From nature to intrinsic values: some fundamental conceptual clarifications.

Rev. Prof. Dr. Louis Caruana, S.J.
Dean of Philosophy, Pontifical Gregorian University, Rome

Our thinking is very often determined by deep-seated mental dispositions that we inherit from our past. The careful examination of such dispositions, of their nature and role, is one of the tasks of philosophy. In my talk, I would like to explore such background dispositions as regards our understanding of nature and values. The concept of nature has a long history during which it has seen some significant changes. This is true also as regards the concept of value. Some prominent philosophers like D. Hume and I. Kant have contributed to the separation between these two concepts. They supported the idea that we cannot derive what we ought to do from what we know about the nature of things. The older tradition that they tried to discredit, however, did not disappear. There are still philosophers who defend the idea, and with very good reason, that, the more we know about how things are, the better our knowledge of values and hence of what we ought to do, given the overarching principle that we ought to do the good and avoid evil. In this talk, I will show briefly how this is possible. My first section will be about the concept of nature, the second about the concept of value and then I will explore briefly some crucial issues on how nature and value are connected. The overall aim is modest. I do not pretend to supply a complete derivation of moral philosophy from the knowledge of nature, let alone to provide an algorithm to solve all ecological ethical issues. I focus only on how the nature of things can throw light on the intrinsic values of creatures.

1. The concept of nature

Through the centuries, the concept of nature has experienced much variation. Let me focus on four major views only, views that shaped our understanding of nature, and that still affect our conceptual dispositions today.

Pre-technological societies had an understanding of nature that we may call animistic. They saw many of the major movements of nature as the result of deliberation and judgement on the part of some invisible persons, often called spirits, with intentions, desires, joys pleasures and resentments just like humans. The rough seas were an expression of anger on the part of the ocean, considered as a person or a god. A good harvest was the benevolence of the land, considered as the domain of spirits. A contagious disease was the punishment of the spirits of
the forest, or of the forest itself considered as a divinity. And so on. This kind of understanding produced a deep reverence towards nature and highlighted the conviction that there is much more going on than what people see. The world was somebody else’s world and humans were just one small part. The view however had the disadvantage of producing excessive fear, of propagating heuristic apathy by blocking intrusive questioning and experimentation. It represents an attitude of being overgenerous in the attribution of personal characteristics. People who explained nature in this way considered themselves surrounded by more persons than there actually were.

A diametrically opposed attitude is one according to which nothing whatsoever in nature has personal attributes, not even human beings. This second view of nature started to emerge when the natural sciences started becoming a major force within culture, roughly from the 17th century onwards. Historians call this second kind of understanding the mechanistic worldview. From the original work of major figures like Galileo, Descartes and Hobbes, we recognize a new idea of nature as a self-creating and self-maintaining machine. It held that matter has passive attributes only. Change is explainable in terms of the mathematical laws of nature. Living things behave in their characteristic ways simply because of the complex interaction between their constituent parts. The laws of nature are a kind of guarantor or dispenser of motion and regularity. Whatever happens happens of necessity. There is no escaping the explanation in terms of particles and laws. No other explanation is needed. No other explanation is compatible. This mechanistic worldview was associated with the production of all kinds of machines, which, in a way, can be seen as a new form of human encounter with nature. Nature is not to be feared. It is to be manipulated to serve human needs. Nature is at the disposal of humans, a thing to facilitate the achieving of human goals, a source to be exploited.

We can see these two views of nature as extremes, one exaggerating the personal attributes and the other practically eradicating such attributes. This suggests that there may be a better position somewhere in the middle, a position according to which some things are genuinely personal while others are so only analogously, if at all. In my work, I call this view the dynamic worldview. Deriving from Aristotelian insights, it starts with the assumption that things have specific powers. For instance, an acorn has an inherent power of becoming an oak. Nature is full of such intrinsic powers. Things are not static but dynamic. We are not saying that, as an acorn grows, it has knowledge of what it is trying to do. We are not attributing personal attributes. That would be a return to the animistic worldview. We just attribute a potentiality as an inherent disposition, and we detach the idea of “inherent disposition” from the idea of “conscious desire”. One may concede, of course, that the original inspiration for this view arose indeed from our human experience. But this does not mean that we are obliged to attribute intentionality to things. We may use analogy. The dynamic view starts from the understanding we have of ourselves and then uses that understanding as a model to understand all other things around us. Non-human animals have dispositions somewhat similar to ours. Inanimate things have dispositions that are only minimally similar to ours. This view of nature seems to be better than the previous ones. Avoiding the extremes, it offers a consistent way of understanding nature in all its enormous variety, both living and non-living.

The three views I mentioned so far try to explain things in terms of our everyday experience. They do not deal with what we might observe had we used a time-scale that differs considerably from the time-scale we normally use. The fourth view of nature is precisely the one that seeks to see nature as a process with units of time that are not hours, days or years but units of vast duration, like millions of years. I am referring to the evolutionary view of nature. This view starts with a special focus on living organisms, seeing them as a tree of life from which the various species we see today are like branches that have spread out in all directions during the vast sweep of evolutionary time. One of the main mechanisms for this
diversification is natural selection or environmental filtering. How a thing relates through time to other things becomes the crucial factor. Philosophers like A. N. Whitehead extended this idea from the biological to the non-biological world. For Whitehead, we should understand the essence of any given thing, living or non-living, primarily in the way it is connected with others, in the way it forms part of a complex agglomeration of relations and processes. On this view, then, the very idea of life tends to become much broader than what we usually think. Life starts to be seen as a term that refers to creative processes out of which new reality emerges.

Of course, much more can be said about each of these worldviews. My main aim was not to be exhaustive but to indicate where our mental dispositions of today might originate. The different worldviews often coexist within the same person and affect his or her evaluation sometimes in one way, sometimes in another.

2. The concept of value

Let us briefly explore now the concept of value. This concept in its simplest form derives from the experience of wanting something. Instead of saying, “I want it”, we describe the same situation by saying “It is valuable for me” or “It has value for me”. Sometimes we generalize this by formulating it in an absolute form: “It is valuable”. The concept of value is very similar to the concept of good, as used extensively in philosophy since ancient times. Our will seeks what is good just as our intellect seeks what is true. A thing or situation could be good for me or valuable for me because it helps me achieve something else. In this case, we are talking about instrumental value. A thing or situation could be good for me, it has value for me, in another sense. It could be valuable because it ensures that I function well. It ensures that I grow as I should, given what I am. It ensures that I flourish fully. In this case, the fundamental determinant is not my project. It is rather my nature, how I am constituted. This distinction is important. It suggests that intrinsic value differs from instrumental value because the former depends on the nature of things while the latter on what people want to do. To unpack these introductory remarks, let me consider two important questions that arise in this area. Are values something we invent or are they there to be discovered? Are there two reference points only, namely the thing being evaluated and the one doing the evaluation, the valuated and the valuator?

3. Knowing nature and recognizing values

Do we invent values or discover them? My answer is that some fundamental values are indeed evident through a study of the nature of things. Some values are certainly invented, the product of cultural or social trends. Others however are not. They are evident through our knowledge of natural dispositions.1 Of the four views of nature that I described in the first part, only one holds that there are no such thing as a natural disposition, the mechanistic worldview. This disregard of natural dispositions has however been exposed as one of its major drawbacks as regards the full extent of science. Most biologists now agree with Ernst Mayr, who was probably the major twentieth century biologist, that, even if physics can survive without final causes, biology certainly cannot. The biological realm obliges scientists to view organisms in terms of functions, in terms of what is valuable for what. Indeed, most biologists agree with Kant that we cannot understand biological systems without the use of

---

1 I adopt a position that we may call naturalistic but certainly not in the current sense of that word. Today many philosophers use this word to refer to a purely materialistic and scientistic position. Unfortunately, this use has blinded many people as regards the rich resources within the idea of nature. It neglects the idea of the norm of nature.
some form of finality. The mechanistic understanding of nature therefore may resonate well with physics but, as regards biology, it is out of tune.

If we accept the presence of finality in nature, it is not difficult to see how we can determine values from nature. The clearest way is first to consider our own human natural dispositions, all of which, taken together, constitute human nature, and then from there derive what is good for us. We say for instance that seven or eight hours of sleep is good for us, food with fiber is good for us, social interaction is good for us, artistic achievements are good for us, keeping promises is good for us. We can derive all these values from our knowledge of human nature. Knowing more about human nature means knowing more about what helps proper growth. It means knowing more about what helps genuine human flourishing. It means therefore knowing more about what is valuable for us and about what we ought to do. Notice that the values I am highlighting here are not instrumental. They have nothing to do with any project I might have, except the very general project of willing to live, which can legitimately be seen as part of human nature. This philosophical position is not new.

For instance, St Thomas Aquinas expressed the same position roughly as follows. God supports and guides His creatures to their destiny in ways that are in line with the nature of each. As regards humans, God guides them in line with what benefits their intellect and will. The moral law therefore is evident in what is essential to the flourishing of human nature.

We can now consider our second question. Are there two reference points only, the valuated and the valuator? In a sense, this is always true. The situation is like perception. When seeing something, there are always two things involved: the perceiver and the perceived. The point of the question however is not about this sense. It is rather about the possibility of my coming to know about what is valuable for someone else or for something else. Following Aquinas, we say that a thing has intrinsic value for me when, because of its nature and of my human nature, it genuinely helps in my flourishing. We can recognize what is valuable however not only for humans. We can determine what is valuable in this sense as regards other organisms. From our biological knowledge of the structure and function of an organism, we can determine what is valuable for it. This, of course, could be valueless or even harmful as regards humans. Notice therefore that, in mapping the value landscape, we often ask, “How is X valuable for Y, irrespective of humans?” Here we have three reference points: X, Y and the valuator.

---

2 In the *Critique of Judgement*, Kant argues that, even though we cannot know whether there are final causes in nature, we are constrained by the peculiar nature of human understanding to view organisms teleologically. David Hull explains how “Haldane [in the 1930s] can be found remarking, ‘Teleology is like a mistress to a biologist: he cannot live without her but he's unwilling to be seen with her in public.’ Today the mistress has become a lawfully wedded wife. Biologists no longer feel obligated to apologize for their use of teleological language; they flaunt it. The only concession which they make to its disreputable past is to rename it ‘teleonomy’.” See David Hull, “Philosophy and Biology”, *Philosophy of Science* 2 (1982) 280–316.

3 Our knowledge of what there is and our knowledge of what is good or bad grow together within us, from the very dawn of our understanding. In our encounter with the world, since our infancy, the many things we see, both living and non-living, are not only situated within our conceptual framework, in a way that determines what things they are. They are also specifically situated within our evaluative scheme, in a way that determines whether they are good or bad, and in what sense. To use the vocabulary introduced by Wilfred Sellars, understanding the world involves not only situating things within the space of reasons; it involves also simultaneously situating them within the space of values. The way infants are introduced to the basic conceptual framework includes the efforts of parents to teach them what to approve, what to admire, what to delight in, what to dislike, and what to neglect.

4 For current versions see the works of Elizabeth Anscombe and Philippa Foot who express this point by saying that morality depends on the life of our species.

5 The commonly used distinction between intrinsic and instrumental value needs careful analysis. Augustine and Aquinas argue that all things have intrinsic value because there is goodness within them, at least in so far as they exist. This is the classic sense of the term intrinsic goodness. My fundamental assumptions as regards intrinsic and instrumental value are related to this but do not refer only to the fact that things exist but also to the way they
This observation may seem superficial. In fact, however, it has some serious repercussions on how we formulate some basic problems in ecology. Consider the familiar term anthropocentrism. It refers to the position according to which humans are at the center. It holds that *Homo sapiens* is of higher value than any other species and that we should appreciate all reality from the human viewpoint. In the course of history, anthropocentrism has taken many forms. Many traditions, both philosophical and religious, have expressed human superiority by holding that humans have access to intellectual and spiritual realms that are inaccessible to other animals. Sometimes defenders of anthropocentrism argue that all other creatures have value only in so far as these creatures are useful for humans. Such a position has produced many a critical voice. In recent ecology debates, opposing sides often claim their own kind of centrism. Anthropocentrism of various degrees is opposed to cosmocentrism or to geocentrism or to biocentrism.

From my previous argument however, it is clear that the very idea of “centrism” can be misleading. The value-landscape is very complex. We cannot picture it simply as a kind of ladder of values with respect to humans. We cannot assume a simple, one-dimensional hierarchy of values, the ones on top being those that can trump the ones below. We need a more responsible picture. I suggest that we see the space of values more like a neural network in which nodes, which stand for particular things or situations, are connected to a great number of neighboring nodes in all directions. The connecting lines represent the relation “being valuable for”. This interlocking and crisscrossing pattern of relations, which represents what is naturally valuable for what, extends indefinitely in all directions all across the natural world. This more complex way of seeing the value landscape has three interesting consequences.

First, it indicates that there is no obvious center. Of course, anthropocentrism in its simple sense will still be valid because all the values that are recognized and named are indeed recognized and named by humans. Apart from this sense, however, the value landscape is not necessarily centered on any one thing or situation. It is certainly not a pyramid with humans on top, totally detached from the rest.

Secondly, the neural-network image highlights the fact that, the more we know about nature, the better we become at recognizing what is valuable for what. As I briefly showed before, the animistic and the mechanistic views of nature represent extremes, and are therefore better avoided. It is better to see nature in line with the dynamic and the evolutionary views, according to which things have their own dynamism and thereby constitute innumerable processes. From such functions and processes, most evident in living creatures, we can recognize what facilitates flourishing and what hinders it. And this is how we build up our map of values. Of course, even human social or cultural features, like “keeping promises”, are included within the picture of values that I am proposing. They are included because keeping

exist. For me, a thing or situation has *intrinsic* value when the way it is, its nature, ensures the full flourishing of the whole of which it forms a natural part. A thing or situation has *instrumental* value when it is useful for the achieving of a goal, this goal being a willing on the part of a person. These definitions show that intrinsic value has to do with the nature of things; instrumental value has to do with a plan or project of a person. For instance, my kidneys have intrinsic value with respect to me because the nature of the living body includes the function of healthy kidneys. In normal circumstances, I do not *plan* to purify my blood. It happens naturally. I do not therefore *use* my kidneys, as I may use a dialysis machine. This machine would have instrumental value for me if my kidneys were to fail and would therefore have no intrinsic value for me any longer. These assumptions capture well, I think, the common idea that intrinsic value is what a thing has “in itself”, “for its own sake” or “irrespective of anyone’s possible use of it”. It is there, part of the given-ness of creation. I need to do further work to see how my position here relates to non-biological entities that are often described as having intrinsic value or inherent value, like works of art.
promises is ultimately in line with human flourishing, given the essential, gregarious nature of our species. The fundamental ground of this value is nature.  

Thirdly, the neural-network image reminds us that there may be links that we have not discovered yet. There may be things or situations that are valuable in ways that we never expected. Recall how a thing’s natural function is recognizable only when we consider that thing as part of a whole, as part of the whole that it serves. For instance, we can recognize how the heart is valuable only when we see it as part of the body, only when we recognize it as the part that is indispensable for the circulation of blood. Another example: I realize that my keeping a promise is valuable, in the natural sense, only when I consider myself not on my own but within the human community. Our knowledge of values therefore may be limited because there may be systems that we have not discovered yet. We may be taking some creatures as relatively independent individuals, while in fact they are parts of a functioning whole that we know nothing about. I interpret Rachel Carlson’s groundbreaking book *Silent Spring* in this way. With her help, we started to see a bigger picture.  

We started to accept that there are links between parts of nature that we had never dreamt of before. The bottom line therefore is that our map of the value landscape is incomplete. We need to acknowledge this limitation. We need to proceed with modesty in our policymaking. Our map of the value landscape is incomplete, as incomplete as our knowledge of nature itself.

**Conclusion**

I started by briefly showing how the dynamic and evolutionary views offer a better background, especially because they allow the norm of nature to be visible, most clearly as regards living things. This dimension of nature allows us to acquire knowledge of values, not just with respect to humans but also across the innumerable constituents of nature. The final point was that a merely superficial knowledge of values is not enough. Since things, living and non-living, can in fact be mutually interlocked within systems that we have not discovered yet, our map of the value landscape is partial. Nearly every step in my reasoning in this paper merits further attention and, in fact, much philosophical work is ongoing in this area. The points I have highlighted do not tell us what to do when faced with conflicting values. My main aim was to indicate the wider horizon, to show that there is more to values than what relates to our projects. Value judgments are therefore open-ended and risky. My overall message is therefore one of caution, at least partially. Nevertheless, I am not saying that the sciences should be curtailed. On the contrary, my point is that, the more we know about the interlocking functional relations within nature, the better we are at recognizing what is good. This is what we can do as humans. This is our vocation. Yes, we are superior to other creatures, but, precisely because we are superior to other creatures, God calls us to be responsible, responsible not just in the light of intuition of moral principles but also in the light of scientific knowledge.

---

6. This is the crucial difference from a Kantian approach, which would ultimately ground the maxim “Hold the promises you make!” on logical consistency, allegedly perceptible via the method of evaluating motivations for action called the categorical imperative.

7. Rachel Carson, *Silent Spring* (Houghton Mifflin, 1962) uncovered how pesticides have surprisingly extended adverse effects on the environment.