproduction and evolution: The *first* is the social effect of easing the burden of responsibility for the natural equipment of human beings. If this were to be replaced by voluntary action and technological construction, individuals or societies would have to accept responsibility for the outcome – and eventually compensate those which suffer from them. This would put a heavy burden on the relation between parents or other people

responsible for the designed "gene-mix" and the offspring endowed with it. But it would also affect the relation of society to those of its members which are less fortunate in gaining the means for securing an advantageous physical outfit. Beyond the compensation of the effects in everyday life, society could be made responsible for the distribution of natural properties itself. To leave this burden to the contingent processes of genetically uncontrolled reproduction represents a positive value for social relations.

The *second* positive effect is the genetic variety between species and between individuals which so far have resulted from the contingent processes of reproduction, species formation and evolution in general. I have discussed the different value-aspects of biodiversity in the preceding section of this paper.

The *third* positive value-aspect of natural contingency may be the general independence of natural processes from human will and foresight. It is not limited to such seemingly subjective and marginal benefits as surprise, the possibility for discoveries, the avoidance of repetition and boredom etc. Natural contingency could also be valued in a more fundamental way regarding the existence of an independent "partner" of humanity, something which at least in some respects remains unconquered, incalculable etc.

If natural contingency can be regarded as a value, we have to deal with a rather complex relationship: Contingency is a relationship between the world and human faculties – and values are themselves relations between these poles. As in other value-relationships, the value of natural contingency supervenes on a relationship between natural processes and human dispositions. In some cases – as in leaving the burden of genetic distribution to nature – it is contingency *as such* which is valuable. In other cases, such as positive surprises and encounters, contingency is rather *part* of the value. And in still other cases, particular results and aspects of contingent natural processes are the principal bearers of value.

Certainly more analysis is needed to determine the exact properties of this value relationship. For philosophical value theory it is important to realise that on all levels of the relationship the *relata* are to a considerable degree independent of each other. Due to this partial independence in relation to individual wishes and mental states in general, what is valuable belongs to the fabric of the world and is not simply projected on it. In my view, modern bioethics is as much in need of a sort of value realism – if a relational one – as it supports the plausibility of such positions in value theory and meta-ethics. Questions of the value of natural properties, including those of the human body or human reproduction, can only be treated sufficiently by means of such a theory.

Notes

[1] For a renewal of the concept of "second nature" cf. McDowell: 167–197.

[2] That the only value and meaning of the existence of the world ("Dasein einer Welt") lies in its final aim (Endzweck), the moral human being, is Kants view in the Critique of Judgement. Cf. Kant 1968: 434 f., 449.

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Between Natural Necessity and Ethical Contingency

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1 Concepts of Necessity and Contingency

It is a well-known fact that the human mind is good at performing some theoretical activities such as logical and mathematical thinking, and also good at practical ones such as building airplanes and designing computers. The human mind is not very good or rather weak at some speculative activities such as metaphysical and moral thinking. It is not a logical contradiction to assume a world in which the human mind is good at metaphysics and ethics, and not so good at logic and mathematics or even to assume a world in which the human mind marvels in both areas. That the human mind cannot have it both ways is a contingent fact; or is it? To answer this question, we need to clarify the concepts of contingency, necessity, impossibility, and we also need to have a proper concept of mind; neither need could be satisfied easily. The question in its bare essentials relates to who we are and what we can know.

Modal concepts are usually grouped into the following three modalities: necessary, possible (contingent) and impossible.[1] Since these modal concepts are semantically related, they are usually defined in relation to each other; in other words, if we can understand one of them "intuitively", we can easily understand the other two. Necessity, contingency and impossibility are also defined in relation to three different disciplines of philosophy: logic, ontology and ethics. From a logical point of view, these concepts are seen as the property of propositions. A proposition is necessary if it is always true, or if its negation is a logical contradiction; and conversely a proposition is possible if is not always true, or if its negation is not a logical contradiction. Finally, a proposition is impossible, if it is never true (or always false). For example, it is always true and thus logically necessary that circles are round; it is not always true and thus logically possible that a certain circle has five centimeter diameter; and it is never true and thus logically impossible that circles have three angles.[2]

Ontological necessity, on the other hand, is a matter of natural or physical laws. Something is ontologically necessary, if a physical law makes it exist the way it does and not any other way. For example, laws of motion make it necessary that the

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world follows an elliptical orbit around the Sun, and not a full circle (Will 1989). Ontological contingency, on the other hand, refers to the case in which something may or may not exist. It is a contingent fact that the solar system has the number of planets that it has rather than more or less.[3] To imagine that the solar system in which the sun had only five planets or the world had more than one moon is not to think something against a physical law. Furthermore, something is ontologically impossible, given the laws of physics, if it can never exist. Given what we know about the surface and atmospheric conditions about Mars, it is physically impossible that life exists in it.

Finally, ethical necessity is what accords with an ethical rule or law that has a normative moral value. Something is ethically necessary if it is always true; for example, it is always true that one should not harm innocent persons. Conversely, something is ethically contingent, if its rejection does not violate an ethical law. One may pursue a career in philosophy or in politics, and neither preference is ethically binding, there is no moral duty or obligation to prefer one to the other. Ethical impossibility is rarely discussed in the literature, thus it is hard to find a definition for it. The closest example to ethical impossibility, I think, is to hold babies responsible for their actions.

The relationship among these three kinds of necessity is a matter of controversy. Some philosophers believe that the distinctions among them are definite, and that any attempt to reduce one to the other will necessarily fail. Others who see parallels between ethical norms and logical necessity want to establish ethical norms on a transcendental (a priori) base. There are also those who want to reduce ethical values to the statements of science, i.e., psychology or biology (Will 1989).

Since modality is primarily a subject matter of logic, our theory of logic has bearing on how we evaluate and apply these modal terms. The concept of logic has undergone substantial changes in the last couple of centuries. Traditional Aristotelian logic was criticized as being unfit for science because science is (or has to be) empirical in principle. There is no need here to go into the reasons and explanations why Francis Bacon, David Hume, John Stuart Mill and others replaced the deductive methods of classical sciences with inductive logic. Furthermore, modern logic that was initiated through the pioneering works of Giuseppe Peano, Gottlob Frege and Bertrand Russell rejected certain assumptions on which the traditional Aristotelian logic was built.

Russell, for example, criticized the traditional logic on a number of points: for its negligence of empirical knowledge and observation, for its attempt to deduce all facts theoretically, and more importantly, for its fixation on the concept of necessity. The traditional logic, according to him, attempted to construct the world through the method of negation without or with little appeal to experience. Traditional logic first considered a set of seemingly possible alternatives about the world, then negated all but one, and claimed that this must be the actual world. Traditional logic looked for alternatives that were impossible. Its main concern was to find out how the world cannot be, instead of how it can be. The true function of logic, Russell claims, is exactly the opposite; to show the possibility of alternatives that are previously considered necessary or impossible. In this way, the new logic “liberates imagination