

# Exploring Next Nature

## Nature changes along with us

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### ABSTRACT

In this paper, we explore and redefine our notion of nature. We will argue that our current common view on 'nature' needs reconsideration. The notions of nature and culture seem to be trading places. Nature, in the sense of trees, plants, animals, atoms, or climate, is getting increasingly controlled and governed by man. It has turned into a cultural category. At the same time, products of culture, which we used to be in control of man, tend to outgrow us and become autonomous. The 'natural powers' seem to shift to another field. Nature changes along with us. We propose the term 'next nature' for this culturally emerged nature. Next nature is real nature, no representation, or a simulation of some long-lost phenomenon.

### Keywords

next nature, media ecology, natural interfaces, phenomenology, hyperreality, autonomous machines, calm technology, genetic surprises, wild systems, re-cultivation.

### INTRODUCTION

Almost every one of us loves nature. Still, what is it? For some of us nature may embody harmony, soundness, and peace. For others, nature is rather wild, brutal, and unpredictable. Nature is untouched by man-it is still unspoiled. But paradoxically, man himself has evolved out of that very same nature. "Nature likes to hide itself", proclaimed the ancient Greek philosopher Heraclitus [9], as early as the 5th century BC. If there is one spot that deserves to be labelled as "natural", it is the environment in which humankind evolved, many, many years ago. This environment has been the basis of our perception of reality and, indeed, of all information we gather. Our human constitution and our senses have been fully adjusted to it. Today, this environment is completely governed by us. It has lost all originality. How natural is it to have a nine-to-five job, and to go to the office with a suit and a tie? The roofs over our heads, the chairs we sit on, even the trees in the forest-they are all what we want them to be. Just take a look around, and try and find the most natural object present in the space you are in right now. Most likely that will be you.

For animals, which do not shape their own world as radically as man, nature will always be nature. Man, on the other

hand, started to bend things to his will. By covering our natural environment with a layer of language, technology and economy, we have modified our living environment. Well-known milestones are the invention of fire, the introduction of agriculture and stockbreeding, the utilization of mechanical production, and the rise of information technology resulting in today's technological culture [19]. This cultural layer is well functioning and has become our "reality". In a way it is a pity that, at the time, there was no Nobel Prize to honour that early ancestor who came up with the idea to make a coat out of a bearskin, for that most ingenious animal would certainly have deserved it. For ten thousands of years, human development was confined to the snail's pace of genetic evolution and we took no advantage from the numerous things we learned throughout our lives. Apart from some rare mutations, the genes we give on to our children are identical to the ones we get from our forefathers. Cultural evolution, however, is much faster. The invention of the wheel, television, the nuclear bomb, the frying pan... they are all crucial things that no person could possibly invent during his own life. Some argue the human race would be better off if we got rid of these inventions [24]. But once they have become part of our daily lives, it seems impossible to imagine life without them. Continuing on Charles Darwin's genetic evolution [3], zoologist Dawkins concluded that replication also happens in cultural evolution, yet in a different sense. He coined the term '*meme*' [2] as the basic unit of cultural evolution.

### Our environment becomes the interface, again

Why do we experience the sound of crickets or the sound of the sea as soothing, as opposed to, for instance, the sound of an engine? Normally, we do not associate technology with

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peace. On the contrary, especially information technology is often quite the opposite of peace and naturalness. Dial tones, e-mails, websites, television and radio-they overload us with all kinds of data. But does technology only give us stress and disquietude, or can it also be the other way around? In fact, there is also plenty of technology that gives us relaxation and convenience. A pair of sports shoes is not necessarily less sophisticated than a desktop [22]. Originally, computers were developed in order to make calculations for business or military purposes. At first, there was only one supercomputer available for the entire corporation; nowadays, each employee has his own desktop. Only recently, computers have entered our personal living environment. In due course, each milk carton will contain one. United Nations research predicts the use of robots around the home to mow lawns, vacuum floors and manage other chores is set to surge sevenfold in the next three years [20]. Domestic robots will become familiar companions in our home environment. And when computers are present everywhere, we cannot possibly operate them all ourselves. Therefore, they will start operating themselves, as well as one another. The radio alarm will tell the electric kettle and the toaster that you are awake and about to have your breakfast. The fridge has already ordered your milk. The morning news is toasted on your bread. As soon as you have left the house, the vacuum robot will start cleaning. And when you return at night and stick your key in the front door, the oven will know that the pizza needs to be heated. At your service, your future house will contain an entire ecological system [6]. The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it [23]. After all, neither do we experience a warm winter coat nor a fine writing pen as technology. In the early days, machines were coarse, heavy and rusty, but nowadays they have become more and more transparent and they are as light as sunshine. Our environment becomes the interface, again.

### **THE INFINITE FORCES OF NATURE**

The relation between man and nature can be summarized as conquering and being conquered. Ever since the English philosopher Francis Bacon [1], we seem to believe that knowledge is power. The principle of progress has never been so popular and generally accepted [5]. It was Bacon's conviction that man could acquire control of nature by means of scientific discoveries and inventions. Nature was to be tortured in order to make her reveal her secrets. If birds can fly, why should not man? For years and years, man has tried to acquire from nature what he does not have himself. And for what purpose? To be able to survive without nature? Just imagine a life without it... would that be possible? I think not.

While battling the forces of nature, man has become more and more independent of physical conditions. At the same time, however, he has become more and more dependent of technical means, of other people and of his own self. Just think of the various forms of dependence that come along with driving a car. There have to be highways, for which road tax has to be paid. Petrol supply has to be arranged. Once on the road, you will have to concentrate, otherwise you might end up in a car crash. You will have to show consideration for other road users, and you simply need to have your driver's licence. And all this is required just to move your body from A to B and save a little time. Physical independence is achieved at the expense of social and mental dependence. Highly precise and productive machines often require highly precise and productive functioning humans to operate them [18]. The things we design often end up designing us.

Another example: A fridge is a most convenient device that makes us less dependent of the natural contamination of food. CFCs are stable industrial gasses, which are incorporated in cooling substances, refrigerators, synthetic foams and various spray cans. CFCs have done so much damage to the ozone layer that the latter has become disturbingly thin. The gap in the ozone layer has been discovered in 1985. At first, when British scientist at the Halley Bay base in Antarctica examined the results of their measurements, they were convinced that something was wrong with their instruments. But after these had been replaced, the conclusions continued to be as alarming as before. When their findings were published in Nature magazine [7], it was clear that something urgent was to be done. The ozone layer protects man and animals from the harmful ultraviolet radiation of the sun. If this protective layer is dismantled, this will have dramatic consequences for us all. Prolonged, unprotected exposure to the sun results in skin cancer. The inventor of the CFC refrigerator had probably never even heard of the ozone layer.

Despite our attempts and experiments, life cannot be moulded that easily. Every time nature seems to be conquered, it stands out as a tough opponent in another field. Hence, the battle between man and nature is infinite. Nature likes to hide itself. And it is not just man who evolves, but, in the process of evolution, nature comes along. My point is that perhaps it is better not to see nature as a static entity, but rather as a dynamic power that is beyond our reach by definition-a power beyond our reach, but with which we will have to deal constantly. To put it differently, maybe we should see nature as the permanent sparring-partner of our development.

## The Biology of Technology

From our biology classes we all know the evolutionary scheme: the monkey that starts walking upright, loses its coat and becomes a human being. But there is something fundamentally wrong about this picture, and no one seems to notice: that human being is naked! Essentially, this is as "unnatural" as a juggling monkey in a clown suit.

What animal is so stupid to come into this world as a naked and crying infant, completely vulnerable, helpless, and an easy prey for any predator? Any newborn lamb or giraffe's baby can walk within a few hours, but it takes man years and years to learn to take care of himself. Therefore, it is no less than a miracle that, despite his physical vulnerability, man has managed to keep dominating the world. Compared to other animals, man is maladjusted, primitive and undeveloped. Still, he has been able to survive, amidst all those animals that are so much better equipped. Other animals have specific organs, skills and reflexes that enable them to survive in their proper environment. But unlike animals, man has never been placed in an environment to which he is specifically equipped. Actually, the physique of man implies that there is no such thing as a "purely" natural environment: by definition, man is a creature of culture [8].

To be honest, our picture of nature is fairly naive and definitely up for reconsideration. At various locations in the Netherlands, prehistoric woods are being laid out: our picture of unspoiled nature is being carefully reconstructed in a real-time simulation [15]. The Green Heart (a renowned natural reserve in the Netherlands) is actually an agricultural and industrial area from the 15th century. A city girl who washes her hair with pine shampoo, one day takes a walk with her father in the woods. Suddenly, she says: "Daddy, the woods smell of shampoo" [13]. Such a young girl would surely perform better at discriminating corporate logos than tree- or bird species. The more we tend to think and act in terms of symbols, the more we lose our grip on physical reality [4]. Was Mondrian's picture [16] the forerunner of the ultimate natural picture after all?

## Wild Systems

Over the last centuries our world view has become more and more actual-actual in the sense of "in accordance with the truth", but above all in the sense of "explicit and articulated". We think we know how things work: our reality has become a set of facts. Mankind is no longer gazing in wonder at the magic of the moon and stars. We have rid ourselves of the belief that our environment is governed by mysterious powers, by spirits and demons. Max Weber has aptly called this "the demystification of the outer world" [21], alluding to the fact that the pre-modern world was still thoroughly ruled by quirks of fate that left mankind powerless. Fate could have a devastating influence on our lives, but could just as

well move our lives into a more favourable direction. After the modernization of the world, man has found himself in a much more rational world, in which everything is schemed or calculated. Bureaucratic structures as well as control models and strategies are being set up to promote a more prosperous world. The rhetoric of decision-making is more and more ruled by rational thinking, and Logos seems to dominate our culture. And when we say myth, we often mean that something is plain nonsense. However, the greatest myth of our time may well be the primacy of the Logos. Systems seldom function the way they were meant to by their makers. Administrative malpractice as experienced by multinationals such as Enron [10], Kmart and WorldCom [17] took their respective shareholders by surprise and proved to be genuine disasters. Ironically, we are able to protect ourselves from floods, earthquakes and tornados, but we are powerless to do anything about this sort of bookkeeping scandals. Quite recently, the oil reserves of Shell appeared to be much smaller than was forecasted. But that was not the fault of the oil reserves; quite the contrary, it was the fault of the Shell management [14]. Systems are the products of culture; still, they can outgrow us and become inaccessible, and force us to 're-cultivate' them.

In the future, natural disasters may cease to exist. In fact, they seem to have already done so. After all, at every disaster we start looking for a scapegoat in the form of some bureaucratic institution: Why were the dykes not high enough? Who is responsible for the earthquake safety of that building? Natural disasters have turned into cultural disasters and organisational failures, and we will certainly have plenty of them in the years to come. Systems can be rude and merciless.

## OUR NEXT NATURE

'Some weeks ago I took a walk in the woods and bumped into the biggest rabbit I had ever seen. The rabbit was already nearly white for the winter and we stood eye in eye with each other for a short and pleasant while—two creatures joined together by mutual curiosity. What will it mean to come across a rabbit in the woods after genetically engineered 'rabbits' are widespread? Why would we have any more reverence, or even affection, for such a rabbit than we would have for a Coke bottle?' It is in such terms, in his book "The End of Nature", that Bill McKibben recounts his mythical encounter with a white rabbit in the woods [12].

Let us look at it from our own perspective: nature as human experience. The associations that most people have with the notion of nature can be summed up in such terms as infinite, inaccessible, overwhelming in power, primal, wild and fearsome [11]. But where can this kind of nature be found nowadays? In the park on the outskirts of the town? Or on the windowsill, where your cat is gently sleeping? Probably

not. Our next nature arises from cultural products that have become so complex that the only way we can relate to them is in terms of a man-nature relationship. There may even come a moment that our connection with an industrially manufactured coke bottle may be richer and more mythical that our relation with a genetically analysed and manipulated white rabbit in the woods.

In point of fact, the notions of nature and culture are trading places. Nature, or whatever we mean by it, is getting more and more governed by man. Nature, in the sense of trees, plants, animals, atoms, or climate, has turned into some sort of cultural category. At the same time, products of culture, which we used to be in control of, tend to outgrow us more and more. Those "natural powers" seem to shift to another field. Our next nature will consist of what used to be cultural, even though this does not alter the fact that this is still a "real" kind of nature. No representation or simulation of some long-lost phenomenon. On the contrary, it is as real as can be, and has all the workings, threads and opportunities of the older, natural phenomena. Wild systems, genetic surprises, calm technology, autonomous machinery and splendidly beautiful black flowers.

We seem to enter a magic garden that may take us by surprise and astonish us, and that may also knock us down or be kindly disposed to us. We will have to make sense of things all over in order to define our place in the world; we will have to invent a new symbolic meaning of things. As newborn children, we wander about in our own creation. Greener grass, you get used to it. Surely I am a nature-lover.

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