METAPHYSICS OF THE WEB

For some decades now, a dramatic transformation has been unfolding - one that is as monumental as the industrial revolution, and that, just like the latter, requires time to be conceptualised. Indeed, it takes time to capture its essence. So far we have used several different, partial, esoteric names to refer to it: virtuality, collective intelligence, internet, web, big data, artificial intelligence... In short, we are collectively preparing a new Visnusahasranāma: a collective poem made up of books, essays, articles, debates, and posts that sing about the thousand names of Visnu, whose essence, however, remains unknown.

Of course, this is not just a theoretical problem. It is obvious that when faced with something whose essence is unknown, all answers can only be inadequate. The expression "squashing water" is probably the one that best describes the manifold reactions people have to this hidden god. In particular, after a few decades of unjustified hope in the thaumaturgical promises of this new god (a time that can be identified with postmodernism, which began, let's not forget, forty years ago with Lyotard dealing with the hidden god), we moved on to execration. The hidden god is a false god, he is the emissary of a true god who is evil - capital.

Among these conflicting interpretations, our Visnu - as it should - continues along its course in the world just like its predecessor, the industrial capital. The latter has proved to be singularly indifferent to love and hatred, and has only ever taken seriously Marx's analysis, which left aside laughter, tears and resentment and tried to understand its object instead. However - if words make any sense and if history has a course - Marxism, born with industrial capitalism, also died with it, and we must not only come to terms with this fact, but also and above all propose an alternative.

It is necessary to bring philosophy back to a new (and at the same time very ancient) function, now that superstition has disappeared, making science the only source of truth and the only candidate to solve our problems. In other words, philosophy has the task of showing us the bigger picture, the whole in which the parts make sense, and of going beyond appearances to grasp essences. I will therefore start by examining the revolution in progress, trying to grasp its specific characters and essential differences with respect to the industrial revolution; I will then concentrate on the metaphysical revelation made possible by this revolution (which, like all revolutions, does not transform the world, but manifests its essential structures, which were already there in a hidden or only sketched form); finally I will turn to speculation, i.e. I will follow the fate of reason, which consists in transcending what is given, ontology, in order to reach out towards what is not yet there, teleology - the purpose of our history and the decisions that we must take with respect to the future.
Let's start with the revolution, which for the moment does not affect the whole world and which appears to be quite different from the industrial revolution, both in terms of the actors involved and in terms of a much greater dynamism (which, coincidentally, suggests that documedia globalization will take place much more quickly than industrial globalization). So what exactly is it about? If we can't give a single name to Visnu, let's at least try to recognize the most conspicuous forms in which it manifests itself, which in my opinion are four: documediality, automation, capitalization and mobilization.

**Documediality**

Documediality is the general framework of the ongoing revolution. In the late eighteenth century we saw the world of industrial capital: it produced commodities, generated alienation, and made lots of noise - the noise of factories. Then it was the turn of financial capital: it produced wealth, generated adrenaline and still made some noise, that of stock exchange sessions. Today a new capital is coming forward, the Documedia Capital: it produces documents, generates mobilization and makes no noise. This capital is richer than the financial one, and, what's more, it is having and will have an unprecedented impact on the creation of value, on social relationships and on the organization of people's lives - and I don't just mean their professional lives.

The revolution that generated this new capital comes from the encounter, made possible by the internet, between the constitutive power of documents, now enhanced by their automation, and the horizontalization of communications in social media. We are witnessing a boom in the recording of acts and, consequently, in social objects: indeed, there have never been so many documents. This mediality - again by virtue of the boom in recording - has determined a transition from one-way communication (from a sender to many receivers) to two-way and multi-way communication (every receiver is a potential sender). The result of all this is a new world that is the contemporary equivalent of the manufacturing industry of the nineteenth and twentieth centuries.

This new world resembles the one we grew up in as little as the industrial age resembled the feudal era. This is why it is so frightening and so hard to interpret. What's certain is that the new world will be characterized by the technological enhancement of human memory just as the industrial world was characterized by the mechanical enhancement of human strength. Everything will be recorded and archived, everything will turn into documents, statistics, knowledge, and humanity will become a dochumanity - i.e., a document-producing humanity (through a production of value and meaning). This new dochumanity will replace the commodity-producing humanity (let's call it prodhumanity) that we have known in its industrial paroxysm and that seemed, but only seemed, to define the essence of the human being as condemned to toil and alienation ever since the biblical curse. This documediality involves three main transformations.

**Automation**

What is memory enhancement for? Perhaps for the creation of a big panopticon to spy on our ideas? No, it serves to build a large virtual workshop in which the only workers will be the algorithms trained by our behavior, thus achieving perfect automation. That's why the first and most fundamental transformation that has taken place with respect to the world of industrial production is the fact that machines now do not strengthen matter, but memory. And this changes everything. Forty or fifty years ago, there were factory workers in Turin. I mention them without regret because I don't think any of them miss that life. Today, the undesirable jobs left are those of
the cleaning staff who disappear as soon as the offices open (offices where people do jobs that may not be terribly creative and rewarding, but are certainly more appealing than those of factory workers or cleaning personnel). Cleaning staff, like bricklayers, construction workers and the often mentioned riders, will all soon be replaced by drones. In our world, goods are increasingly produced by machines without any need for human help, and services are increasingly automated or delegated to consumers, since thanks to the Web we are now our own bank branches and travel agencies.

There are, we are told, a great many underpaid workers in Ethiopia and all over the world, of every gender and age, who are paid ridiculously low wages to act as serfs of AI, helping computers in the recognition tasks they are not yet able to perform. I don't see them around me, unlike the workers I saw when I was a boy in Turin. I don't doubt that they are there, but I am sure that they too will disappear one day, just as the workers have, without regretting the bad life they will have left behind. As is natural and right, these disappearing workers occupy the collective imagination because they are the ones who are the worst off. Sometimes, however, they monopolize it, and this is neither natural nor right because the fundamental task of those who reflect on society (and do so because they are comfortable doing so) is not to make charitable speeches, but to propose concrete solutions and alternatives.

In a word, sooner or later we won't - and in many cases we already don't - need producers, and work in factories or call centers is going to become an archaism, without generating any sincere regret, but producing a phantom limb of the production that we will miss, but that we never really enjoyed. Now, what has made this perfect automation possible? The ability to produce documents. Automatic translation systems are so efficient today because they can count on the recording of an unprecedented body of texts: a large part of the translations that humanity has produced in its history, and all the translations that we improve every day when we correct the translation software we use. This is why we are constantly offered free services, because by using them we increase their efficiency, and therefore their automation.

Increasing automation shows us that machines not only replace the physical strength of humans, but also emulate their intelligence, which in its core - in its fundamental and essential form, both in humans and in automata - is memory, i.e. the ability to record things and take advantage of what has been recorded. In a regime of total automation, machines do not just supplement human strength by providing dead labour that integrates with the living labour of workers and employees. Something profoundly different happens, even and perhaps above all from a conceptual point of view, something that was not even foreseen in Marx's “Fragment on Machines”: dead labour, i.e. automation, becomes so perfect and autonomous - thanks to the collection of data that instruct the production and distribution processes - that it does not require any living labour, at least not in the traditional modes of toil and alienation.

What do humans do? Some of us are teachers, some are chefs, some are footballers, some carers, some gangsters, some writers, some pensioners. Now, even if all these professions are exhausted, there will always be someone who has no job. So what about them? This is where the conceptual invention must come into play. When every activity, productive or not (that is, paid or not) produces data, which in turn generate value, it becomes necessary to recognize that mobilization is a job, just as important if not more important than canonical jobs, since it allows to perfect automation, optimize distribution, and improve services, including social services (think of the biomedical field).
Capitalization

This conceptual invention has already taken place, but those who have profited from it are platform operators, not data producers. This is not because the former are necessarily more forward-looking than the latter, but because they gradually realized something that they were the first to ignore (those who started a social network or an online distribution network thought they would finance themselves with advertising or sales, only later did they realize that the real deal would be to collect data). Technology, by recording consumption, succeeds in converting it into production, this time of data, which in turn is useful for increasing automation and distribution. Above all, it can be capitalized, that is, it can act as reserve of value, currency and means of exchange - in other words, it is destined for the same functions traditionally covered by money.

Today's greatest wealth does not derive from the production of goods or from finance, but from the artificial creation of documentation processes. We can now collect data that previously could not be preserved: they now perform the same functions as money (value reserve, currency unit, means of exchange) and, in addition to this, being informally much more valuable than money and finance, they contribute to the automation of production and the improvement of distribution. This capitalization is happening, today, under everyone's eyes: accumulated, analyzed, exchanged, and sold, the documents produced by our consumption and idleness are transformed into great wealth. And this wealth (being much more informative and polyvalent) is far greater not only than that produced by our labor, which is of no interest to anyone, but also than that produced by money and finance, i.e. forms of documents produced not automatically, but deliberately and voluntarily.

This is the second fundamental trait of the current revolution. Neoliberalism was certainly wrong, but its mistake was not to consider capital as essential (which, in fact, it is). It consisted in thinking that the prototypical capital was the financial capital, aimed at profit: indeed, it is much more than that. Similarly, Marxism was wrong to think that capital was the production of goods and labor: once again, it is much more than that. Capital is the essential form of human culture, therefore of human nature (there is no human nature outside of culture), because it is the condition of possibility of technology and social objects: without archive, that is, without capital, we would not be free from the slavery of money, but rather (as in Homer's image of misfortune) we would be "without clan, without law, without hearth". With the documedia revolution, money, which incompletely represented the archive, was replaced by the archive as such.

The documedia capital can thus be represented in the form of a universal blackboard, in which all social acts are recorded in such a way as to be indelible and in principle accessible to the whole of humanity (a sort of 1:1 map of the empire, the possibility of which is becoming more and more concrete as the recording of acts does not require devices but is widespread in the environment, as in 5G technologies). Obviously, humanity does not have access to this universal blackboard (and if it did, it would understand nothing about it) but what is certain is that every human act is potentially going to be recorded on that surface.

It is here that we find the second transformation, which, once again, represents a sensational and underestimated break with respect to our industrial past: while goods are produced and distributed automatically, with a dizzying growth in dead labour, human agents are left with an enormous amount of living labour, which is not recognized as such, although it consists of the most living labour of all: life. All of us humans, together with the other organisms within us and outside us, live. That is, we are subject to irreversible processes that dictate the
urgency of consumption. This point - which I will come back to extensively later - is not a matter of detail: machines can do everything, but they do not run on their own: they require the temporality and the purpose that comes to them from human needs. And humans, consuming and more generally living (i.e. performing a large number of acts that previously left no trace, and that for this very reason appeared and were useless or futile) produce documents, i.e. acts that in a digital environment (unlike in an analogue environment) can be capitalized in an economic and automatic way.

**Mobilization**

We all consume, no matter where we are. This circumstance recalls an aspect that is often overlooked, namely that the entire economic, social and technological apparatus finds its ultimate goal in the satisfaction of the needs of humans as organisms, and would make no sense in their absence. As a result, the function of the human being as a consumer is infinitely more important than that of the human being as a producer, even if due to the habitual link with previous ways of life we are led to believe that production constitutes a privilege and a relatively rare merit, and that consumption is an obvious fact and probably also a demerit, a moral defect. Now, obviously, that's not the case. Production, as I said, is increasingly a prerogative of mechanisms, while consumption remains an insurmountable prerogative of organisms, and becomes economically and socially significant among human organisms. When real-time life also becomes, at the same time, a deferred life (a recorded, calculated, archived life), not only can the data it produces be capitalized by the platforms, but life itself becomes mobilization.

This is the third transformation that is taking place: what was classically called "work", and used to be well distinguished from life, now becomes mobilization, an activity that, in an environment filled with recording, produces value. When automation renders human action superfluous, humanity, far from falling into idleness and inaction, undergoes an unprecedented mobilization. On the one hand, this total mobilization seemingly makes life completely alienated, with a colonization that appears to realize, albeit in a soft way, the dream of work spread throughout the day (trivially, it is possible for someone to ask us to respond to a message or email at any time). On the other hand, however, and in a conspicuously contradictory form, there seems to be no trace of alienation at play because, as has been said, the variety of tasks and the lack of working hours makes the worker (an old name that is adopted in the absence of better ones) achieve the full realization of free labour that is supposedly achieved in a communist society.

This mobilization has two main aspects. The first and more obvious one is that instead of lying in bed all day long, we travel, consume and, above all, interact at all times with documedia devices (they generally look like phones or watches, but, I repeat, more advanced technologies will allow us to produce documents even without these devices). Thus, if the production of traditional goods is transformed into dead labour, humans exercise an enormous and irreplaceable living labour, i.e. the production of documedia commodities. This production limits itself to recording things that humans already did before, that is to say life and everything that it involves (consumption, anxiety, curiosity, fun, boredom...). Only now all that uselessness (life does not have external purposes, but only internal ones: that is, in simpler terms, it does not make sense) has become useful because it is recorded, and it is recorded because it is useful, so it is quantified, unified, and transformed into statistics and forecasts.

This mobilization as a production of value has not yet been conceptualized, due to a form of ignava ratio or at least of traditionalism. The identification between work and production, which binds human beings to an
outdated technological history, prevents us from recognizing the essence of labour as human intervention in the world. This can be seen very well in the traditional representations that depict the absence of work as pure inactivity, as well as in the concerns of economists and sociologists who in the twentieth century wondered how humans would fill the growing amount of free time guaranteed by automation. What has happened in recent decades shows that these concerns were unfounded, because human beings know very well how to occupy their free time, provided they have a technical tool that allows them to do so. The total mobilization generated by the documedia revolution is therefore of particular anthropological interest because it shows that humans, if the environment is favourable, choose action between action and inaction.

The second aspect of this mobilization, less obvious but more essential, is that the documentalization succeeds in transforming in activity and profit also things that previously were purely passive and useless: sleep, fun, consumption. As production and distribution become increasingly automated, the decisive factor will shift from production to consumption, and from negotium to otium. The homo faber was only a contingency linked to a very long phase of human history, the one between the cessation of hunting and harvesting and the perfect automation of production. Production can now be entirely ensured by machines, but consumption necessarily requires human agents, which therefore provide the ultimate purpose of the whole system and, at the same time, improve its functioning since consumption, just like any other form of human mobilization, now produces data.

Even sleep, when it produces data that can be collected, is capitalized - indeed, even mattress testing can become a very respectable profession. Aristotle claimed that life is praxis and not poiesis, meaning by this that it does not produce objects and has no purpose outside of itself. But when human behaviour (consumption, action, invention) can be recorded, then praxis is converted into poiesis, that is, it produces documents that, as we have seen, can be capitalized. To understand what I mean, think of the specific and unrequested reports that your smartphone presents to you, and which have the singular effect of transforming into calculable objects events that previously vanished into nothing, and turning into activities things that we previously called, in all conscience, a waste of time. Now, channel zapping on TV is a waste of time, but surfing on your mobile phone is not, and the difference lies in the fact that zapping leaves no trace, but navigation does. As Monsieur Jourdain discovered that spoke all his life in prose without knowing it, so we discover that we were mobilized all along - even when, sprawled on the couch like Oblomov, we were watching a football match.

**Hysteresis**

Automation, capitalization and mobilization - the three key characteristics of the documedia revolution - manifest the nature and structure of a process that in itself goes beyond conservation and revolution, presenting itself as the profound nature of both the natural and the social world. The technological revolution therefore calls for a conceptual revolution, but this is precisely where the problem lies. With a few exceptions, the understanding of the web is still Ptolemaic: the web interprets itself as information technology, that is, as the simple digital evolution of the amnesiac television that dominated in the middle of the twentieth century. ICT, the acronym that designates web technologies, is eloquent in this respect: Information and Communication Technologies. The documedia world has thus become a "virtual" world, a world behind the world, or a representation of the world in which a second imaginary life could take place. If applied to the web, this conception interprets the documedia society as a liquid society in which ideas meet. Instead, it is the environment of a life that is no longer "solitary
brutish nasty and short", as life outside society was according to Hobbes, but that is certainly more exhausting, less informed and less transparent than we would like. When social networks and computer services made it clear that the documedia world was indeed the real world, the only one there is, it was reiterated that the web is an *infosphere*, that is, an area in which information is exchanged, a close relative of the noosphere (the sphere of knowledge, in turn related to Marx's General Intellect) that Teilhard de Chardin spoke about almost a century ago.

And this overlooked the decisive fact that all that takes place on the web is about archiving rather than communication. This is its really essential trait, metaphysically speaking: the internet is neither a dream world, nor a sphere of empty words. It is a docsphere: a sphere that, through an unprecedented recording power, creates documents. Only once we have understood this circumstance will we be able to talk about the web with full knowledge of the facts. This raises the doubt, hyperbolic but not unfounded, that until now we have talked about the web without knowing what it was - which would not be the first time, since the discovery of the West Indies onwards. Indeed, the web, from an ontological point of view, is not a representation of society: it *is* society. In fact, society is made up of social objects as recorded acts, and recording is now increasingly taking place on the web. For this reason, the web is much more than a super-television that transfers and communicates information that is passively received by the user: the web records and archives. And while with spoken words and old media there could be communication without archive, with the advent of writing, as well as the internet and the new media that depend on it, recording is preliminary to communication. There is no communication without archive, but it is very easy to obtain archiving without communication.

It is therefore necessary to pass from the Ptolemaic web to the Copernican web, aware of the fact that the mechanical strengthening of the archive is its decisive characteristic, from which six other fundamental characteristics derive: 1. the web is first and foremost recording, and not only communication; it functions not as a television, but as an archive; 2. it is action and performativity more than information, it does not limit itself to accumulating knowledge, but defines a space in which social acts take place, such as promises, commitments, orders; 3. it is real more than virtual, i.e. it is not a simple immaterial extension of social reality, but it is defined as the elective space for the construction of social reality; 4. it is mobilization more than emancipation, i.e. it does not immediately provide liberation (as was believed when the web took its first steps) nor is it simply configured as a tool of domination, but is rather a mobilizing apparatus that makes people perform actions; 5. it is emergence much more than construction, in the sense that it is not somebody's deliberate project, but rather the result of many components that have come together in a non-programmatic form; 6. finally, it is opacity and non-transparency, i.e. it does not clarify itself but, on the contrary, it asks to be clarified, again revealing a strong isomorphism with social reality, and in particular with its emerged tip that is capital.

If one had to give a single name to the thousand faces of Visnu, the clues accumulated so far suggest one word: *hysteresis*. This term is widespread in many areas and has many different meanings, but from a metaphysical (that is, as I will shortly specify, transcategorial) point of view it designates the circumstance in which an event keeps track of the events that preceded it, so that the effects outlive the causes. The scratch on my mobile phone that reminds me of when I dropped it, the compound interests of capital, learning a language and the neurosis that pushes us to set up relationships with others by repeating patterns experienced when we were children are just a few examples of hysteresis.
Hysteresis does not only take place in the interiority of the mind, nor is it only found in the exteriority of the social world: it also exists in nature and its objects. Something happens - a summer storm, a forest fire, a meteorite falling on the Moon - and matter remembers it in the form of moisture, ash or craters, thus starting that process whose ultimate outcome, through other forms of hysteresis, is not only the social world, but the mental universe itself. Thought, in fact, never takes place without the support of a body, which is not reduced to the brain, but is made of skin, senses, hands, feet, pens and notebooks. Indeed, matter is the archive of past events: craters recall ancient explosions, mountains preserve shells dating back to the time when they made up the bottom of now-vanished seas. More prosaically, think of the dents on our mobile phones and the scars that we got as children, which keep track with implacable precision of our falls. Matter is nature and memory is spirit, but the two dimensions are neither separated nor opposed: nature is an unconscious spirit and the spirit is an unconscious nature.

At this point it is not surprising that when a technological apparatus like the hard disk was invented, capable of maximizing the effects of hysteresis, humanity turned its gaze away from the conquest of space (which was supposed to be its main objective in the middle of the twentieth century) to capitalize on the profits of the conquest of time, that is, the advantages that derive from being able to keep track of a huge number of events that previously disappeared like tears in the rain. The boom of hysteresis, i.e. the circumstance that every natural or social event, every behaviour, even the slightest one, can be recorded automatically and at a very low cost, has completely changed the world in which we live, revolutionizing the very nature of production that characterized the industrial world.

Hysteresis is thus a candidate to be the unifying principle of the event with a thousand names and faces with which we have been dealing in recent decades. A principle that, let's not forget, was not at all foreseen by the analyses of the mid-twentieth century, which predicted the imminent disappearance of writing. Yet the very opposite has happened, and the ideological representation of society in which writing would be replaced by warmer media, such as orality and images, has been denied by the technological reality of the boom of hysteresis. This phenomenon did not come down from the heavens of ideas, but rose from the earth of concrete practices; for this very reason it constitutes a historical contingency that at the same time reveals a metaphysical structure that today can be interpreted and understood, just as mathematization has interpreted and understood the physical structure of the world.
REVELATION

The documedia revolution is not a new version of technological alienation, on which millions of pages have been written - only to increase deforestation and thus the production and sale of chainsaws. This revolution has generated a revelation rather than alienation. In fact, technology - far from distorting it - manifests human essence, because there can be no human being without technological supplements. The ongoing transformation, therefore, has been a revelation of the human essence. If this is the case, then there is no reason to feel surprised that the enormous increase in the means of recording produced by the internet has brought about the gigantic social change that we have before our eyes. This is the dialectic that we must understand to begin with.

To study the internet does not mean to deal with technology any more than to look at a sports center means to show interest in sports. To consider the internet, indeed, is to deal with humanity: long before being a rational animal (the psychology of thought, as well as economics and everyday life, reveal how little rational we are by nature), and a social animal (sociality seems to be a precarious imposition dictated by evolutionary needs), man is a technological animal, and precisely through this mobilization he enters rationality and sociality, which he does in a non-sovereign, submissive, and subordinate fashion. Long before we reason, we act. And above all we act without reasoning for most of our lives. The ontology of social being is an ontology of action much more than an epistemology of reflection. This is why both the interpretations of human conduct in terms of rationality and the theories about the incidence of conceptual schemes on reality do not explain our behaviour.

What is manifested right before our eyes has nothing to do with an interruption of the course of the world or with an alienation of human nature. What is happening is a revelation that, as always happens in technology, brings to the fore ancient things, essences and principles that were hidden from us under accessory conditions that we can now do without. Sticking to the most sensational case, i.e. the transformation of human labour, we have just discovered that the definition of homo faber is inadequate and contingent, not only because it does not apply to our not-so-remote hunter and gatherer ancestors, but because it will not apply to our not-too-distant inventor and consumer descendants: in fact, the production of goods will no longer be the task of our species, but will become an exclusive prerogative of the machines. This may seem like a wonderful, or at least interesting, thing, but it comes with many issues, not least because we naturally tend to see the present through the eyes of the past and thus to interpret the new world through the parameters of the old world of fields and factories.

To understand human beings, one does not need to look inside them (according to the hypothesis of introspection), nor to simply study their behaviour (according to the hypothesis of behaviourism): one needs to understand what mobilizes them. Weak by nature and in need of parental care for far longer than all other animals, the human species has invented not only technology and culture but also, and above all, mobilization, i.e., the availability to a complex strategy that involves memory, responsibility, and time deferral. It is here that we must seek the origin of phenomena like religion, economics, law, and strategy.

We continue to stock up on bodily fat as if we were living in the savannah and supermarkets did not exist; computer hard drives preserve the traces of what they have recorded, and this technical automatism is the basis of the contemporary world; the universe is the result of the expansion of a memory that has given rise to matter. It is therefore not at all surprising that humans have a tendency to be conservative; what is surprising is that this
tendency conditions even those humans who want to be revolutionaries. What lies behind this tendency to be conservative? In a first approximation, capitalization is only the emerged tip of a transversal and properly metaphysical structure.

**Metaphysic**

Hysteresis is a general trend in society, technology and nature. It is therefore the fundamental metaphysical principle, in the sense in which Kant speaks of the first metaphysical principles of nature science. What deserves consideration is that here the metaphysical function is assumed by a principle that does not belong to thought and is intrinsically dynamic. The fundamental meaning of hysteresis is that the notions that make up the furniture of the world, both ontologically and epistemologically (existence, purpose, causality, truth, action...) derive from the ontological dependence between matter and memory. There is no memory without matter, because memory always requires a physical medium on which to deposit itself. But, more radically and decisively, there is no matter without memory, because matter, being persistent in time, requires a recording that defines it as matter. This definition may seem circular, but it is this circularity that lies at the basis of the speculative hypothesis commonly accepted by physicists, according to which the universe is the result of the expansion of an original and highly concentrated mass, which at the time was matter and memory. It is animistic to think that beer comes out of a stem to respond to the action of some primal activity; it was simply compressed in the stem and as it comes out it expands and cools down. It would be no less animistic to attribute the origin of the universe to an action rather than to the principles of passivity and entropy. What was pure hysteresis, with no extension and no time, turned into space, time, processes, events, objects.

Metaphysics is not something “beyond” (unless we mean the location of Aristotle's notes on this theme, which Andronicus of Rhodes placed after the books on physics); it is something that is very much right here, and whose effects we experience at every moment. Aristotle compares sensible experience to a fleeting army. In the flow of experience, the sensations scatter around like a panicked army, until a soldier stops and reassures his companions, so that the phalanx can get back together. In the same way, the flight of sensations stops when a belief is formed. This then becomes knowledge when we are able to transmit to others the beliefs we consider (rightly or wrongly) to be true and justified. The Aristotelian image is interesting in many respects: it explains the gradual passage from feeling to thought; it suggests that, just as sensations are fixed, so categories are formed, precisely through the interaction of experiences - that is, with the "rhapsodic" process that seems so reasonable and that yet Kant disliked so much. Most of all, it compares a natural process (the fixation of sensation, but it could be, just as well, the way a stream digs ever-deeper furrows in the ground) to an intentional process - the soldier who stops, and the others who imitate him. Between the watercourse, the fixing of sensation and the soldier's decision there are many differences, but there is no real gap - there is no intervention of some magical property that differentiates the soldier’s decision from the way in which the water, making its way, turns right or left. Above all, it illustrates a process of hysteresis that goes beyond the sphere of knowledge, also affecting being, doing and planning.

Here's the first point that needs clarifying. We are generally willing to see memory as a precondition of knowledge, but we are much more reluctant to admit that what is represented in the mind as memory is only one of the functions of hysteresis which, as such, is not limited to the sphere of epistemology, but invests ontology,
technology and teleology. When Kant defines the supreme principle of the intellect as the ability of phenomena to re-enter the synthetic unity of apperception, he is referring to the fact that knowledge requires hysteresis. With respect to this stronghold of both ancient epistemology (already found in the *Theaetetus*) and modern epistemology, all I have to add is that hysteresis is not only gnoseology, but affects all areas of metaphysics. Hysteresis is the transcategorial (the transcendental in the classical sense, the metaphysical structure) which, being transversal, undermines the traditional distinctions between *physis* and *nomos*, *physis* and *techne*, and in general between natural and artificial.

Indeed, the persistence of an effect without a cause (whether for a long or a short time) is full of consequences. The effect was passive and bound to the here and now of its production, but the trace is active (it exists independently of the cause) and is independent of the spatio-temporal circumstances of its production. The consequences of this independence and capitalization - i.e. of this independence without removal - with respect to original causality are just as important as (but much less considered than) the consequences of causality, which has long been seen as the only metaphysically relevant function in our understanding of the world. What is recorded is no longer an event, but a being, which as such lends itself to being iterated (I can repeat it at will), altered (the recording preserves a form without matter, an *eidos* without time) and interrupted (the repetition, though indefinite, is not infinite). On the simple basis of these four elements, metaphysical hysteresis is able to account for the essential characteristics of the event with which we are confronted today, and at the same time, for the general structures of reality expressed through history and technology. Let us examine these four components, in a brief anatomy of hysteresis that also allows us to define the four fundamental articulations of metaphysics: ontology, technology, epistemology and teleology.

**Ontology**

Let's start with ontology, i.e. what there is regardless of what we know or think we know. Why is there something rather than nothing? Because there is hysteresis, namely the past repeated by matter and remembered by memory. The idea of a creation *ex nihilo*, a simple origin, is the result of too short a time perspective. Following the Bible, people were convinced that the world was no older than 6000 years and that no new species could be born (the perfection of the divine plan was at stake), therefore they could not explain the existence of complex structures - whether it was the world, the mind, language or society - if not by resorting to the hypothesis of some supernatural creation. Or else, which is the same, they had to invoke a conceptual construction, that is, a temporal action of providence. For constructivism the problem was: without the categories and the I think, how can this improvised and brief chaos be organized? The idea of a project, a design, a construction was a reasonable way to compensate for the short time it apparently took to create the world.

But if we calculate an infinitely longer time, as guaranteed to us by hysteresis, everything changes: 13.7 billion years, i.e. the time that separates us from the birth of time, is long enough for anything to happen. If the universe has had all the time and all the energy of the world at its disposal, then there is nothing mysterious about the fact that on a secondary planet heated by a third order star, eventually phenomena such as life, language, football leagues and transcendental philosophers have originated. The first two events manifest a type of emergence in which human intentionality plays no role, while the latter require a more articulated human intervention. However, just like the former and like an enormous amount of other things, the latter are the result of emergence and contingency, not construction and necessity. With respect to these events, intelligence plays an
essential role, which, however, does not consist in generating them, but in trying to give them meaning (a task at which it is rarely successful, if ever).

The only ingredient needed for something to be there is the essential performance of hysteresis which consists of recording: keeping track makes it possible to capitalize on memory by transforming it into matter, and on matter by transforming it into memory. At the beginning there was a big bang, and in the end there shall be thermal equilibrium. In the middle there is time, which tells the story of a growing trend towards disorder and heat loss. The origin of the universe therefore presents itself, if we believe the main physical conjectures, as undoing and passivity, so the hysteresis that was able to hold being together by depriving it of spatial and temporal dimension weakens and gives rise to space, time and spatio-temporal objects. The explosion caused some very concentrated matter to unfold and become the world: this was a contingent fact. But in order for this contingency to emerge, transforming itself into the world, it was necessary for there to be, in the explosion, not only the capacity to expand, but also the capacity to keep track: in order for something to take place, in nature or in society, recording is in fact necessary, otherwise the world would be an eternal beginning, an instantaneous glow without coherence and without consequence.

But what does the power of recording depend on? What is the reason for its superiority, which yet is often misunderstood or simply assumed as obvious? This is anything but a mystery, or, more exactly, it is a purloin letter stolen in plain sight. Recording has the metaphysical property of transforming passivity into activity, events into objects, cases into laws. When it is repeated, A is no longer just A: it is something different and more free. What is repeated is repeatable, and this changes everything, even from an ontological point of view. Understanding this means carrying out a Copernican revolution that is much more demanding than Kant's, which simply made knowledge depend on recording (and proposed a spurious collapse of ontology on epistemology) while in the perspective that I defend being and knowledge are the result of hysteresis. In order to understand the ontological importance of hysteresis it is sufficient to imagine a world without recording, i.e. a world where causes had no effects - in other words, a world without causes and without effects.

Causality, the supposed glue of the universe, is in fact the result of a more fundamental structure, i.e. recording. Schopenhauer stated that he could give up all Kantian categories except causality. I say that I can give up all the structures of the Kantian transcendental, except recording, to which Kant himself refers when he speaks of the syntheses necessary for the constitution of experience and when he describes the imagination (that is, a form of recording) as the common root of sensibility and intellect. Recording - keeping track, the passive synthesis, the remembrance of memory and repetition of matter - determines the emergence, the birth of something new: the universe, life, society, meaning, intentionality and all the individuals who furnish our world. This sublime (in a mathematical and ontological sense) overabundance of time and space has allowed the world to undergo all sorts of unrest, nonsense and dissipation: the economy, let's not forget, only matters for those who have little time. With enough time and space, anything can happen, including the spirit.

It should come as no surprise, then, that metaphysics is so deeply rooted in the world. The spirit, in fact, is emergence, not Pentecost: it rises from the world and does not descend from heaven. And meaning, that is to say, the most manifest aspect of the spirit, must likewise be conceived as emergence and not as Pentecost. From the Pentecostal perspective, in fact, there is a meaning that is prior to and independent of the forms in which it is
expressed and the ways in which it is impressed. The model here is the Aristotelian theory of expression: in the mind there are meanings that are expressed through words, which in turn are symbolized through writing. Therefore, there can be a meaning even if unexpressed and, more importantly, meaning has no genesis: it has always been there or is somehow heaven-sent. While the Pentecostal meaning follows the direction Meaning > Expression > Hysteresis, emergent meaning goes in the direction Hysteresis > Expression > Meaning. In terms of the theory of expression we thus have forms of inscription (notches, drawings, traces) that take on an expressive value, which is subsequently associated with a meaning; this is evidently the case in the Lascaux caves: the faculty of making marks precedes the forms in which it manifests itself and the meaning it receives. In the theory of man we encounter techniques that reveal otherwise unexpressed human characteristics - from the will to power to the love of theory. In the theory of society, finally, we find forms of organization that originate in our animal past, which were subsequently formalized and perfected in customs, rules and documents, and which eventually gave rise to collective intentionality.

Is it still necessary to postulate the intervention of a *logos* (or, more modestly, of some meaning) to account for a world that owes its contingent emergence simply to an incalculable wealth of time, matter and energy? When one uses intelligent design to explain the order of the natural world, and intentionality and construction to explain the social world, one makes the same mistake that Spinoza used to criticize. Spinoza reproached those who resorted to the spirit by assuming that certain performances exceeded the possibilities of bodies: so far - noted Spinoza – no one has truly established what a body can or cannot do. Likewise, no one has established what recording alone can really do. Underestimating its extent has led us to appeal to magical entities that we can easily do without, i.e. benign or evil entities to which we have superstitiously attributed power over our lives. Yet perhaps these deities do not have such power on their own, but only as the hypostasis of a fundamental function, namely recording.

**Technology**

Technology doesn't seem to enjoy the same metaphysical nobility credentials as ontology and epistemology. But, if we pay attention to it, technology is not absent from metaphysics: it is simply not noticed. Hysteresis shows precisely how technology plays a role that is just as crucial as - if not more crucial than - its noble sisters. By "technology" I refer to the categorial domain that collects all the different ways of doing, just as ontology is the categorial domain that collects all the different ways of being, epistemology is the categorial domain that collects all the different ways of knowing, and teleology is the categorial domain that collects all the ways of ending (in the sense of both the end and the purpose of something). By "technique" I mean instead the object of technology, i.e. any type of iterable and regulated action with an external purpose, carried out by an organism or mechanism, and which results in either some action aimed at achieving a purpose (*praxis*), or a production that generates an artifact, i.e. the objectification of a purpose (*poiesis*). In this sense, technology manifests its action in those regional spheres of ontology which are ecology (the environment and in particular the human environment), anthropology (the distinctive characteristics of the human animal as opposed to other organisms) and economy (the distinctive characteristics of the social world).

Ecology is not a separate field from technology, any more than anthropology is. In both cases we are dealing with ways of becoming. Let us not forget that the true opposite of "natural" is not "artificial", but "supernatural". In this sense, human artifacts, from the point of view of their material composition, are natural, not supernatural. The plastic island in the Pacific was produced by a process no less natural than the one that
determined the emergence of a volcanic island: in both cases the components are natural and the processes, both in the plastic island and in the volcanic one, have nothing supernatural about them (and if one had to choose which event was more spectacular, it would surely be the volcanic island).

From this point of view, not resorting to some intelligent design, whether it knows it or not, whether it wants to or not, realism finds itself in the fortunate condition of being able to explain nature through technology, (which is not so absurd if we think that Darwin elaborated the theory of natural selection starting from the observation of the artificial selection made by farmers and breeders), i.e. a more complex phenomenon through a simpler one. The difference between technology and nature, in fact, is only a difference in degree: nature is normally much more complicated than technology. In this sense, as we will see shortly, the difference between artificial intelligence and natural intelligence does not consist in some magical transcendence of the latter as opposed to the former, but rather in the fact that the former has simpler functions, even though the enhancement of memory will soon be able to make it as complex as natural intelligence. This, in the first approximation, must be the objective of a philosophy of nature: not so much or not simply recognizing nature as spirit, but rather recognizing it as technology.

The economy, in turn, is the most manifest form of hysteresis in the social sphere. What is needed, therefore, is a Copernican revolution that allows us to understand society starting from capital, and not capital starting from a society erroneously considered to be immune to capital. Capital is fundamentally mnestic, and this explains the importance of memory in society, as well as the easy reversibility of data into wealth. Society is a general economy, since it is based on the same promise mechanism that underlies the economy in the strict sense. That’s why, when you talk about society, sooner or later you find yourself talking about money. This does not depend in any way on whether human beings in general, or certain societies in particular, are more or less venal. Quite simply, society constitutes the technological apparatus that humans, without any social contract but simply moved by a competence without understanding, have produced outside of themselves by exteriorizing their purposes (natural life does not have a meaning outside of itself, but social life does, and continually proposes objectives and deadlines to us). In this society, humans, by exteriorizing the potentially solitary purpose of eating, have chipped flints to kill animals or their fellows; by exteriorizing the social purpose of giving and having have engraved notches indicating debts or credits; have made tattoos to indicate status functions, and so on.

This leads us to the link between technology and anthropology. The human being is an unstable animal which is therefore weaker and more dependent than other animals. This is why it has developed technologies that make up for its shortcomings. The surplus of human beings over animals does not lie so much in what they possess within them, but rather in what they externalize in the form of technology and archiving. And their very internal superiority, the brain, derives its efficiency from its continuous exposure to the technical and social world, with a process that begins with education and language learning, and continues until retirement, after which, unsurprisingly, a rapid psychic decay takes place (unless countermeasures are taken that would be senseless in a Cartesian framework where thought is independent from extension, matter and society).

In addition to being particularly evident in these three regional ontologies, technology plays a crucial role in the transition from ontology to epistemology. Technological apparatuses are an eminent example of the power that derives from the automatic iterability of any function. Typically, one of the first technologies we have
witnessed is the chipping of a flint, which was transmitted and perfected over a very long period of time through the cooperation between memory (the acts necessary to chip a flint with increasing refinement) and matter, which acts as a partial vector of memory. The flint retains the traces of the modification undergone, which may, though not necessarily have to, turn into knowledge. This evolution took thousands of years, and its refinement was entrusted to the object as much as to the subject: it consisted of repetition in the former (the past is repeated by matter), and remembrance in the latter (the past is remembered by memory).

It is therefore a remembrance, not an understanding: it is a competence, a know-how and not a theoretical knowledge, even if it can (but not necessarily must) lead to knowledge. This keeping track, exactly as in the case of writing, money or documents in general, creates a value and accumulates it within the object, which presents itself as the final result of the cooperation between subjects and objects. But these apparatuses - from chipped flint to smartphones, including writing and currency - are nothing more than a circumscribed, though very cumbersome, manifestation of a more general function of technology, which is exercised in the social sphere (think of the constitutive role of rituality in society) and in the conceptual sphere (the notion of "meaning" would be inconceivable if one could not rely on the iterability of signs, which ensures the process of idealization). The latter circumstance is of particular interest. The result of iteration is in fact the potential generation of an idea as a possibility of indefinite repetition.

**Epistemology**

Epistemology is what we know or think we know. It depends on ontology to the extent that knowledge is always knowing something independent of the knowing subject. The main characteristic of epistemology is alteration. It is evident that something like an alteration takes place when something is known by someone, that is, when one moves from ontology to epistemology. If instead there were identity between ontology and epistemology, the very meaning of epistemology would be lost, since knowledge is always knowledge of something other than oneself. What the reflection of the twentieth century has defined as an ontological difference, meaning the difference between beings and being, must be defined with greater precision as an epistemological difference, that is, as the difference between the entities and the knowledge we have of them.

Neglecting this difference reduces ontology to a mere noumenical layer and shifts philosophical inquiry to the level of pure phenomenology, with the result of seeing the world as the simple reflection of our conceptual patterns. Thus, both ontology and epistemology are emptied of meaning: the first is reduced to a pure semblance subjected to epistemology, and the latter is deprived of its fundamental character, that of being knowledge of something other than oneself. This is why quantum physics creates so many problems in epistemology, generating an anomalous cross between ontology and epistemology. But quantum phenomena do not allow us to treat the whole reality as if it were a prosthesis of quantum physics. The world as we experience it does not obey quantum physics, unless we want to take to the letter the Italian proverb "the master's eye fattens their horse".

Now, the enthusiasm with which both philosophy and common sense have embraced quantum physics, seeing it as a scientific proof of the principle that there are no facts, but only interpretations, depends on the fact that it was in line with transcendental fallacy, that is, the reduction of existence to the knowledge we have of it. For the transcendental fallacy, ontology must resolve itself into a theory of knowledge, which speaks not of things themselves, but of the way in which they must be made to be known to us. This fallacy manifested itself in the twentieth century criticism of the "myth of the given", which supports the dependence of ontology on
epistemology with the following argument: if I want to be able to use data as the basis of a theory, then these data are not independent of the theory. If, on the other hand, I claim that data is independent of theory, then I will never be able to use a single piece of data to confirm or disprove a theory. This means that: if I want ontology to serve epistemology, epistemology must build ontology. This discourse is intimately inconsistent, because an ontology built by an epistemology is an epistemology and not an ontology, and an epistemology that knows an epistemology (instead of an ontology) is not even an epistemology.

When we came into the world, the world was already there, and not as an inert residue, but as the structure from which living beings emerge, along with their social and ideal world. When we come into the world we come from the world, from a world that surrounds us and that approaches us with obstacles and resources, with a complex but knowable reality, and this being in the world makes the question of how we access the world subtly meaningless. If by chance we woke up in an unknown room, the right question would not be: "how can I know this room?" (of course I can know it, I'm in it!), but if anything, as Jonah or Pinocchio wondered in the belly of the whale: "How did I get there? Why am I here?" The problem is not how the mind refers to the world, but rather how the mind emerges from the world, and the answer to this question comes from technology as iteration. In this framework, the process of idealization as an outcome of iteration is a decisive element in the transition from technology to epistemology, from becoming to knowledge, i.e. from iteration (the same is repeated) to alteration (the same is known and becomes an object of understanding). As soon as we have ideas, we are also able to formulate statements about something, i.e. to carry out processes in which epistemology is revealed as the result of a cooperation between ontology and technology, where the first offers the matter, the second the process, and the third the form (the proposition S is p, where p aims to be true of S).

Let me give you an example. There are 22 beans in a can (ontology); I count them (technology); I utter the sentence: "there are 22 beans in this can" (epistemology). The sentence is true. The can weighs a certain amount (ontology); I put it on a scale (technology); I utter the phrase "this can weighs 100 grams" (epistemology). This sentence is also true. If I were in the United States I would say that the can weighs 3 and a half ounces, and it would be equally true, although 3.5 and 100 are two different numbers. Bottom line: the truth is relative to the technical instruments of verification, but absolute with respect to the ontological sphere to which it refers and to the epistemological need to which it responds. "Relative" and "absolute" indicate, in the version I propose, two different forms of dependence of truth, with respect to ontology and with respect to technology. The operation just described rests on three elements: the truth bearers, the truth factors, and the truth enunciators. Truth bearers are the states of things with respect to which a proposition is true (the beans in the can). They therefore constitute the ontological element of the process. Truth factors are the operations necessary to produce true propositions about states of affairs (in this case, counting the beans). They therefore constitute the technological element of the process. Truth enunciators are the propositions necessary to communicate the results of the operations carried out by the truth factors with reference to the truth bearers (in this case, the phrase "there are 22 beans in this can"). They therefore constitute the epistemological element of the process.

It's worth pointing out that this process has a synthetic dimension, in that it adds something instead of just analysing what is already there. Analytical truths, those that inform us that no bachelor is married, are much less interesting than synthetic truths that inform us about married women who spend time with bachelors. This search for synthetic truth involves doing without knowing, i.e. an art: Maigret investigates and is unable to explain
the logic of his investigations, and Kant reminds us of the mysterious nature of a simple operation such as $7 + 5 = 12$, in which the concept of 12 cannot be deduced from the analysis of 7 and 5, because I could get to 12 even by summing 6 and 6 or 10 and 2. So let's solve an old mystery, this time a philosophical one. The intuitive definition of truth dictates that it is the correspondence between a proposition and a thing: the phrase "the snow is white" is true if and only if the snow is white. So far so good, but the problem starts when it comes to explaining what we mean by "correspondence": does it mean that words resemble things? This problem reminds one of Augustine's view on time ("What then is time? If no one asks me, I know what it is. If I wish to explain it to him who asks, I do not know") which is solved precisely by placing the emphasis on the technological dimension of truth - which, just like cycling or lighting a fire, can work perfectly even if we don't know the reasons for it (as happens in the "unreasonable effectiveness" of mathematics which today finds an eminent and disturbing illustration in the world of generalized hysteresis).

**Teleology**

Hence an important consideration: even a machine is capable of epistemology, and we can see this very well in the different mechanisms that humanity has been dealing with: scales, tables, calculators etc. are generally capable of telling the truth. The problem is that these truths make no sense, that is, they have no meaning for anyone. In order for meaning to be found, it takes a fourth element brought about by hysteresis, that is, *interruption*, which defines the sphere of teleology. Iteration does not come by itself, and every mechanical process, from the functioning of a technical apparatus to that of a bureaucratic system, can be interrupted. But behind this interruption there is a temporality that is fundamentally related to organisms, not mechanisms. What is the characteristic of a mushroom as opposed to an integrated circuit? The fact that its iteration, sooner or later, is subject to interruption; and in organisms this interruption is much more significant than in mechanisms. In line with the destiny of all there is, what has been formed dissolves, hysteresis gives way to *entropy*, recording loses its power, and history begins, i.e. survival in an intentional memory, intentionally fighting against oblivion. Life is the property of organisms, subjected to an interruption that puts a permanent end to the mechanism of iteration. However, it is necessary to remember that interruption phenomena take place on a background of iteration, both in nature and in society. In other words, hysteresis is not interrupted but, on the contrary, the interruption takes place only on a background of iteration.

Being for death, which for Heidegger was the characteristic trait of the human animal as opposed to non-human animals, is in fact what distinguishes any animal from an automaton. The point is very simple, and is connected to the capital circumstance that organisms have a metabolism and computers do not: trivially, for computers the alternative is between on, off and then, potentially, on again; while for organisms it is only between alive and dead. The finalism of bodily life depends on the fact that life has a direction, because it follows an irreversible process: in the end you die and are buried. If by hypothesis a computer was buried in a dry and safe place, the following year it could be turned on again, while there is no way to resuscitate the dead, as for them the on/off alternative is resolved *a divinis* in the off position. Humans, like all other organisms, have only two positions, on and off, and when they are off they cannot be turned on again. Automata, on the other hand, can be turned off and on again for a long time. Just as they have no internal purpose of their own, but manifest that of their creators, so they have no life, but promise a resurrection to the living that cannot be reborn.
Interruption therefore brings a central element into the metaphysical furnishing of the world, namely finality and, with finality, meaning. *Meaning is interruption*, the mechanism that comes to a halt, the interpretation that stops and finds something solid: what was simply iterated means something to someone, someone who is first and foremost an organism. Only in an organism, characterized by limited lifetime, can phenomena such as anxiety, anticipation, desire, boredom, and hunger take place. And it is precisely these phenomena emerging from organisms that give meaning to what in a machine simply makes sense. To be clearer, the phrase "in a hundred years we will all be dead" has the same meaning whether it is found in a book, repeated by a gloomy loudspeaker at a railway station, or spoken by a lecturer in a witty mood. But only for the speaker and their listeners does the phrase have a meaning as well as a sense. And this is for the trivial reason that in a hundred years they will, indeed, all be dead (this, incidentally, is also the reason why the phrase means something to you and me).

This point is crucial and deserves to be explored further. In a way, metabolism - that is, the characteristic of every living being - can be fully assimilated to the cyclical progress of a mechanism. However, cyclicity, in an organism, is characterized by a very marked irreversibility. A machine subject to a catastrophic event can in principle always be repaired, while the same cannot be said of an organism, and it is for this reason that organisms meet death, an event that always has an exclusively metaphorical value for a mechanism (when I say that my computer is dead, I mean something different and metaphorical compared to when I say that a relative is dead, because I cannot exclude the resurrection of the former while I have good reasons to exclude the resurrection of the latter).

Anthropology is the most manifest sphere of interaction between iteration and interruption, between mechanism and organism. The human being is an organism like any other animal, and therefore is subject to irreversible processes. These processes are the basis of an internal purpose, which is properly purposelessness: the purpose of the living is in fact the end of life. This characteristic of organisms, the fact that they possess finality as a distinctive quality, is full of consequences. Having no purpose outside of themselves, some organisms have developed the ability to produce mechanisms, such as technological devices and social structures, which are expressly endowed with purposes (coffee machines are made to make coffee, Universities are made to educate and do research, while human beings are not made to drink coffee any more than they are made to be educated or to do research).

More than other organisms, however, human beings are capable of projecting finalities outside themselves, producing mechanisms endowed with (derived) finality and indefinite iterability: technical apparatuses, including institutions, the social world, and culture. Human animals, unlike ducks, but like hair dryers, can enhance their performance through mechanical processes and technologies endowed with repeatable procedures (I can turn a hair dryer on as many times as I want). But, unlike hair dryers and just like ducks, they are composed of an organic part, subject to irreversible processes. This changes everything: having a body means having needs, pursuing goals, being aware that time is limited and therefore precious (is it conceivable for a computer to get bored? I don't think so, while we know very well how often we get bored). Instead of being halfway between an animal and the ubermensch or neither angels nor beasts, humans are halfway between animals and automatons. The surplus they have over machines is animality; the surplus they manifest over animals is technology, which is the product of a so-called second-class instrumentality: if other animals make instruments, humans make machines, complex objects whose function does not derive from their form but from the interaction between their parts. Non-human
animals have only their organism, and therefore are irritable; machines only have their mechanism, and therefore are not irritable but reactive (they react according to programs); humans stand at the crossroads between mechanism and organism, that is, they possess what I call responsiveness, the irritability of an organism enhanced by the resources of a mechanism.

The fundamental characteristic of the human being must be sought in responsiveness - which does not consist in some spiritual soul supplement, but in the animal nature that characterizes us as organisms - and in the encounter between the organism and a technical supplement. We are human because we are animals and we are more complex souls than non-human animals because we have - within us and especially outside us - very powerful automata called language, culture, and technology. It is in this framework that concepts such as trust, responsibility and decision acquire meaning, as they involve the presence of technological components - of which computers are only the latest version, given that everything started with the lever, the wheel and writing - and biological components, i.e. the fact that there are at least two organisms that interact socially. To claim that a computer may be responsible for something is a conceptual error about the notion of "responsibility", and it is like thinking that if you take a ten euro note from the right pocket of your trousers and put it in your left pocket, you are lending yourself ten euros. The same, although for other reasons, applies to non-human animals.
Stephen Hawking pursued the ambitious plan of seeing things from God's point of view. Which is legitimate, not only because one must have models in life, but above all because, as Kant used to say, the fate of reason is to go beyond the limits it has set itself and define the totality within which all particular forms of knowledge make sense. This was the traditional task of philosophy, but in the last two centuries it was left to the sciences, while philosophy gave up not only particular knowledge - which is entirely legitimate, as it is very dangerous to be treated by a philosopher (as the Schelling family well knows) - but also speculation about the big picture. And this makes no sense.

There is no reason to renounce speculation, and indeed there are excellent reasons for a revival of the speculative dimension of philosophy with a view that embraces nature, society and technology. The absence of this element in the speculative philosophies of idealism, in which it was replaced by the spurious and indefinite notion of "spirit", constituted one of the most concrete reasons for the collapse, and then the obsolescence, of transcendental idealism, while it may constitute the foundation of the emerging realism that I am proposing. Idealism presupposes that reality depends on ideas, that is, ontology depends on epistemology. This dependence is exercised through explicit technological processes of a constructionist type (Plato's *Timaeus*, where the world is constructed starting from the ideas, Kant's schematism, the operations of the I in Fichte, Hegel's dialectic). However, this technological element is subordinate to ideality and the spirit, not considering that these are both a result of technology: the idea, as we have seen, is the result of an indefinite possibility of repetition, and the spirit is the dynamic version of the idea.

This consideration is the starting point for realism, which presupposes a dependence of ideas on reality, that is, of epistemology on ontology. Realism involves emergentism instead of constructivism, which instead is implied by idealism. The idea and the spirit emerge in a contingent form from matter through iterative processes, in which hysteresis plays a decisive role. Once the process reaches a certain degree of awareness - as happens in higher organisms, and in particular in a superorganism such as the social world - hysteresis manifests itself as technology, i.e. as an activity regulated and oriented towards an external purpose. The awareness of this end, which does not necessarily take place and which in most cases does not compromise the success of the process, is what we call "epistemology", i.e. the world of ideas and of the spirit.

Assuming that ideas are indeed born from reality, it is natural and right to wonder why philosophy should have a higher right to speculation than the empirical sciences. This question can be answered with two arguments. The first, the weaker one, refers to equal opportunities. If the empirical sciences can devote themselves to speculation, there is no reason why philosophy cannot do the same. This argument is primarily addressed to all those philosophers (and they are the majority) who for almost two centuries have transformed philosophy into a modest imitation or description of science. Harmful in itself, this choice has generated a pernicious side effect, namely the identity revolt of philosophers against science, which has turned philosophy into a modest imitation of magic. Appealing to equal opportunities means not giving science the monopoly of truth and speculation, but it does not at all mean that science does not think or any other similar nonsense.

The second argument, which is stronger, refers to the specific differences between science and philosophy, and addresses both philosophers and scientists. As we know, the difference between science and philosophy is no
older than the scientific revolution. The latter, as we know, has been characterized by the generalization of the mathematical and quantitative method and by the absolute privilege of efficient causes. Far be it for me to criticise choices whose benefits are macroscopically evident in the population growth and a longer life span. The point is, however, that speculation is characterized by the search for final causes: the fate of reason, i.e. going beyond what is subject to empirical verification, necessarily involves the recognition of purposes and not only causes. That is, it does not consist in conjectures about causes that cannot be demonstrated empirically, but in hypothesizing ends that make empirical demonstration possible, but are not part of it. For example, in order to explain the heartbeat, I have to assume that its end is blood circulation; I can prove that the heartbeat causes the blood to circulate, but I can only speculate that the heart's purpose is blood circulation. On the other hand, it is not a speculative hypothesis that reducing the cost of money is aimed at increasing trade and imposing custom taxes is aimed at boosting the national economy.

The difference between natural and artificial intelligence is speculative, because it is not a question of intelligence itself, but of purpose. Mechanisms receive their finality from the outside, therefore they have explicit finalities, which, however, they have not given themselves. Organisms, instead, only have internal purposes, and these purposes manifest themselves as the set of needs, volitions, sensations and feelings that characterize the functioning of an organism as opposed to that of a mechanism. And precisely this organic rootedness is what underlies reason as a faculty of ends. The brain is not made to think any more than the eye is made to see and the nose to support glasses. We treat the brain like a computer and the eye like a camera because the introduction of final causes (thought, vision) allows us to explain how they work. But as such, neither the brain nor the eye have any purpose whatsoever. They are simply part of an organism that has but one, and often unconscious, purpose: to stay alive. Because of this need, organisms are guided by final causes (causes whose prototype is the stimulation of hunger) while mechanisms are guided by efficient causes (a command that comes from an organism).

Suppose I am fidgeting with kitchen tools to make a pasta, and the parts of the stove, which have explicit purposes, undergo the efficient causes that derive from my action, triggered by my desire to eat. Rationality is precisely this ability to assign ends, from that of making a pasta dish to that of restoring the Roman Empire. Therefore, those who, between Darwinism and vitalism, recognized a biological foundation of reason were not mistaken. They were only wrong in drawing from this foundation a contrast between life and intelligence. Life, as an organic component, provides the ends; intelligence, as a mechanical component, provides the means. And reason is the result of this interaction between ends and means: it is the properly human realization of the organism. Drawing the conclusion from what has been said so far, there has always been artificial intelligence but there will never be an artificial reason. The latter is the result of a responsiveness, of an encounter between iteration and interruption, between mechanism and organism, between cause and end. This is why philosophy is more entitled than the empirical sciences to engage in speculation. Because philosophy is the teleology of human reason, that is, a reflection that, starting from the characteristics of being, outlines the forms of finality: intentionality, responsibility and historicity.

**Intentionality**

Let's start with intentionality. In common parlance, to intend or have intentions means to propose to do something. But in philosophical language it also means to represent something in one's consciousness. The distinctive character of the mind would in fact be the ability to make images of objects, whereas objects are not
able to make images of their subjects. At this moment I am representing my computer screen, which is an intentional content of my consciousness precisely because I have in my mind the image of it. Having this representation, as I said, is the distinctive characteristic of the mind as opposed to what is not mind, if not even the condition of possibility of experience (this is what Kant suggests when he says that the ego must be able to accompany our representations) and of existence (ego cogito, ego sum can be translated as "I have representations, therefore I am").

However, suppose I switch on my webcam and turn it towards me. I now have a representation of the screen, and the screen has a representation of me. Does this mean that the computer has an intentionality? If "intentionality" refers to the ability to have representations of things outside of us, then not only computers and cameras, but also mirrors possess this distinctive feature of the mind. And the fact that, in response to this objection, scholastic as well as analytic philosophers use the notion of "secondary intentionality" only adds to the general awkwardness, because it is not clear why, if not for a petition of principle, one should call the intentionality of a mirror or a computer "secondary", and the intentionality of a professor or a beaver "primary". The difference is not between primary and secondary, but between organic and mechanical, and it remains to be seen why we should introduce an animistic notion such as that of "intentionality" instead of that of "representation", which does not require recourse to soul supplements in order to be understood.

This shows that, for historical reasons that I cannot go over here, the term "intentionality" is misleading, because it suggests not only the possession of an image, but also an act of the will. To have the intention to do this or that does not simply mean to represent oneself this or that - something that both the mind and a computer can undoubtedly do - but it means to propose to perform an action. This is something that I can do and the computer cannot do, not because I possess the representation and the computer does not, but because I have attitudes towards this representation (fear, desire, planning) that the computer does not have. Once again, recourse to intentionality is presented as a petition of principle: a notion that should define the distinctive character of the mind, in fact, presupposes this distinctive character, but in an implicit form, i.e. the fact that the mind is a domain of representations (and, let's not forget, of operations that are not represented) that take place in an organism instead of a mechanism. If we want to distinguish mechanical representations from organic ones, as is more than legitimate, we must engage in serious work instead of trying to get away with an ambiguous catchword like "intentionality".

This applies regardless of the circularity whereby the mind is defined by intentionality and intentionality by the mind. To maintain that extramental representations acquire intentionality only because they are used by a mind, but do not possess intentionality in themselves, means at best to state the obvious, i.e. that a mirror or a computer are mechanisms and a beaver or a professor are organisms. In the worst and most frequent case, it means to argue that the mind confers intentionality to representations, which is tantamount to using the definiendum (intentionality as the alleged character of the mind) as definiens (intentionality as the property that the mind confers on representations).

Responsibility

Therefore, the distinctive feature of the human mind as opposed to a computer, as far as intentionality is concerned, does not lie in the possession of representations, but in the purposes connected with these
representations, that is, with what we intend to do with them and, more generally, with what we intend to do full stop. It follows that the proper characteristic of the mind, if by this term we refer to the natural mind and not to the artificial mind, is not intentionality in the philosophical sense, but intentionality in the legal sense - which, after all, is in line with common parlance. Computers have intentions as representations, humans have intentions as representations and as intended actions. In other words, what characterizes human intentionality as opposed to artificial intentionality, just like what characterizes human intelligence as opposed to artificial intelligence, is not a capacity (to represent in the case of intentionality or to handle signs in the case of intelligence) but the practical purpose and emotional tone that accompany the representation and manipulation.

Meaning depends on this circumstance: what was simply iterated by an organism or mechanism means something to someone. This someone must be an organism (typically an animal) subject as such to those processes of interruption I was talking about above. Only in an organism, characterized by a limited life time, can phenomena such as anxiety, waiting, desire, boredom, and hunger take place. And it is precisely these phenomena affecting the organism that give meaning to what in the machine simply makes sense. If we reflect for a moment on this crucial difference between organic and mechanical, we can not only give a non-mystical or tautological meaning to the vital impulse, but also explain where exactly the difference between human and computer thought lies. The sense of finitude, which depends on the irreversibility of the process that affects a living being (which therefore has both memory and a sense of the end) can only take place in a living being. Some will argue that a great many living beings do not have any reflective awareness of the end. But it is not necessary to have read a treatise on metaphysics, nor to have practiced some form of authentic existence, to feel the bites of hunger and thirst, which remind us, with a clarity that one would needlessly seek in some manual of devout life, that we are and shall be dust.

This matter finds an elective application in the sphere of responsibility. In this field, the debate on free will has generated enormous confusion. Born at a time when explaining meant identifying the causes, the debate necessarily leads to the denial of freedom, since it is obvious that an effect, once it has occurred, could not but follow from the cause that produced it. If we see the scene again, it will become clear that Sam had to play As time goes by again and Blücher could only precede Ney on the fields of Waterloo, and that, for the same reason, we couldn't help but do whatever we did. With this perspective, or more exactly with this retrospective, we only grasp one side of responsibility, which is interesting from the point of view of reward and punishment, that is, answering for what one has done. However, if we can be called to answer for, it is precisely because we are free - a notion that is denied by the causal perspective. If answering for is to make sense, it is therefore necessary to introduce another perspective, that of answering to, which is based on principles that are not causal but final. Responsibility for past actions rests on the decision about future actions, and is therefore explained not by ontology but by teleology. Sam could have not played As time goes by and Ney could have been quicker, and this is possible because, unlike the past, the future does not yet exist, it is not subject to ontology but it lies in the hands of teleology, i.e. the finality we decide to give to our actions, for which we will be called to answer not as bodies obeying causal principles, but as spirits obeying final principles.

It is worth noting that in this perspective the dualism between matter and spirit qualifies itself not as an unacceptable ontological dualism, but as a chronological dualism: the spirit is all the time we have before us, matter is all the time we have behind us, just as causality is what lies behind us and purpose is what lies before us.
Incidentally, those who accuse realism of accepting reality as if it meant denying freedom show some lack of understanding: ascertaining reality for what it is does not mean accepting it, but simply not being stupid or blind. The world of the spirit and freedom is more open than ever when it is placed in its proper time, namely the future with respect to which we must make our decisions.

As modern science defined itself by the exclusive recourse to causal explanations, philosophy, which did not resign itself to the status of deuteragonist, has legitimately claimed for itself the final causes, incontestably observing that the historical and social world cannot be explained without recourse to final principles. In so doing, however, (this is the well-known affair of the sciences of the spirit) philosophy was transformed into a social-historical science, leaving out the whole field of nature and not taking into account technology, i.e. the field of explicit ends. To recall the necessity of speculation in philosophy means, therefore, in my perspective, to insist on the fact that philosophy, being able to resort explicitly to both efficient causes and final causes, is more entitled than science to address speculation. In fact, science simply deals with the hypothetical generalization of causal links, while philosophy (if it is interested in speculation) can legitimately resort to final links.

Historicity

One last point. The question about final causes is a question about history, which has more to do with the future than with the past. In general terms, historicity is the antithesis of Wittgenstein's very unfortunate statement "Whereof one cannot speak, thereof one must be silent", which gave analysts the conviction that they were, for this reason alone, the first of philosophers, while reducing them to being the last of scientists. When creating a philosophy of history or, if you prefer, a story, one indicates a perspective for the future, and only in this perspective can one read the past. This is a very respectable activity, which in the last two centuries has fallen into disrepute for the very good reason that for the last two centuries it has only given us bad news - deserts are advancing, the West is declining, nihilism is taking over the world, etc.

If one thinks about it, the circle of need and its satisfaction, that is, life, has no meaning (and that is what is called "nihilism"); but to think about it a little more, there is no reason why there should be an ultimate meaning, and the multitude of intermediate meanings, from the starry sky above us to the Michelin-starred restaurant in front of us, are more than enough to make life worth living. This answer, however, is incoherent with the speculative tendency towards overcoming one's limits, and so I don't want to avoid the question of the ultimate goal - that is, of what I call "Deity", taking up Samuel Alexander's terminology - as well as the issue of the ideal telos towards which all historicity moves.

What will become of us? Where are we going to end up at this rate? Let's take this question in all its seriousness. It is we, as human beings, who are heading somewhere. Elephants, beavers, mullets or amoebas do not have a philosophy of history, i.e. the creation of an end that goes beyond the end of their organisms. And this is not a limit, but rather the sign of the success of their life forms. It is we who can and must ask ourselves "what is going to happen to us?": what is going to happen to us, mind you, and not (as in the anthropocentrism of the anthropocene) to the planet, which was there before us and will be there after us and is sovereignly unconcerned by our debates. The decision about the future is a decision of and about humanity, and far from having stolen the future from anyone we are today able, with goodwill, to give a non-catastrophic answer to the sacrosanct question: what will become of us?
Once acknowledged this, we can and must do something, and to do it we have to start from the fact that (contrary to what we believe) we can write the rules of the game like never before: now that machines have relieved us from working, we have the crucial task of consumption, i.e. of giving meaning. If, in fact, responsiveness is an exclusive characteristic of the human being as a mixture between organism and mechanism, nature and culture, then the enhancement of the mechanism (artificial intelligence) gives the human being an unprecedented centrality. When we no longer serve as mechanisms, since there are perfect mechanisms to replace us, our organic component comes to the fore. If it weren't for us, hungry, bored, desiring and rightly worried that it might all end in a catastrophe - not the end of the world (as anthropocene theorists presumptuously claim) but the end of humanity - then all our wonderful set of apparatuses would lose its meaning.

Imagine the scene. The ecological catastrophe makes all human beings disappear, but there are still all the automatons: billions of smartphones, tablets as far as the eye can see, ATMs, sushi making machines, drones to deliver it, self-published novels, panthered coats, watches with Minnie and Mickey Mouse, pornographic movies, etc. All this for what? For whom? Not for beavers (let's suppose they are the life form that has benefited most from the disappearance of humans): indeed, it's hard to imagine a beaver watching a porn movie wearing a panther coat. At that point, a Superstite God would understand that the highly imperfect beings we call humans were the purpose of the whole system. Now, humans could come to the same conclusion even without the ecological catastrophe, indeed, while trying to prevent it and hopefully even succeeding. Other than kenosis, it would be an apotheosis. And I am personally relying on it, even if this will not mean achieving happiness, simply because humans are never happy. That is why they stole fire from the gods, believing they would become happy like them and not understanding that the problem was not fire, but humanity, that is (to use a technological metaphor), you can’t play on broken strings.