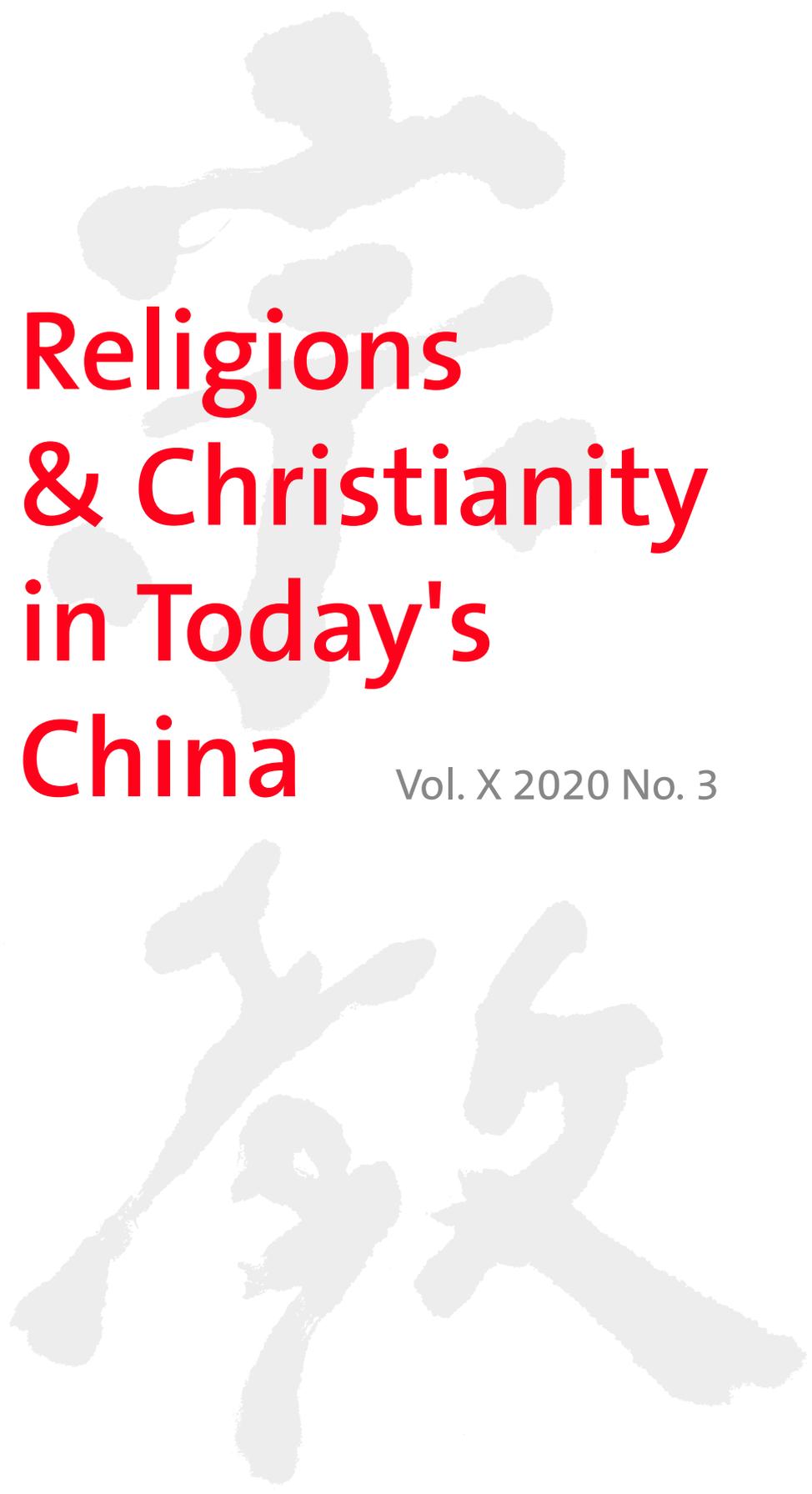


中國宗教評論



# Religions & Christianity in Today's China

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## Editorial

Dear Readers,

In the third issue 2020 of *Religions & Christianity in Today's China* (中国宗教评论) we continue with two more contributions of the 10th European Catholic China Colloquium “*Laudato Si*’ and Technoscience – Implications with Focus on the Church in China,” which took place in Siegburg, Germany, from 30 August to 1 September 2019.

Prof. Dr. Massimo Borghesi (Department of Philosophy, Social Sciences and Education at the University of Perugia) in the Opening Lecture to the Colloquium explores “The Model of Techno-science in *Laudato Si*” and its implications for the modern world and future developments. Dr. Heinrich Geiger (for 30 years responsible for the Asia Desk of the Katholischer Akademischer Ausländer-Dienst KAAD, Bonn, now free author) discusses in his article “Protection of Nature – Protection of Culture: On the Significance of the Chinese Understanding of Technology in the Context of the International Discussion on Environment” *inter alia* the impact of the concepts of *ziran* 自然, *tian* 天 and *xing* 性 from the perspective of Chinese philosophy.

In the next issue of *Religions & Christianity in Today's China* (2020, No. 4) we will again continue with the News Updates on recent events and general trends with regard to religions and especially Christianity in today's China.

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*Sankt Augustin, August 2020*

*The Editors*

## The Model of Techno-science in *Laudato Si'*

Massimo Borghesi

### 1. A Contested Encyclical



Prof. Dr. Massimo Borghesi at the 10th European Catholic China Colloquium in Siegburg. Photo: China-Zentrum archives.

The encyclical *Laudato si'. On Care of Our Common Home* was published in 2015. Similarly to what happened with the apostolic exhortation of 2013, *Evangelii Gaudium*, this encyclical has sparked a public debate.

The objections and criticism followed two main directions. The first is that of those who think the document represents the Pope venturing into an unknown territory, a territory where he is not an expert, discussing a field – the ecology – which should not be a concern of theology. For those critics, the papal document is a tactical operation, prompted by the convenience of riding the “green wave” of the moment. Clearly, this type of criticism comes from the religious conservatives who think environmental issues and ecology are a subject of today’s progressivism. For the conservatives, the Roman Pontiff is more concerned with the caring of plants and seas and is not as focused

on the Church and on the evangelization of people. The Pope, in their opinion, is more concerned about the world than about Christ.

The critics forget how all the recent Popes, from John XXIII onwards, have given special consideration and attention to the themes of peace, social justice, development of the peoples, and work. It is the social doctrine of the Church, in which tradition the encyclical *Laudato si'* fully belongs. The care for the natural world, inseparable from the destiny of humankind, is part of the theology of creation to which the second chapter of the encyc-

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lical is dedicated. The document takes its title from the verse of the Cantic of St. Francis of Assisi and it does that not because it follows a *naive* environmental ideology, but in a way that is consciously theological. In fact, the encyclical ends with a hymn to the Trinity – definitely not pantheistic.

The second trend of criticism concerns the content of the papal document. The opposition of the Pope to the economic model based uniquely on the law of profit, responsible for the exploitation of the environment, was not well-received by many – especially by the most radical sectors of the liberal-capitalistic system.<sup>1</sup> It is the same type of criticism that was moved by the analysis of the contemporary economy offered in *Evangelii Gaudium*.<sup>2</sup> The critics fully understand that the encyclical, far from being only a diversive, is a full-fledged “social encyclical.”<sup>3</sup> The thing they contest is primarily, the fact that the Pope aligns the Social Doctrine of the Church, after the years of the East-West conflict, along the North-South axis, in the same way Pope Paul VI did. In the second place, they criticize the attribution – which in their opinion has no scientific evidences – of the climate change to man’s action. The causes of the climate change, in their opinion, have little to do with the process of industrialization, the use of coalmines and with the deforestation. The critics refuse to accept man’s liability and they absolve the industry from any responsibility regarding the processes of exploitation and pollution of land and water. Hence the reaction to the papal document, which speaks overtly of “global inequality”<sup>4</sup> in the depletion of natural resources and in the distribution of waste which affects the poorest countries of the world – the dumping grounds of the world. The Pope writes:

*The warming caused by huge consumption on the part of some rich countries has repercussions on the poorest areas of the world, especially Africa, where a rise in temperature, together with drought, has proved devastating for farming. There is also the damage caused by the export of solid waste and toxic liquids to developing countries, and by the pollution produced by companies which operate in less developed countries in ways they could never do at home, in the countries in which they raise their capital.*<sup>5</sup>

This process, in which the economic dependency is translated in a profound modification of the environmental conditions, is not fully comprehended because there is not a culture

- 1 See Samuel Gregg, “Laudato Si’: Well Intentioned, Economically Flawed,” June 19, 2015, <http://institutoacton.org/2015/07/07/laudato-si-well-intentioned-economically-flawed/>; and Paul Anthony McGavin, “What’s Wrong with ‘Laudato si’?” February 9, 2016, <http://chiesa.espresso.repubblica.it/articolo/1351224.html>. See also the different assessment of Michael Löwy, “Laudato si’. La lettura di un marxista,” October 2, 2015, [www.vita.it/it/article/2015/10/02/laudato-si-la-lettura-di-un-marxista/136800/](http://www.vita.it/it/article/2015/10/02/laudato-si-la-lettura-di-un-marxista/136800/).
- 2 See Andrea Tornielli – Giacomo Galeazzi, *Papa Francesco. Questa economia uccide*, Milano: Piemme 2015; and Nello Scavo, *I nemici di Francesco*, Milano: Piemme 2015, pp. 15-35.
- 3 In an interview with *La Stampa / Vatican Insider* of August 9, 2019, to a question about the Synod on the Amazon of October, the Pope answered: “It is the ‘child’ of the ‘Laudato si’. Those who have not read it will never understand the Synod on the Amazon. Laudato si’ is not a green encyclical, it is a social encyclical, which is based on a ‘green’ reality, the custody of Creation.” (“Pope Francis Warns against Sovereignism: ‘It Leads to War’”).
- 4 Pope Francis, *Laudato si'*, [http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html), nos. 48-52. For the sources of quotations within the nos. of *Laudato si'* not explicitly mentioned here, please see the original.
- 5 *Ibid.*, no. 51.

that is up to the task. In the attempt to interpret the crisis, the positions fluctuate between two opposite polarities.

*At one extreme, we find those who doggedly uphold the myth of progress and tell us that ecological problems will solve themselves simply with the application of new technology and without any need for ethical considerations or deep change. At the other extreme are those who view men and women and all their interventions as no more than a threat, jeopardizing the global ecosystem, and consequently the presence of human beings on the planet should be reduced and all forms of intervention prohibited.*<sup>6</sup>

This second position, refusing man's responsibility, arrives at a pantheism, a mysticism of nature which implies the equivalence of value between mankind and the other species. For Pope Francis it is not correct

*to put all living beings on the same level nor to deprive human beings of their unique worth and the tremendous responsibility it entails. Nor does it imply a divinization of the earth.*<sup>7</sup>

The anti-humanist ecology is deeply contradictory.

*A sense of deep communion with the rest of nature cannot be real if our hearts lack tenderness, compassion and concern for our fellow human beings. It is clearly inconsistent to combat trafficking in endangered species while remaining completely indifferent to human trafficking, unconcerned about the poor, or undertaking to destroy another human being deemed unwanted.*<sup>8</sup>

The ecology promoted by *Laudato si'* is profoundly humanistic. The drama of today's environmental degradation lies in the fact that it can lead to the extinction of mankind. As in an announced nuclear catastrophe, we are now reaching a "breaking point,"<sup>9</sup> a point of no return.

Avoiding this peril requires a new awareness of the processes, of their correlation. "Everything is related":<sup>10</sup> it is a statement that frequently appears in the text of the encyclical. It is not an "holistic" nor pantheistic statement. Instead, it is about applying the model of polarity which, as I wrote in the book *The Mind of Pope Francis: Jorge Mario Bergoglio's Intellectual Journey*, lies at the foundation of Bergoglio's philosophy.<sup>11</sup>

6 Pope Francis, *Laudato si'*, *op. cit.*, no. 60.

7 *Ibid.*, no. 90.

8 *Ibid.*, no. 91.

9 *Ibid.*, no. 61.

10 *Ibid.*, no. 92.

11 Massimo Borghesi, *The Mind of Pope Francis: Jorge Mario Bergoglio's Intellectual Journey*, Collegeville, MN: Liturgical Press 2018.

## 2. The Technocratic Paradigm

This synthetic reflection requires, to face the environmental issue, the understanding of the connection between economy, finance, politics and the technocratic model. The third chapter of *Laudato si'*, “The Human Roots of the Ecological Crisis,” is dedicated to the hegemonial nature of this model. It is not a recent statement of the Pope. The emerging of a positivistic and tecnocratic state of mind, which accompanies the process of the post-marxist globalization, has always been a firm point in Bergoglio’s mind since the times he was bishop and then cardinal in Buenos Aires and also in one of the intellectuals that influenced him – the Uruguayan philosopher Alberto Methol Ferré.<sup>12</sup> As Francis noted in 2014:

*To our dismay we see technical and economic questions dominating political debate, to the detriment of genuine concern for human beings. Men and women risk being reduced to mere cogs in a machine that treats them as items of consumption to be exploited, with the result that – as is so tragically apparent – whenever a human life no longer proves useful for that machine, it is discarded with few qualms, as in the case of the sick, of the terminally ill, the elderly who are abandoned and uncared for, and children who are killed in the womb.*

*This is the great mistake made “when technology is allowed to take over”; [“]the result is a confusion between ends and means”. It is the inevitable consequence of a “throwaway culture” and an uncontrolled consumerism. Upholding the dignity of the person means instead acknowledging the value of human life, which is freely given us and hence cannot be an object of trade or commerce.<sup>13</sup>*

The tecnocratic model that guides today’s economy is combined, in this era of globalization, with an individualistic and relativistic philosophy. The positivist neo-empiricism that constitutes post-1989 culture is the meeting point between technocracy and relativism.

In *Laudato si'*, the worldwide hegemony of the tecnocratic model, accompanied by ethical relativism, shows how humanity entered “a new era in which our technical prowess has brought us to a crossroads.”<sup>14</sup> On one side, there are great aesthetical possibilities offered by technology and progress. The techno-science

*can also produce art and enable men and women immersed in the material world to “leap” in the world of beauty. Who can deny the beauty of an aircraft or a skyscraper? Valuable works of art and music now make use of new technologies. So, in the beauty intended by the one who uses new technical instruments and in the contemplation of such beauty, a quantum leap occurs, resulting in a fulfilment which is uniquely human.<sup>15</sup>*

12 On Alberto Methol Ferré see Massimo Borghesi, *The Mind of Pope Francis: Jorge Mario Bergoglio’s Intellectual Journey*, *op. cit.*, pp. 143-186.

13 Pope Francis, “Address of Pope Francis to the European Parliament”, [www.vatican.va/content/francesco/en/speeches/2014/november/documents/papa-francesco\\_20141125\\_strasburgo-parlamento-europeo.html](http://www.vatican.va/content/francesco/en/speeches/2014/november/documents/papa-francesco_20141125_strasburgo-parlamento-europeo.html). (The two internal quotes are both from Pope Benedict XVI, *Caritas in Veritate*, no. 71.)

14 Pope Francis, *Laudato Si'*, *op. cit.*, no. 102.

15 *Ibid.*, no. 103.

On the other side, the techno-science represents a tremendous challenge for man's responsibilities. "Never has humanity had such power over itself, yet nothing ensures that it will be used wisely, particularly when we consider how it is currently being used."<sup>16</sup> It is not possible to ignore the negative potentialities offered by nuclear energy, or by the use of bio-technologies, or by the informatic control and by DNA experimentation. In his evaluation of the present time, Pope Francis keeps in mind the observations of one of the authors that greatly influenced him: the thinker Romano Guardini.<sup>17</sup>

In both *The End of the Modern World. A Search for Orientation* and *Power and Responsibility. A Course of Action for the New Age*, the Italian-German author offered a picture of the degradation and exploitation of nature by industrialization and technology not unlike the work of Martin Heidegger. He did not, however, indulge in archaic utopias but realistically posed the question of power capable of dominating the accomplishments brought about by technical progress. The ability to have power over one's power is the fundamental anthropological question of our time. It is a problem complicated by the fact that the modern era demonstrates, in its "autonomy," an inability to maintain the values that come from its Christian heritage. The parasitic use of those values, cut off from the roots of faith, is, as Nietzsche's work makes clear, impossible. It is this horizon that makes the relationship between humanity and its own power and technology problematic today. In his lecture "On the Necessity of a Political Anthropology," Bergoglio observed that the sort of faith in progress that was typical of the Enlightenment is held today by no one. As Guardini highlighted in *The End of the Modern World*, the three absolutes have failed: Nature, Subject, Culture. It is a fact that

*the three elements typical of Modernity (nature that subsists in itself, the autonomous subject personality, and the creative culture that considers itself capable of establishing its own norms) have lost their referential validity.*<sup>18</sup>

The consequence, Bergoglio said (citing López Quintás's text on Romano Guardini), was that

*humanity today feels absurdly free, with a freedom that, in large part, is abandonment. ... Overlooked is the fact that creation can generate pride and this causes an imbalance between the power that one has over things and the power one has over power.*<sup>19</sup>

16 Pope Francis, *Laudato Si'*, *op. cit.*, no. 104.

17 For Bergoglio as a scholar of Guardini, see Massimo Borghesi, *The Mind of Pope Francis: Jorge Mario Bergoglio's Intellectual Journey*, *op. cit.*, pp. 101-141.

18 Jorge Mario Bergoglio, "Necessità di un'antropologia politica: un problema pastorale," in: *Stromata*, January-February 1989; Italian translation in Papa Francesco – Jorge Mario Bergoglio, *Pastorale sociale*, Milan: Jaca Book 2015, p. 293.

19 *Ibid.* The citation is from Alfonso López Quintás, *Pasión de verdad y dialectica en Romano Guardini, postfazione a R. Guardini, El ocaso de la edad moderna*, Madrid: Guadarrama 1958, p. 171.

There is a disproportion between technical power and the ethical maturity of those who would use it. For this reason,

*in the characterization of an anthropology that does not become a return to ignorance, the question of control of power is present in the wholeness-form tension, which avoids chaos and formalism. The challenge of anthropology is to shape and limit the unlimited fullness of the technology of power. The correct characterization of tensions helps, and is already in itself dominion and limit that leads to such a crazy force of the culture of modernity.<sup>20</sup>*

Bergoglio quoted Guardini directly here:

*The wildernesses of nature have long been under the control of man; nature as it exists round and about us obeys its master. Nature now, however, has emerged once again into history from within the very depths of culture itself. Nature is rising up in that very form which subdued the wilderness – in the form of power itself. All the abysses of primeval ages yawn before man, all the wild choking growth of the long-dead forests press forward from this second wilderness, all the monsters of the desert wastes, all the horrors of darkness are once more upon man. He stands again before chaos.<sup>21</sup>*

It is therefore necessary to control this new chaos produced by humanity. In a 2003 conference titled “Duc in Altum: Social Thought of John Paul II,” Bergoglio addressed the idea of work in Pope John Paul’s teaching:

*The pope reaffirms this concept in light of the very essence of humanity, the essence from which springs the mission of “dominating the earth,” and which involves the free choice to be a collaborator of humanity’s Creator. We hear echoes here of the prophecy of Romano Guardini, who in his book *The End of the Modern Age [World]* (1950) identified the fundamental reason for the paradigm shift that was coming to dominate our modern world. Guardini saw as a characteristic feature of our modern civilization the fact that power was increasingly turning into something anonymous. And from there, as from a root, all the dangers and injustices we suffer today are born. And the antidote that he proposed was that humanity, each one of us in solidarity, becomes responsible for power. It is precisely here that John Paul II’s vision fits human work as the place where the person freely chooses to use power as a service and in collaboration with God’s own creative work for the good of all.<sup>22</sup>*

This Guardinian understanding of the relationship between technology and power in the “postmodern” era took a central place once again for Bergoglio when, as pope, he wrote his encyclical letter *Laudato Si'*. The work written by Guardini in 1950 *Das Ende der Neu-*

20 Jorge Mario Bergoglio, “Necessità di un’antropologia politica,” *op. cit.*, p. 298, n. 24.

21 Romano Guardini, *Das Ende der Neuzeit*, Würzburg: Werkbund Verlag 1965, pp. 91-92. The citation is in Jorge Mario Bergoglio, “Necessità di un’antropologia politica,” *op. cit.*, p. 298.

22 J.M. Bergoglio, “Duc in altum”, il pensiero sociale di Giovanni Paolo II,” in: J.M. Bergoglio – Papa Francesco, *Nei tuoi occhi è la mia parola. Omelie e discorsi di Buenos Aires 1999–2013*, Introduzione di A. Spadaro, Milano: Rizzoli 2016, p. 229.

*zeit* (*The End of the Modern World*), is quoted five times in *Laudato si'*. Here, the author offers a clear picture of the directions that characterize the “post-modern” times – a period marked by immense power thanks to the technical and scientific progress, but also a time that lacks an ethics able to rule this same power.<sup>23</sup> *Modern man is powerless against his own power.* From being a mere instrument, technology becomes the driving force of a process which does not seem to have a recognizable subject anymore. The eclipse of the subject, a clear symptom of the lack of a moral position able to affirm the human centrality, explains, for the Pope, “the globalization of the technocratic paradigm.” The universalization of the technical model, promoted to an absolute value, explains the widespread reductionism, the power of the utilitarian mindset. To the point that

*the idea of promoting a different cultural paradigm and employing technology as a mere instrument is nowadays inconceivable. The technological paradigm has become so dominant that it would be difficult to do without its resources and even more difficult to utilize them without being dominated by their internal logic.*<sup>24</sup>

The technocratic model is the “logic” that drives economy, finance, politics. Francis quotes Guardini, according to whom, the technical model “moves forward in the final analysis neither for profit nor for the well-being of the human race” but “in the most radical sense of the term, power is its motive – a lordship over all.”<sup>25</sup> Technology is domination and nothing, in today’s perspective, seems to escape this state of things. Everything that should be an end in itself – humanity, nature – becomes a mere means.

The means become ends and the ends become means. *The technocratic model leads to the ethical inversion of the world.* This inversion is favoured by the fact that “The specialization which belongs to technology makes it difficult to see the larger picture.”<sup>26</sup> Reducing reality to the totality of technical problems “leads to a loss of appreciation for the whole, for the relationships between things.”<sup>27</sup> The thing that gets lost is the relationship with “philosophy and social ethics.”<sup>28</sup> In this way, the environmental issue appears to be a mere variable, a setback, a byproduct of other problems. The thing that is not grasped is the essential, vital connection that links man to the environment – environment which is not only the physical space but, more profoundly, the place of his living, of his feeling at home, in a vital bond with the surrounding nature. For this reason, according to Francis,

*Ecological culture cannot be reduced to a series of urgent and partial responses to the immediate problems of pollution, environmental decay and the depletion of natural resources. There needs to be a distinctive way of looking at things, a way of thinking, policies, an educational programme, a lifestyle and a spirituality which together generate resistance to the assault of the technocratic paradigm. Other-*

23 See Massimo Borghesi, *Romano Guardini. Dialettica e antropologia*, Roma: Edizione Studium 1990 (2004), especially chapter VI: “Tecnica e potere nell’era ‘post-moderna,’” pp. 197-236.

24 Pope Francis, *Laudato Si'*, *op. cit.*, no. 108.

25 Romano Guardini, *Das Ende der Neuzeit*, *op. cit.*, pp. 63-64, cit. in: Pope Francis, *Laudato si'*, *op. cit.*, no. 108. [*The End of the Modern World*, Wilmington, Del.: ISI Books 1998, p. 56].

26 Pope Francis, *Laudato si'*, *op. cit.*, no. 110.

27 *Ibid.*

28 *Ibid.*

*wise, even the best ecological initiatives can find themselves caught up in the same globalized logic. To seek only a technical remedy to each environmental problem which comes up is to separate what is in reality interconnected and to mask the true and deepest problems of the global system.*<sup>29</sup>

### 3. The Resistance to the Technocratic Paradigm

Thus, *Laudato si'* not only offers a critical diagnosis of the ecological problem of today. It also identifies the cause of the environmental crisis in a reduction of the ethical and humanistic dimension, produced by the worldwide hegemony of the technocratic model. The encyclical invites us to a moral “resistance” against this hegemony. The theology of redemption cannot ignore the theology of the creation in a moment, like the present one, in which technology as dominion completely separated from any ethical purpose, is risking to make the “common home” forever unlivable. It needs a “cultural revolution,”<sup>30</sup> a change of perspective which is able to challenge the intellectual tendency of the European modernity, characterized by a hubristic humanism, incapable of understanding its limits.

*Modern anthropocentrism has paradoxically ended up prizing technical thought over reality, since [as writes Romano Guardini] “the technological mind sees nature as an insensate order, as a cold body of facts, as a mere ‘given’, as an object of utility, as raw material to be hammered into useful shape; it views the cosmos similarly as a mere ‘space’ into which objects can be thrown with complete indifference.”*<sup>31</sup>

Because of this “excessive anthropocentrism,”<sup>32</sup> typical of modernity, “often, what was handed on was a Promethean vision of mastery over the world, which gave the impression that the protection of nature was something that only the faint-hearted cared about.”<sup>33</sup> This “excess” does not imply the reduction of the human presence on earth, nor Neo-Malthusian programmes on abortions and reduction of birthrate,<sup>34</sup> as the radical tendencies of ecology affirm.

*A misguided anthropocentrism need not necessarily yield to “biocentrism”, for that would entail adding yet another imbalance, failing to solve present problems and adding new ones.*<sup>35</sup>

29 Pope Francis, *Laudato si'*, *op. cit.*, no. 111.

30 *Ibid.*, no. 114.

31 *Ibid.*, no. 115. The quotation of Guardini is in: *Das Ende der Neuzeit*, *op. cit.*, p. 63. [*The End of the Modern World*, *op. cit.*, p. 55].

32 Pope Francis, *Laudato Si'*, *op. cit.*, no. 116.

33 *Ibid.*

34 *Ibid.*, no. 118. “Since everything is interrelated, concern for the protection of nature is also incompatible with the justification of abortion. How can we genuinely teach the importance of concern for other vulnerable beings, however troublesome or inconvenient they may be, if we fail to protect a human embryo, even when its presence is uncomfortable and creates difficulties? ‘If personal and social sensitivity towards the acceptance of the new life is lost, then other forms of acceptance that are valuable for society also wither away’ (*ibid.*, no. 120).

35 *Ibid.*, no. 118.

From the perspective of the model of polarity, which is at the centre of Bergoglio's thought, "we need to develop a new synthesis capable of overcoming the false arguments of recent centuries."<sup>36</sup> The Italian edition of the encyclical uses the term "dialectics" instead of "arguments." The synthesis the Pope refers to, means to *overcome the false dialectic between anthropocentrism and naturalism*. The relational model, at the centre of *Laudato si'*, is beyond the antithesis between the anthropocentric and the biocentric excess. The anthropological primacy of mankind over nature requires respect for the "common home," for the *habitat*, for the natural world. It is not possible to separate humankind and the quality of its life from the environment. Uprooting is a consequence of the technocratic model which, in turn, holds as its own premise a disembodied self, homeless, the nomadic man required by the neo-capitalistic market.

The nomadic condition finds a confirmation in the ethical relativism of the globalisation era.

*When human beings place themselves at the centre, they give absolute priority to immediate convenience and all else becomes relative. Hence we should not be surprised to find, in conjunction with the omnipresent technocratic paradigm and the cult of unlimited human power, the rise of a relativism which sees everything as irrelevant unless it serves one's own immediate interests. There is a logic in all this whereby different attitudes can feed on one another, leading to environmental degradation and social decay.*<sup>37</sup>

The technocratic model is accompanied by the culture of relativism. The marriage between positivism and relativism marks the globalisation era. It is an important statement that denies the accusations of those who think the Pope has yielded to the relativistic culture.

*The culture of relativism is the same disorder which drives one person to take advantage of another, to treat others as mere objects, imposing forced labour on them or enslaving them to pay their debts. The same kind of thinking leads to the sexual exploitation of children and abandonment of the elderly who no longer serve our interests. It is also the mindset of those who say: Let us allow the invisible forces of the market to regulate the economy, and consider their impact on society and nature as collateral damage. In the absence of objective truths or sound principles other than the satisfaction of our own desires and immediate needs, what limits can be placed on human trafficking, organized crime, the drug trade, commerce in blood diamonds and the fur of endangered species? Is it not the same relativistic logic which justifies buying the organs of the poor for resale or use in experimentation, or eliminating children because they are not what their parents wanted?*<sup>38</sup>

Can we find a way out? How can we escape from a culture of relativism which justifies the economic-technocratic model – the primary cause of the environmental disaster? *Laudato si'* shows all its pessimism regarding a purely technical, economic-based, answer.

<sup>36</sup> Pope Francis, *Laudato Si'*, *op. cit.*, no. 121 [emphasis mine].

<sup>37</sup> *Ibid.*, no. 122.

<sup>38</sup> *Ibid.*, no. 123.

“[...] *The environment is one of those goods that cannot be adequately safeguarded or promoted by market forces*”. Once more, we need to reject a magical conception of the market, which would suggest that problems can be solved simply by an increase in the profits of companies or individuals. Is it realistic to hope that those who are obsessed with maximizing profits will stop to reflect on the environmental damage which they will leave behind for future generations? Where profits alone count, there can be no thinking about the rhythms of nature, its phases of decay and regeneration, or the complexity of ecosystems which may be gravely upset by human intervention. Moreover, biodiversity is considered at most a deposit of economic resources available for exploitation, with no serious thought for the real value of things, their significance for persons and cultures, or the concerns and needs of the poor.<sup>39</sup>

Economy, subjected to the principle of maximizing the profit, is unable to free itself from an “instrumental way of reasoning.”<sup>40</sup> *Laudato si'* agrees with the members of the Frankfurt School, Horkheimer and Adorno, and their critique of positivism.<sup>41</sup> The alternative offered by the encyclical focuses on two points: the recovery of the primacy of politics over economy, and the revaluation of the aesthetic model over the functionalist/utilitarian one. “Politics must not be subject to the economy, nor should the economy be subject to the dictates of an efficiency-driven paradigm of technocracy.”<sup>42</sup> In order to achieve that, there needs to be a politics which is capable of facing the problems with an “integral and interdisciplinary approach;”<sup>43</sup> a politics that knows the notion of the “common good,” of which human ecology is an integral part. This politics must be oriented by an anthropology and a social philosophy guided by four ideal principles, recalled both in *Evangelii Gaudium* and *Laudato si'*: “realities are more important than ideas,”<sup>44</sup> “the whole is greater than the part,”<sup>45</sup> “time is greater than space,”<sup>46</sup> “unity is greater than conflict.”<sup>47</sup>

An integral politics should place the human being at the centre and his *habitat* should be considered part of this centrality. The sovereignty over the world includes also the custody and the care of the world. There is a limit to the utilization of natural resources, beyond which the destruction of the environment is irreversible. This means that we have to abandon the dominant ethical horizon, in order to gain a new image of the human. The drama of the present time is made even worse by the lack of awareness regarding the fact that in order to heal the environment we need to heal man. The persistence of the myth of progress, which – ironically – also influences the liberal-conservatives who are

39 Pope Francis, *Laudato Si'*, *op. cit.*, no. 190.

40 *Ibid.*, no. 195.

41 See Max Horkheimer, *Eclipse of Reason*, New York: Oxford University Press 1947.

42 Pope Francis, *Laudato Si'*, *op. cit.*, no. 189.

43 *Ibid.*, no. 197.

44 *Ibid.*, no. 110.

45 *Ibid.*, no. 141.

46 *Ibid.*, no. 178.

47 *Ibid.*, no. 198. About the meaning of the principles in Bergoglio's “polar model” see Massimo Borghesi, *The Mind of Pope Francis: Jorge Mario Bergoglio's Intellectual Journey*, *op. cit.*, pp. 107-122.

traditionally hostile toward ecology, leads to the illusion that the environmental issues can be solved magically, that the planet and the atmosphere can tolerate everything, that there is no limit, that climate changes are physiological. Thus, technocratic progressivism hides the economic and financial interests and it prevents from raising the anthropological question. According to Francis:

*There can be no renewal of our relationship with nature without a renewal of humanity itself. There can be no ecology without an adequate anthropology.*<sup>48</sup>

Therefore, the respect for the natural conditions means, in the first place, a new relationality which allows to overcome the technocratic ideology and way of thinking.

*If the present ecological crisis is one small sign of the ethical, cultural and spiritual crisis of modernity, we cannot presume to heal our relationship with nature and the environment without healing all fundamental human relationships.*<sup>49</sup>

The place of this healing points towards a space of rediscovered beauty. Towards an *aesthetic revolution*. Sensitive to the lesson of the great theologian Hans Urs von Balthasar, the author of the monumental *Herrlichkeit*, Pope Francis urges us to understand that

*“the relationship between a good aesthetic education and the maintenance of a healthy environment cannot be overlooked”. By learning to see and appreciate beauty, we learn to reject self-interested pragmatism. If someone has not learned to stop and admire something beautiful, we should not be surprised if he or she treats everything as an object to be used and abused without scruple.*<sup>50</sup>

The aesthetic revolution allows us to escape from the technocratic model. Beauty possesses a higher meaning and functionality than the limited, utilitaristic functionality governed only by the law of money and profit. Beauty opens up to a sense of mystery, of gratitude, as it is shown in the *Canticle of the Sun* of Francis of Assisi; and beauty also allows to open up to an authentic relationality between man and nature. There is not only utilization, but also respect; not only dominion but also gratitude. There is a different logic here, which puts things in perspective and enables us to place technology and economy at the service of a politics of the common good. At the service of a project which can reconcile city and country, North and South, the centre of the metropolis with the peripheries – places that are often miserable, polluted and dangerous.

In the encyclical, the Pope recalls paragraph 210 of *Evangelii Gaudium*:

*“How beautiful those cities which overcome paralyzing mistrust, integrate those who are different and make this very integration a new factor of development! How attractive are those cities which, even in their architectural design, are full of spaces which connect, relate and favour the recognition of others!”*<sup>51</sup>

48 Pope Francis, *Laudato Si'*, *op. cit.*, no. 118.

49 *Ibid.*, no. 119.

50 *Ibid.*, no. 215. Regarding the influence of the aesthetic theology of von Balthasar on Bergoglio, see Massimo Borghesi, *The Mind of Pope Francis: Jorge Mario Bergoglio's Intellectual Journey*, *op. cit.*, pp. 244-253.

51 Pope Francis, *Evangelii gaudium*, no. 210, cit. in *Laudato si'*, *op. cit.*, no 152.

Beauty favours integration, relation, recognition. Technology can make a great contribution to this. But, in order for this to happen, it is necessary to begin with social and community experiences connected to a territory. There needs to be a *community environmental revolution*.

*Nevertheless, self-improvement on the part of individuals will not by itself remedy the extremely complex situation facing our world today. Isolated individuals can lose their ability and freedom to escape the utilitarian mindset, and end up prey to an unethical consumerism bereft of social or ecological awareness. Social problems must be addressed by community networks and not simply by the sum of individual good deeds. This task [as writes Romano Guardini] “will make such tremendous demands of man that he could never achieve it by individual initiative or even by the united effort of men bred in an individualistic way. The work of dominating the world calls for a union of skills and a unity of achievement that can only grow from quite a different attitude”. The ecological conversion needed to bring about lasting change is also a community conversion.*<sup>52</sup>

A conversion means more than simply “resisting.” It involves a change of heart and mind. In a time in which the technocratic model dominates universally and runs through all the political formations, without distinctions between right and left, *Laudato si'* represents a different perspective. Thus, the encyclical gives a voice to the expectations of millions of men and women who are forced to live in miserable conditions. It is a cry of alarm because, if it is true that “time is greater than space,” time is running short for the richest parts of the planet too. The great climate changes, the rising of the temperature, the melting of the ice caps suggest an apocalyptic scenario, with biblical migrations, desertification and new circles of misery and famine.<sup>53</sup> To face the chaos generated by an economic, technical-utilitarian rationality, politics must come back in the foreground and govern everything with an awareness about the present and future implications of its decisions. Man must be able to control his own power, and he should not let technology and its excesses to dominate him.

*Laudato si'* speaks to everyone, but in particular to those who have the responsibility of the destiny of the world. Political, economic and military decisions do not concern only the present or the immediate future. These decisions, thanks to the technical power and the changes it produces, jeopardize the future of the coming generations. Everything is correlated, and those who guide history must hold together the present and the future; they must govern the present in the light of its probable future developments. Those who come after us will be the judge. They will judge if, with our great power, we will have made the earth habitable or if we will leave them a destroyed world, an utterly changed nature and a desolate land.

The cry of alarm of the Pope is the reflection and meditation the world desperately needs today.

52 Pope Francis, *Laudato si'*, *op. cit.*, no. 219. The quotation of Guardini is from *Das Ende der Neuzeit*, *op. cit.*, p. 72. [*The End of the Modern World*, *op. cit.*, p. 65-66].

53 See “IPCC Special Report on Climate Change and Land” by the scientific climate committee of the United Nations, published in Geneva on August 6, 2019, [www.ipcc.ch/site/assets/uploads/2019/08/SRCCL-leaflet.pdf](http://www.ipcc.ch/site/assets/uploads/2019/08/SRCCL-leaflet.pdf).

## Protection of Nature – Protection of Culture: On the Significance of the Chinese Understanding of Technology in the Context of the International Discussion on Environment

Heinrich Geiger

**Abstract:** *Living in the Anthropocene, we have new possibilities to make use of technology. Studying ancient Chinese philosophy, we learn that the essence of technology can be characterized by the concept of an ongoing dynamic process between human beings and nature. All human activities are already part of nature: what we do, inevitably affects nature and nature correspondingly always affects us in turn. It has to be realized that the “ten thousand things,” the things of the world, are not only a “standing reserve” to be exploited by man. Instead, cooperation between man and nature has to be taken as a holistic, dynamic process.*

*Due to the technological and scientific development in the Anthropocene, in the 21<sup>st</sup> century, technology is expected as a means to overcome the ecological violence of man during the Holocene. Ancient Chinese philosophers would say that the evolution and procreation of heaven and earth have to be assisted. From them we also could get to know that a narrow anthropocentrism will lead to much unhappiness, quarrelling and disharmony. It may even bring disaster upon the whole population of the world. The first step to overcome any kind of narrow anthropocentrism would be to learn from the historical truth that nature has already been formed by different technologies and strategies of power (bio-power) over centuries. The second step would be to develop a new understanding of technology, based on the idea of a way of living in harmony between man and nature which is already the second or, as some would say, the third nature.*

*But, technology is not pure. Caused by the growing competition between nations, in the present international setting it is very political. We have to keep in mind that the search for better technology is not only justified by the desire to understand the truth. It is pushed by the de-*

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*sire to be in control, in control of the single subject, the whole society, the whole world, all of nature, in so far as it is of use for man because of strategical reasons. We have to accept that technology is not only for technology's sake. It does not only enter the realm of the political, but it is political itself.*

*Will it be possible to overcome the still prevalent, narrow anthropocentrism? Hopefully yes! But technology will play a crucial role in that process. Our hope is that the opposition of man and nature and the opposition of natural and cultural sciences have lost their meaning in the Anthropocene.*

Technology has always been an inescapable part of life. In the present circumstances the term of the “Anthropocene” sends the message that technology is having undeniable impacts on the environment on the scale of the planet as a whole, so much so that even a new geological epoch has begun and an old epoch, the epoch of the Holocene, which lasted for 12,000 years, has gone. Only some weeks ago Martin Head, a geologist, described that process and its results with the following words: “We have talked to the earth, and now the earth responds to us.”<sup>1</sup> Besides many other meanings the term of the “Anthropocene” includes the insight that mankind has caused mass extinctions of plants, animal species, polluted the oceans and altered the atmosphere during its “talk” to the earth, as Martin Head has put it. The “response” of the earth is, among other things, the climate change, articulating itself in flooded coastal areas, droughts, wars and migration. This fundamental violence is done by man under the banner of scientific and technological progress. Science and technology may count as the greatest mythological beliefs of our time. In China today “Scientific Socialism” is propagated and put into political practice. According to my opinion, which is in line with Martin Heidegger, we have to grasp this unsettling essence of modern metaphysics and strive to overcome it by returning human existence (“Dasein”) to its origin in the world.

Under the premises of the Anthropocene, not only the natural sciences, but also the humanities have to look for new ways to define themselves. By doing so, they cannot escape the crucial question whether the opposition of man and nature on the one and the opposition of natural and cultural sciences on the other side have not lost their original meaning in the new epoch? How to uphold these oppositions in a world where we cannot find a place which does not show ecological footprints of human beings? Man and nature cannot be separated from each other anymore, as they are parts of a dynamic process which does not distinguish between them. With respect to the question about individuals living a life of appropriateness and establishing their destiny, we also have to ask if the concept of naturalness, as it has been formulated in the book *Laozi* 老子 for example, is still able to provide cultural guidance. How can we define what is ethically right or wrong within processual orders, happening between nature and man? We might oppose genetically modified organisms in industrial food production because we see them as doing fundamental violence to the fabric of nature and humanity. However, another group of

1 Jörg Häntzschel, “Menschengewalt. In Berlin trafen sich Wissenschaftler, um nachzuweisen, dass das Zeitalter des ‘Anthropozän’ angebrochen ist,” in: *Süddeutsche Zeitung*, June 1–2, 2019.

people may claim that genetically modified organisms in industrial food production are good because they allow a larger human population to be fed. What is ethically right and what is ethically wrong?

It seems that we inevitably fall into a kind of relativism regarding controversial issues like these. Values, judgments and appraisals are often attached to certain particular standpoints. This leads to a confrontation between various opposites: between objects and the self, being and non-being, difficulty and ease, good and evil and, last but not least, because of this kind of thinking in dichotomies, to a misleading human approach to nature. In fact, the relationship between humanity and nature is at the heart of ontologies of all philosophical interrogations, albeit expressed differently in different historical epochs and cultural contexts. In ancient Chinese philosophy human essence is defined through relationship, and it is through the employment of such reasoning that one could attain access to the supernatural which is permeating the whole of nature. But if the relationship between human beings and the world is cut off, the atomization of individuals and the fragmentation of the natural world take place. Mankind is then nothing more than the dominator of nature, understanding that the world is created for its use – be it as a tourist destination or a place of economic exploitation. Under these premises man is the subject, the “measure of all things;” he is privileged and the keeper of nature.

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Could ancient Chinese philosophy help us to overcome these predicaments, which are caused by a very harmful opposition of man and nature and by some kind of blindness towards the fact that human beings are not the masters of nature, nor can they exist independently of it? Does not ancient Chinese philosophy tell us that human beings and nature are interdependent, improving one another, getting along well with each other and integrating? To remember, the book *Laozi* explicitly points out that a human being should hold a respectful attitude towards heaven, the *dao* 道, and naturalness, and respect the laws of nature; humans in conformity with the *dao* should not violate natural laws, they should follow them instead. Only in this way can they achieve oneness between man and nature and apply their technical skills in the right and not in a destructive way – which is one of the core ideas of Daoism and, as I would like to state, of Chinese culture. It permeates the arts of painting, calligraphy, Chinese craftsmanship and so on in general. Technology plays an important role; according to Chinese philosophy not as a tool of violence, but as a tool of human experience (some may call “wisdom”) which unfolds its effects in the very process of living. The human person and the world are one ongoing process. Because there is no dichotomy between nature and nurture, between social and biological issues, there is also no antagonism between the realms of technology and ecology. “The problem is how human growth can unfold with the rhythm of nature.”<sup>2</sup>

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The present government of the People’s Republic of China is running a plan, unveiled four years ago in May 2015, called “Made in China 2025.” As China revved up its manufactur-

2 Liu Jing, “Growth, Experience and Nature in Dewey’s Philosophy and Chinese Philosophy,” in: *Frontiers of Philosophy in China* 12 (March 2017) 1, pp. 90-103. Quotation on p. 96.

ing machine to power growth over the years, officials were willing to tolerate some of the downside of scrap, namely the pollution of local soil and rivers by low-end-recycling practices. Further on, since the 1990s, the world has shipped its waste paper, discarded plastic and unwanted metals to China, where they have been destined to be used as raw materials to help power the country's export-driven manufacturing boom. In 2016, China imported about \$ 18 million worth of what the government calls solid waste. But the situation has changed. China does not want to be the rest of the world's trash can anymore. It started its regulatory fight against imported garbage in 2013, when a flurry of port inspections forced overseas recyclers to clean up their operations and invest in new waste-sorting technologies.<sup>3</sup> Among other things "Made in China 2025" means that the People's Republic of China should no longer make such environmental sacrifices. Pollution figures strongly into the broader debate over the cost of growth in China. If successful, the antipollution campaign could produce bluer skies and cleaner water across the country. And, not to forget: Following the guidelines of Scientific Socialism the Chinese government has designs to dominate cutting-edge technologies like artificial intelligence. It is enlisting some of the world's biggest technology players in its push.

"Made in China 2025" is very ambitious. It means a national industrial policy that aims to project a new type of global might and influence. According to my opinion, there is a common idea, shared by modern and traditional China. It lies in the fact that both focus on the interaction between human persons in community and the natural world so as to formulate a dynamic life philosophy or, as I would say, following the German philosopher Günter Wohlfart, an ethical system without morality.<sup>4</sup> But in this system there exists a dilemma: The dilemma "between unbalanced and inadequate development and the people's ever-growing needs for a better life," as President Xi Jinping stated in 2017.<sup>5</sup> Ecological consciousness and ethics without morality, can they work well together?

## Remarks on the Concept of Nature in Traditional China<sup>6</sup>

The conventional term in Chinese philosophy for nature is *ziran* 自然. In general it is associated with Daoism. In the books *Laozi* and *Zhuangzi* 庄子 nature represents a certain desirable state beyond the realms of civilization and social norms. The followers of Daoism dissociate themselves from the followers of Confucianism. They are dreaming of a prehistoric period. Thanks to the natural living conditions at that time, human beings had, so the assumption, supernatural capabilities at their disposal. Through Neo-Confucianism the relationship between Daoism and Confucianism entered into a new stage at

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- 3 Mike Ives, "China Does Not Want to Be the World's Garbage Dump Anymore," in: *The New York Times International Weekly*, December 15, 2017.
- 4 Günter Wohlfart, *Die Kunst des Lebens und andere Künste. Scurrile Skizzen zu einem eurodaoistischen Ethos ohne Moral*, Berlin: Parerga 2005.
- 5 Keith Bradsher, "Harder Line on Pollution. Could China Slow Down China," in: *Süddeutsche Zeitung*, November 10, 2017.
- 6 Based on the book Heinrich Geiger, *Den Duft hören. Natur, Naturbegriff und Umweltverhalten in China*, Berlin: Matthes & Seitz 2019.

the end of the first millennium A.D. At the same time, *The Book of Changes* (*Yijing* 易经) began to play a new and far-reaching role.

Zhou Dunyi 周敦頤 (1017–1073) is generally called the pioneer of Neo-Confucianism. Being an outgrowth of ancient Confucianism, modified by Daoism and Buddhism, Neo-Confucianism thrived from the twelfth to the sixteenth century. Zhou laid the pattern of metaphysics and ethics for later Neo-Confucianism in his works *An Explanation of the Diagram of the Great Universe* (*Taiji tu shuo* 太极图说) and *Penetrating the Book of Changes* (*Tong shu* 通书). His *Taiji tu shuo* is not like any diagram of the Daoists. It is closer to *The Book of Changes* rather than to the books *Laozi* and *Zhuangzi* of Daoism. Zhou Dunyi based his entire philosophy on *The Book of Changes* and, as such, used this classic for his own “rational philosophy.”<sup>7</sup> Following *The Book of Changes*, the two complementary ethical formulae, seriousness (*cheng* 誠) to straighten the internal life and righteousness (*yi* 義) to square the external life, became the keystones in the method of moral cultivation of many Neo-Confucianists.

From the writings of Zhou Dunyi we may see that at the latest since the formation of Neo-Confucianism, this means from the beginning of the second millennium A.D., *The Book of Changes* had been very crucial again in a specific way for the understanding of the harmony between heaven (*tian* 天), earth (*di* 地) and men (*ren* 人). Zhou Dunyi assimilated the Daoist element of Non-Being to Confucian thought, but in so doing, he discarded the fantasy and mysticism of Daoism. In the following, nature was conceived as a part of a reality, which can be regulated. It was understood among other things as a functioning whole, be it a landscape with thousands of traces of *qi* 气 or a city with thousands of roads. Now, in the 21<sup>st</sup> century, not only a few are convinced that, following *The Book of Changes*, you even may discover the laws of nature in the stock-market. According to my own opinion, this is a late result of Neo-Confucianism, using *The Book of Changes* for its “rational philosophy.”

## Culture and Nature<sup>8</sup>

In the history of Chinese thought nature is not opposed to culture or the world of man. *The Book of Changes*, which is characterized by the impact of different traditions of thought, shows that well.

Since its very origin *The Book of Changes* consisted of the so-called eight Trigrams (*ba gua* 八卦, i.e., figures composed of three lines each), being then the name symbols for eight worldly natural objects or phenomena, such as Heaven, Earth, Thunder, Winds, Fire, Water, Mountains and Marshes. From those eight symbols they were extended to sixty four combinations of two combined Trigrams, called sixty four Hexagrams (*liushisi gua* 六十四卦, i.e., figures composed of now six lines each). Traditionally the invention of the eight Trigrams is ascribed to the mythical ruler Fu Xi 伏羲. King Wen 周文王 of the Zhou-Dy-

7 Chan Wing-Tsit (transl./comp.), *A Source Book in Chinese Philosophy*, Princeton, New Jersey: Princeton University Press 1969 (fourth printing 1973), p. 460.

8 Based on the book Heinrich Geiger, *Den Duft hören. Natur, Naturbegriff und Umweltverhalten in China*, Berlin: Matthes & Seitz 2019.

nasty (approx. 1100–256 B.C.) is said to have doubled the Trigrams to Hexagrams and was the first to arrange them. But actually *The Book of Changes* has been accomplished by many people with generations of efforts. Different parts of it have been compiled over a long period by different groups of persons. The final shape must have evolved during the Warring States period (441–221 B.C.). During the last two centuries B.C., when cosmological speculations prevailed, there were four different traditions of the *Yijing* for which professorships were established. The versions of Meng Xi 孟喜 (approx. 1<sup>st</sup> century B.C., exact life data unknown) and Jing Fang 京房 (78–37 B.C.) soon dominated over the others, but were themselves, at the end of the Eastern Han-Dynasty (25–220 A.D.), overshadowed by the versions commented by Zheng Xuan 郑玄 (127–200 A.D.) and Wang Bi 王弼 (226–249 A.D.). Matters of dispute are the actual dates of the completion of the *Yijing* commentaries. Feng Youlan 冯友兰 (Fung Yulan), for example, dates the commentaries as late as the Western Han-Dynasty (206 B.C. – 9 A.D.).<sup>9</sup> The *Ten Wing Commentaries* (*Shi yi* 十翼) which interpret the Hexagrams and their statements in a lexicological, symbolistic and philosophical way should be considered products of that time.

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Talking about *The Book of Changes*, we may presume that the text describes an ancient system of cosmology and philosophy which underwent a process of reinterpretation by Neo-Confucianism. In its early times it was used as an official book of divination by ancient rulers. Later on its meaning was applied in geomancy as corresponding to points of the compass. But, despite that fact, one should not forget its heterogeneity. At the time of the classical philosophers in around 500 B.C., after the Zhou-State weakened and China moved in to the Spring and Autumn Period (770–481 B.C.), *The Book of Changes* began to show traces of different schools which utilized the material of the same to be interpreted into their own system of thought. Confucian influence played a great role, but also Daoism and the Yin-Yang school. As Burton Watson in his book *Early Chinese Literature* explains,

*it thus provided an opportunity for scholars with a more metaphysical and transcendental bent of mind to indulge their tastes without going outside the realm of the Five Classics, and the endless volumes of commentary on the hidden meaning of the Changes are the result. Had there been no such text in the Confucian canon, it is likely that such men would have abandoned Confucianism entirely in favour of the Daoists, who from the beginning interested themselves in mystical and cosmological speculation. It was probably to preclude just such an eventuality that the early Confucian scholars took over The Book of Changes and made it part of their literature.*<sup>10</sup>

Starting from the 10<sup>th</sup> century A.D., the Neo-Confucian school understood the “father of all classics and source of a hundred schools of thought” in a more moralistic and, as pointed out above, functional manner.

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9 Fung Yulan, *A History of Chinese Philosophy*, transl. by Derk Bodde, 2 vols., Princeton: Princeton University Press 1952/3, pp. 381-382.

10 Burton Watson, *Early Chinese Literature*, New York – London: Columbia University Press 1962, p. 153.

In the *The Book of Changes* there is no real line between culture and nature, they are inseparable from each other. Studying nature means a communication within an overall context, to which we human beings belong. In their encounter with nature human beings reflect the basis of their own existence. They face, so to speak, relations all the way down, and all the way up and all the way out, which they have to consider. The Hexagrams of the *The Book of Changes* prove that there are no terms of relations which are not simply clusters of further relations. For the sake of an unrestricted understanding of the concept of nature as it is represented by *The Book of Changes* we have to keep that in mind. As it deals with Tri- and Hexagramms we have to understand the reader of *The Book of Changes*, following Charles Sanders Peirce, as someone “who knows no more recondite reality than that which is represented in a true representation.”<sup>11</sup> But this is, thanks to the deep meaning of the Tri- and Hexagrams in *The Book of Changes*, the reality of the whole universe, comprising heaven (*tian*), earth (*di*) and men (*ren*).

The concrete never satisfies the mind: Even though numerous physical models have been constructed and a multitude of mathematical models have been formulated, through the history of *The Book of Changes* we may learn that the mental experiments still continue. The hermeneutic of this classical book is justified by the idea of “second nature” (John McDowell, born 1942, *Mind and World*, Harvard University Press 1996) which is based on the capacity of human beings as potentially rational and dialogical, responsive to “*Bildung*” (education or, better, formation). It is not only justified by the insight into nature itself or what we may call “first nature” and laws which may be explained by knowledge of fact. The textual tradition of the Chinese classics as it was shaped by Neo-Confucianism shows that we cannot leave our own horizon, as the effective history of a continuing tradition depends on constantly new assimilations and interpretations.

## The Concepts of *ziran*, *tian* and *xing*<sup>12</sup>

For a genuine understanding of the concept of nature in China studies on *ziran* 自然 are not enough. To show it in all its diversity and depth, explanations on *tian* 天 and *xing* 性 have to be included. In that context I will not talk about the concept of *qi* 气 which was used as early as the Western Zhou-Dynasty (app. 1100–771 B.C.) in the meaning of nature.

### *Ziran* 自然

We come across the term *ziran* from the 4<sup>th</sup> century B.C. amongst others in the Mohist canon. In the book *Daodejing* 道德经 (English: *True Classic of the Way and the Power*) the term *ziran* is used as an expression for something which cannot be named and realizes the utmost in itself. Also Wang Bi defines *ziran* in a very general way: according to him *ziran* should be understood as something which is empty or non-existent and comes into

11 Martin Krampen et al. (ed.), *Die Welt als Zeichen. Klassiker der modernen Semiotik*, Berlin: Severin und Siedler 1981, p. 38.

12 Based on the book Heinrich Geiger, *Den Duft hören. Natur, Naturbegriff und Umweltverhalten in China*, Berlin: Matthes & Seitz 2019.

being through action or motion. The passage from potentiality to actuality is important. Therefore in ancient Chinese philosophy the concept of *ziran* gets its meaning on the one hand as a universal notion within an ontological model. On the other hand it is referred to in a significant manner as a human ability to fully merge with the *dao*, to get into oneness with the ten thousands things (*wan wu* 万物).

The character for *ziran* consists of two parts: *zi* 自, which is to be meant as “self,” and *ran* 然, which is joined to it, again consists of three component parts: right the radical “dog,” left the radical “flesh” and below them the radical for “fire.” *Ran* has been used in its etymological meaning of “burning” up to the Han-period (206 B.C. – 220 A.D.). However, we face many difficulties and fundamental philosophical problems in the act of translating *ziran*. A dependence of this core concept of East-Asian thinking on Western concepts should be avoided.

Within the concept of *ziran*, nature is respected as a dynamic, self-regulatory essential form. First and foremost, it is understood as a rational, systematic arrangement, as is the case in *The Book of Changes*. Hence the meaning of nature (*ziran*) has not necessarily to be derived from the love for nature, but from the perspective of reflective human beings who are concerned about their own existence. This is an important difference between Chinese and Western culture which should be considered when we talk about environmental issues, too. Love for nature or unity with nature under the premise that it cannot be separated from man – this means two different relational settings of nature and man.

The core ideas of the Chinese concept of nature (*ziran*) may be found in *The Book of Changes*, as already pointed out above. According to the system of cosmology and philosophy, that is intrinsic to ancient Chinese cultural beliefs, every existence is a product of firm and yielding forces, it is at the same time a physical being as it is a force which interacts with other forces. From the third commentary of *The Book of Changes*, the *Great Commentary* (*Da zhuan* 大传) or, as it is also called, *About the Relationship of the Hexagrams* (*Xi ci zhuan* 系辞传), Section I, Chapter I, Paragraph 1 we can get an idea about the process of evolution of the universe from primordial chaos to ordered entity:

*Heaven is high, the earth is low; thus the creative and the receptive are determined. In correspondence with this difference between low and high, inferior and superior places are established.*

*Movements and rest have their definite laws; according to these, firm and yielding lines are differentiated.*

*Events follow definite trends, each according to its nature. Things are distinguished from one another in definite classes. In this way good fortune and misfortune come about. In the heavens phenomena take form; on earth shapes take form. In this way change and transformation become manifest.<sup>13</sup>*

Even though this comment is a product of the Han-Dynasty, it is evident that such a conception must go back much earlier. We learn that cosmic evolution proceeds in four stages. The very first is the setting of the value levels of heaven and earth, and those in between.

13 Richard Wilhelm, *The I Ching*, transl. by Cary Baynes, New York: Princeton University Press 1967, p. 280.

It is followed on the second stage by the differentiation of the firm and the yielding which is the precondition for the distribution of the two forces into different value levels on the third level. These value levels obey the rules that “similar things tend to group together” or “similar natures respond to each other.” On the fourth stage it comes to a formation of all the phenomena and things because they interact with each other and keep changing harmoniously due to a closed system of order.

### *Tian* 天

“Heaven is high, the earth is low,” as we have heard from the *Great Commentary* of the *Yijing*. The term of “heaven,” in Chinese *tian*, already appears in the texts of the *Shujing* 书经. From the outer appearance *The Book of Documents*, as the *Shujing* is called in English, goes back to the period between the 20<sup>th</sup> to the 7<sup>th</sup> Century B.C. But in reality it may count as a compilation of texts from the 10<sup>th</sup> to the 6<sup>th</sup> Century B.C. Together with the *Shijing* 诗经, *The Book of Songs*, it belongs to the oldest traditions of China.

Since the term of “heaven” (*tian*) is not clearly explained by the *Shujing* or by the *Shijing*, it came to the fact that it had been identified in some cases by Western ideas in the meaning of a personal God. Reasons for that had been given particularly by paleographic analysis of the graphic character *tian* which clearly shows, as it was seen, a human figure with big head and distinctive limbs. However the definition of “deity” in the Christian meaning as creator of cosmos and the human beings, etc. is eliminated as possibility for the *Shujing* as well as for the *Shijing*, as the heaven in these texts does not act as a creator. Even though in the *Daodejing*, the book *Laozi*, cosmogonical reports can be proved, there is good reason to conclude that in classical Chinese texts, as there are the *Shujing*, the *Shijing* and the book *Laozi*, the idea of a deity in the sense of a creator God does not exist. *Tian* has to be understood as a term which is symbolizing the entity of ancestral spirits of a dynasty.

Wolfgang Bauer has explained on various occasions how heaven (*tian*) slowly lost its transcendent position during the Zhou-Dynasty.<sup>14</sup> According to the German sinologist, in the course of that process the meaning of *tian* changed from a generic term for the entity of ancestral spirits of a dynasty finally into “nature.” *Tian*, the heaven, did not anymore, as it did before, look after the human beings, listen to them or speak to them. It appeared rather in a plethora of natural phenomena, from which the human beings had to draw their own lessons for concrete political decisions. This provided a very special historical background for the use of *The Book of Changes* as an official book of divination and geomancy.

### *Xing* 性

Besides and together with the terms *ziran* and *tian* the Chinese understanding of nature is closely related with the term *xing*, which I would translate as “human nature.” In classical

14 Wolfgang Bauer, “Gläubigkeit und Rationalität. Über das Verlassen von Göttern und Geistern in der zweiten Hälfte des ersten vorchristlichen Jahrtausends,” in: Kulturstiftung Ruhr, Essen (ed.), *Das alte China: Menschen und Götter im Reich der Mitte. 5000 v.Chr. – 220 nach Chr.*, München: Hirmer Verlag 1995, pp. 147-155.

Chinese philosophy the identification of *xing*, suggested by etymological word relatedness, with the “inherent” (*sheng* 生) is very common. In the meaning of “heavenly nature” the concept of *xing* is found in a text passage in *The Book of Documents* (*Shujing*). There it is mentioned as a reason for a lost battle and the relief of the Shang- (approx. 1600 – approx. 1100 B.C.) by the Zhou-Dynasty. It was argued that the last king of the Shang-Dynasty disrespected his “heavenly nature” (*xing*).

In the *Shujing* the will of heaven had been regarded as the crucial moment for the victory or rather the defeat of a dynasty, even though heaven itself did not execute it, but specific historical persons. Those who had been victorious had proved already that they are capable of implementing what is conceived as being in accordance with human nature (*xing*). This story tells us that according to the *Shujing* human nature (*xing*) is not really free in the modern sense of the word. It is bound by a contract, which emanates from the “will of heaven” (*tian ming* 天命) and requires its implementation by several means that we also know from the *Yijing*.

## Closing Remarks

The concept of *tian* changed from “heaven” to “nature” in the meaning of natural phenomena within the last centuries B.C. And also the concept of *xing* underwent a transformation in the same direction. From the writings of Mengzi 孟子 (372–289 B.C.) and Xunzi 荀子 (298–238 B.C.) we know that during the 4<sup>th</sup> and 3<sup>rd</sup> century B.C. human nature was not seen any more within an order set by heaven. It was seen in the light of human nature itself which Mencius understood as good and Xunzi as bad. Mencius talked about the virtues of men, Xunzi about their sensual and instinctive nature which could be used for the sake of a harmonious state by the means of music and ritual.

These transformations have to be kept in mind when we speak about nature in China and its underlying cosmology which is also basic for *The Book of Changes*. We should learn from these transformations that the Chinese perception of nature comes along with a diverse history, which brought specific Confucian concepts into the vicinity of Daoism, especially at the time of the Western Han-Dynasty (206 B.C. – 9 A.D.), and again, together with some Buddhist impact, at the time of Song-Dynasty (960–1279 A.D.), based on the *The Book of Changes*.

\*

Now we are living in the epoch of the Anthropocene. After a break with its own tradition in the course of the 20<sup>th</sup> century, Daoism, Confucianism and Buddhism again play a certain role in the academic world of present day China. During the last decades, a whole range of discussions and mechanisms have evolved to address the loss of nature, environmental degradation and ecological corrosion. Along with an emphasis on these issues, there has been also an increasing focus on how to find an adequate response to what nowadays is seen as a global challenge in dealing with environmental degradation and ecological corrosion. Historically speaking, one could say that there has been worldwide an evolution from nature conservation education to environmental education to the

recent idea of education for sustainable development. But, Pope Francis in his encyclical *Laudato si'* goes a step further and speaks of an education in “integral ecology” that combines environmental, economic, social, cultural and spiritual ecologies in caring for our common home.<sup>15</sup> If we want to tread along this line of thought, valuing non-European cultures and traditions in the care for our common home cannot be ignored. Pope Francis’ *Laudato Si'* is addressed to “every person on the planet,” with a stern warning of the dangerous changes the earth’s climate and ecosystems are undergoing.

From the above analyses and explanations, it becomes clear that it is a great challenge for environmental questions to find a respectful way to compare Western and non-European, in our case Chinese, traditions. It is challenging, yet crucial, not to distort non-European traditions by making them conform to Western traditions. They must be a part and parcel of creating a culture of care and raising global awareness for our common home. Not to forget: In Chinese culture nature has a lot to do with practice. That means: You can only protect nature, if you protect your own culture.

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15 Pope Francis, *Laudato Si': On Care for Our Common Home*, Vatican city 2015.

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