

Joachim Rathmann / Uwe Voigt (Hg.)

# Natürliche und Künstliche Intelligenz im Anthropozän

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# Nature as a Work of Art?

translated into English by Kevin Fencil

Marion Friedrich

## Zusammenfassung

Unser Verständnis (unser „Begriff“) der Natur ändert sich mit zunehmenden technischen Möglichkeiten: Schon lange betrachten wir sie nicht mehr nur und bilden sie ab – wir zerlegen sie in Einzelteile und bemühen uns, sie uns zugänglich zu machen – das, was unsere Sinnesorgane nicht funktionsintrinsisch wahrnehmen können, amplifizieren und verändern wir. Auf diese Art schaffen wir u. a. Synästhesien: „Sounds of decay“, das Forschungsprojekt mit künstlerischen Ambitionen von Cat Hope<sup>1</sup> ist ein Beispiel. Tod, Zerfall von lebender Materie, sichtbar mit und ohne Hilfsmittel, wird hörbar gemacht.

Auf der anderen Seite verschieben wir unsere „natürlichen“ Grenzen als Menschen durch die Implementierung künstlicher (technischer) Komponenten in den lebenden Organismus mehr und mehr. Jeder Versuch, Natur (über die Erkenntnisse der Einzelwissenschaften hinaus) begrifflich zu fassen, führt in letzter Konsequenz zur Frage nach der Natur des Menschen zurück: Diese Hürde zeigt sich zunächst unüberwindbar. In jedem Bemühen, Natur zu objektivieren, setzen wir sie in Relation zu uns als Subjekte. Insbesondere die Möglichkeiten der modernen Technik stellen uns erneut vor die Herausforderung, Stellung zu uns als natürliche, in der Natur befindliche (und von ihr abhängige) Lebewesen zu beziehen – und dies unabhängig davon, welches Gegensatzpaar wir in dem Bestreben, uns einen Naturbegriff zu bilden, auch konstruieren (Natürlichkeit – Nicht-Natürlichkeit; das Ent-

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<sup>1</sup> Sounds of Decay (2013). Sound Installation. Premiered at SemiPermeable at the Powerhouse Museum, Sydney, as part of the International Symposium of Electronic Art. Made in collaboration with Rob Muir, as part of an artist residency at SymbioticA lab.

standene – das Gemachte; das Normale – das Abnormale; das Authentische – das Künstliche; Gesetzmäßigkeit – Willkürlichkeit).

Je nachdem, wie wir Natur definieren, gelangen wir zu gänzlich unterschiedlichen Schlüssen in Bezug auf die Legitimität des (naturgemäßen?) Bestrebens, eben jene zu überwinden bzw. die uns durch unser Menschsein natürlich gegebenen Grenzen zu erweitern. „The primary political and philosophical issue of the next century will be the definition of who we are“, schrieb Ray Kurzweil<sup>2</sup>. Noch nie schien die Kluft zwischen dem, was wir tun können (was technisch realisierbar ist), und dem, was wir tun möchten (was wir für moralisch richtig, für unanfechtbar halten), größer: Doch wie können wir entscheiden, ob beispielsweise Moral-Enhancement „richtig“ im Sinne von „natürlich“ genug (= moralisch korrekt) ist, wenn wir uns noch nicht einmal darüber klar sind, was überhaupt die „Natur des Menschen“ ausmacht?

Dass wir in die Natur eingreifen, sie zu verstehen und verändern suchen, ist allgemein eine (moralisch) akzeptierte Tatsache. Seit jeher haben wir unsere Umwelt (die „Natur“) durch unser Eingreifen zu Gunsten der menschlichen Spezies manipuliert. Heute verfügen wir über die technischen Möglichkeiten, in die Natur des Menschen selbst einzugreifen – ohne sie bislang ausreichend definiert zu haben: Mittels Enhancement-Methodik nehmen wir Einfluss auf Kognitionen, Emotionen und sogar Wahrnehmungsmodalitäten.

Es ist dringend erforderlich, dass wir uns darüber verständigen, „welche Art und welches Ausmaß des Eingreifens gut ist“<sup>3</sup>, auch, wenn der Versuch, eine einheitliche „Naturphilosophie“ und sei es nur durch das Erreichen eines Konsens in Hinblick auf einen Naturbegriff, zu betreiben, utopisch wirkt.

Es war kein allzu langer Weg von der Feststellung, dass Kunst konzentrierte Natur sei<sup>4</sup> über hybride Kunstskulpturen bis hin zu „Sounds of decay“, dem Projekt von Cat Hope, die als Mitglied der australischen interdisziplinären Forscher-/Künstlergruppe SymbioticA, den Zerfall lebender Materie vertonte: Das Zellsterben einer in einem Luftentfeuchter gehaltenen, austrocknenden Riesenkröte wird in Musik umgewandelt. Auf diese Art machen wir Natur zum Kunstprodukt, machen sie uns für alle unsere Sinnesmodalitäten zugänglich, erweitern zugleich mit Neuroprothesen unsere Sinneskapazitäten.

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<sup>2</sup> Kurzweil (2000).

<sup>3</sup> Siep (1999).

<sup>4</sup> Balzac (2002).

In dieser paradoxen Situation, in der die einen daran arbeiten, moralisches Urteilsvermögen (mit konsequentem Handeln) durch Eingriffe in die „menschliche Natur“ zu stärken, und die anderen „natürliche“ Prozesse pervertieren, um sie, auch unter Einbezug quasi synästhetischer Empfindungen, zu ästhetischen Objekten zu stilisieren, sich ihrer eigenen Natur damit entfremdend, wird Natur im doppelten Sinne zu einem Kunstprodukt: Natur wird zu konzentrierter Kunst.

## Abstract

Our understanding of the term “nature” has changed as our technological prowess has grown. Whereas nature used to be something we observed and created representations of, it is now something we attempt to make accessible by disassembling into tiny pieces, amplifying and modifying that which our senses cannot otherwise perceive. In the process, we create experiences that are in part synesthetic. “Sounds of Decay,” in which death and the decay of living matter are made audible, is an example of this. Parallel to this, we’ve embarked upon an attempt to enhance our own “natural” abilities to perceive and perform by implanting artificial – technological – components in our bodies.

Findings within the individual branches of science notwithstanding, any attempt to make nature definable ultimately and inevitably leads to questions about the nature of man himself. Whenever we try to objectify nature, we do so relative to ourselves, the subjects. Regardless of which pair of opposites we choose (natural/not natural; that which originated/that which was made; the normal/the abnormal; the authentic/the synthetic; that which conforms to rules/that which is random), the possibilities afforded by new technologies present us with the challenge of constructing – or construing – a concept of nature and of taking a stance on what it means to be a human being, both of and dependent on nature. Depending on how we define nature, we arrive at widely varying conclusions about the legitimacy of our (natural?) efforts to overcome it, to go beyond the boundaries it has set out for us as humans.

“The primary political and philosophical issue of the next century will be the definition of who we are,” wrote Ray Kurzweil in the year 2000. The gap between what we are able to do (i.e. what was technologically possible) and what we want to do (i.e. what we considered morally defensible) has never seemed larger. How are

we to decide whether moral enhancement, for example, is “morally correct” in the sense of being “natural” enough when it isn’t even clear to us what the essence of the “nature of man” is?

That we intervene in nature and seek to understand and change it is a (morally) accepted fact. Human beings have been modifying their environment (nature) to suit their purposes since time immemorial. Today, we possess the technological savvy to manipulate the nature of man itself without having sufficiently defined the “nature of man.” Various methods of enhancement allows us to influence cognition, emotion and even modes of perception.

It is absolutely crucial that we reach a consensus about “what type and what degree of intervention is good” (Siep 1999), no matter how utopic the attempt to come up with a philosophy of nature we all can agree upon, or at the very least to reach a consensus regarding the definition of nature, may seem.

The path leading from the observation that art is concentrated nature (Honoré de Balzac, 1799–1850) via hybrid art sculpture to “Sounds of Decay” (a project by Cat Hope, who is a member of SymbioticA, an interdisciplinary Australian group of researchers and artists) is a short one. The dying cells of a cane toad dehydrating in a desiccator are transformed into music. Nature becomes a synthetic product, something we can experience with our senses, while our senses are enhanced with neural prostheses.

In this paradoxical state of affairs, in which one group strives to improve our ability to pass moral judgment (and act upon this judgment) by intervening in “human nature” while another group perverts “natural” processes and utilizes quasi synesthetic perception in order to create aesthetic objects that bear little relation to their natural selves, nature becomes not only a synthetic product but concentrated art.

## 1. Nature as a Work of Art

Suppose I arrived on Earth as a visitor from another planet and was taken on a sightseeing tour. If we first visited the river Lech as it runs its “natural” course<sup>5</sup> and afterwards an artfully placed pond in somebody’s garden, I’d hardly be able to tell

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<sup>5</sup> Cf. Soentgen (2014).



which of the two is “natural” and which has been “made” – at least not without some sort of prior knowledge. I would see water, in varying degrees of motion, surrounded by a landscape – even the concrete bed of the pond is ultimately made out of “natural” materials<sup>6</sup>.

In order to differentiate nature from art, I have to apply the knowledge I have at my disposal about how the water came to be and about the rules and laws that govern its flow. In doing so, I would be introducing myself as an observer into the equation. What I could say is: If, by applying the methods available to me as a scientist, I can observe or at least assume the existence of some sort of adherence to a natural law, then the thing I am observing is nature. Water, for example, wants to flow downhill. Even a hill of sand piled up by a child can cause water to flow downhill, assuming there is enough mass to propel it forward.

Art seems to adhere to laws that can hardly be comprehended “objectively.” In everyday speech, art is thought of as something that has been made. Yet, is a bird’s nest *nature* or *art*? Whether we think the landscaped waterfall in our neighbor’s garden is pretty or aesthetically pleasing seems at first to depend on purely subjective preferences. Nonetheless, even our aesthetic sensibilities adhere to certain rules – both in art and in nature. Beauty, it turns out, is measurable. We consider a face to be beautiful, for example, when its features stand in a certain proportion to one another<sup>7</sup>. Both symmetry and “proximity to the average” (or “familiarity”) determine whether or not we find a face attractive in our culture<sup>8</sup>.

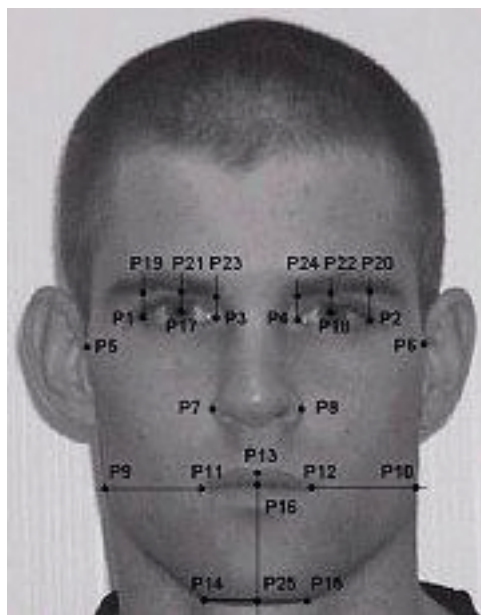
As a human being subject to the laws of nature, it is impossible for me to step outside myself and exempt myself from all the implicit rules that influence how I perceive things. Because of this, I can only perceive everything the world has to offer as a work of art. What qualifies as *nature* outside of my field of perception is impossible to say, given that man himself is a work of art.

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<sup>6</sup> Clearly, we can’t create “new” materials. All we can do is use existing “natural” materials and combine them, transform them or change their ratio to one another. At the microscopic level, their components remain the same.

<sup>7</sup> When we emphasize certain features (when we elevate the familiar to the extraordinary, for example, by giving a face larger than average eyes), we create beauty, consciously turning “nature” into art.

<sup>8</sup> Cf. <http://www.zib.de/deuflhard/pub/Schoenheit.pdf>, read, like all other internet resources referred to in this paper, retrieved 10.02.2021.



*Fig. 1: Measuring beauty<sup>9</sup>.*

Does this mean the terms “nature” and “art” are freely interchangeable – and thus meaningless? Does it make sense to take a philosophical view of nature at all when nature *as such* does not and cannot exist for us because it is, just like art, purely a contrivance of the human spirit?

I believe that today, more than ever, we must set ourselves to the task of uniting epistemology, hermeneutics and other philosophic semi-disciplines so that guidelines in terms of practical ethics can be established.

This paper will attempt to show that both nature and art are abstract terms that are, at first glance, indistinguishable from one another. After all, each time we observe nature, our observations are colored by our own self-image. Only when we begin to see ourselves as works of art does the opportunity to con-

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<sup>9</sup> Picture source: © Nicole Koehler; Koehler, N. et al.: The relationship between sexual dimorphism in human faces and fluctuating asymmetry. *Proceedings of the Royal Society B* 271, Suppl 4, 2004, Fig. 1 (Section).

sciously plan our further evolution arise. There is no way of “returning to nature” as far as I can see.

Our understanding of the term “nature” has changed as our technological prowess has grown. Whereas nature used to be something we observed and created representations of, it is now something we attempt to make accessible by disassembling into tiny pieces, amplifying and modifying that which our senses cannot otherwise perceive. In the process, we create experiences that are in part synesthetic. One example of this is “Sounds of Decay,” a project by Cat Hope, a member of an interdisciplinary Australian group of researchers and artists called SymbioticA<sup>10</sup>. In it, death and the decay of living matter are made audible.

Parallel to this, we’ve embarked upon an attempt to enhance our own “natural” abilities to perceive and perform by implanting artificial – technological – components in our bodies.

Findings within the individual branches of science notwithstanding, any attempt to make nature definable ultimately and inevitably leads to questions about the nature of man himself. Whenever we try to objectify nature, we do so relative to ourselves, the subjects. Regardless of which pair of opposites we choose (natural/not natural; that which has originated/that which was made; the normal/the abnormal; the authentic/the synthetic; that which conforms to rules/that which is random), the possibilities afforded by new technologies present us with the challenge of constructing – or construing – a concept of nature and of taking a stance on what it means to be a human being, both of and dependent on nature. Depending on how we define nature, we arrive at widely varying conclusions about the legitimacy of our (natural?) efforts to overcome it, to go beyond the boundaries it has set out for us as humans.

“The primary political and philosophical issue of the next century will be the definition of who we are,” wrote Ray Kurzweil in the year 2000<sup>11</sup>. The gap between what we are able to do (i.e. what is technologically possible) and what we want to do (i.e. what is considered morally defensible) has never seemed larger. How are we to decide whether moral enhancement, for example, is “morally correct” in the sense of being “natural” enough when it isn’t even clear to us what the essence of the “nature of man” is?

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<sup>10</sup> SymbioticA (2013).

<sup>11</sup> Kurzweil (2000).

That we intervene in nature and seek to understand and change it is a (morally) accepted fact. Human beings have been modifying their environment (nature) to suit their purposes since time immemorial. Today, we possess the technological savvy to manipulate the nature of man itself without having sufficiently defined the “nature of man.” Various methods of enhancement allow us to influence cognition, emotion and even modes of perception.

It is absolutely crucial that we reach a consensus about “what type and what degree of intervention is good”<sup>12</sup> no matter how utopic the attempt to come up with a philosophy of nature we all can agree upon, or at the very least to reach a consensus regarding the definition of nature, may seem.

The path leading from the observation that art is concentrated nature<sup>13</sup> via hybrid art sculpture to “Sounds of Decay” is a short one. The dying cells of a cane toad dehydrating in a desiccator are transformed into music. Nature becomes a synthetic product, something we can experience with our senses, while our senses are enhanced with neural prostheses.

What motivates a person to end another living being’s life with the goal of creating a work of art, even if it is only the life of a toad? Where does the idea arise, not just of observing the process of decay but of creating out of it a “melody of death?” Is it (scientific) curiosity, the artistic muse or anger<sup>14</sup> at the toads that seem to have descended on Australia like a plague? Whatever the motive may be, I would like to state for the record that I consider killing a toad and audibilizing its decay an act of aggression<sup>15</sup>.

In this paradoxical state of affairs, in which one group strives to improve our ability to pass moral judgment (and act upon this judgment) by intervening in “human nature” while another group perverts “natural” processes and utilizes *quasi*-synesthetic perception in order to create aesthetic objects that bear little relation to their natural selves, nature becomes not only a synthetic product, but concentrated art.

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<sup>12</sup> Siep (1999).

<sup>13</sup> Honoré de Balzac (1799–1850), Source: Balzac: *Illusions perdues* (1837–1843).

<sup>14</sup> In general, artists are more likely to occupy themselves with emotions than scientists.

<sup>15</sup> For the purposes of this paper, I would define aggressive behavior as an act aimed at adversely affecting the well-being of another living creature or, at the least, knowingly accepting that this will happen, independent of motive or intent.

I'd like to explain, from a humanistic perspective, why finding a "way back" (to nature) seems impossible to me. I assume that in formulating a contemporary philosophy of nature, we are allowed to define ourselves as beings that occur within nature and to declare our (environmental and social) natural habitat a work of art, which we may sculpt according to ethical guidelines to be defined. A nature to which we might wish to return, assuming we found it to be a pleasant place, is therefore inaccessible to us. We have various strategies at our disposal to help us evolve as humans. We could decide, for example, to exert direct influence over our emotions, using moral enhancement or transindividual consciousness to weaken them or even negate their influence in favor of rational decision-making processes. Or we could concentrate on sculpting our natural and social habitat to optimally suit the needs of our species. Taking the humanistic view of man as a social being, this would entail reaching fair compromises between the needs of each individual. In such a scenario, primal emotions such as fear, anger, sorrow and disgust, which forcefully compel us to act and which often lead to destructive behavioral strategies, could be interpreted as "status indicators." This would allow us to concentrate on the optimal use and further enhancement of our higher cortical functions – our reason.

## 2. Sounds of Decay

In the booklet accompanying her project, "Semipermeable +" from 2013, Symbiotica describes the musician Cat Hope's installation as a concept rather than a finished work:

From life, to un-life: a dead cane toad makes music/albeit very, very quietly. It's a sort of fuzzy, low, soft wound, usually inaudible, but processed for the human ear in Cat Hope's *Sound of Decay* (2013). The corpse itself is a vaguely disturbing form almost obscured by the condensation that lines the walls of its sealed glass container, and as such evokes death and kind of elongated timescale more sure, perhaps, than a clear view.

RealTime Arts on Cat Hope's project "Sounds of decay"



Cat Hope is a composer, sound artist, performer and academic. She is a classically trained flautist, self-taught vocalist and experimental noise bass player with an active performance profile as a soloist and in music groups. She is the director of the internationally recognised music group, *Incubel* and has toured internationally as a noise artist. Her installations have been shown at ECA (Japan, Tallin), Liquid Architecture, the Totipot (Rugby Beer Music Festival), The Perth International Arts Festival and in Singapore, USA, Japan and Ireland. Cat is currently a research fellow at the Western Australian Academy of Performing Arts at Edith Cowan University. This work was conceived by Cat Hope and Bob Hult, as the *Symbiotech* Sound Collective, with funding from an Edith Cowan University Faculty Research Grant. The computer programming is by Stuart James, based on a concept by Bruce Murphy. [www.soundsdecay.com](http://www.soundsdecay.com)

Assisted by the State of Western Australia through the Department of Culture and the Arts.

*Fig. 2: Semipermeable+, SymbiotechA, 2013, p. 26, p. 27<sup>16</sup>.*

<sup>16</sup> Credit to photographer Ian Hobbs, 2013, artwork in the photograph Cat Hope.

### 3. Back to (human) nature?

From a humanistic perspective, man is good by his very nature. We are evolving individuals who strive to improve, wrote Andrés Sánchez Bodas in his *Manifiesto humanístico*<sup>17</sup>, willing to do another a good turn once we have realized that we, too, will be helped when we need it<sup>18</sup>. Attempting to understand man as an individual outside the context of social relationships would appear to be as fruitless an endeavor as trying to approach *nature* as something that we ourselves are not part of and have no relation to.

Martin Buber's description of the direct (and natural) relationship between the "I" and the "thou" in his work *Das dialogische Prinzip* sounds modern because, among other reasons, it appears to account for the findings of neuropsychological research into empathy and attachment behavior.

In this context, I understand aggression to be an act that harms not only another person, but me as well (because I am in a constant state of relationship to others). Aggression is a form of self-harm.

This is very much the opposite of the fundamental assumption of humanism I wish to promote, in which life strives *by its very nature* to remain intact, to maintain its physical and mental integrity. This leads me to conclude that aggressive behavior is a result of a faulty learning process and does not necessarily reflect human nature; rather, it countermands it. Every creature strives to remain intact and to preserve life, choosing to extinguish it only when placed in a life-threatening situation itself or in order to optimize the skills that help it remain alive<sup>19</sup>.

We humans would seem to be an exception. No longer caught up in the battle for survival, we do not kill out of fear, but for scientific purposes, curiosity, revenge or pleasure. In this sense, death can be seen as the final consequence of a behavior aimed at hindering another living being in its pursuit of well-being.

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<sup>17</sup> Bodas (2013).

<sup>18</sup> Carl Roger's protégé Marshall Rosenberg put Roger's theoretical postulate into practice with his process of Nonviolent Communication.

<sup>19</sup> Such as with housecats and other predatory cats that practice chasing mice or dismembering their prey.

As such, aggression isn't a feeling, but a behavioral strategy applied to satisfy unfulfilled needs which are the root cause of noticeable emotions. We human beings are in many cases no longer in touch with/no longer understand our own "nature."

If nature, and particularly the nature of man, is not objectively accessible to us – if we cannot comprehend the nature of nature – then this positive view of the nature of man seems to me to be no less plausible than any other<sup>20</sup>. I therefore decide to believe in Carl Rogers' actualizing tendency<sup>21</sup>, which states that each individual strives to realize his or her own potential, in part by forming a congruous self-concept based on everything the organism as a whole has experienced both unconsciously and consciously<sup>22</sup>. In this sense, aggressive behavior isn't part of human nature, but rather an indication of our increasing *estrangement* from our nature.

Yet, how should we propose to return to our natural state when we cannot objectively determine what it is? When, whatever it may be, it is incapable of standing solitarily and discretely alongside that which we have learned and which has shaped us? When we can't even assume agreement upon one of the various "concepts of man" available to us?

In asking these questions, we eventually come to realize that there can be no direct way "back to nature." On the contrary, the challenge we face is of setting a course for the further evolution – the *progress* – of mankind and figuring out how we can influence that.

The discussion I'd like to spark is whether we can control our aggression<sup>23</sup> by accessing our innate ability to empathize. If strategies of ethical behavior are to be derived from what Theodor Lipps referred to as "*Einfühlung*"<sup>24</sup>, certain environmental factors must be in place. When I say "ethical behavior," I mean behavior that does not pur-

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<sup>20</sup> No theory of the nature of nature is verifiable because every attempt at empirical examination constitutes an intervention in or manipulation of that which is being examined. Obtaining objective findings would appear to be impossible; one cannot simply be aware, one must be aware "of something."

<sup>21</sup> As opposed to the death drive (Todestrieb) assumed in classical psychoanalytic studies.

<sup>22</sup> Rogers (1994).

<sup>23</sup> I would submit that every act of aggression is a superfluous act.

<sup>24</sup> *Einfühlung* was Theodor Lipps' term for empathy, i.e. the ability to transcend the "I" in order to participate subjectively in that which another person experiences. That this isn't only a conscious process, but primarily a pre-conscious and thus involuntary process has been confirmed by countless studies, some of which are referred to in this paper, cf. Lipps (2009).



posely harm another living being, assuming all living beings are of equal value. With this “negative” definition as a starting point (ethical behavior = removal of aggression), we can set up a “positive” guideline that would go something like this: Ethical behavior is behavior (usually a compromise) that contributes to the well-being of all involved.

If we do not succeed in ensuring that living conditions are such that all living creatures can satisfy their needs (and I assume there is no way “back to nature,” because we’ve gotten so accustomed to reducing abstract terms like “nature” to the superficial that it hardly occurs to us how absurd any attempt at “re-naturalization” would be), then the only (?) alternative left to us is to influence evolution in such a way that its result is ethically acting beings adhering to the principles of reason. This in turn would assume an ability to switch off emotions that lead to aggressive behavior. Which emotions might those be?

In an ideal world – so says humanistic thought – emotions are the result of fulfilled or unfulfilled needs, the purpose of which is to indicate those needs to us. We have a wide variety of strategies at our disposal for satisfying our needs. In the real world, we have forgotten how to differentiate between needs, emotions and courses of action.

In everyday speech, aggression is often conflated with emotion. The Oxford Dictionary defines aggression as “feelings of anger or antipathy resulting in hostile or violent behavior; readiness to attack or confront.”<sup>25</sup> The word has its origins in the Latin *ad* (towards) and *gradi* (proceed, walk). The connotation of an impending attack has been present in the word since the early 17<sup>th</sup> century.

I would like to trace aggression (aggressive behavior) back to emotions or, better yet, back to the unfulfilled needs that lie at the root of those emotions in order to better get at the question of how aggressive behavior can be modified and/or prevented. I would prefer, in doing so, not to get into a discussion of whether this is a desirable goal, and I don’t wish to delve into methods of operant conditioning such as punishing aggressive behavior. Psychopaths (violent criminals with dissociative personality traits who harm other living creatures seemingly only for their own pleasure<sup>26</sup>), for example, are less responsive to pain inflicted on them as a con-

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<sup>25</sup> <http://www.oxforddictionaries.com/definition/english/aggression>, retrieved 19.07.2021.

<sup>26</sup> The ICD-10 defines a dissocial personality disorder as follows:

- A disorder characterized by a pervasive pattern of disregard for and violation of the rights of others that is manifested in childhood or early adolescence (adapted from DSM-IV: Diagnostic and Statistical Manual of Mental Disorders).

sequence of their behavior than comparable groups<sup>27</sup>. I would like to focus on prevention and, as such, on the design of human nature.

From a humanistic perspective, it is crucial to differentiate between behavioral strategies, feelings and needs in order to be able recognize consciously and with self-empathy one's own (un)met needs and the emotions (symbolized affects, cognitively labeled sensations) that result from them as they arise later on. Marshall Rosenberg's life work consists, among other things, of using non-violent communication to anchor in the consciousness of all humans the idea that every form of violence is a tragic expression of an unmet need.

Being conscious of this allows us to deviate from our automated behavioral strategies and to search for alternatives. In his master's thesis from 2005, Simon Beck<sup>28</sup> provides us with a simple set of directions for transforming the violence that results from needs calling out to be met, which often manifests itself as aggression:

*Transforming the Pain of Unmet Needs to the Beauty of Needs*<sup>29</sup>

1. Acknowledge the stimulus, the neutral observation that you are responding to. Be specific and concrete, describing the precise stimulus for your feelings.
2. Acknowledge your reaction. There are 3 steps to transforming the "jackal":
  - a. recognition/naming the thought or message; b. embracing or "enjoying the jackal show". Allow any reactions, judgments, anger, etc. to come into

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- A personality disorder whose essential feature is a pervasive pattern of disregard for, and violation of, the rights of others that begins in childhood or early adolescence and continues into adulthood. The individual must be at least age 18 and must have a history of some symptoms of conduct disorder before age 15 (from DSM-IV, 1994).
  - Personality disorder characterized by conflict with others, low frustration tolerance, inadequate conscience development, and rejection of authority and discipline.
  - Personality disorder whose essential feature is a pervasive pattern of disregard for, and violation of, the rights of others through aggressive, antisocial behavior, without remorse or loyalty to anyone.

<sup>27</sup> Scheider (1923).

<sup>28</sup> [http://www.cnvc.org/sites/cnvc.org/files/NVC\\_Research\\_Files/NVC%20Research/Beck-Developing\\_NVC\\_Integral\\_Approach.pdf](http://www.cnvc.org/sites/cnvc.org/files/NVC_Research_Files/NVC%20Research/Beck-Developing_NVC_Integral_Approach.pdf), retrieved 14.02.2021.

<sup>29</sup> Gonzales (2004).

your awareness, and express it to yourself silently, out loud, or *best written* for clarity. And c. differentiation from the jackal thinking. In this part you can use a phrase like, “I am telling myself ([...] the jackal message.)” Go through this process with each message.

3. What feelings arise in you? Notice/feel authentic feelings.
4. What are the unmet needs that give rise to the feelings? Stay with feelings and needs.
5. Stay with steps 3 and 4 until you have given yourself sufficient empathy. Allow yourself to “be with” the feelings of pain of your unmet needs. This is the mourning/grieving stage.
6. Stay in the mourning stage until you have felt a shift in your feelings. You will usually feel some relief and/or relaxing of feeling.
7. Very often what can occur at this stage is a re-stimulation of jackal thinking. If this happens, empathize with the feelings and needs behind this jackal and go back to mourning, or “being with” feelings and needs.
8. Now focus on the need itself. Not the unmet need, but the “beauty of the need.” Sense/feel the positive value, the inherent vision of why this need is important to you. Allow yourself to immerse your awareness on this aspect.
9. Notice any request you may have of yourself. What action(s), internal or external do you want to take to meet any need(s) that is/are present.
10. This entire process is not a linear, but rather a dynamic, organic process. You will probably move from one dimension to another, staying focused on what is alive.
11. The three qualities that come from this process are: *clarity*, *compassion* for self, and *empowerment* to move forward in deep self-connection and meeting needs.

#### 4. Emotional Control?

B.F. Skinner has pointed out that suggestions that human behavior be controlled tend to elicit negative emotional reactions<sup>30</sup>. Even in cases where behavioral control

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<sup>30</sup> Cf. Skinner (2011), p. 3.

might contribute to enabling humanity to live together in mutual respect and recognition of one another's needs, a majority would probably refuse such measures. They might fear being manipulated or may interpret such measures as "curtailing their freedom." They could see them as a breach of human rights (do we have a natural right to behave aggressively?) or simply of their right to choose to behave wrongly if they wish. I define the choice of behaving wrongly as the freedom to behave in a way that is knowingly harmful to other living creatures (that violates their physical or psychological integrity), despite the fact that alternative ways of behaving which do not lead to harm exist. This is not to say that it is always intuitively clear which non-harmful alternatives are available.

I'd like to suggest that a guiding tenet of humanistic ethics be the idea that *in an ideal world*, a fair compromise between the needs of all participants can always be reached.

This approach to ethics is a utopian one, because it assumes that we no longer concentrate on the questions of how we will *reactively* behave, but how we can *actively* foster the conditions that allow ethical quandaries (or pseudo-quandaries) to be prevented<sup>31</sup>.

How can we create a world in which it is possible to distance ourselves from our perceived emotions, both noticed and unnoticed, in order to reach compromises driven by reason? How can we control our emotions (and the impulses they give rise to)?

Can we "turn off" needs so as to prevent emotions which are considered negative and which lead to aggressive behavior? I don't think we can. Needs, as I see them,

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<sup>31</sup> I am referring here to thought experiments along the lines of the so-called Kohlberg Dilemmas. For example: In Europe, a woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost him to make. He paid \$400 for the radium and charged \$4,000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money and tried every legal means, but he could only get together about \$2,000, which is half of what it cost. He told the druggist that his wife was dying, and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it." So, having tried every legal means, Heinz gets desperate and considers breaking into the man's store to steal the drug for his wife. Other examples can be found at: <http://examples.yourdictionary.com/ethical-dilemma-examples.html>, retrieved 14.02.2021.

are a natural state of a living organism. What we can do is to recognize them for the life-sustaining functions that they are<sup>32</sup> and, by *equitably* distributing the resources we have at our disposal, satisfy them before they lead to violence.

Can we manipulate the character of the perceived affects<sup>33</sup> that are emotions so that their influence on actions is weakened or even eliminated? Here, several options are open to us:

1. We could proceed indirectly, by satisfying our needs, so that negative emotions are counteracted while positive, reactive emotions (pleasure) are fostered. Here is Marshall Rosenberg's exemplary list of needs and the emotions that result from them:

Eight Primary Emotions:

- Sadness: grief, sorrow, gloom, melancholy, despair, loneliness, and depression.
- Anger: fury, outrage, wrath, irritability, hostility, resentment and violence.
- Fear: anxiety, apprehension, nervousness, dread, fright, and panic.
- Joy: enjoyment, happiness, relief, bliss, delight, pride, thrill, and ecstasy.
- Interest: acceptance, friendliness, trust, kindness, affection, love, and devotion.
- Surprise: shock, astonishment, amazement, astound, and wonder.
- Disgust: contempt, disdain, scorn, aversion, distaste, and revulsion.
- Shame: guilt, embarrassment, chagrin, remorse, regret, and contrition.

All other emotions are made up by combining these basic eight emotions. Sometimes we have so called secondary emotions, which refers to an emotional reaction to an emotion. We learn these. Some examples of these are: Feeling shame when you get angry, feeling angry when you have a shame response (for example, hurt feelings), feeling fear when you get angry (maybe you've been punished for anger). There are many more. These are *not* wired into our bodies and brains, but are learned from our families, our culture, and others. These emotions show when our needs are or are not fulfilled.

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<sup>32</sup> An approach taken into consideration by psychotherapy and as part of "awareness training" today.

<sup>33</sup> As primary, non-specific bodily states that can be transferred into our self-concept via a symbolization process like the one described by Rogers.

Needs are p.e.:

- Security
- Confidence
- Choice
- Faith
- Legacy
- Making a difference
- Sense of belonging/love
- Stimulus
- Influencing ... being able to influence matters in a positive way brings empowerment
- Variety
- Spirituality

Carl Rogers, Rosenberg's protégé, stresses that primary emotions (pleasure, fear, anger, sorrow and disgust – all accompanied by the same gestures and expressions across cultures and thus universally recognizable) are perceived as secondary emotions<sup>34</sup> or "pseudo-feelings"<sup>35</sup> when they cannot be assigned a place within one's self-concept or integrated into one's own self-image. If this is indeed the case, we can concentrate on the modification of primary emotions and leave aside the secondary emotions and pseudo-feelings, as these are misinterpreted affects.

2. We could attempt to manipulate primary emotions directly, on the level of neurotransmitters.

Emotions can override the ability to perceive needs that are crucial to survival. As far back as the 1950s, Olds and Milner<sup>36</sup> were able to show in an experiment with rats that, when given the opportunity to activate a switch that would release dopamine into their own bodies via an electrode implanted in their *nucleus accumbens*, the rats would activate the switch until they died of hunger or thirst. The same area of the brain has since been identified as responsible in part for how humans expe-

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<sup>34</sup> Shame, frustration, irritation, curiosity, surprise, etc.

<sup>35</sup> Feeling attacked, injured, deserted, marginalized, neglected, etc.

<sup>36</sup> Olds/Milner (1954).

rience emotions like pleasure, lust and motivation. More recent studies, including Tanja Singer's, have shown that in most men, increased amounts of dopamine<sup>37</sup> are also released by the *nucleus accumbens* when they experience malicious joy (the German *Schadenfreude*), i.e. when they witness a rival who has previously acted "unfairly" towards the test person experiencing pain or loss<sup>38</sup>. Oxytocin, the so-called "love hormone" seems to ameliorate this effect<sup>39</sup>, which may also explain why women in the control group did not experience *Schadenfreude*, but rather empathy with their rivals. Nonetheless, *Schadenfreude* – the anticipation of which may in my opinion initiate aggressive behavior – is a reaction to a perceived (subjectively experienced) injustice.

These studies seem to indicate that a "continual state of happiness" for all people is not something we should attempt to strive for. For one, because the *nucleus accumbens* only releases increased amounts of dopamine when something is "better than expected" or when something perceived as pleasurable is also new or novel in some way<sup>40</sup> – thus increasing tolerance for such things and subjecting them to the law of diminishing returns. But also because (artificial) stimulation could somehow override or mask our awareness of the needs that are essential to our survival<sup>41</sup>.

If "happiness pills" and brain pacemakers<sup>42</sup> aren't the answer, might it instead be sufficient to permanently eliminate the primary and negatively connoted feelings of fear, anger and sorrow along with the aggressive behavior they lead to? Assuming some sort of neuro-enhancement were possible, how could we make use of it without simultaneously endangering our own survival<sup>43</sup>? And

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<sup>37</sup> A phenomenon associated with experiencing pleasure or positive feelings.

<sup>38</sup> In the experiment as classically conducted, two competitors are each given the opportunity to act either fairly or unfairly. The amount of *Schadenfreude* experienced by one competitor correlates directly to unfairness previously experienced. Cf: Archival Report [<http://sans.haifa.ac.il/publications/envyschadenfreude.pdf>, retrieved 14.02.2021].

<sup>39</sup> Cf. Shamay et al. (2009).

<sup>40</sup> The same process which is being discussed as the basis for motivation when learning new things, cf. Spitzer (2008).

<sup>41</sup> The same dilemma is apparent among those addicted to drugs (amphetamines, heroin, alcohol, etc.).

<sup>42</sup> Such as those used to treat those suffering from Parkinson's Disease as well as depression and other neurotransmitter disorders.

<sup>43</sup> See Hans-Christian Pape's succinct remarks in the *Deutsches Ärzteblatt* in 2007: "Fear enables us to survive."

how would such technological innovation even be possible in the face of ad absurdum applications of the postulate of refraining from aggressive behavior (see my definition of aggression as willfully harming or knowingly accepting that harm will be done to the well-being of another living creature, regardless of intent or motive)?

As for discussions of decoupling the fear network located in the limbic system and the prefrontal cortex and activating the frontal control function, those are best left for others<sup>44, 45</sup>.

Do we wish, then, to accept the challenges associated with no longer viewing mankind as natural beings, but as artificial ones (works of art) which we are free to design according to certain ethic guidelines?

Regardless of how we decide, we will always be intervening in nature. Nature, as we experience it today, is concentrated art. We manipulate nature even by simply letting things happen. Should we choose not to accept that passivity itself constitutes an intervention into nature (we can't leave nature, we move about always within it, we are part of it; nature does not exist outside of our definition but is, ultimately, a manmade work of art), then our problem is solved.

But if we assume that, as natural beings (i.e. works of art) ourselves, we bear some sort of responsibility for our habitat as well as for ourselves, then we also have the freedom to determine the direction we'd like to evolve in. Do we wish to intervene in that imaginary "human nature," to reach for the tools of moral enhancement, whatever they may be, in order to dampen our primary emotions so that our empathy may hold sway? Might it not be better to simply turn off, either temporarily or permanently, those emotions with cognitive enhancement or by tinkering with our limbo-cortical networks?

Or would we rather concentrate on shaping our habitat<sup>46</sup> so that resources are distributed evenly, however one might define this, and the needs of all living beings can be met? So that, by giving ourselves more flexibility in choosing courses of action, the need for aggressive behavior becomes superfluous?

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<sup>44</sup> The amygdala appears to be responsible for primitive, simple forms of associatively learned fear, while the hippocampi are responsible for more complex forms and for the context of fear. The prefrontal cortex exerts control over fear reactions.

<sup>45</sup> I am assuming that this is or will in the near future be within the realm of the technically possible, though whether or not we'll consider it a good thing remains open.

<sup>46</sup> Not only our "natural" habitat but also our social habitat.



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