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AURORA AND CENTAUR

Reality and Description
in the Age of Technology

Inter Actions
Stroud, UK

Translated from the Italian,
L'aurora e il Centauro:
Realtà e descrizione nell'era della tecnica,
Editrice Antroposofica,
Milano

Translated by Sarah Monz,
with scientific review by the authors

Published in the United Kingdom by
InterActions, Stroud

English edition copyright © 2026 InterActions

<https://interactions360.org>
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Paperback ISBN 978-1-915594-11-2

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Printed by Ingram / Lightning Source

Cover image: Laura Borghi, "Alchemical Egg", 2022 –
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PREFACE

by Stefano Pederiva

Compared to the past, people today are confronted with completely new challenges: on the one hand in relation to nature, where there have been significant changes in the biological equilibrium – think, for instance, of climate change; and on the other hand in relation to humans themselves, whose natural constitution can now be augmented by artificial intelligence, making them potentially manipulable in both a genetic and technological sense. The social repercussions give rise to a vast number of issues. These are more evident in the case of climate change, less so when it comes to technological development, but clearly present in the fields of medicine and democratic freedoms.

The question then arises: how can we deal with these new challenges in a conscious and socially constructive manner, i.e. in the sense of genuine progress consistent with that which defines us as potentially free and responsible human beings?

In order to gain clarity on the situation, the second question then arises: what are the historical and cultural origins of this novel situation? Once this has been clarified, one may recognise the positive as well as negative potential in the respective fields of scientific research. This is followed by a third, more general question, which has already been hinted at: What are the social consequences of the ideas and scientific developments that have brought about the changes we are experiencing?

The present work addresses, from various perspectives, the most important issues related to the questions above. On the one

hand, it investigates the relevance of the methodologies employed by science, which is seen to be one of the main causes for the current changes – a methodology which, by and large, represents a reductionist approach to the complexities of life and in particular to human nature, thus incapable of addressing coherently the topic of living beings, nor adequately dealing with specific aspects of the healthy and the ill human being. On the other hand, it advocates for a methodological extension capable of addressing the questions of life in a “biophilic” and not a “necrophilic” sense, to use Erich Fromm’s terminology. It all starts with a reflection on the cognitive abilities of the human being itself – crucial elements if we are to approach the questions above.

Here, therefore, we are talking about thoughts and language, about the meaning of knowledge, about quantum physics and measuring the invisible, about the introduction of a new qualitative science of the inorganic, about morphology and morphodynamics, about imagination and the quest for a new paradigm for the life sciences and medicine, to name just a few of the topics. These will be enriched by several appendices for further exploration. All of this will be addressed in a special manner, namely in the form of aphorisms. On the one hand these allow for poignant and meaningful statements, and on the other hand make it possible to return to certain topics multiple times and from different perspectives, thus enabling an inner processing of the contents. There is no shortage of artistic elements which are indispensable on the quest for new paradigms in relation to what is living.

The present work represents a valid and significant contribution to a reflective process urgently needed in the face of the radical changes we are experiencing, with all their positive and negative consequences. A piece of clear and rigorous thinking, to read again and again in order to appreciate all its facets.

PROEM

*Rose, oh reiner Widerspruch, Lust,
Niemandes Schlaf zu sein
Unter soviel Lidern*

*Rose, oh pure contradiction, delight
Of being no one's sleep
Beneath so many lids*

Rainer Maria Rilke, *Der Grabspruch*

From birth to the moment of death, all conscious beings find themselves confronted with an external world that is already given. Adult human beings generally believe they are facing a real and objective world.

In our civilised age, the external world appears to us to be divided into structures that have the character of objects. However, as Edmund Husserl states in his *Erfahrung und Urteil*¹ (1939), every contemporary person is living in a world of objects permeated by the “*sediments of logical operations*” through which science, particularly mathematical physics, has constructed the images of the world and of nature. These objects exist in an exact, idealised space-time belonging to the realm of geometry and physics and not at all corresponding to the space and time of original experience taking place “*in the life-world (Lebenswelt)*”.²

The view permeating the consciousness of contemporary humanity, both Western and Westernised, is based on the conviction that only what exists in space and possesses causal efficacy has the adequate ontological weight to be granted the status of reality. This *naturalistic* and *naively realistic* view took hold in Europe after

Hegel's death in 1831, driven by the rise of *positivism* in France during the first half of the 19th century. Positivism reduced the concept of science to a mere *science of facts*, where a *fact* is understood as a type of reality obtained through impartial experimental verification. Therefore, in the current context, a fact is the result of observations universally accepted by the international scientific community. Thus, science does not deal with nature itself, but only with results derived from experimental investigation.

In particular, facts are the result of reducing the *qualitative* to the *quantitative*. In their ontological structure facts hold a high degree of abstraction due to the enormous complexity of logical-mathematical formalisation achieved through the application of increasingly refined *algorithms*, among which *statistical algorithms* feature most importantly. With the advent of *Computer Science* and *Artificial Intelligence* (AI), the nature of facts has been enriched with a new ontological dimension that no longer has anything to do with physical space, but instead with a *virtual* space.

Now, the question is: Is *reality* that which is described and defined by science and constructed from facts, or is it necessary to consider different approaches, such as art, to find the authentic roots extending into the primordial world which small children are able to access in various ways, and perhaps animals as well? If reality possesses a richer and more complex ontology which cannot be reduced to the facts of experimental science – which has developed in our time within an increasingly technological framework – then the very concept of *scientificity* should be reconsidered and reformulated. However, this should not be accomplished through the revival of metaphysics, the significance of which has already been discarded by Wittgenstein (1889–1951), *logical positivism*, and *analytical philosophy*, but rather through a rigorous phenomenological approach as proposed in the scientific works of Goethe (1749–1832) and, in particular, in their epistemological elaboration by Rudolf Steiner (1861–1925).

In this essay, we aim to address these topics which are of crucial importance at the present historical moment dominated by the tendency – especially accentuated by the 2020 pandemic – to solve all problems through statistical analysis, as is common in evidence-based medicine (EBM) and epidemiology, which have put person-centred and care-based medicine into second place.

It is important to note that the concept of *nature* is being increasingly, even in everyday language, replaced by the concept of *environment*. *Nature* is, in fact, too much infused with a residue of original sacredness to be considered suitable for the cultural and social needs of a large part of contemporary humanity, which is so focused on satisfying its desires and the demands of consumerism. The concept of *environment*, as commonly understood, therefore seems more appropriate to express the world structure shaped by a reality based on the *facts* of experimental science.

Husserl, on the other hand, highlighted how psychology, understood as a science of subjectivity, has also turned into a natural science in the previously indicated sense, e.g. a science of facts.³ In order to reformulate and to rethink the concept of scientificity, the topic of subjectivity must be adequately addressed, with the aim – also in this case – to penetrate its original essence in search of its objective dimension. This would make it possible to restore nature’s qualitative side, i.e. the reality accessible to the senses, to scientific knowledge. Only by rediscovering the objective aspect of subjectivity – its *logos*⁴ – can we adequately bring that active part of subjectivity we call “I” back into relationship with nature, allowing the logos of the soul to reunite with the logos of nature.

Explanation of the title

Aurora and Centaur represent two mythological figures corresponding, respectively, to the *Apollonian* and the *Dionysian* categories from which Friedrich Nietzsche derived the Attic tragedy.⁵

These two categories symbolically refer to the arts of space and the arts of time in the ancient Greek world, especially sculpture and music, but they also signify *simultaneity* and *succession*, through which the images of visual perception and the melodies of music and language are conveyed. In the historical process of the evolution of human consciousness, images and language have changed radically over time. The title of this essay aims to evoke two polar archetypes that, in some way, have contributed, and continue to contribute, to the development of human culture and civilisation, particularly to the problematic dialectic underlying the developments in the fields of art and science.