

THE UNKNOWN BEFORE DISCOVERY

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Starting from the most important conquests of contemporary post-positivistic epistemology and from its authors such as Karl Popper, Thomas Kuhn, Paul Feyerabend, and Edgar Morin and going through Gadamer's hermeneutics or Wittgenstein and de Mandeville's approaches to scientific and social paradigms, this article focuses on the limits of scientific dogmas and on the overbearing rationalism that claims to explain everything, marginalizing many aspects of human life which cannot be rationalized. The scientific approach cannot be just conceptual. It must be opened to images and unusual connections. The scientist must concentrate his or her attention on limit-matters that are often unpredictable and go beyond the logical-philosophical field toward the metaphysical one. "I did not know I did not know" realized von Foerster, and aware of that, the scientist should become the specialist of the unknown, moving along the border-figures of science and philosophy.

KEYWORDS: Border-figures between science and philosophy, limit-matters, undecidable, unintentional effects, unknown.

Scientific dogmas represent perhaps the most difficult heritage of modern age. More intrusive than religious dogmas, they have often nourished an arrogant and immeasurable rationalism (a *hybris* of reason), which has claimed to explain everything, marginalizing the many aspects of human life, which cannot be rationalized: instincts, drives, anguish, feelings, passions. But in the attempt to remold reality through strategies of social engineering, rational-constructivism has often turned into a *heterogenesis of aims*, the effects of which have been ruinous and destructive.

In the 20th century many discoveries refuted and falsified the pretences and the abuses of scientism. On the contrary, the most creative and flexible scientific methodologies often gave high examples of morality, readiness to change, research of truth, as means and not as aim. Man neither is, nor will be the god to whom another man must bow. No man will ever be omniscient and that is true, first of all, for men of science.

This is perhaps the most important lesson of the discoveries and the controversies of contemporary epistemology. If we think of Karl Popper's critical fallibilism and rationalism, of post-positivist epistemological turning point in the views of

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Thomas Kuhn (the structure of scientific revolutions), of Imre Lakatos (the methodology of research programs), of Paul K. Feyerabend (methodological anarchism), of Edgar Morin (complexity), we find theories diverging in their research lines, but converging in creating an atmosphere of theoretical pluralism, opposed to every monism. With different stress, each of them showed that scientific discovery is supported, on the one hand by an *aware ignorance* and on the other hand by the control of the limits of reason. The wisdom of the tradition, which goes from Socrates to Popper, lies in this awareness, in this “knowing not to know anything absolutely certainly.”

If, according to Plato, a learned person (the philosopher-politician) is “he who knows good from evil,” according to Socrates he is “he who knows he does not know” and knows the limits and the mistakes caused by knowledge. In other words, the matter of ignorance in the field of science is not less important, fascinating, and problematic than the one in the field of philosophy. The scientist Heinz von Foerster faces the matter in an original way, maintaining that what distinguishes a scientist from a non-scientist is the fact that the former immediately admits his ignorance. His desire to know solely starts from here. If he knew everything, he would not wonder about anything else and would not start any research (von Foerster, 1990). According to von Foerster, the classic Socratic statement “I know I do not know” is insufficient because it remains within the force field of knowledge.

Saying “I did not know I didn’t know,” von Foerster raises the question of a *second degree ignorance*, that is to say the one related to the blind point of view, from which we see all the rest: a space in which we cannot see, without knowing we cannot see. A space that remains unapproachable through sole conceptualizations. Indeed if, on the one hand, conceptualizations deceive us to have enlightened reality, on the other hand, they keep us away from our fundamental problem (the fact that we cannot see), effectively worsening our capacity to know.

During the last 50 years, scientific progress has been clearly showing some fundamental limits of our capacity of self-comprehension. In particular, Kurt Gödel showed the impossibility of grasping the coherence and completeness of a formal system within the system itself. In this regard, von Foerster pointed out that Gödel’s principle is only applicable to strictly formal systems. But, again according to von Foerster, we do not always express ourselves within a formal system; we do not express a monologue, as a formal system does; we are dialogical animals. There is a semantic problem and not a syntactic one and we can demonstrate how Gödel’s principle is not applicable to a semantic universe (von Foerster, 1990).

The scientist often focuses his or her attention on unintelligible and unpredictable limit-questions, which exceed the logical-philosophical field to enter the metaphysical one. This happens when we make decisions on questions that are fundamentally undecidable. Decidable questions depend on the rules that we know. Nonetheless, within certain rules, even they show undecidable areas. In other words, even apparently clear problems cannot be conceptualized. For instance, wondering how the universe was created remains an undecidable problem, because the dialectic alternation of hypothesis and counter-hypothesis leaves the question completely open and no intellectual virtue will help us to solve it. Attention: there are plausible hypotheses, theories, or stories about the origin of the

universe but what is lacking is a stable, sole answer. Von Foerster maintains that we can only decide the undecidable questions, because the decidable ones have already been decided by rules (von Foerster, 1990).

Here, a fundamental epistemological problem is clear: How do we answer the question “do we represent the world” or “do we create a world”? That is to say, is the principal source of our knowledge given by experience with the world as its consequence, or is the principal source the world and then experience is its consequence? As is evident, centuries after the debate between Hume and Berkeley started, we have not come to univocal answers. It is up to us to decide.

Bartley paradoxically maintained that he had learnt from Popper that when he said something he did not *actually* know what he said, and from Hayek that when he did something he did not *actually* know what he did. If that is true, when we say something, because of the infinite consequences of our theories, we do not actually know what we say. In the same way, when we act, because of the infinite consequences of our action, we do not actually know what we do.

According to Hans Georg Gadamer, unquestioned master of hermeneutics, a work of art or a literary text have effects that will become known to the interpreter only later on, effects that the author of the text could not imagine. The creation is not the creator and the text does not identify with the author. As Bakhtin pointed out, today the recognition of Shakespeare’s greatness is wider than it was during his time because of the full spread of polysemous expression of his dramatic work, which has progressively used the enormous variety of interpretations of the audience’s repeated emotions and of so many generations of readers who have contributed to give it new meanings. For this continuous interpretative refining and for the reason that today the audience can live the extraordinary experience of a language of pure fiction and formal perfection, Shakespeare’s texts continue to kindle surprise and wonder. Moreover, surprise and wonder that become as wide as more banal everyday and mass media language is.

The process of scientific discovery is different from artistic creation, but both of them deal with surprise and unpredictability. In the field of social sciences, all that is emphasized by the *Fable of the Bees* by Bernard de Mandeville, in which the crisis of social planning (caused by the unintentional effects of social enterprise and benefits due to private vices) ends with the radical delegitimization of every scientific paradigm.

In 1705, De Mandeville (1988) wrote with caustic irony:

A SPACIOUS Hive well stock’d with Bees,
That lived in Luxury and Ease;
And yet as fam’d for Laws and Arms,
As yielding large and early Swarms;
Was counted the great Nursery [5]
Of Sciences and Industry.
No Bees had better Government,
More Fickleness, or less Content.

The hive was the reign of inequality, in which thieves, counterfeiters, pimps, magicians and other suspicious people lived

And all those, that, in Enmity
 With down-right Working, cunningly
 Convert to their own Use the Labour
 Of their good-natur'd heedless Neighbour:
 These were called Knaves; but, bar the Name, [55]
 The grave Industrious were the Same.
 All Trades and Places knew some Cheat,
 No Calling was without Deceit.

In that situation even,

The Lawyers, of whose Art the Basis
 Was raising Feuds and splitting Cases, [60]
 Opposed all Registers, that Cheats
 Might make more Work with dipt Estates;
 As were't unlawful, that one's own,
 Without a Law-Suit, should be known.
 They kept off Hearings wilfully, [65]
 To finger the retaining Fee;
 And to defend a wicked Cause,
 Examin'd and survey'd the Laws;
 As Burglars Shops and Houses do;
 To find out where they'd best break through. [70]

Also the priests,

... were as famed, as Taylors
 For Cabbage; or for Brandy, Sailors.

And

Their Kings were serv'd; but Knavishly
 Cheated by their own Ministry;
 Many, that for their Welfare slaved, [115]
 Robbing the very Crown they saved.

But even if

... every Part was full of Vice, [155]
 Yet the whole Mass a Paradise;
 Flatter'd in Peace, and fear'd in Wars
 They were th'Esteem of Foreigners,
 And lavish of their Wealth and Lives,
 The Ballance of all other Hives. [160]
 Such were the Blessings of that State;
 Their Crimes conspired to make 'em Great;
 And Vertue, who from Politicks
 Had learn'd a Thousand cunning Tricks,
 Was, by their happy Influence, [165]
 Made Friends with Vice: And ever since
 The worst of all the Multitude
 Did something for the common Good.

Vice increased cunning which, spreading to industry, made the hive leave life's comforts.

According to Mandeville, the fact that private vices can originate public virtues should not be a scandal. This is a rule of human individual and social dynamics, when they free themselves from ideological cages. That is well known in the tradition of Christian thought. St. Thomas Aquinas (1940) wrote that “many useful things would not exist, if all sins were severely forbidden.” (p. 120)

“Unintentional effects,” “to decide the undecidable” are the border-figures between science and philosophy. But not only science explores the unknown. As the infinite quantity of researches on anthropology shows, myth is also a way to face the unknown, to bear the anguish caused by the excesses of reality. Paul Ricoeur speaks about “living metaphors” continuously created by language and poetry, bridges built between imagination and reality, which we have always considered separate.

Scientific process cannot have a sole way, it cannot be only conceptual. It must be opened to new images, approaches, connections, unknown encounters until it casts doubt on the relation between non-conceptual and conceptual thoughts. But we can approach all that by freeing metaphors from the role of a pure way to rationality, and by giving them back their heuristic autonomous strategy, in the end by recognizing them as the thin tissue at the basis of our conscience where our thought, our feeling, our belief rests. We do not have to fall again into deep emotivity, but we should know that metaphor (the “shadow-zone” that is never explicitly theorized or thematized) allows our word and our thought to be distinct from the unthought or from the unsaid. In this way, each statement of ours has a meaning because it is written in the background of a symbolic world that transcends it.

If concepts are consciously determined, instead metaphors refer to the world, as crossing illuminations that clarify logically indefinable relations of meaning. Pure concepts pay a high price on the altar of clarity and of univocality: the access to *the world of life*.

Even if ambiguous, vague and imprecise metaphors are instead connected to it without any mediation. For this reason science marginalizes them, gaining clarity but losing further sense; instead we believe that even the stricter logical thought cannot do without them.

We are not allowed to know any way, in advance. The same way (but other metaphors can help us: the course, the navigation, the journey) is an experience. Both Latin and German language have words like *ex-pereor* and *er-fahrung* that translate the term “experience” into “to travel,” “to cross.” By extending its semantic meaning “to experience” can be “to sail.”

It is not a risk to bring the idea of the journey as *crossing knowledge* near the sense that scientific research assumes within the post and anti-positivist paradigms. Even if, on the one hand, the secularized (and technicist) world and on the other hand the birth of *Copernican man* have determined a radical antithesis between myth and reason, new discoveries and changes of paradigms have moved forward the borders of what is unexplainable and undecidable, entering the dangerous and exiting territory of the *aware ignorance*. According to Gadamer, as in Wittgenstein’s (2002) opinion, thinking of human soul as a *tabula rasa* without any influence or preceding knowledge is naïve. Gadamer noticed that he who wanted to doubt everything, would not even be able to doubt. In his opinion, the

same game of doubting already implies certainty and the child learns because he believes in adults. Doubting comes after believing (Gadamer, 1983).

Then we comprehend something only because we “pre-comprehend” it. Every idea characterizes us, directs us but this is true until, still searching, we investigate it because in the meantime it has already become questionable and unsatisfactory.

In this sense we could say that every pre-comprehension is a prejudice. But if it is so, the whole of our tradition is a tissue of prejudices. Indeed, we always and necessarily judge from a limited point of view and long before having deeply comprehended the matter. Then nobody is free from prejudices. But prejudice is not a false judgment or something negative.

According to Gadamer, he who thinks to be free from prejudices referring to the objectivity of method and denying his own historical conditioning, is strongly and unconsciously influenced by prejudices that dominate over him, as a *vis a tergo*. He who cannot recognize the judgments that determine him will not even be able to see the things showed in their light (Gadamer, 1983).

We are all influenced by tradition. Even if we tried, we could not avoid our prejudices and our pre-conditionings. In short, we cannot wipe away the story written on the “paper” of our life. We can only write it again. We can only continuously re-create it.

An intelligent scientific method could be perhaps compared to a “game,” with rules for all the participants, which spur on their creative capacity within a settled context. That is to say, a game that implies a certain deal of ignorance and, we add, of inattention and of conceit. The philosopher of science Paul K. Feyerabend notices in an acute and penetrating way that there is no idea that is shattered when we examine it in detail. *Neither theories, nor ideas, can lead human actions or justify them once they are done.* The reason is that the universe of ideas is characterized by conflict and if it were neglected by men, it would allow, order, forbid any kind of action. But men act and they do it more or less coherently. So their actions are not only caused by ideas. On the contrary, in Feyerabend’s opinion, we cannot approach anything without a certain quantity of ignorance, inattention, conceit, and we would be lost without that strange and impenetrable phenomenon that we call choice (Feyerabend, 1994).

Every time that rationality becomes part of a choice, it changes because a concept depends on the ways in which it influences action. In this way, problems always show many solutions, not a single one. Univocality does not indicate the right way at all.

Many years ago Feyerabend, surprisingly as always, suggested to divide the concept of “we” into “you” and “I,” as parts of an unknown entity, which could be called *Being*, in order to answer the question on the sense of methodological pluralism. Feyerabend maintained that we continuously challenge the *Being*, receiving different answers to *manifest worlds*. In a *manifest world* it is possible to separate the act of observation from its objects or from the observed facts. Nonetheless, this does not mean that “observed things” coincide with the *Being*. Like every determined world, the world that allows separation is an answer to the *Being* and moreover, it is different from the same *Being*. To identify the most known among the manifest worlds with the *Being*, not only depreciates the other clear manifest

worlds but it shows also the considerable lack of perspectives. Even if we are a little thing compared to the history of mankind, the least beings related to the history of life and absolutely insignificant related to the history of matter, according to *our reconstruction*, we claim to have solved the mystery of universe (Feyerabend, 1994).

These pretences (and this vanity) not only veil our judgment but they also strongly oppose our knowledge of the world. Anyway, also these ideas do not transform *manifest worlds* into constructions originated by our concepts and by our actions. On this regard, saying that some cultures as some biological mutations have no future, Feyerabend considered himself neither a *constructivist* nor a supporter of the strong project of sociology (Feyerabend, 1994).

In other words, also the success of the most difficult scientific experiments is not the proof that we have reached the *Being*. A *manifest world* can be intelligent and significant, it could also reward its creators. But it is only a possibility, certainly not the image of another world different from human beings. Every image, which self-represents itself as completely *objective*, has neither any human signification nor any information. On the whole matter, Feyerabend rigorously and responsibly concluded that to play with ideas is a nice hobby but the real testing for an idea is when it challenges the *Being* and enriches human life.

We like to think of the scientist as a *specialist of the unknown*, a man who deeply assumes the sense and the (highly scientific) value of Nietzsche's poetical statement: "One must have chaos in one, to give birth to a dancing star."

This unknown horizon is done by ways of thought, which Michel Serres (1984) poetically compares to the geography of those landscapes that connect the Atlantic Ocean to the Pacific Ocean in north Canada. It is characterized by "archipelagos on the noisy and unknown disorder of the sea, tops jagged by the blow of the undertow (. . .), single and rising rationalities whose reciprocal links are neither easy nor evident."

To avoid the way between correctness and soul, between hard sciences and human sciences or between the world and we, would mean to trust in a short of breath and (only apparently secure) rationality, which blows—as Musil would say—as a "wind of death on the fields of soul." That unavoidable way is our way to North-West.

(Translation by Antonella Radogna)

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