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AGAZZI ON KNOWING THE INVISIBLE

Abstract

Against certain positivistic and neopositivistic strictures still rooted in our society, Agazzi argues that knowing the invisible is possible, not just in science, but also in metaphysics, in morals, in aesthetics, and in other areas, including, in a sense, religion. The book also examines many examples of such knowledge, surveying not only the great classics of philosophy but various immortal masterpieces of art, music, and literature. It is not just a treatise in epistemology, but a book of philosophy in the most complete and traditional sense, for it discusses knowledge not only for its own sake but also as a guide to culture, morality, happiness, and to the sense of life. Thus, it also provides some important suggestions on how to face our time of crisis and an uncertain future. Despite Agazzi's proverbial rigor and clarity, his project is so momentous and demanding that I discuss certain points which might deserve further explication and argumentation.

Keywords: Knowledge; Invisible; Metaphysics; Religion; Art; Faith; the Sense of Life; the Future; Epistemology, Morals; Aesthetics

AGAZZI ÜBER DAS WISSEN UM DAS UNSICHTBARE

Zusammenfassung

Gegen bestimmte positivistische und neopositivistische Einschränkungen, die immer noch in unserer Gesellschaft verankert sind, argumentiert Agazzi, dass die Erkenntnis des Unsichtbaren nicht nur in der Wissenschaft, sondern auch in der Metaphysik, in der Moral, in der Ästhetik und in anderen Bereichen, in gewissem Sinne auch in der Religion, möglich sei. Das Buch untersucht zudem viele Beispiele dieses Wissens und untersucht nicht nur die großen Klassiker der Philosophie, sondern auch verschiedene unvergängliche Meisterwerke der Kunst, Musik und Literatur. Es ist nicht nur eine erkenntnistheoretische Abhandlung, sondern ein Buch der Philosophie im umfassendsten und traditionellsten Sinne, denn es behandelt Wissen

nicht nur um seiner selbst willen, sondern auch als Leitfaden für Kultur, Moral, Glück und den Sinn des Lebens. Damit liefert es auch einige wichtige Anregungen, wie wir unserer krisenhaften Zeit und einer ungewissen Zukunft begegnen können. Trotz Agazzis sprichwörtlicher Strenge und Klarheit ist sein Projekt so bedeutsam und anspruchsvoll, dass ich hier bestimmte Punkte diskutiere, welche eine weitere Erläuterung und Argumentation verdienen.

Schlüsselwörter: Wissen; Unsichtbares; Metaphysik; Religion; Kunst; Glaube; der Sinn des Lebens; die Zukunft; Erkenntnistheorie, Moral; Ästhetik

Introduction: Evandro Agazzi's Latest Book

Over many decades of philosophical profession Evandro Agazzi has written almost 100 books and over 1000 articles, and given countless lectures on practically every philosophical question. At the heart of his interests, however, is the problem of knowledge: first of all, scientific, but equally important, and strictly connected to it, also common knowledge and metaphysical knowledge. In 2014, Agazzi published *Scientific Objectivity and Its Contexts*, which presents in a complete, organic, and updated way all his philosophy of science. Similarly, in *La conoscenza dell'invisibile* (2021), he offered a summation of his work and ideas concerning those forms of knowledge which transcend science but are at least as important and can be equally rationally justified: metaphysics and philosophy in general, but also ethics, aesthetics, our knowledge of the mind, religion, and all the ways in which we gain cognitive access to the invisible.

The book is not (mainly) a treatise in philosophy of science, not even exclusively a book of epistemology, but of philosophy in the most complete and traditional sense, addressing not just propositional knowledge but our overall perception of life and the world, including emotive, existential and axiological experience. It doesn't discuss knowledge just for its own sake, but also as a guide to the right way to live, to happiness, and to the sense of life. Its ultimate goal is a guide to orient personal and social life, especially in a time of crisis like now. Some very thoughtful pages are devoted to the Covid-19 pandemic (still perduring when the book was completed), to the need for a prudential rationality in addressing the challenges of complex systems, and to the conditions for looking with *active hope* to an uncertain future.

Besides asking, on the knowledge of the invisible, the typical epistemological questions (can we reach it? How? With which justifications? Within

which limits?), the book also examines many examples of such knowledge, surveying a number of problems and solutions in metaphysics, ethics, philosophy of religion, of art, of literature, of psychology, etc. This is done in a pleasant and plain style, while discussing not only the great classics of philosophy but also some immortal masterpieces of Western art and literature (Caravaggio's *The Calling of Saint Matthew*, Beethoven's symphonies, Dante's *Divine Comedy*, Dostoevsky's *Crime and Punishment* and the *Brothers Karamazov*, Tolstoy's *Resurrection*, to mention just a few), and some of the highest examples of moral conscience, like Giuseppe Mazzini, Albert Camus, or Adrienne von Speyr.

Whoever has attended even a few of the lectures delivered by Agazzi on the most different topics in various disparate contexts, has appreciated the intellectual clarity and insight by which he treats his topics, from the simplest to the most complex one. Therefore, it would be a pity if the materials on which they were based and the ideas they conveyed were dispersed. In fact, the impression is that the book has been written precisely to collect a large number of lecture notes or other drafts variously connected with this topic, making them available to readers in a complete and systematic form.

There are many kinds of invisible, including some about which one would say there cannot be knowledge at all: the theoretical entities of natural science, mathematical entities, the mind, the whole spheres of ethics and aesthetics, values, reasons, freedom, the sense of life, happiness, God, the immortal soul, the future... How then can all these different subjects be brought under the label of knowledge? Through the mediation of *experience*, which Agazzi understands in a very broad sense, including not just sensorial, but moral, aesthetical, erotic, emotive, philosophical, religious, and even mystical experience. Each of them and their mutual interconnections are discussed in chapters VII-XV. Therefore, there are as many types of knowledge as the different types of experience on which they are grounded. Besides, there remains a further all-important space where knowledge is precluded, the space of faith.

The global perspective is that of a metaphysical and religious view of the world, very close if not identical to that of Christianity, which is explained by, argued for, and embedded into the highest achievements of classical and modern (Western) philosophy.

Those other forms of knowledge resemble science because all of them are based on both experience and reason (*logos*), and even science opens to our knowledge entire invisible areas of reality, such as the natural entities that

escape direct human perception, past history, or the subjective mental states and experiences. However, each science studies only a particular sector of reality, by assuming a particular viewpoint on it, while metaphysics operates from the point of view of reality as a whole. In this way, eventually, it can even transcend the whole of experience, while the entities studied by the sciences, even when they are invisible, are still analogous to the visible ones. Thus, science always operates within the sphere of experience. What is beyond that sphere, of course, is also the object of religion. Ethics and aesthetics are also based on particular forms of experience (moral experience and aesthetical experience) (§ 6.4), but unlike science, they concern values, not facts. Metaphysics, religion, ethics, and aesthetics form a continuum and are the area where we face the problem of the sense of life (§ 4.5).

This is why these disciplines of the invisible are even more important than science, from an existential point of view. Yet, today's culture is still permeated by the positivistic and neopositivistic ideas that they cannot yield any knowledge or are not even meaningful forms of discourse. Therefore, Agazzi's argument to the effect that they can be as rational and epistemically justified as science (although in different ways) is particularly welcome.

Agazzi brings to bear on his conclusions many achievements of classical metaphysics and theory of knowledge, which are still valid in the light of contemporary epistemology. A whole tradition, extending from Aristotle to the medieval scholastics through the more recent works of Brentano and Husserl, is thus made to interact with the rigorous methods of analytic philosophy and the results of contemporary philosophy of science. The resulting picture is complex but unitary, multifaceted but harmonic and well-structured. Thus, the book outlines a "system", not in the sense of a rigid and strictly deductive architecture of theses and arguments, but of the intrinsic and objective connections among the various aspects of existence and the distinct human potentialities highlighted by Agazzi.

According to Wilfrid Sellars, the task of philosophy is "to understand how things in the broadest possible sense of the term hang together in the broadest possible sense of the term" (Sellars 1962, p. 35). That is precisely what Agazzi does, by showing how many disparate invisible things can be known even in the strong sense that they can be fitted within a globally coherent and intelligible scheme.

As in the classical method of philosophy, for each subject he introduces, first, a number of important (although seldom technical) distinctions (the need for which is quite conveniently recalled by the title of this Journal).

Then he proceeds by arguments and sound synthetical conclusions, as well as by healthy good sense considerations applied to the analysis of social and cultural trends, nice perspectives on the history of ideas, and fine interpretations of works of art. The book, therefore, enjoys the great clarity and plausibility which is typical of Agazzi's works.

Since his goal is so ambitious, and the stakes are so high, he argues with great rigor and circumspection. Still, I shall try to contribute a little to an enterprise with which I am overall quite sympathetic by discussing certain particularly demanding passages that might still raise objections or deserve further explication and argumentation.

1. The Achievements of Metaphysics

Agazzi begins by defending the possibility of knowing the invisible against the objections that were raised by positivists and neopositivists: science itself, which they considered as the virtuous paradigm of knowledge, allows us to know many invisible entities, like atomic and subatomic particles, fields of force, viruses, etc. In fact, as Aristotle says, all humans by nature seek knowledge. This is because they are rational, i.e., they ask the reasons why things are so and so. In order to know, therefore, we must proceed beyond immediate experience through "*logos*" (reason). Knowledge requires experience, for reason is bounded to the sphere of the essences, while experience concerns reality, i.e. existence. On the other hand, experience yields certainty, but not knowledge (§ 17.1). Besides, experience itself is perception informed by the intellect (as already pointed out by Plato, and recently by Popper and the "new philosophers of science"). Hence, both experience and reason are required in knowledge (§ 3.2.2.).

In order to find the reasons of what we observe, we must formulate hypotheses about the unobserved and even unobservable causes of events, so use reason "synthetically", not just "analytically" (§ 3.2.4). This is to say, reasoning is not just deductive, but also ampliative, through induction, abduction, and theorization.

The difference between science and metaphysics, however, is that in the former we must always go back to experience to check the hypotheses with observation, while in the latter this is not always possible (§ 3.2.5). This is not to say that the mediation of experience in metaphysics is less faithful than in science, but that science concerns "the whole of experience" (i.e., anything which may be experienced) while metaphysics concerns "the Whole

without qualifications” (i.e., just anything, even what escapes any possible experience). For instance, an electron is not observable, but it belongs to the same type of reality as a table or a house. If instead a metaphysician says, for instance, that God exists, the reality he is talking about is incommensurable with empirical reality (§ 3.2.6).

This example makes Agazzi’s point intuitively quite plausible, but generalizing it is not easy: what exactly distinguishes the reality of God or of other non-empirical entities from empirical reality? Not that it is not material, for we can have experiences of many non-material things (e.g. mental phenomena (see Ch. 7). Values (e.g., moral and aesthetic values) are neither physical nor psychical, actually they are neither objects nor facts, yet according to Agazzi we have a particular type of experience of them (Ch. 6). Mental entities and values would thus seem to belong to the whole of experience, but then what is left outside it (besides God), and how is it characterized? Besides, the experience of a chair, of an electron, of an emotion, and of a value seem to be of very different kinds: what is common to all of them, which justifies calling all of them “experience”? And how do they differ? (I shall come back to this problem). For instance, it might be noticed that I can “observe” electrons indirectly by seeing the readings of certain instruments, or sensing their observable effects (e.g., an electric shock). Similarly, I can observe someone’s mental state indirectly, through its manifestation in speech and behavior. But couldn’t one maintain that even God can be observed indirectly, by observing His works in the creation, or certain events which can be attributed to His intervention? So, in which sense both electrons and mental states are of the same kind as tables and chairs, while God is not? Of course, an electron is material, while God is not, but even a mental state is not material.

Against scientism, Agazzi denies that one could prove that the Whole coincides with the whole of experience; but even if such a proof were possible, it would be a metaphysical proof, because it would concern the Whole (even if showing that it reduces to the whole of experience) (p. 78). However, he doesn’t even prove the contrary, i.e., that the complement of the whole of experience is not empty. He only refers to a demonstration by Bontadini, according to which “if we remain within experience, being is limited by non-being”, as shown by the phenomenon of becoming (i.e., change). This, however, is contradictory, because it turns non-being into “a reality, which can even limit being”. This contradiction can be avoided only by denying that the Whole is exhausted by the whole of experience (pp. 80-81). There

follows, in particular, that what lies beyond experience (in practice, God) is not limited by non-being (p. 283).

Of course, this argument relies on a very ancient and prestigious tradition of thought, but practically each step raises issues that would benefit from more explication and support. For instance, as already noticed by Plato (*The Sophist*, 257b), the phenomenon of change (becoming) does not entail that there is an *absolute* non-being, only a *relative* non-being: becoming is not passing from being to non-being, but from being a certain thing to being a different thing. But even granting that within experience “being is limited by non-being”, it does not follow that, since non-being can limit being, it is a sort of positive reality: saying that being is limited by non-being is simply to say that being is limited, i.e., it is not infinite, and there need not be anything, any positive reality, beyond it.

According to Kant, metaphysics, unlike science, is a subjective and intrinsically unstable discourse. But Agazzi remarks that this is because each form of non-metaphysical discourse achieves an intersubjective agreement within its circumscribed field thanks to premises which are taken for granted and cannot be doubted in that area of discourse. Therefore, non-metaphysical knowledge is intersubjective but relative.

Metaphysics, instead, works from the point of view of the Whole, therefore nothing can be taken for granted in it, and it is an absolute form of knowledge. As a consequence, however, intersubjective agreement is not guaranteed in it, and it can be reached only in limited and provisional ways (p. 82). Nonetheless, progress is possible in it, too. Even without a conclusive agreement on particular theses, “today we analyze reality from the point of view of the Whole by instruments more powerful and penetrating than those available to Plato, Aristotle, Descartes or Kant”, and “certain claims are no longer possible in philosophy after Kant, or Hegel or Marx” (pp. 84-85).

On the one hand, therefore, “seldom the metaphysician reaches incontrovertible results with certainty; on the other hand, this inquiry requires great expertise and much time and commitment, much more than most people can have. Still, the horizon of the Whole involves problems in which our very existence is at stake, hence demand an incontrovertible knowledge”. They are the problems on which our essential choices and the sense we give to our life depend. Here, therefore, rational reflection gives way to existential faith (pp. 86-87). The latter need not be religious, but possibly political, humanitarian, or generally secular. Atheism itself may constitute such a faith when

it becomes an existential attitude that is not conclusively grounded on other forms of knowledge (p. 88, Ch. V).

However, the faith in God cannot be reached through metaphysics, but the other way round: “When in metaphysics one strives to prove the existence of God ... for those who wish that God exists the proof will probably succeed, for those who don’t wish that God exist, quite likely it won’t succeed”. Therefore, for those who have faith, metaphysics becomes “a use of reason to transform into knowledge, if possible, what has been accepted by faith”. This is not incompatible with a scientific attitude, because “Even scientific discourse, in fact any form of knowledge, consists always in the transition from believing to knowing” (p. 88. See also p. 283).

These are critical, but also problematic passages: (1) is faith really more certain than scientific or metaphysical conclusions? Is it not, instead, a partial, uncertain, and dim vision? As St. Paul puts it, “Now we see as in a mirror, dimly; but then we shall see face to face. Now I know only in part; then I will know fully, even as I am fully known” (1 *Corinthians* 13, 12). Perhaps one can distinguish between the subjective certainty of the believer and the objective uncertainty of what is believed (since if it were objectively certain it would be known). Yet, not all believers are subjectively certain of their faith.

(2) True, all of us would like to base our fundamental choices on incontrovertible knowledge, but in the end, many accept to ground them on uncertain and groping knowledge or belief: according to Plato, one “should persevere until he has attained one of two things: either he should discover or learn the truth about [those fundamental problems]; or, if this is impossible, I would have him take the best and most irrefragable of human notions, and let this be the raft upon which he sails through life—not without risk, as I admit—if he cannot find some word of God which will more surely and safely carry him” (*Phaedo*, 85d).

(3) The idea that faith has a voluntaristic component is traditional but difficult to understand. Even if it were so, the voluntaristic component might not automatically apply to a rational demonstration of the existence of God. In other words, a rational person might have a strong desire to prove the existence of God, yet fail to do so and abstain from making incorrect inferences or draw hasty conclusions in order to succeed.

(4) The way in which one moves from religious belief to metaphysical knowledge of God is different from the way in which in science one moves from belief to knowledge: as Agazzi himself explains elsewhere, scientific

belief is an opinion that is still uncertain because not sufficiently supported and awaiting confirmation; instead, religious faith is a belief which is certain even if lacking sufficient empirical or rational evidence, precisely because it is not the kind of attitude which expects that sort of confirmation.

The highest result metaphysics can aim for is demonstrating the existence of God, but concerning the “proofs” that have been proposed to this end, Agazzi is quite cautious. According to the teleological argument, God is required to explain the wonderful order of the universe. Agazzi, however, thinks it is not conclusive, because it has not been proven that cosmic order wouldn’t be possible without God. Moreover, claiming that the universe is orderly is tantamount to claiming that it has a sense and a purpose, i.e., it is value judgment, and far from evident (pp. 106-107). St. Anselm’s ontological argument is that, since by definition God is the most perfect Being we can conceive of, He must exist, otherwise we could think of something endowed with the same attributes *plus* existence, hence more perfect than Him. Like Gaunilo and Kant, however, Agazzi objects that this is to confuse existence as an attribute of a concept with the actual existence of an object (p. 159).

He finds more convincing the argument (proposed among others by Voltaire) that “The existence of entities which don’t have the reasons of their existence in themselves must depend on an entity which has in itself the reasons of its existence” (pp. 106, 109). Yet, what does it mean exactly that an entity X has *in* itself the reasons of its existence? Since the ‘in’ cannot be spatial, does it mean that X is *causa sui* (cause of itself)? But this notion is impossible since a cause cannot coincide with its effect. Therefore, it must boil down to say that X exists (presumably from eternity) without having been caused by anything, but then the universe itself might exist from eternity without having been caused. One could object that this is impossible because of the principle that nothing can exist without sufficient reasons (p. 283), but this principle is not self-evident.

At any rate, a formidable obstacle to a rational demonstration of the existence of God is the existence of evil in the world (§ 4.6), because it seems to imply that either God does not exist, or He is not supremely good, or not almighty. For centuries, great philosophers and theologians have been searching for a solution to this problem (i.e., for a *theodicy*), and Agazzi provides a wide, detailed, and convincing account of this question. Initially, on the basis of phenomenological evidence, he discards the idea that evil does not exist or is pure non-being. Secondly, he rejects the justification of physical

evil as an atonement for moral evil, both because evil cannot be removed by adding further evil, and because that would not account for the suffering of the innocents. Next, he carefully examines the remaining proposed solutions, highlighting their reasons but also the doubts raised by each one.

His conclusion is that no philosophical solution is satisfactory, and evil remains unintelligible. At this point however, since nothing exists without reasons (principle of sufficient reason), and we are unable to find the reasons of evil, a true rationalism (p. 107) should conclude that evil has reasons that no human intellect, but only God can understand (p. 129). According to Pascal, it is rational to recognize the limits of reason (pp. 93, 130), and this applies to evil as well: what seems evil to us may not be actually so. Only God knows with certainty what is good and what is evil (§ 15.4).

Here, however, it could be observed that we are almost always able to understand the reasons of each particular evil, both physical and moral. What we don't understand is rather why evil exists at all, if God is both supremely good and almighty. Besides, as before, one could question the principle of sufficient reason.

Summing up, anyway, Agazzi seems to hold that we can know that there exists a being which is infinite (not limited by non-being), and that has in itself the reasons of its existence. However, the rationally insoluble problem of evil implies that either (1) that being is not both supremely good and almighty (hence, it is not what we call "God"), or (2) we cannot understand it, since what we consider as evil might not be actually evil, hence we cannot understand what is good and what is evil from the point of view of such being, and the reasons why it allows certain events.

However, accepting option (2), i.e., granting that there are things which human reason cannot understand or explain, would jeopardize all the possible proofs of the existence of that being, because they argue that its existence is *the only* way to explain certain things (e.g., the apparently contradictory fact that being is limited by non-being, or why entities which don't have in themselves the reasons of their existence came to be, or why the universe is perfectly ordered, etc.): if there are reasons we cannot understand, those facts might be explainable in different ways. The conclusion seems to be that we can know that such a being exists, but not that it is God. Properly speaking, for Agazzi, God can only be the object of faith, i.e., an "existential attitude", which is based on a peculiar religious experience (§ 9.7).

2. The Different Forms of Experience and Knowledge

2.1 *Religious Experience and Faith*

Metaphysics, says Agazzi, shows that the Whole does not coincide with the whole of sensorial experience: there is something beyond it, at the very least a being that is not limited by non-being. Metaphysics, however, cannot achieve this being as a subject (a person), but only as (a set of) attribute(s). Instead, in religious experience, “God Himself makes Himself felt to us and calls upon us” (p. 228), so we meet Him also as a subject. Religious experience is quite different from sensorial experience (like also affective, moral, and aesthetic experiences are all different from it). Nonetheless, God reveals himself to us through some historical facts, like the resurrection of Christ, visions, or mystical experiences (p. 256). Yet, religious experience is not exceptional, everybody can have it: for instance, God may be discovered in a great sorrow, or in an existential tragedy, or in a great consolation, or in the everyday life of believers.

Existential judgments are pronounced only in front of some presence or immediate testimony, and this testimony is available to man: “the testimony of the soul is the spiritual experience which attests God” (p. 229). Von Balthasar writes that he received numberless “tangible proofs of the supernatural truth” of Adrienne von Speyr’s mystical experiences (p. 258), hence mystical experience can be considered an empirically observable fact (p. 257).

Yet, I wonder: if this is so, if we have such a direct experience of God so that He makes Himself felt to us and we meet Him as a subject, shouldn’t we say that we *know* (not just *believe*) that He exists, just as we know that a certain island exists after having sensorial experience of it, or a certain particle exist after getting experimental evidence of it? Agazzi would probably answer that the obtaining of a historical fact (like the resurrection of Christ) can be debatable, or it may be debatable that in certain historical facts (say, in a personal tragedy) God is manifesting himself to us, or that the actual nature of a mystical experience is by definition completely subjective so that external observers cannot have any perception of its supernatural character (p. 220). Therefore, such historical events or experiences do not bring back religious faith into the realm of knowledge, because even the obtaining or the interpretation of those facts is accepted by faith. If so, however, that

in religious experience “God makes Himself felt to us and calls upon us” should not be understood literally, but as “The believer *feels* that God makes Himself felt to us and calls upon us”.

Be this as it may, according to Agazzi, “Faith is not an opinion, but the manifestation of an existential attitude that results in a set of conceptions which determine the sense and value of existence” (p. 227). Thus, after distinguishing propositional belief and belief as *trust* in God (§ 9.3), he explains that dogmas are the elevation of debatable propositions to incontrovertibility by the religious authority (§§ 9.4, 9.5). That authority derives its supposed infallibility from the word of God, but it is controvertible that certain propositions are the word of God, and also that they attribute infallibility to a certain authority (p. 220). Thus, both infallibility and the dogmas can only be objects of faith, and faith is not knowledge, although it belongs to the cognitive sphere, since it is rational and based on experience (pp. 217-218). Although there is no need to have faith when one knows, one can still have faith even while knowing, precisely because faith goes beyond the sphere of knowledge (p. 218).

Christian faith, in particular, is not believing certain propositions, but the faith in Christ, hence also in His doctrine. He lives within the Church and His doctrine can be expressed by propositions, which however are relative to times and to the viewpoints of the faithful. If this is acknowledged, ecumenism is readily achieved, and there is no reason to exclude certain people from the Church because they do not accept certain propositions. Jesus did not promise salvation by believing certain propositions, but by living with Him and as He lives (i.e., by loving) (§ 9.6). Thus, in spite of their grammatical form, dogmas are not descriptive propositions after all, but signs of an invisible reality, which can be attained by an anagogical interpretation aiming at the spiritual orientation of one’s life. This is how in all religions (and in Christianity in particular) the continuing teaching of the religious authorities makes God present in an invisible way (§ 9.8).

In Christian faith, we find also the only satisfactory answer to the problem of evil: through the passion of Christ, God gives sense to suffering, by taking it on Himself in order to manifest His love. In Christ’s resurrection “evil and death are defeated by His divine power, so that God’s perfection and the apparent imperfection of a suffering God become compatible, not in the abstract but in a coexistence which reason may struggle to understand, but that a person of faith no longer needs to understand” (p.136). Besides, Jesus showed that evil can be defeated by repentance and forgiveness:

the former cancels the evil inflicted by the sin to the very soul of the sinner, while the latter breaks the spiral of evil calling for further evil, by healing its wound (p. 137). Of course, these two considerations are not *rational solutions* to the problem, since the former does not remove evil, only gives some sense to it, while the latter at most applies to moral evil, not to physical evil. They express just the attitude suggested by Christian faith toward it.

2.2 Moral Experience and Ethics

Even morals according to Agazzi is first of all an experience: we cannot but perceive things, actions, or events as good or evil, right or wrong (just as, from a different viewpoint, we perceive them as beautiful or ugly). That is, we have experience of objective values: it is as if we perceived them by a sort of inner eye (ethical intuitionism) (§ 7.8).

Following Aquinas, Agazzi explains that moral experience, i.e. moral conscience, is a judgment not *per modum cognitionis*, but *per quondam conaturalitatem*: our natural inclination appraises as good an action which our intellect by itself could not determine to be good or not. Conscience, therefore, yields a form of knowledge that is rational though not ratiocinative, based on a non-sensorial experience (pp. 252-253). As pointed out by Kant, our moral conscience provides “unshakable evidence” of the existence of a moral law and of objective duties (p. 284): even without hypostatizing values, we have the strong intuition that moral judgments have an objective content and are apt to be true or false in a non-subjective sense. This is why even ethics can be considered a *bona fide* form of knowledge, founded on a peculiar type of experience.

A doubt that could be raised here is that moral experience is not quite of the same kind as sensorial experience, because in the latter different subjects inevitably agree (save clearly pathological cases), while in the former they often diverge, without any ready and clear criterion to settle those disagreements. This would show that while in sensorial experience we are basically passive receptors of an external content¹, i.e., of certain intrinsic properties of objects, in moral experience it is us who attribute an extrinsic property to the object. If this is the case, then moral experience would not be able to ground objective knowledge of values, in the way in which sensorial experience grounds objective knowledge of facts. Besides, one might wonder whether our moral conscience is really “unshakable evidence” of

¹ In spite of the fact that the ways in which we receive it are determined by the perceptual structures of our sense-organs and of our cognitive mechanisms.

the existence of objective values and duties. In fact, there are some well-known naturalistic (i.e., non-moral) explanations of our moral conscience, like those offered by Hume, Marx, Freud, and others.

According to Aquinas, it falls to the intellect to recognize what is good, and to the will to choose it; hence, the action is morally right only if the will obeys the intellect (p. 334). Therefore, it is right for a subject to act according to the judgment of his or her conscience, even if it happens to be wrong, because knowing what is right in the concrete case is the task of conscience, which cannot be hogged by the will. Agazzi notices that from this there follows no relativism, but that conscience has a cognitive dimension, although it is fallible, and that there should be liberty of conscience, pluralism, and tolerance (p. 251). How do we distinguish the right from the wrong conscience? According to Aristotle, by the judgment of the virtuous person, who has the right inclinations and habits. Now, this is fine, but one could still ask: who tells who is the virtuous person? One might answer: one who holds the right ethical doctrine. But which is the right doctrine? Perhaps here one could proceed by something like Goodman's (1979, § 3.2) method of reflexive equilibrium, by dialectically checking and amending one's immediate moral judgments with the judgments of the virtuous person and/or with one's preferred ethical doctrine, but also these with each other and again with one's immediate judgments.

In ethics, we need to look for a sort of general map of the universe of values (p. 184) to guide our actions, but Agazzi acknowledges the many difficulties of this task: values may at least *prima facie* conflict among themselves, or with *duties*; we should therefore rank them by importance, and see when we can choose the more important ones to the preference of less important ones, or whether certain values (e.g., human dignity) are absolute and are not negotiable at any price. We should also understand when we might legitimately prefer a minor value to a greater one, as sometimes it seems intuitively right. But it is obscure by which criteria we might decide all these questions (p. 185).

Philosophers try to tackle these problems through ethical theories, but Agazzi criticizes both Kantian formalism, which stresses duty for the sake of duty without telling what is actually good or not, and teleological theories like utilitarianism, because the moral goodness of an action cannot depend on a distribution of non-moral goods (pp. 184-185) In the end, he seems to incline toward joining a sort of Kantian formalism with the identification of certain substantive moral ends, happiness in particular. However, he does

not develop this point except by referring to Scheler (1913, 1916). Personally, I appreciate the attempt in this direction made more recently by William Frankena (1973) through a theory based on two fundamental principles: benevolence (producing some positive good) and justice (acting according to the formal Kantian criteria of equality and universalizability).

In a different chapter (§ 15.6), when discussing the interdependency of different forms of experience and how one can cognitively pass from one to the others, Agazzi seems to suggest that morals may be founded upon metaphysics and religion: in Ivan Karamazov's words, if God does not exist, then everything is permitted, hence we cannot explain why we should act morally (pp. 283-284). Even the attempt to ground morals simply on human nature (e.g., by holding that we should behave in the ways dictated by it) doesn't work, because one could ask whether human nature itself is good. For instance, in Plato's *Gorgias*, Calicles argues that according to nature it is just that the strong own more than the weak, and equality is unjust (and the same maintained by Nietzsche). To exclude that human nature itself is evil, one must argue that it is good since it is the work of God, thus falling back on a religious foundation of morals (pp. 275, 284).

In my view, however, an alternative approach is possible: even without holding that human nature is intrinsically good, one may argue that we must act in accordance with it in order to be happy, because nobody can be unhappy by acting against one's own nature, and happiness is our ultimate end. Moreover, Calicles may be resisted by denying the factual premise of his argument: it is not the case that human nature prescribes the supremacy of the strong over the weak, but justice and equality (see Alai 2023 for this kind of approach).

2.3 *Philosophy, Art, and Aesthetics*

In Ch. X, Agazzi discusses the experience of philosophy, not only in its strict professional sense but in the wider sense that any person experiences rationality and reflection, the need to ask why-questions and to make a synthetic use of intellect. This is always the experience of a concrete person with a specific psychology in a real environment and a historically determined condition. This is why, according to Fichte, one's philosophy depends on the kind of person one is, and according to Hegel, philosophy is one's time perceived in thought. Agazzi seems thus to characterize the experience of philosophy not as the philosophical activity itself, but as the particular way in which one performs and lives it. This is quite plausible, since experience

always has at least an important passive aspect, while philosophy itself is completely active.

Chapter XI examines the experience of beauty and aesthetics. Plato and the subsequent platonic tradition considered beauty as the first and fundamental way to understand being and to open up to transcendence (p. 235). Aesthetics raises the “why” question in front of the immediate experience of the beauty (once it was especially natural beauty, today mainly artistic beauty). Aesthetic theories, therefore, cannot radically contradict the immediate aesthetic judgment but must be checked against it, even if in turn they are called to clarify, enrich, justify, and correct it (p. 235). Agazzi thus applies to aesthetics something similar to Goodman’s cited method of reflexive equilibrium.

These considerations explain both the importance and the limits of aesthetic theories, and Agazzi offers some clarifying examples by discussing the romantic idea that music should essentially express sentiments, the opposite pure formalism of Hanslick (1854), and Busoni’s (1907) recognition that music is a complex phenomenon, but first of all a perceptive experience arising from the interaction of body and mind, whose aesthetic value is utterly independent of pre-established forms and prescriptions (pp. 336-237).

Like in Popper’s “three worlds” theory, musical objects and works of art and science in general have their beginning in the creative action of their authors, but then they exist outside space and time. As remarked by Schumann with reference to Beethoven, musical compositions get an ephemeral sensorial exemplification when immediately present to our perception in their execution; however, they can be understood better and better only by reflecting on their enduring mental representation (p. 238). Agazzi also comments on the merits and limits of Croce’s poetry vs. non-poetry distinction, on his doctrine of the autonomy of art (§ 11.3), and on Leonardo da Vinci’s idea of painting as science, quite far from the Romantic conception of art as a subjective expression of sentiment (§ 11.4).

2.4 The Unity of Experience

The various forms of experience are not separated, but just different faces of our general experience of reality and life. In chapters XIV and XV Agazzi provides a wealth of illuminating examples of their interconnections. Dante’s love for Beatrice was the origin of his *Divine Comedy*, with its religious, scientific, philosophical, and religious contents. Beethoven’s suffering from his deafness and his love for his “immortal loved one” impelled him to write

the *Patetica* (where he cries his distressed ‘why?’ to God), his symphonies of the heroic period (where he seems to struggle against Destiny), and his *Missa solemnis* (which expresses his religiosity and initiates Romanticism in music).

Agazzi highlights how religious experience arises from art in some extraordinary paintings by Caravaggio and Rembrandt and in Chopin’s music. On the other hand, also art arises from religion, as in Beato Angelico, or from mathematics, as in Piero della Francesca, or from science, as in Leonardo, or from philosophy, theology, and politics, as in Dante.

In Kant, notoriously, moral conscience is the way to faith in God. Besides, we can turn to the great masterpieces of universal literature for some of the most striking approaches to the problem of evil, which interrogates so deeply our moral conscience and religious sensitivity. Do the gods envy the happiness of mortals, as in Herodotus’ story of Polycrates’ ring? (p. 280). Or does Fate bind men to commit evil even against their own will, as in Sophocles *Oedipus*? (p. 282).

In Judeo-Christian theology, all humans are sinners, and sufferance is their punishment. But this doesn’t account for the suffering of innocent children, cries out Ivan Karamazov in Dostoevsky’s novel (p. 278). An answer comes from the doctrine of the original sin, Adam’s and Eve’s attempt to become masters of good and evil, like God. But why was it a sin? Since God made man in his own image and similitude, explains S. Augustin, being like God is precisely the ultimate aspiration of mankind: a kernel of good can be found even in the sin of pride. Suffering, then, is not just an expiation, but something inherent to our existential condition: since similitude is not identity, but analogy by proportionality, for all our longing we just cannot be equal to God (p. 279). Thus, tragic characters like Dostoevsky’s Raskolnikov and Ivan Karamazov, or (partly) Tolstoy’s Nechljukov, believe to be morally and intellectually superior to common people, and above the very laws of morality. This plunges them into the abyss of crime, and they find redemption only by accepting suffering as atonement (pp. 276-277).

3. The Present and Future of Mankind

In the last three chapters (XVI, XVIII, XVIII), taking a cue from Hegel’s statement that philosophy is our own time apprehended in thought (p. 312), Agazzi brings together many threads of his multifaceted discussion to reflect on the contemporary cultural and existential condition of mankind.

Thus he asks whether our life has a sense or how it can be given one, what we might expect from the future and how we should face its challenge.

3.1 The Need for an Adequate Scientific Culture

An unmistakable character of current society is the paramount role played in it by science and technology, which however involves certain paradoxes and negative consequences (a topic to which Agazzi has already dedicated a book (Bellini, Agazzi 2020)). For instance, today the artificial pervades all aspects of life. This is because it is our very nature to adapt the environment to our needs so that our ecosystem is the world of the artificial. Paradoxically, however, we witness a growing tendency to reject the artificial and go back to nature. While many think that science and technology should be encouraged and strengthened to get progress and innovation, others believe that their uncontrolled development would be dangerous, and it must be stopped to return to a more natural life (pp. 314-315).

According to Agazzi, this is because today science and technology enjoy an enormous social consideration, to the point of being considered the ultimate authority on our choices, but poor cultural influence (p. 313). In turn, this happens because, for almost a century, science has been considered exclusively as a body of pragmatically effective notions, forgetting that it is first of all pure knowledge. Even when considered as knowledge, it is seen just as the discovery of new *facts*, hence neutral and certain. It is disregarded that it is creative, conjectural, fallible, consisting of ideas and theories, and that it evolves historically, not only just for internal reasons, but for social, technical, and ideological reasons as well. It is urgent, therefore, that science education and communication be completed by an adequate epistemological and historical reflection which highlights these “invisible” aspects of scientific practice (pp. 315-316; §§ 17.3-17.4).

The average educated person knows quite a bit of history, literature, and art, but little or nothing about mathematics or natural sciences. Perhaps, this is because it is thought that the former group of disciplines concerns directly human life, while the latter concerns nature, hence its usefulness is merely practical. However, also humanistic studies lose all their cultural value if taught superficially and pedantically. On the other hand, science can be equally formative if taught by stimulating intellectual curiosity and reflection.

Again, the human world is now so thoroughly shaped by science and technology, that it cannot be understood, judged, and evaluated without

a basic scientific culture: questions concerning pollution, nuclear energy, biotechnologies, the social impact of information technology, artificial reproduction, transplant of organs, euthanasia, and abortion cannot be analyzed and decided exclusively on the basis of moral and juridical principles (§ 17.5).

True, we have an enormous number of scientific articles, journals, books, and conferences. But Agazzi remarks that they do not influence culture because they are available only to a small number of specialists in very narrow sectors, not to the normally learned people. Science provides rigor and objectivity (which should be extended to the human studies), but it does not cover the space of value judgments, responsibilities, duties, and policies. This space cannot be left to impulses, passions, interests, or shrewdness. In public debates, politicians of opposing parties rely on “scientific experts” of their own, who use science as a toolbox to support their leader’s choices (§ 17.6). This is why, according to him, on the one hand we should foster a better scientific culture, but, on the other hand, thought and knowledge should proceed well beyond the limits of science.

3.2 Beyond the Limits of Science

According to both Kant and Voltaire, in Enlightenment reason acknowledges its own limits and fallibility, becoming aware that certainty can be achieved only through faith, but it does not accept any limitation to its own exercise, rejecting any principle of authority or form of censorship (§ 16.1). While the end of the XVIII Century witnessed the censorship of atheism in Germany, the XX Century saw a censorship of metaphysics in the name of science, which had become in the meantime the new supreme authority (p. 305). In Chapter XVI Agazzi argues that, in the spirit of Enlightenment, we should pursue the critical and synthetic use of reason to its ultimate consequences, without accepting the limits imposed on it by scientism. In other words, reason has a full right to go beyond science.

The censorship of metaphysics has been enacted especially by Logical Positivism, for instance, by Carnap (1959), but in less dramatic forms also by Phenomenology, Existentialism, Analytic Philosophy, and Hermeneutics. At its root is a materialistic conception disguised as the methodological principle of the causal closure of the physical world, which prohibits hypothesizing any nonphysical (e.g., psychological, let alone supernatural) cause for physical phenomena. Thus, for example, the well-documented sudden and scientifically unexplainable healings which are usually considered miracles

are called “*natural* healings” (so excluding *a priori* any supernatural explanation), while the only empirically ascertained fact is that they are spontaneous and unexplained (pp. 306-307).

At most, metaphysics and religion are tolerated as subjective beliefs without cognitive value. This kind of discrimination is mainly justified by appealing to Kant’s refusal to admit, besides sensorial intuition, also intellectual intuition. But we know that mental acts are intentional, i.e., their objects are present in them, even if they remain distinct from their objects. In fact, our various forms of immediate non-sensorial experience (like moral experience, acknowledged by Kant himself as an indubitable fact), together with the consequent synergy of experience and *logos*, allow us to have metaphysical and religious knowledge (p. 308).

Certain points are unclear to me in this passage. First, earlier Agazzi had clearly distinguished religious faith from knowledge (pp. 86-88, 217-218, *passim*). Why then here he considers religion as knowledge? Perhaps here he is referring just to *natural* religion. But we have seen that even natural religion cannot be easily accepted without recourse to faith. Second, it is quite clear why Kant rejects intellectual intuition: as I noticed earlier, when we perceive through our senses we are basically passive, hence (except for hallucinations and the like), there is no question that something real is in front of us, with properties at least corresponding, if not identical, to those we perceive. Instead, when we “perceive” through the mind, in principle the object of that perception might be (and often is) just a product of the mind itself. Mental intuition may be indubitable in formal questions (e.g., in mathematics), but hardly so in substantial (e.g. existential) questions. Again, as already remarked, moral conscience is a fact, but not a form of perception in the same sense as sensorial experience.

More generally, the word ‘experience’ may take a wide range of different meanings. For instance, Agazzi uses it to mean both some kind of perception (e.g., the experience of beauty, or of the moral law) and a way of behaving or living (e.g., the experience of rationality, or of philosophy). Of course, experience can also be understood as what one perceives by behaving or living in a certain way. At any rate, this notion plays such a key role in Agazzi’s philosophy that (as it surfaced in some previous comments) it would be very helpful if he provided a systematic account of it, precisely distinguishing what is common and what is different across the various kinds of experience in the various areas. In particular, if the different non-sensorial forms of experience are to warrant as many forms of knowledge, one would need to

know why and how they resemble sensorial experience not just in a vague analogical sense, but precisely in warranting the objectivity and correctness of the beliefs based upon them.

3.3 The World of Science and the World of Life

Today, a normally learned person accepts the ontology of science as the correct answer to the question of what there is, but Agazzi argues that the ontology of science is far from adequate to satisfy the needs of personal and social life (§ 16.2). The world pictured by science is poorer than the “world of life” in which we all live every day, because each science offers only a partial viewpoint on things, which allows objectivity and progress, but only within a limited horizon (§ 16.3). For instance, the space of physics is homogeneous and isotropic. Instead, the space of life is composed of “places” that are variously characterized for us (a home, a temple, a battleground) or in themselves (a desert, a field, an icefield, etc.). Even certain abstract spatial notions, like that of the *center*, receive a stronger sense in human activities (for instance, the center of a city with its institutions, or the capital of a state, etc.) (§ 16.3.1).

Also, the space of life is not isotropic: directions have different relevance in relation to the places we are interested in reaching, and cardinal points have been loaded with sense in many cultures. The notions of *high* and *low* have been attributed strong axiological meanings: ‘high’ is synonymous with ‘good’, ‘saint’, ‘elevated’, ‘superior’, while ‘low’ often means ‘bad’, ‘inferior’, ‘morally low’, etc. (§ 16.3.2).

While in geometry high and low are simply relative positions, in the life world they are spatial regions, separated by the surface of the ground on which we stand, and playing important metaphysical and religious roles: they are Heaven and Earth, where the benign and the evil deities (respectively) reside, and where paradise and hell are located. Today we don’t think any more simply of the starry sky, as Kant did, but of an expanding universe with countless galaxies; but this still raises admiration, awe, and the need to interpret it and ask for its reasons (§.16.4). Metaphysics and religion offer precepts for life, but also an interpretation of space and time: in ancient cultures the priests were also astronomers (and astrologists), and the main reason why Galilean science was opposed by the Church is that it seemed to strip Heaven and Earth of their metaphysical interpretations (which however it did not, just putting them in parentheses) (§ 16.6).

Physical time is homogeneous but not isotropic, because of the thermodynamical arrow of time and of the influence of mass on spacetime. Even so, it is far from sufficient to account for duration and change already at a biological level, but then also at the psychological, social, and existential levels. Certain moments assume a unique and absolute value that no point in physical time could have: for believers (and to an extent for humanity in general) the moment of Christ's incarnation is one that gives sense to everything that happened before as a preparation, and to what happens afterward as memory (and actualization). Not to speak about present, past, and future, which exist only for the conscious subject (§ 16.5).

3.4 The Need for a Non-Sectorial Awareness

The *Gioconda* cannot be understood by looking at it from a few centimeters away. All the possible philosophical, cosmological, philological, or theological analyses of the Divine Comedy are helpful to understand it, but they cannot account for its poetical value, we need a global perspective. Similarly, the sciences have developed by narrowing down the horizon of an ancient global worldview and providing a collection of separate pictures; instead, we need a global outlook, metaphysical or religious (within which their results can be preserved, however). Philosophers and religious people know all that scientists know, but on top of it, they have a sense, a global view, that scientists *as such* cannot get (§ 16.7).

Modernity has demanded and proclaimed the autonomy of the different spheres, such as science (Galileo), politics (Machiavelli), economics (British liberalism), and art (Kant and the Romantics). That does not mean just autonomous internal criteria, but *freedom* from external control in practical action: art, politics, economy, science, are taken to be independent of values. It is assumed that politicians can pursue certain policies even if economically disadvantageous, that certain economic choices are admissible even if socially disadvantageous, that certain artistic products are admissible even if obscene, etc. Even religion is acceptable within its limited sphere but without connections to the rest of personal and social life. Particularly instructive, in this respect, are Max Weber's essays "Science as a Vocation" (1919a) and "Politics as a Vocation" (1919b). This, however, has brought to obviously wrong consequences, and nowadays it is recognized that the defense of peace, of human rights, and of the natural environment, ought to constrain our actions in economy, politics, science, and technology (§ 17.8).

3.5 *The Search for Happiness and the Sense of Life*

Pascal writes that everybody is moved by the search for happiness, even those who commit suicide. They will never choose except to that end. This clearly provides a non-sectorial perspective on life, showing what knowledge is ultimately about and why it must include the invisible.

According to Aristotle, happiness is the content of a form of life, the exercise of the highest virtue, i.e., rationality. According to Kant, instead, it is the fulfillment of all our tendencies: a state, not an activity. Moreover, it doesn't motivate action, because one must act morally only for the sake of duty, not in order to be happy. We feel that virtue deserves happiness and this has the same evidence as the moral law; therefore, we can legitimately *hope* that if we do our duty we will be happy, and since this presupposes the intervention of God, we can be certain that He exists. In this way, oddly, Kant grounds his certainty on hope. In the end, therefore, he achieves God by faith, not by knowledge (§ 17.7).

Giuseppe Mazzini writes that our duties originate from God and are defined by His law. That God exists is indisputable: He lives in our conscience, in the conscience of Humanity, and in the universe. He cannot be denied in front of a starry night, of the tomb of our beloved ones, of martyrdom (p. 328). Thus, notices Agazzi, for him God is only the foundation of morals, he loses God's transcendence because he does not have the experience of the sacred. On the opposite, Jung holds that God must be felt empirically close, immediate to us. Otherwise, he might not exist (p. 329).

Here, however, I wonder: are not moral conscience, the awe of a starry night, the sentiments inspired by the death of our loved ones, deep experiences in Agazzi's sense? Conversely, who does actually feel God empirically, as required by Jung? Perhaps only very few mystics. And how does one know that what mystics feel is not just a subjective effect of their mind?

Moving from the nominal definition to a real definition of happiness, what does it actually consist of? What is it that makes us happy? Some feel satisfied by goods of lower level, probably because, having not experienced higher goods, they cannot miss them. Others find happiness in art, or in science, or in the absolutely perfect fulfillment of their duties. Agazzi, however, wonders whether in those ways one can really be happy, or one also needs some kind of faith. Surely, each particular passion must be open to all the others, since happiness has no watertight compartments.

According to Socrates, happiness consists in knowing the "causes", i.e., the reasons why something is good and beautiful. But this involves asking

about transcendence and the immortality of the soul. In Greece and in the Middle Ages, they thought that by appreciating goodness and beauty we can ascend to God. Thus, the search for happiness involves the search for the sense of life (§ 17.7.1). Suicide can be seen as a revolt against the impossibility to give sense to life, and from this point of view Camus stated that the problem of suicide is the only serious philosophical question (§ 17.7.3).

Does the Whole include only the whole of experience? Is the whole of experience the absolute Whole? This, says Agazzi, is the metaphysical problem *par excellence*, and only by answering ‘no’ one can fulfill the existential need to “save the value of life”. This is what philosophers do through metaphysics, but ordinary people achieve through faith (§ 16.6).

Intuitively convincing as these claims are, they are so intellectually demanding and existentially committing that I cannot help wondering: (i) What exactly is the *value of life*? (ii) What does it mean to *save* it? (iii) Couldn’t one hold that the value of life is the sense that each person attributes to it and that it may be preserved simply by living accordingly? (iv) If one believes that the Whole coincides with the whole of experience (i.e., that there is no God), cannot one still attribute deep sense to life (as many atheists and naturalists do)? Here is an example:

Fall in love with some activity and do it! Nobody ever figures out what life is all about, and it doesn’t matter. Explore the world. Nearly everything is really interesting if you go into it deeply enough. Work as hard and as much as you want to on the things you like to do the best. Don’t think about what you want to be, but what you want to do. Keep up some kind of a minimum with other things so that society doesn’t stop you from doing anything at all (Feynman 1985).

Agazzi might reply, as hinted above, that these passions are not enough, one needs also a faith. But he himself has acknowledged that even atheism can be a faith when it constitutes an existential attitude which is not conclusively based on other forms of knowledge (p. 88), and yet atheists believe that there is nothing beyond the whole of experience.

3.6 The Future as Invisible

The last chapter reflects on the future and our attitude to it. For one thing, the future presupposes our subjective experience of time, and for another, it is the object of our hope: when we try to understand how to spend the limited time of our existence, the future is the only time open to our

actions. No doubt, it is one of the objects of our intentionality (i.e., we are able to *know* it), yet it is certainly as invisible as anything might be (§ 18.1).

Many ancient cultures considered the future as inescapable and unpredictable. The Epicureans thought it was unpredictable, but contingent, due to the random deviations of atoms (the *clinamen*). The Stoics considered it as fixed by a rational fate, hence inescapable and unpredictable, but good. In the Judeo-Christian tradition, it is in God's hands: it may still be inescapable and unpredictable, but we can trust in its eventual goodness, and the sense of our actions is to help God's project and gain salvation (§ 18.3).

In the Modern Age, the earthly world began to be seen as a *regnum homini*: according to Bruno, Machiavelli, and Francis Bacon, science was to discover the secrets of nature in order to put it at our service. Moreover, the construction of machines began to produce a new artificial world. The peculiarity of machines is that they are perfectly known, even before they are built, and their operations are fully predictable. A short step from this was to realize that by discovering the relevant scientific laws, natural systems too could be conceived as machines, hence perfectly understood at least as concerns certain aspects essential to us: living organisms can be conceived as biological machines, substances as chemical machines, thermodynamical and electromagnetic systems as distinct kinds of machines. Positivism introduced the idea that society itself is a machine, to the point that we still talk about the "mechanisms" of power, of market, and of communication (§ 18.4).

The optimistic conclusion was that in principle the future could be predicted and planned: in Laplace's words, if one could (i) know exactly the conditions of every slightest particle at a given instant, (ii) know exactly all the relevant laws, and (iii) compute everything, one would know exactly all the past, present and future. In practice, these three conditions could never be fulfilled, but they could be indefinitely approximated (§ 18.5).

Subsequent history, however, disappointed these optimistic expectations. A number of crises have taken by surprise even the experts and radically changed our ways of life: in the XX Century two world wars, two cruel and mighty dictatorships and their fall, the decolonization process. In our century, the Twin Towers assault and the economic crisis of 2007-2008. Crises did not concern only the human life, but also the natural or artificial world: the accidents at Chernobyl, Seveso, Bhopal, various devastating earthquakes and tsunamis, the Covid-19 pandemic.

In fact, we now know that Laplacian determinism is wrong, and the future is unpredictable, not just in practice, but even in principle, for at least two reasons: the physical world is ultimately based on a quantum ontology and quantum laws, hence subject to radical indeterminism; besides, both the natural and the human world consist of very *complex* systems, whose non-linear dynamics make prediction in principle impossible. Therefore, unpredictability is an intrinsic aspect of reality, it is not due just to an ignorance which can be gradually overcome. We can still build models and make predictions, but no longer use them as foundations, only as tools for our actions, on condition of checking both their reliability and their suitability to our ends (§ 18.6).

Agazzi is certainly right in criticizing optimistic determinism and in claiming that exact predictions are principle impossible, but it is also true that over the years we have enormously reduced the space of unpredictability, and we will still indefinitely reduce it. Just think of weather forecasts: since the atmosphere is an extremely complex system, not long ago they were practically impossible, but now they have become highly reliable, and are constantly improving.

3.7 The Covid-19 Pandemic

The book was completed while the Covid-19 crisis still perdured, and Agazzi reflects on it as a case of an unpredicted event and as an example of how to reason on an uncertain future. Since the virus was completely new and unknown, initially the pandemic was faced with good sense but limited and provisional policies (mainly isolation). Even then, scientists were enrolled by politicians to suggest or support decisions that were political, not scientific. But one couldn't do otherwise. Once vaccines were found, it was hoped that they would solve all the problems and we could go back to the usual life.

However, because of the complexity of the systems involved, after each crisis, things cannot ever be like before. With Covid-19, because of confinement, even the healthy people experienced the typical condition of sick people, that of depending on others and being unable to plan. Thus, we learned the need to care for the sick, not just to cure them. People were dying despite the cures, so we learned that the task of medicine is not to defeat death but to foster and defend health in its widest sense. The stop to the economy halted many unstructured and day-by-day jobs, with many unemployed risking starvation. Social security had to step in, but that meant an increase

in public debt. This greater debt will have to be paid for by the next generations, so we must invest in their instruction to allow them to pay.

To each crisis in the past there followed a “vital reaction”, the invention of something new to cope with the new conditions: the Second World War was followed by an economic rebirth and new advanced democracies both in Italy and in Germany; besides, the institution of the United Nations, in spite of their evident limitations, prevented major conflicts and helped to safeguard human rights. Even the Covid-19 pandemic is going to yield new and only partially predictable opportunities: we will probably rediscover the value of social solidarity; remote work is very useful and it is here to stay; certain professions will disappear (as it has always happened), but new ones will arise; we had to recognize the concept of vulnerability and we are called to implement systematic policies to protect vulnerable people (§ 18.7).

3.8 Prudence, Hope, and the Future

Upon understanding that reality is inherently complex and cannot be predicted exactly, we should not fall into relativism or agnosticism, but shift from a rationality of certainty to one of prudence. Here ‘prudence’ is not understood simply as caution or circumspection, but in Aristotle’s sense of *wisdom*, i.e., the ability, required in uncertain conditions, to judge the worth of certain ends and the suitability of the means to attain them. No wonder prudence in this sense has been considered as one of the four cardinal virtues, the most decisive ones for practical life. It presupposes certain basic values that are held by faith and provide a long-term orientation to our choices in uncertain and unpredictable situations. In a crisis, none of our old schemes, practices, or institutions seem to work anymore: least we are prey to discouragement, we need self-initiative, creativity, and plasticity, oriented by basic ideals and values. No such orientation comes from relativism or agnosticism (§ 18.8).

As concerns our attitude toward the future, Agazzi distinguishes three concepts: hope as a purely subjective desire; *grounded hope*, i.e., an expectation based on good factual reasons; and *active hope*, based not only on good factual reasons but also on active commitment and on the faith that the desired end can be reached. In order to face unexpected challenges, it must be not just the hope of particular events (in French ‘*espoir*’) but a generally optimistic hope in the future (‘*espérance*’).

When it presupposes the faith in God, active hope is nothing but the theological virtue of hope. Still, it can have secular versions: Kant’s hope

that virtue will be rewarded, based on natural religion and within the limits of reason, is one. Bloch's hope based on a faith in social utopias is another. The great social and political advances of the last two centuries were driven by the faith in certain basic values and ideals, which motivated commitment even at the cost of hard sacrifices.

Today's world has many particular hopes, trusting that they can be fulfilled by human efforts and through technology, but it has largely lost that global active hope, hence the sense of life (§ 18.9). Therefore, the new generations must be helped to shift from a rationality of certainty to one of prudence and to recover those basic ideals and values that can orient them on a path which cannot be known in advance. Only in this way they will face the future with hope, and this will be possible if the West continues to be a civilization based on all-around knowledge, including the sphere of the invisible, as it has been in its best moments (§ 18.10).

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