

The Role of Nature for the Future of Man

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SUMMARY

Teilhard de Chardin was not only a priest and philosopher, but also a natural scientist. As such, he has inspired theologians, but also academics until today. The purpose of this essay is to put Teilhard de Chardin's work into perspective of one of the most pressing challenges mankind is facing now: The fate of the natural environment. While in the last century, mankind has become increasingly aware of the impacts our lifestyle has on the natural environment and while we have achieved great milestones in terrestrial conservation, marine conservation lags far behind. The ocean has escaped our attention and remains underresearched, underfunded, and underprotected.

According to de Chardin, man is placed in the forefront of life. Yet, de Chardin reminds us that humans, albeit the highest point of organization and consciousness in evolution, must not forget their roots. And our roots are in this world, to which we are deeply connected. We exist within, not outside the universe and this planet. Our ability to reflect on our own behavior is what elevates us above the rest of evolution. Hence, it is within our best interest and in line with the expansion of our consciousness that we reflect on this, and increase our "scope for action" and preserve god's creation, including plants, animals and ourselves.

Mankind is "folding in upon itself" as de Chardin describes in many of his works when illustrating the formation of the Noosphere which results of the tighter and tighter packing of human consciousness to finally "cover" the planet with another layer – a layer of reflection, thinking and consciousness. However, this process suddenly got sped up in the last century, with accelerating velocity. Now, "The human molecules are tightly packed together", we are running out of space, and "we see races and cultures jostling one another, and a soaring world population amid which we are all beginning to fight for elbowroom." Conflict is rife. In the face of this, de Chardin urges us to make a decision; a decision, which carries the "necessity for our generation of adopting certain firm values regarding the course of the world, of taking a major decision upon which the future of human history will depend. De Chardin saw reigniting the natural force of love for each other and the nature that surrounds us as one pillar of the future of man. The other is the path of unity, which I interpret not only of the unity of man among each other, but also as man changing his view of the environment from one of exploitation and use to coexistence, as we have all sprung from the same creation of God.

1. Introduction

Teilhard de Chardin was not only a priest and philosopher, but also a natural scientist with great interest and achievements in geology and paleontology that contributed to the discovery of the Peking man. As such, he has not only inspired theologians, but also scientists, including Sir Julian Huxley (Foreword in “The Phenomenon of Man”, 1955) and evolutionary biologist Jeremy Griffith (Griffith, 2013), until today. The purpose of this essay is to put Teilhard de Chardin’s work into perspective of one of the most pressing challenges mankind is facing now: The fate of the natural environment. It is organized into three parts: In the first part, I will briefly introduce my research topic, the conservation of the marine environment, and its importance for the future of mankind. In the second part, I will discuss de Chardin’s views on nature, man’s place in nature, and the importance of nature for the future of man. In the last part, I will elaborate on the solution de Chardin saw for humankind and nature to live in harmony and finish the essay with a conclusion, summarizing the findings.

2. My Research and the Future of Mankind

UN Messenger of Peace with a special focus on climate change Leonardo diCaprio (UN, 2014) stated earlier this year, that saving the oceans, which cover more than 70% of our planet (NOAA, 2015), might be the biggest challenge we will face in our lifetimes. While in the last century, mankind has become increasingly aware of the impacts our lifestyle has on the natural environment and while we have achieved great milestones in terrestrial conservation, marine conservation lags far behind.

It might be the fact that we have our eyes only fixed upon the land and cannot gaze under water, or as de Chardin states in “*The Phenomenon of Man*” (1955) on the importance of seeing:

“*Seeing*. We might say that the whole of life lies in that verb. That, doubtless, is why the history of the living world can be summarized as the elaboration of ever more perfect eyes within a cosmos in which there is always something more to be seen. After all, do we not judge the perfection of an animal, or the supremacy of a thinking being, by the penetration and synthetic power of their gaze? To try to see more and better is not a matter of whim or curiosity or self-indulgence. *To see or to perish* is the very condition laid upon everything that is an element, by reason of the mysterious gift of existence. And this, at a higher level, is man's condition.”

The ocean has escaped our attention. And the fact remains that the ocean is underresearched, underfunded and underprotected. As of 2015, 15.4% of the global landmass is protected for wildlife conservation, which often also benefits the local communities in the area. Yet, only 3.4% of the ocean is protected (UNEP WCMC, 2015). Further is ocean research underfunded, which is for example clearly reflected in the US’ National Oceanic & Atmospheric Administration, short NOAA versus the budget granted to the much better known NASA, National Aeronautics and Space Administration. This year, less than a third of NASA’s budget of \$17,460 million (NASA, 2015), but only \$5,496.7 million (NOAA, 2015) were considered enough for oceanic and atmospheric research, on which our and the planet’s survival directly depends – with e.g. per-capita marine fish consumption increasing steadily year by year around the globe (FAO, 2015). An evaluation of research papers published in 2015 has also revealed that only small percentage of all papers on ecology even deal with the marine environment, while it covers more than two thirds of our planet (Munguja & Ojanguren, 2015). According to Dr. Sylvia Earle (2015), former head of NOAA and probably one of the most famous marine scientists alive, “without the ocean, there will be no humans.”

It is time for us to veer our eyes onto this magnificent and fascinating part of creation, not only in order to preserve it, but also to ensure the survival of mankind.

I am an ecologist by training and have spent many weeks in the field, researching Caribbean coral reefs. It was there that I witnessed the devastating effect the removal of one of the ocean's most iconic – and also important – predators can have. Coral reefs in Honduras were devoid of sharks wherever we searched. Taken by man to sell their highly priced fins. As a large animal, they reproduce slowly and in few numbers (Ebert et al., 2013). Evolution had not prepared them for the onslaught by our kind. And a reef devoid of sharks is overall empty. The removal of the apex predators that occupy the top niche of the food web leads to what we know as a trophic cascade: Sharks at the top of the food web exert top down control and keep smaller predators, also called mesopredators, in check (Baum & Worm, 2009). If sharks are removed, mesopredator populations can explode, decreasing herbivorous fish in turn, which usually keep algae growth on coral in check, ensuring that these reef-building, sessile animals get enough sunlight. With all these functions disturbed or lost, we dove many reefs empty of fish, only home to slime- and algae-overgrown, dead coral; a phenomenon also described by scientists worldwide (e.g. Pandolfi et al., 2005).

Sharks are a keystone species for the survival of our oceans. Yet, we kill up to 100 million of them in both artisanal and commercial fisheries worldwide (Worm et al., 2013). As a slow-reproducing, slow-growing, late-mature fish with few offspring, they cannot cope and populations of sharks have been decreased by up to 99% in some species. Now, one third of all shark species is classified as threatened (Dulvy et al., 2008). Sharks, not as charismatic as other big marine life like dolphins or whales, lack protection. Barely any management of their fisheries is in place globally and international trade agreements like CITES only cover a handful of species so far (CITES, 2013). We should care, not only for the sake of preserving these fascinating animals that already swam on our planet with the dinosaurs, and have barely changed in appearance over the last 100 million years (Ebert et al., 2013), but also for the sake of the whole ocean, as an ocean without sharks will soon be devoid of many other species as well. And also for our own sake, as the per-capita consumption of fish is rising every year (FAO, 2015), ensuring the protein intake of a growing human population and also as millions of people worldwide live with the ocean and enjoy its natural beauty – be it part of their lives everyday or on a holiday.

My research focuses on a long-term analysis of the Japanese shark fishery. For this, I took an approach that resonates with de Chardin's urge that "mankind needs to in-fold on itself" and that we need "to unite" in order to progress to our highest state or omega point, where we can finally leave chaos and suffering behind us (The Future of Man, 1955). Instead of just concentrating on the effects in the ocean or criticizing the mismanagement of shark fisheries, I decided to live with the local fishing community of Kesennuma for several weeks each year for the past two years to learn from them and discuss potential solutions together with them. Often antagonized by the strong and culturally unaware demands of international NGOs, I found this – albeit slow at times – to be a more fruitful approach.

3. Pierre Teilhard de Chardin's Views of Nature

According to de Chardin, man is placed in the forefront of life (The Future of Man, 1964).

He writes:

"The answer is clear. If, as I maintain, the movement of the cosmos towards the highest degree of consciousness is not an optical illusion, but represents the essence of biological

evolution, then, in the curve traced by Life, Man is unquestionably situated at the topmost point; and it is he, by his emergence and existence, who finally proves the reality of the trajectory and defines it - 'the dot on the i'..."

When observing the cosmos through history and evolution, de Chardin came to two logical conclusions: First, "life moves", meaning it is constantly changing and evolving. And second, "in a definite direction", establishing that life does not move in a chaotic or random fashion, but always toward a higher organization and complexity, and a condensation of consciousness. He named the culmination of this movement in a definite direction the Omega Point probably de Chardin's most acclaimed concept.

He further describes two important factors, which we can clearly witness today with an exponentially increasing human population on earth: "First, the confined surface of the globe, and secondly, the incessant multiplication, within this restricted space, of human units..." (The Future of Man, 1964). Of particular interest is however this prediction that he added: The human units are "endowed by ever improving means of communication with a rapidly increasing scope for action" (The Future of Man, 1964). Humans will not only multiply and multiply, but they will also expand their connection to each other by improving their means of communication. We have now arrived in the Digital Age, which allows the majority of mankind to get in direct contact with just about anyone around the globe, verifying de Chardin's foresight. He sees this development as a mandatory next step in our further evolution to an even more conscious and more organized version of ourselves. And by this evolution he means not only the evolution of the human individual, but also our evolution as an organized network of humans, the idea at the core of the Noosphere (The Future of Man, 1964).

Now one might ask: If man is placed in the forefront of life, the topmost point of evolution, and if the eternal pattern of life is to always evolve toward higher organization and complexity, is it then even necessary to conserve nature? Is it not the natural path of the organisms that have not evolved to such a high level as humans, being plants and animals, to perish like so many other branches of evolution have before?

It seems that de Chardin strongly disagrees. As a paleontologist, he has adopted a method of looking for wisdom by studying the past and written on this in many of his works, specifically in the essays that are collected in "*The Vision of the Past*" (1966). As such, not only the foremost point, but the whole path of life an evolution is valuable. He further says in "*Human Energy*" (1969): "We must accept what science tells us, that man was born from the earth. But, more logical than the scientists who lecture us, we must carry this lesson to its conclusion: that is to say, accept that man was born entirely from the world, not only his flesh and bones, but his incredible power of thought."

De Chardin reminds us that humans, albeit the highest point of organization and consciousness in evolution, must not forget their roots. And our roots are in this world, to which we are deeply connected. We exist within, not outside the universe and this planet (Man's Place in Nature, 1966).

In "*The Future of Man*" (1964), he further states:

"Because plants and animals are excessively fragile in their structure, and because until now their existence has only been detected, indeed is only conceivable, in severely limited zones of Time and Space, we have been accustomed to regard them as an anomaly and an exception, almost a small, separate world within the great universe."

Plants and animals are fragile and exist in a limited, complex network that is equally fragile, the ecosystem. As we can understand from this quote, man is well aware of this fact. Man is also aware of his impact on the planet, including overexploitation, climate change or habitat loss for plants and animals. As de Chardin states: “The animal knows, it has been said; but only man, among animals, knows that he knows. (...) The basic characteristic of Man, the root of all his perfections, is his gift of consciousness *in the second degree*. Man not only knows; he knows that he knows. He reflects.” (The Future of Man, 1964)

Our ability to reflect on our own behavior is what elevates us above the rest of evolution. It is our natural course to further deepen this ability, leading to the expansion of the Noosphere, finally reaching Omega Point. In this light, it can be said that it is our path to do so and to reflect on our lives, our doings and our impact:

“(Man) *knows that he knows* - with the multiplicity of consequences that we all experience, without having fully assessed their stupendous biological significance: prevision of the future, construction of ordered systems, power of planned invention, regulation (and rebounding) of the evolutionary process, etc.” (Future of Man, 1964)

In summary, it can be said that following his natural path of reflection achieved through ever-growing consciousness, unique in evolution, man has realized that the degradation of nature, climate change and e.g. overexploitation of marine resources will have dire consequences not only for the ecosystem and plants and animals, but also for ourselves. Hence, it is within our best interest and in line with the expansion of our consciousness that we reflect on this, and increase our “scope for action” (Future of Man, 1964) as mentioned above and preserve god’s creation, including plants, animals and ourselves.

4. The Role of Nature for the Future of Man

And what merit will mankind achieve from preserving and guarding nature? According to de Chardin’s essays, I could uncover two main points: Love and the journey toward Omega Point. Let me elaborate on them one after the other. De Chardin believes:

“Love is the most universal, the most tremendous and the most mysterious of the cosmic forces.” (Human Energy, 1969)

De Chardin attributes more power to love than to any other force in the universe, further elaborating that he believes it to be present in all life forms: “The most telling and profound way of describing the evolution of the universe would undoubtedly be to trace the evolution of love.” (Human Energy, 1969) His most remarkable statement is for me however the following:

“If man fails to recognize the true nature, the true object of his love, the confusion is vast and irremediable. Bent on assuaging a passion intended for the All on an object too small to satisfy it, he will strive to compensate a fundamental imbalance by materialism or an ever-increasing multiplicity of experiments. His efforts will be fruitless and in the eyes of one who can see the inestimable value of the “spiritual quantum” of man, a terrible waste. But let us put aside any sentimental feelings or virtuous indignation. Let us look very coolly as biologists or engineers, at the lurid atmosphere of our great towns at evening. There, and everywhere else as well, the earth is continually dissipating its most marvelous power. This is pure loss. Earth is burning away, wasted on the empty air. How much energy do you think the spirit of the earth loses in a single night?”

He describes beautifully and in a poetic way the loss man suffers if he forgets about the infinite power of love. And de Chardin illustrates how with this loss, not only man, but those around him and the earth itself will suffer. Love is the driving force in our universe, that keeps it going, perpetuating and keeps it together. Losing love is to de Chardin equivalent with losing precious energy. And this love is not only the love between man and woman, but the love between all for all. People have great capacity to love nature and enjoy their love for nature. Since the beginning of time, we attributed great powers to nature, its plants and animals and painted, sung on, and described the sublime we feel in the presence of nature. Still in modern times, man finds joy in experiencing nature, in a city park or on a resort beach, he finds inspiration in nature patterns for his designs and fashion, and we rejoice the solace of a companion animal. And it must be this most basic of all forces – love – that will drive our will and action to preserve nature not only for its own sake but also for our own survival and advancement.

Love also directly relates to Omega Point: “If human particles are to group themselves 'centrally' they must ultimately - in unison and simultaneously - love one another (Let me Explain, 1970).” De Chardin sees love as a prerequisite for reaching Omega Point, and it is at the core of the idea of Omega Point that we unite and treat each other, what is around us – our environment – with love.

But in one of his later essays *Galileo's Question Restated* (1947-48) in “*The Future of Man*” (1964) de Chardin returns to the closely related topics of the Noosphere and Omega Point with a sense of urgency. Love – the most universal of all forces as de Chardin calls it – seems to have faded. He recorded and researched in his paleontological studies how far man has developed over the past million years, yet now, seeming so close to his super-personalized form the advancement suddenly seems disrupted. What happened?

Mankind is “folding in upon itself” as de Chardin describes in many of his works when illustrating the formation of the Noosphere which results of the tighter and tighter packing of human consciousness to finally “cover” the planet with another layer – a layer of reflection, thinking and consciousness (e.g. Let Me Explain, 1970; *The Future of Man*, 1964). This process of “folding in” happens in “two cosmic coils (spatial and mental)” (*The Future of Man*, 1964). The mental process refers to the formation of the Noosphere through our increasing ability to reflect and awakening consciousness. The spatial process he describes as – same as the mental process – very slow for the last ten thousands of years. Small clusters of humans existed across the globe as separate entities. However, this process Dornhege 6/9 suddenly got sped up in the last century, with accelerating velocity.

Now, “the human molecules are tightly packed together” (*The Future of Man*, 1964), we are running out of space, and “we see races and cultures jostling one another, and a soaring world population amid which we are all beginning to fight for elbowroom. We see a world, stretched almost to breaking-point between two ideological poles, where it is impossible for the smallest peasant in the remotest countryside to live without continually being in some way affected or worried by what is going on in New York or Moscow or China...” (*The Future of Man*, 1964). He writes how “modern man, scarcely entered into what he supposed to be the haven of his individual rights, finds himself suddenly drawn into a great unitary whirlpool where it seems that his most hard-won attributes, those of his incommunicable, personal being, are in danger of being destroyed” (*The Future of Man*, 1964).

Conflict is rife. Mankind is destroying its habitat, the planet and itself. As recent examples of what de Chardin calls the “gregariousness of crowds” and the “brutalization of the masses”, which are “not effects of increased complexity, but unorganized large numbers” (*The Future*

of Man, 1964), we can mention the terror attacks on Paris in November 2015 or the unregulated plundering of the world's oceans by illegal fishing, estimated to be between \$10 billion and \$23.5 billion annually, representing between 11 and 26 million tonnes of catch (Agnew et al., 2009).

In the face of this, de Chardin urges us to make a decision; a decision, which carries the “necessity for our generation of adopting certain firm values regarding the course of the world, of taking a major decision upon which the future of human history will depend (The Future of Man, 1964).” De Chardin sees this in-folding as part of the natural process we are following to Omega Point. To him, the decision is not if or how to reverse it, but what to do with it, how to manage and design this process:

“We must accept it once and for all. Human Problem No. I is no longer that of deciding whether we can escape the socio-physical in-folding of the human race upon itself, since this is irrevocably imposed on us by the physiochemical structure of the Earth. All that matters, the only meaningful question, is to know whether this process of totalization is leading us toward what summit, or what abyss?” (The Future of Man, 1964)

At this point de Chardin reminds of that God bestowed us with a gift: the freedom of choice. “We can reject and resist the tide, seeking by every means to slow it down and even to escape individually (at the risk of perishing in stoical isolation) from what looks like a rush to the abyss; or we can yield to it and actively contribute to what we accept as a liberating and life-giving movement.” (The Future of Man, 1964). He urges us to recognize and actively face the “immense problems which Mankind must solve without delay if it is to survive” (The Future of Man, 1964). And his answer to what kind of action we need to take is clear:

“We debate endlessly about Peace, Democracy, the Rights of Man, the conditions of racial and individual eugenics, the value and morality of scientific research pushed to the utter-most limit, and the true nature of the Kingdom of God; but here again, how can we fail to see that each of these inescapable questions has *two aspects*, and therefore *two answers*, according to whether we regard the human species as culminating in the individual or as pursuing a collective course toward higher levels of complexity and consciousness? Let such organizations as the U.N. and UNESCO continue to multiply and flourish; I for one shall always rejoice unreservedly in their existence. But we must realize that we shall be forever building on shifting sand so long as bodies of this kind are not agreed on the basic values and purpose underlying their projects and decision.”

It is de Chardin's fundamental belief that as long we pursue selfish endeavors, we will experience chaos, like war, famine, and environmental destruction. No matter what laws or international organizations we put in place, their efforts will be futile if we do not change our *Weltanschauung* fundamentally. This quote of de Chardin is something we should contemplate carefully with the COP21 Climate Conference taking place in Paris now (December 2015). Will this conference of policymakers and politicians have a positive impact on the future of mankind and our planet? As mankind reaches denser levels on the way to Omega Point, we need to leave our individualistic pursuits behind in order to live in harmony. Otherwise the increased complexity will lead to chaos. Many believe reversing this density of human “over”-population is the only choice we have, yet de Chardin disagrees, stating that this is the natural course of creation and evolution. In this late essay of his, written at the end of WWII, he urges us to change our ways from an individual to a united mankind to complete our journey towards Omega Point – full of hope that we are climbing toward the summit, not falling into an abyss. De Chardin saw reigniting the natural force of love for each other and the nature that surrounds us as one pillar of the future of man. The other is the path of unity, which I

interpret not only of the unity of man among each other, but also to change our view of the environment: Is nature something we take from, use and exploit? Or is it our home we live in harmony with?

5. Conclusion

Mankind, at forefront of life, not only springs from nature, but also depends on it for survival. Yet, our given path of reaching the most complex stage of evolution, Omega Point, by expanding our consciousness also brought turbulences with it on the journey, which, have become remarkable with the increasing density of humans on the planet. From this state of chaos, not only mankind, but the whole planet, the whole environment, suffers as well. In the pursuit of sometimes profit, sometimes sheer survival in the face of dwindling resources and increasing numbers of people, nature is exploited and degraded. This causes suffering for not only mankind but all of God's creation, the plants and animals. De Chardin reminds us that the most fundamental source of cosmic energy – love – and the ceasing of selfish and individual pursuits for the sake of finally uniting as one human race, which would also be represented in one interconnected Noosphere, can be the way out of chaos and towards the bright future of reaching Omega Point. De Chardin does not see nature as a dispensable commodity to be trampled in the pursuit of progress. This would go against his fundamental belief in love and negate the idea of unity.

While we already reached great progress on land with e.g. terrestrial community-based management projects, where a local community takes on full responsibility of their surrounding environment and manages it sustainably, we lag far behind when it comes to marine conservation. Yet, millions of livelihoods depend on the ocean, our per-capita consumption of protein from the sea is increasing by the year and the marine ecosystem covers more than 70% of the globe, making up a huge part of life on earth. While we can't see so well what is beneath the waves, the ocean also deserves our love and respect just as much, to create a future of harmony. Currently, the individual pursuit of profit against international rules and regulations or the blatant lack of regulations, especially for threatened species like sharks, is endangering marine life. For my research project, I did not take the top-down approach of simply analyzing policy rules and regulations but decided to visit, live with and observe a fishing community in Kesenuma to learn about their views of the ocean and how we can create a harmonious partnership between humans and oceans; beyond exploitation, for sustainable use and co-existence. This year, for the first time, the community decided on new management rules, which are a great step toward this goal. It was not a top-down order, but a decision they made united, by themselves, and to preserve the ocean, their livelihood, and our future.

This makes me, like Pierre Teilhard de Chardin, hopeful that we are indeed not standing at an abyss, but can together climb the summit.

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