Miracles

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Giuseppe Tanzella-Nitti [1]

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I. The Religious Dimension and Christological Specificity of Miracles

Just as the notion of mystery [2] has religion as a natural and primary backdrop, so too does that of "miracle" (from Lat. *miror*, to be amazed at), though both terms are subject to a variety of understandings and lexical uses. In fact, the varied use of the two terms has inevitably led to a broadening of their meanings, as evident by their use in numerous contexts. In general, a miracle indicates something out of the ordinary that points to a sphere of possibility and activity going beyond that which human beings are accustomed to knowing and carrying out in their daily lives. Following from this, the notion of miracle is associated with a realm of forces and possibilities belonging to something, or to someone, who is "Totally Other," an event or action that can be understood only as an intervention of the gods, or of God, in the human world. From this point of view, miracles follow closely behind the phenomenology of religion and the approach to religion that one has. On the one hand, affirming the reality of miracles can be an expression of genuine openness to transcendence and the possibility of divine revelation, aided by a

corresponding rational, philosophical judgment. On the other hand, this affirmation can degenerate into a credulity divorced from reason, an approach that seeks anxiously to find the divine where it is not, or worse, attempts to subject the divine to human control by the practice of magic.

The notion of a miracle points principally to the idea of "wonder" or "prodigious works" precisely because a miracle is recognized as divine intervention breaking into ordinary space and time. However, the notion of a miracle also includes a certain wonder and amazement before nature and reality, or the beauty of things. In this, it indicates the human experience of insight into profound levels of understanding and the contemplation of being, an experience demonstrating that the divine can also be recognized in what is simple and ordinary. It is in this context that we speak, for example, of "the miracle of life." Yet, we can also speak of "the miracle of technology," thereby making an indirect reference to the amazement we have for human intelligence which makes such technology possible.

In this article, I shall for the most part seek to develop those aspects of miracles that come into debate with scientific rationality. For a more general, theological treatment of the theme, the reader is asked to go to the first section of the Bibliography (see Marcozzi, 1957; see also Latourelle, 1988, 1994, and 1995), which also includes popular essays (see Lewis, 1947; McInerny, 1986). The interdisciplinary value of miracles for both philosophical and scientific thought is clear. As I shall discuss below, the understanding and discernment of miracles within a philosophical context relates rather closely to the notion of the laws of nature [3] and the epistemology [4] which lies therein. In a theological context, we deal with the significance of miracles as a sign of the credibility of faith, particularly in a world dominated by scientific rationality. Theology also deals with the issue of historical access to miracles, principally the miracles of Jesus of Nazareth, which the Church has always considered fundamental in supporting faith in the divine nature of Christ, the Incarnate Word.

From quite a different standpoint, one could pose the question of the nature and value of the "paranormal" within the realm of science. Theology, for its part, needs in certain circumstances to clarify the nature and range of what is called "supernatural" to distinguish what is theologically supernatural from other phenomena that may be termed paranormal but do not concern theology. It is likely due to these fine distinctions and the vastness of the semantic field, which can lead to profound confusion, that in recent decades theology seems to use the word "miracle" much less frequently in its terminology. Surprisingly, in the four major constitutions of the Second Vatican Council, the term miracle appears only twice (*Lumen gentium*, n. 5; *Dei Verbum*, n. 4) leading some to think we are living in an era of a "crisis of faith" regarding miracles. It is, however, true that the theology and Magisterium of the Roman Catholic Church have progressively concentrated their reflection and teaching on the miracles of Jesus, emphasizing that they point to His person, to the subject who performs them, about whom they "reveal" something. It would not be possible, therefore, to speak of miracles without an integral theological approach to Jesus of Nazareth and to the mystery of His real identity.

In this way, theology has brought about a hermeneutical renewal of "miracles" by pointing to "The Miracle," that is, by pointing to the Resurrection of Jesus Christ [5]. Christ's Resurrection is the event and mystery that stands out as the apex of Divine Revelation. In the light of the Resurrection, it is possible to understand the overall meaning of His Incarnation, passion, and death upon the cross, as well as the descent of the Holy Spirit upon the Church. The theological distinction is therefore made between miracles and "The Miracle." Theology would not have any substantial interest in speaking about miracles as purely extraordinary events if not in reference to what they reveal about Jesus Christ, and to what Jesus Christ reveals through them. Such a renewal is important also in terms of interdisciplinary discussions inasmuch as theology, in explaining miracles, can never limit itself to their historical credibility, their scientific verifiability, or their nature of being unexplainable events. In theology, any "miracle" must

remain anchored in its meaning as a sign, a sign which is an invitation to the human person. A miracle points to an irruption of God in history. It is a sign whose aim is not to astonish human beings by provoking their admiration, but to show them all of His saving love in freeing them from sin and death [6] . Comprehending the meaning of a Christian miracle is not limited to demonstrating God is *among* us but also seeks to make it genuinely understood that God is *for* us.

II. The Miracles Related by the Gospels: Their Meaning and Historical Value

1. The Terminology of Miracles in Sacred Scripture. In the Old Testament, the terms most used to indicate God's "miraculous" interventions are "sign" (Heb. *'ôt*), "prodigious work" (Heb. *môpet*), and also "great deeds of God" (Heb. *gedulôt*). Less present, however, is the simple idea that wonder is something extraordinary that astonishes. There are numerous miracles in the Pentateuch and historical books (they appear much less in those of the prophets and are almost absent in the wisdom books except as a reference to past events), and they are principally in the context of the liberation of the people of Israel from Egypt (book of Exodus). Their narration remains frequent in the successive contexts of the battles which mark the era of the affirmation of David's kingdom and then the division of the kingdom of Israel, up until the second exile (especially in Judges, in the two books of Samuel, and in the two books of Kings). The image of an "omnipotent" God emerges, one who is exercising His full Lordship over history, protecting Israel and leading it to the observance of the Law, correcting and instructing it in order that God's people might remain faithful to the covenant and thus remain the heirs of a plan of salvation on behalf of all the other peoples. But the interventions of God in history are never restricted to demonstrations of His pure omnipotence. They are bound to a message, or a teaching, and to the establishment of a new relationship with God. It is indeed principally in this direction that the miraculous event disposes and seeks to guide. Any miracle is joined to faith as a condition of its recognition and is a manifestation of the adhesion of the human person to the salvific works of God. The author of the miracle is always God, even when the miracles are worked by human beings. Neither Moses nor the prophets work miracles in their own right or to further their own interests. It is God who works miracles through them (see *Jn* 6:32-33). Miracles take place in a climate of faith, prayer, and trust in the covenant.

In the books of the New Testament, miracles are principally denoted by the use of four recurring terms: "miraculous power" or "an act of divine power" (Gr. *dynamis*); "sign" (Gr. *semeîon*); "prodigy" (Gr. *téras*); or "miraculous deed" (Gr. *érgon*). In continuity with the Old Testament, miracles always remain a "sign" of God which refers to God Himself. In the New Testament, miracles are above all a "sign of Christ" that reveal His messianic mandate, as is well synthesized in the question put forth to Jesus by the disciples of John the Baptist: "John the Baptist has sent us to you to ask, 'Are you the one who is to come, or should we look for another?' At that time he cured many of their diseases, sufferings, and evil spirits; he also granted sight to many who were blind. And he said to them in reply, 'Go and tell John what you have seen and heard: the blind regain their sight, the lame walk, lepers are cleansed, the deaf hear, the dead are raised, the poor have the good news proclaimed to them. And blessed is the one who takes no offense in me'" (*Lk* 7:20-23). The idea of a miracle as a sign is especially present in John who, in the first chapters of his Gospel, traces the miracles which accompanied the Exodus of the chosen people and links them to the miracles and discourses of Jesus, focusing to a great extent upon seven miracle-signs narrated in an ordered sequence, from the transformation of water into wine at Cana (*Jn* 2:1-11) to the resurrection of Lazarus (*Jn* 11:38-44). Matthew and John speak of the "works of Christ" and the "works of God," in reference to the works Jesus performs in obedience to the Father, as works that the Father accomplishes in Him. Paul will focus more upon the works of the divine power, centered upon the gift of justification obtained in the redemption brought by Jesus Christ. More than had been the

case in the Old Testament, the miracles of the New Testament are brought to fulfillment within the realm of faith. Faith that Jesus can accomplish such works is in reality faith *in* Jesus, i.e., in His divinity and in His origin in the Father. Even the miracles which the apostles work, narrated in the Acts of the Apostles, continue to be miracles of Jesus for which faith in Jesus is required: "Peter said to him, 'Aeneas, Jesus Christ heals you. Get up and make your bed.' He got up at once" (*Acts* 9:34; cf. *Acts* 3:6). The significance of the miracles of Jesus of Nazareth has been the subject of a number of General Audiences [7] given by John Paul II from November 11, 1987 to January 13, 1988.

2. The Miracles of Jesus of Nazareth. A comparative analysis of the four Gospels reveals no less than forty diverse accounts of miracles worked by Jesus (not including approximately ten apparitions of the Risen Lord). To this are added about thirty miracles related in the Acts of the Apostles (cf. Geisler, 1999, pp. 484-86). It is possible that at times the same events may have been reported by the different Evangelists with such variations as to make them appear to be diverse events. In this case, the over-all number would be reduced a bit. Nevertheless, the "weight" these narrations have within the material used by the Evangelists is so remarkable that they cannot be considered circumstantial. The Gospel of Mark demonstrates this clearly where the accounts of Jesus' miracles take up 31% of the text. If one were to leave out the last six chapters of the Gospel of Mark regarding the passion of Christ, in the remaining text accounts concerning Jesus' miracles would rise to 47% (cf. Latourelle, 1994). The narration of the miracles is so entwined with the comments on Jesus' teachings and with the description of the reactions of those who are present—reactions which are themselves occasions for teaching—that it would be quite difficult to come up with some kind of separation between the "preaching of Jesus" and the "works of Jesus." The theologian knows well that this strict correlation is an intrinsic characteristic of Revelation itself whose plan "is realized by deeds and words having an inner unity," as expressed in *Dei Verbum*, 2. An illustrative example of this is the healing of a paralytic reported by the three synoptic Gospels (see *Mt* 9:2-7; *Mk* 2:3-12; *Lk* 5:18-26) in which the teaching of Christ regarding the divine power which He has to forgive sins (and the corresponding faith in such a power) is intentionally associated with the working of a miracle: "'What are you thinking in your hearts? Which is easier, to say "Your sins are forgiven" or to say "Rise and walk"? But that you may know that the Son of Man has authority on earth to forgive sins, He said to the man who was paralyzed, I say to you, rise, pick up your stretcher, and go home'" (*Lk* 5:22-24).

The miracles of healing are by far the most numerous. Among them are numbered three resurrections of human beings who had died (the daughter of Jairus, the son of the widow of Naim, and Lazarus of Bethany). However, miracles worked over the elements of nature are not lacking either: the transformation of a considerable quantity of water into wine; at least two separate multiplications of loaves on behalf of several thousand people; a miraculous catch of fish considering both the quantity of fish caught and the circumstances of the catch; and episodes in which Jesus intervenes to calm a storm, walk upon water, or instantly bring a boat ashore. Aside from a few rare cases in which "supplementary" actions are commanded to complement that which He has worked (see, for example, *Jn* 9:7), the healings always have an immediate character and concern a variety of illnesses: a sudden recovery from a grave fever; a stable recovery of sight, hearing, and the ability to speak; the ceasing of chronic hemorrhaging; an end to an epileptic crisis; an instantaneous healing of leprosy; a recuperation of motor functions after a paralysis or malformations from birth (for a more detailed analysis see Leone, 1997, pp. 43-133). Among the miracles of healing, the exorcisms of demons would also probably be listed (although it must be kept in mind that the mentality of the time probably considered certain illnesses, particularly epilepsy, to be caused by the invasive presence of evil spirits). Contemporary exegesis cannot ignore the possibility that some accounts of miracles are possibly "post-Paschal re-readings" of the divinity of Jesus Christ, the full awareness of which the disciples reached only after the Resurrection. In cases such as this, the narration of an extraordinary deed would aim to offer a literary context in which to transmit a particular teaching

relative to the two natures, human and divine, of Christ. But even if this were so (a classic example would be the second miraculous catch of fish, added after the first conclusion of the Gospel of John, see *Jn* 21:1-14), the high number of miracles performed by Jesus and reported by the Evangelists, and the embedded narrative weave in which they are entwined with the rest of the Messiah's life and actions, testify that the great majority of them had to be episodes which really happened and which the disciples witnessed historically.

3. The Historical Significance and Realism of the Miracles Reported by the Gospels. In analyzing the historical actuality of miracles, it is possible to apply the same standards used for the Gospel [8] narrations as a whole, particularly the criteria of multiple attestations and continuity and discontinuity (cf. Latourelle, 1988). Miracles are related in diverse sections of the New Testament and according to varying literary forms. The accounts of miracles range from detailed and extensive descriptions to concise and synthetic summaries and from being parenthetic citations within various events to narratives expressly dedicated to them. In the Acts, we find phrases which make it clear that—aside from the factions in favor of or against acknowledging Jesus as the risen Messiah—the fact that Jesus of Nazareth had passed several years in public working healings and miracles amidst the people was something well known to everyone (see *Acts* 2:22; *Acts* 10:38-39). The criterion of continuity—which attributes a greater value to the narrations that demonstrate a continuity with the historical-contextual surroundings in which they are believed to have occurred—seems to be verified in the case of miracles by the close connection between miracles and the "preaching of the kingdom," which was considered by all to be the prophetic activity *par excellence* (exemplary in this regard is the passage in *Mt* 4:23-25, as well as the messianic self-proclamation of *Lk* 4:16-21). Miracles are quite often associated with the demand for an interior conversion, and they therefore stand out as a salvific work upon the body and the soul. They are followed by an invitation to proclaim the works of God, glorify Him, and bear witness to Him with one's life. All of these are elements which place the activity of Jesus in continuity with that of the teachers of Israel (cf. *Mt* 11:20-24; *Lk* 10:13-15). At the same time, these miracles represent an eruption of something new which is breaking away from many of the usual Jewish expectations and dispositions, and they therefore cannot be interpreted as a simple literary construction that arose from the community in which Jesus lived and worked. In the miracles of Jesus there are elements of discontinuity with Jewish habits such as drawing near to lepers in order to cure them (Jews considered leprosy impure), the numerous healings worked on the Sabbath, and the authority by which Jesus accomplished such works (i.e., in His own name and by means of a power which belonged to Him alone).

In favor of their historical actuality, one could add to the preceding criteria other considerations referring to the "style of Jesus" in His miracle working. His works arise from a sensitivity toward human suffering rather than from the desire to perform flashy deeds. His activity is oriented toward the good of the person and not toward obtaining public recognition for himself. Even when the miracles are worked with the aim that those present will believe in His divine origin in the Father (as in the resurrection of Lazarus, *Jn* 11:42), their ultimate scope is not the human glory of Christ but rather the conversion of hearts toward the new logic of the Kingdom of God (see *Mt* 12:28). The narrations of miracles are for the most part sober and at times meager. Jesus acts according to His habitual personality without the necessity of transforming Himself (when He does transfigure himself, it is not to perform miracles, see *Mt* 17:1-8 and parallel texts). A significant example of Jesus' tempered attitude to miracles is when He rebukes the peculiar "proposal" of some of the disciples to punish those cities which had not welcomed their preaching by sending a rain of fire from heaven (an image borrowed from the Old Testament) (*Lk* 9:54-55). Analogously, He reproaches the attitude of those who, in order to decide whether or not to believe, seek only signs and extraordinary events (*Jn* 4:48). "The restraint that marks the wonder-working activity of Jesus is in harmony with the context and religious meaning of His miracles. He shows no self-centeredness, attention to himself. He refuses flashy exhibitions and amusing prodigies which Herod

looks for from him. He asks those who have been the beneficiaries of a miracle to remain silent about it, when the crowds become fired up, he slips away. After the multiplication of the loaves, he forces His disciples to depart in order that they may not be caught up in the messianic fever that is sweeping through the crowd (*Jn* 6:15)" (Latourelle, 1988, pp. 62-63). To those who ask Him for a "misplaced" sign—that is, to those who seek a sign as proof of the truth of His words—He responds by speaking of the sign *par excellence*, His Resurrection (*Mt* 12:38-39; *Jn* 2:18-22). This same attitude will be maintained through the supreme moment of His death: He who had worked miracles for others will not accept the challenge to work miracles for Himself by coming down from the cross (*Mk* 15:29-32).

Concerning the realism of the narratives and the relation between subjective experience and an objective event, it must be noted that those people who did not want to believe in Jesus, even when they were present at a miracle, were not unbelievers on account of a scanty conviction regarding the "truth" of the observed events. The healings are not considered "conjurer's tricks," nor is Jesus accused of fraud. The criticisms clearly go along other lines. This man, his adversaries affirm, "is not of God" because the power to cast out demons has been given to Him by the devil himself, or because He worked miracles on the Sabbath in transgression of the Law. It is not that those who "do not believe" deny His miracles. Rather, they do not go any further than them. They do not go beyond the amazing events, and they do not welcome that which the events reveal about the subject who works them and His salvific mission. A very particular realism is present in the episode of the man born blind, which is narrated in the Fourth Gospel (*Jn* 9:1-39). The man who was miraculously healed undergoes a meticulous identification. First, it is verified that this is a beggar known by all and not simply someone who looks like him. He is then questioned regarding precisely how the healing came about. Finally, his parents are called upon and questioned to obtain information about the congenital nature and permanency of his infirmity. Once the reality of the event is ascertained, the debate moves toward the identity of Jesus and how a sinner, who does not respect the Sabbath, could have worked such a miracle.

A further element of interest regarding the historical truthfulness of miracles is the fact that the primitive Church rejected several narrations of the life of Jesus, classifying them as "apocryphal" gospels, precisely due to an abnormal presence of prodigious deeds. The deeds related in the apocryphal gospels differ from the miracles narrated in the "canonical" Gospels above all because they do not reflect a salvific aim and call to conversion. Instead, the miracles in the apocryphal gospels emphasize marvelous actions performed solely to arouse awe, or at times they are performed without sufficient discernable motivations. The apocryphal miracles often have a forcefully symbolic and figurative meaning, or they focus on astonishing descriptions, thus distancing themselves from the sober and historical-narrative style proper to the Gospels that the Church had at that time already accepted.

Finally, it must be kept in mind that the essential nucleus of the apostolic *kérygma* (or "primitive proclamation") was that "Jesus is the Christ, the Son of God who died for our sins and is risen from the dead" (*Acts* 2:22-24; *Acts* 10:36-43; 1*Cor* 15:3-5). In this proclamation Jesus' miracles take on the important role of testifying to the divine identity of the subject. Upon this depended, in the preaching of the apostles, the truth of redemption and its universal effects for the human race. If the Gospels were written in order to bear witness to the divinity of Jesus Christ (*Mk* 1:1; *Lk* 1:1-4; *Jn* 20:30-31), the accounts of miracles constituted an intrinsic part of such a witness. It does not seem possible, then, to disregard them without losing the whole content, credibility, and salvific importance of that which their authors intended to proclaim.

III. Miracles according to the Teaching of the Catholic Church

In the Christian tradition, miracles have never been understood simply as unusual or unexplainable deeds. Such a characteristic, by itself, is not sufficient to define their theological and religious nature. Quite some time ago, St. Thomas Aquinas demonstrated this with lively examples taken from the scientific context of his time: “The word miracle is derived from admiration, which arises when an effect is manifest, whereas its cause is hidden; as when a man sees an eclipse without knowing its cause, as the Philosopher says in the beginning of his Metaphysics. Now the cause of a manifest effect may be known to one, but unknown to others. Wherefore a thing is wonderful to one man, and not at all to others: as an eclipse is to a rustic, but not to an astronomer. Now a miracle is so called as being full of wonder; as having a cause absolutely hidden from all: and this cause is God. Wherefore those things which God does outside those causes which we know, are called miracles” (*Summa Theologiae*, I, q. 105, a. 7). In *De Potentia Dei* (q. 6, a. 2), instead of an eclipse, Aquinas uses the example of a magnet which attracts a piece of iron, something which to the unlearned seems to be a miracle because it appears to be an action contrary to nature, but in reality there is nothing miraculous about it because what happens is only a consequence of the nature of the magnet.

A miracle, therefore, must point toward a corresponding and proportionate cause which could clearly be only the personal action of God. The divine action, inasmuch as it is a personal action, is not limited to the simple miraculous deed in itself but possesses a dimension and a finalism [9] which reveal something of the subject who performs it. This divine action is a communication on behalf of human beings. Theology has tried to systematize the three preceding criteria (the unusual character, divine action, and the intentional dimension) by distinguishing three aspects in the phenomenology of miracles: psychological, ontological, and semiological. The psychological aspect points to the dimension of surprise and wonder before a totally unexpected event in which the subject psychologically places him or herself in a situation of listening and openness to a divine revelation. The ontological aspect indicates a work whose accomplishment is ontologically possible only by God [10] and therefore has a solid connection to His creative power [11] (to give existence and life, to manifest His Lordship and omnipotence over a creature which belongs to Him because it depends on Him in a radical way). Third, the function of a miracle is not to stupefy or to bewilder but rather to transmit a message. In its semiological aspect, a miracle is a sign which bears meaning, and the biblical image of God gives assurance that the acting subject’s intentionality is benevolent and salvific. That which occurs in a miracle is subject to various linguistic interpretations. A miracle can therefore also include a symbolic dimension (a bodily healing, for example, could symbolically refer to the capacity to bestow spiritual salvation; a multiplication of loaves could refer to the spiritual food of the Eucharist, etc.).

If in medieval theology the tendency was to emphasize the ontological aspect of miracles, one of the aims of the “modernist” current at the end of the19th century was precisely to downplay the ontological aspect. The modernist current fluctuated between a material-sensible interpretation and a spiritual-symbolic interpretation of miracles without, however, succeeding in harmonizing these two dimensions, objective and subjective, in a convincing way. Beginning with M. Blondel, progress was made in presenting a more balanced composition of the two dimensions through a reevaluation of the semiological aspect, which later acquired a strong Christocentric connotation with K. Adam and R. Guardini. Miracles were traditionally classified within the “motives of credibility” of faith (see DH 2779, 3034, 3876), but the Second Vatican Council preferred to speak of miracles in terms of “signs of salvation” so their recognition and their apologetic use would not be separated from their salvific meaning grounded in Jesus Christ. The only time the document *Dei Verbum* uses the word “miracle” is in the context of the economy of the unique revelation and self-witness of God whose fullness is given in Christ: “For this reason Jesus perfected revelation by fulfilling it through His whole work of making Himself present and manifesting Himself: through His words and deeds, His signs and wonders, but especially through His death and glorious resurrection from the dead and final sending of the Spirit of truth. Moreover He confirmed with

divine testimony what revelation proclaimed, that God is with us to free us from the darkness of sin and death, and to raise us up to life eternal" (n. 4). Miracles are "signs of Christ" through which He transmits specific things: merciful love for human beings; the desire to restore life to humanity; the will to restore an order overturned by sin; offering Himself as Eucharistic food for the crowds; establishing a sacramental economy which makes use of sensible signs; restoring to persons, by means of sight and hearing, the capacity to see and listen to God, or to walk according to His ways. The Resurrection is the miracle and "sign" of Christ *par excellence* (cf. *Mt* 12:39) by which He demonstrates, not only the eternal condition to which the human person is called, but also nature's destiny to be transformed and elevated by means of a "new creation."

In the declarations of the Magisterium of the Roman Catholic Church we do not find, not even in the past, a "definition" of miracles but solely clarifications regarding their content and finality. Their historical value is affirmed along with their inability to be reduced to purely symbolic or mythological narrations (cf. DH 3009, 3034, 4404). Their value in moving people toward faith is recognized (cf. DH 2753, 2779). Also, the Magisterium refutes the intellectual position which maintains that while faith may be prepared to recognize miracles, reason is incapable of comprehending miracles, a position which is rooted in scientific agnosticism (cf. DH 3485). In any case, although they are not expressed in a systematic way, the three psychological, ontological, and semiological criteria are found within the whole of stated doctrine. The definition of a miracle, therefore, is not a matter for the Magisterium's official teaching, but is rather left to theology. Theology must also prudently evaluate the problem—a problem that does not have an immediate solution—of how to detect miracles within the order of natural phenomena and what corresponding epistemology would be implied therein (see below, V). It is not surprising, therefore, that in keeping with its own specific method and field, theology focuses principally on the "religious" dimension of miracles. Latourelle offers a structured and concise formulation defining a miracle as "a religious wonder that expresses, in the cosmic order (human beings and the universe), a special and utterly free intervention of the God of power and love, who thereby gives human beings a sign of the uninterrupted presence of His word of salvation in the world" (1988, p. 276).

IV. Philosophical and Biblical Criticisms of the Possibility and Significance of Miracles

In the past as well as today, miracles have been, and are, the object of criticism by both scientific and philosophical thinkers. The former focus on the concept of nature [12] inherent in the affirmation that miracles happen; the latter, on the consequential image of who God [13]is. There has also been criticism based on biblical-hermeneutical arguments about the authenticity of the miracles reported in Scripture and their meaning, as well as theological criticism about the apologetic value of miracles and their role in the dynamic between faith and reason. Significantly, both the philosophical and the theological criticisms rely, at different levels, on scientifically-based considerations. This phenomenon, in turn, provides a particular stimulus for science, because a theological definition of miracle–or at least the establishment of canons appropriate for non-ambiguous recognition of them– should refer to nature's behaviour, laws, properties and limits, all questions on which scientific thought licitly claims to be competent.

To the extent that theology seeks to maintain a certain realism [14] on the issue of miracles, taking a step back from grasping or integrally re-interpreting the ontological dimension, it should necessarily come to grips with natural sciences. This would allow "miracle" to become one of the principal topics with an interdisciplinary character, perhaps even the topic *par excellence*.

1. Spinoza, Hume, Voltaire, Bayle, Kant, the Young Hegelians and Contemporary Criticism by A. Flew.

Among the principal philosophical positions, Spinoza's (1632-1677) opinion is noteworthy. In *A Theologico-Political Treatise* (see Chapter VI, "Miracles"), he dedicated an entire chapter to miracles. Contrary to what we might think, and without hastily defining his thought as atheistic and pantheistic, we must admit that Spinoza's objections maintain a certain validity at present, even for theology, and his influence on the authors after him is comparable with that of David Hume on the same topic of miracles. Spinoza holds two principal beliefs: a) nothing happens in contrast with nature or outside its laws, although our knowledge of these laws is limited and imperfect; b) a miracle, should it occur, does not provide a rational basis for God's existence or His Providence, both of which are based on the natural order and not on what contradicts it. The miracle is only a perception of people, in particular of illiterate ones, used to deduce the divine from what is exceptional, from what is in contrast with nature and not from what governs it. Thus theological vision that affirms that miracle is "the sign" of God [13] becomes problematic. Miracles do not demonstrate God's existence, rather they make us doubt it: God, in His perfections and omnipotence, is the cause by which nature follows a determined and immutable order, not by which that order is violated by nature. Actually, to the extent that we regard a miracle as destroying or interrupting the order of the nature, not only it can not provide any cognition of God, but rather it would eliminate our knowledge of nature and make us doubt God as well as every other reality. The miracle, whether qualified "against nature" or "beyond nature", is precisely an "absurdity": everything against nature is also against reason, and what is against reason is contradictory and should therefore be rejected. In Spinoza, the critique on miracles is not contrary to Scripture, whose authority the Jewish philosopher does not deny; it is rather the affirmation that such events – conceived as miraculous by men, but in reality caused by natural reasons omitted, not described or not recognized by Scripture– do not provide authentic and unambiguous knowledge of God [15]. Spinoza's criticism is not so much based on pantheism as on a strong link between God and the rationality of nature, an association already asserted in the 17th century and that would have been present in common thought for the greater part of the 18th century. Since the 19thcentury, this association no longer stands, but the idea of nature's rationality certainly does. Even today it represents the scientist's spontaneous framework, a framework unperturbed by occasional anomalous behaviors in natural phenomena, which call for a more in-depth knowledge of nature. Spinoza highlights the fact, nowadays still valid, that the definition of "event contrary to nature that happens within nature" is not easily comprehensible for those who make nature their subject of study, and runs the risk of being deemed an ingenuous, philosophically inconsistent attribution. The lack of a metaphysics of being and the difficulty in recognizing the pre-eminence of being over knowing, means that Spinoza understands the omnipotence of God on a "flat" gnoseological plane, and doesn't grasp how God, being really separate from nature, can be its transcendent cause.

David Hume (1711-1776) conducts his criticism of miracles from an epistemological and historical-religious point of view, principally in his work *Enquiry Concerning Human Understanding* (see Chapter X, "On Miracles"). If a miracle is defined as a "violation" of the laws of nature [16], our direct experience of the stability and immutability of these laws leads us to conclude—so Hume argues—that a person of good sense cannot reasonably give their supposed "violation" any credence. Furthermore, he maintains that the accounts of miracles which have been passed on to us are not very reliable since they originated within, and were conveyed through, a religious and mythical context, a context that the advance of rational knowledge has progressively discredited. If miracles are absurd for Spinoza, they are for Hume simply "unbelievable." To this same conclusion we should arrive, according to the Scottish philosopher, if we consider a miracle to be an extremely rare, albeit possible, event. In this case, since the evidence of regular laws is much more noticeable than their occasional violation, wise people–meaning those who base their beliefs on the more general and better well-founded evidences– should not give credence to such events, as uncultured and less informed people would do. Hume observes that the

unusual character of events narrated as miraculous in the past is often seen in the present as less surprising, and for this reason, an eye witness' testimony, however plausible he may seem, has little or no value: the incredibility of a fact invalidates the authority of the one who reports it. Two observations are in order regarding Hume's argumentations. He considers the subject's comprehension of reality as a measure of the whole, and therefore does not accept unprejudicedly that God could be the cause of that reality in ways that transcend our experience.

According to Spinoza, new or unusual phenomenologies don't exist, or if they exist they are natural and not miraculous; according to Hume, those phenomenologies are not highly probable. Both of these viewpoints show the importance of not forgetting Thomas Aquinas' distinction between the different levels from which it is possible to examine a phenomenon, in relation with the knowledge (or ignorance) of the subject, and in relation to the special modalities by which a particular event/fact seems to "overpass" natural forces (cf. *Summa Theologiae* I, q. 105, aa. 7-8; [17] *De potentia Dei*, q. 6, a. 2). Spinoza and Hume, although from different perspectives, both deny the possibility of what Thomas defines as a miracle "in the narrow sense". Aquinas describes miracles as phenomena that correspond to works done by God "outside those causes which we know;" works "opposite from the effects and the way of acting of nature;" and finally works that "go beyond nature [12] in the very substance of the fact, a fact that nature could on no account accomplish." The significance of such events remains unchanged over time if, on a gnosiological level, we acknowledge the possibility of discerning between what belongs to nature and what belongs only to God, and if we admit, on an ontological level, a real distinction between God and nature, between Creator and creature.

The second observation refers to the loss of the eyewitness' authority because of the incredibility of the facts narrated. In reality, as Hume recognizes, we should compare evidences: there is not sufficient testimony – Hume affirms – to establish a miracle, unless the testimony is such that its falsity would be more miraculous than the very fact it attempts to state. When they tell us that a dead man has come back to life – so Hume observes – we should consider which is more probable: that the witness is deceiving us or is himself a victim of deception, or that the fact referred to has indeed occurred. We must pit "one miracle against the other": if the falsity of the witness (whether deceiver or deceived) is a greater "miracle" than the miraculous nature of the narrated event, then and only then, the witness possesses sufficient authority to convince, thus allowing the subject to form a firm opinion. We are therefore faced with a criticism which, in our opinion, leaves the value of the testimony unchanged, but asks testimony to be expressed at its highest possible level. This is nothing but the logic of martyrdom, of the sanctity, and of unity of the intellectual life, the only logic able to reassure the subject that his assent to an event that surpasses reason, is itself reasonable.

In the corresponding entry of his *Philosophical Dictionary*, Voltaire (1694-1778) speaks of miracles as a *contradictio in terminis* (an intrinsic contradiction). They are a kind of "insult to God" because they ascribe to God the task of correcting, by means of His miraculous interventions, that which He himself has created and brought into existence. Prior to Voltaire, Pierre Bayle (1647-1706) had developed analogous arguments in which denying miracles did not include a denial of God but rather the denial of a certain image of Him which popular piety endorses and religions nourish.

The perspective of the Age of Enlightenment finds a philosophically wiser expression in Immanuel Kant (1724-1804), who, in his book *Religion within the Bounds of Bare Reason* (1793), dedicates an Annotation of Chapter II to the subject of miracles. Taking his cue from Jesus [18]' reproach "unless you people see signs and wonders, you will not believe" (Jn 4,48), Kant observes that moral life and the imperatives that should regulate it cannot be based on hypothetic events. The high esteem he professes for morality and the need to provide a commonly held universal basis for it, impose an opposition between

two different ideas of religiosity: one based on reason and universal consensus, the other on credulity and emotionality. The latter would give faith to personal and transient experiences, responsible for a demonstrative use of miracles. Although, in principle, a miracle could happen, its exceptionality when compared with natural and rational laws would compromise its recognition by reason. This would endanger the ability to know the divine law, which would then be fickle and precarious; a law that, for moral reasons, should be clear and accessible to everyone. “If, however, we assume that God sometimes and in particular cases also lets nature deviate from these its laws, then we do not have the least concept, and also cannot ever hope to acquire one, of the law according to which God then proceeds in the arrangement of such an event […] Now, here reason is as though paralyzed by this, because it is held up by it in its occupation according to familiar laws, but is not instructed by any new law, nor can ever hope to be instructed concerning one in the world”. (I. Kant, *Religion Within the Bounds of Bare Reason* [Indianapolis/Cambridge: Hackett Publishing Company, 2009] p. 98). The relative incompleteness of scientific knowledge should not be utilized as an access door for the irrational and the miraculous. Such incompleteness, so Kant affirms, does not invalidate the rational approach that science has ever to maintain while judging the facts. Rather, what seems to escape from the natural laws should be accepted and endorsed by science: in fact, science is stimulated by the study of all observable phenomena in nature to perfect the knowledge of its laws. Asserting that events extraneous to the laws governing the universe and our life are not objects of science would have devastating effects at a moral level: “If reason is deprived of the laws of experience [19], then in such an enchanted world it is no longer of any use whatever, not even for the moral employment therein, in complying with one's duty….”. (*Ibidem*, p. 101)

The thinkers mentioned here, each in their own way, present theology with a very specific request: a theology of the miracle respectful to scientific epistemology [20]. Such a theology should be able to clarify what constitutes the “no natural” and the “extraordinary” value of such events, explaining their relationship with our experience of natural and scientific laws, regarding both the *possibility* of miracles, and their *recognisability*.

In the 19th century, the criticism of miracle flows into the denial of God, as expressed by positive atheism and modern materialism. Miracles are considered a sign of credulity, directly proportional to the influence of religion on the mindts of illeterate people and inversely proportional to the progress of science. Young Heghelian understand religion as mere mythology; religion, then, must be replaced by rationality and by the creative potentialities of the idealistic Spirit. They claim a purifying work of science to free humankind from irrational beliefs, a task already theorized in France by Auguste Comte (1798-1857).

Due to its influence on the context of natural sciences, the criticism of miracles recently brought forward by Anthony Flew (1923-2010) must be pointed out. By radicalizing Hume’s position, and emphasizing the non-falsifiability of religious assertions so that they lack any convincing cognitive value, the English atheistic philosopher insists upon the non-historicity, incredibility, and non-discernible character of miracles (see “Miracles,” in *The Encyclopedia of Philosophy* [New York: 1972], vol. V, pp. 346-353). A miracle would not be impossible from a logical point of view, but it would be impossible from a scientific point of view. A miracle would presuppose faith in the existence of God [13] (if God exists, then it is logical that there could be miracles). Thus, miracles are not sufficient proof for reason, and therefore they would not have any apologetic value. Flew grounds this affirmation epistemologically by casting light on a vicious circle. Firstly, the English philosopher observes, miracles are not adequate to prove God’s existence, nor that of a world that transcends nature, because they presuppose both exist. To be recognizable, miracles should in fact maintain a cognitive reference to a supernatural dimension; if we confine them within a natural dimension they would be unrecognizable. But miracles by definition are declared to overcome that dimension. If, with Augustine, we affirm that miracle is something not opposed to the nature, but rather to our knowledge of it, (cf. *De civitate Dei*, XXI, 8,2), then we are forced to

accept, the English philosopher says, that miracles surpass not only our capability of interpreting them, but, more radically still, our capability of identifying them. (cf. Flew, 1972, pp. 348-349). Essentially, a miracle remains not recognizable and not knowable rationally. So, we can not use it within arguments that, from faith, would appeal to reason. To put it more formally, the criticism of Flew to the recognisability of miracle is the following: a miracle could be qualified only in two ways, either a) rare and unusual event; or b) event that overcomes natural order, surpassing its laws. In the first case, it would be a natural event, not miraculous in a "narrow sense"; in the second case, it would be an unidentifiable and unknowable event. In neither case could the event be used to "prove" anything. A truly miraculous event, Flew affirms, a miracle ontologically more qualified than what Augustine requests, should be "independent from nature" (and it should not only be beyond our present knowledge of it). Otherwise, it should be qualified only as an unusual event, strange but interpretable within a "wider frame" of natural laws [16] and explanations and so, without the possibility of pointing beyond nature.

A first reason of interest for Flew's criticism is that he takes note of the fact that a judgement on miracle does not pertain to an epistemology of the natural sciences – and in that regard the philosopher is correct. He is also correct when he asserts that miraculous events cannot be used to support the existence of a Creator, nor as an apologetic defense of the truth of a religious system. A miracle can only be an event through which a known God makes Himself present as "responsible" for the action that caused the miracle, revealing Himself as a person in that action. The miraculous event in its totality – i.e. the believing context owned by the addresses of the miracle and the message transmitted by event itself – reveals the identity of its Author and His moral quality: if it is God, creator of heaven and earth, or a generic spiritual agent able to surpass the order of nature and matter. We observe that both Flew's criticism, and the considerations that a theistic defense develop in reply, support contemporary theology's choice not to consider miracles as events in themselves but as events of revelation, referred to Christ and the context of redemption. Only the religious context of revelation, mercy and salvation – in which the event can be read and recognized – reveals the Agent's character and His relationship with men. Flew is not right to limit the recognition of the miracle – and its apologetic value – to the significance that the event takes on when considered against the background of empiric rationality, forgetting that the semiological value of the event, its meaning for man, can most certainly be grasped just as adequately by other kinds of rationality equally meaningful for the believing subject.

2. The Biblical Hermeneutics of Miracles and the Existential Value of Their Semiological Aspect: Blondel, Bultmann. Beginning in the late 1800s, the criticism of miracles within the field of biblical studies developed into a program of "demythification" of Sacred Scripture, particularly the New Testament. It began with Adolph von Harnack (1851-1930) and given continuation by Rudolph Bultmann (1884-1976). For Bultmann, the demythification program is twofold. First, in the biblical accounts of miracles he identified literary forms originally belonging to extra-biblical traditions. For instance, there are "miraculous" healings performed by Aesculapius and Aepidaurus (Greco-Roman demigods) and by Apollonius of Tiana (a philosopher and wonder-worker divinized by Septimus Severus), healings that could easily be reduced to purely natural phenomena. He then pointed out that the accounts themselves cannot withstand analysis by contemporary scientific mentality and the knowledge we have acquired about the structure of matter and its laws.

With provocative phrases that have become well-known and have been reported many times in literature, Bultmann stresses: "It is impossible to use electric light and the wireless and to avail ourselves of modern medical and surgical discoveries, and at the same time to believe in the New Testament world of spirits and miracles. We may think we can manage it in our own lives, but to expect others to do so is to make the Christian faith unintelligible and unacceptable to the modern world" ("New Testament and Mythology," in *Kerygma and Myth: A Theological Debate*, ed. H.W. Bartsch, trans. R.H. Fuller [New

York: Harper and Row, 1961], p. 5). In keeping with the more general perspective of his "existential exegesis," the German theologian proposes a distinction between *Mirakel* and *Wunder*. To *Mirakel* he attributes the traditional notion of a "miraculous event." To *Wunder* he attributes the idea of "wonder" one experiences when observing a specific event—an existential event particularly meaningful for the subject—with the eyes of faith. *Mirakel* holds no interest for religious faith because we cannot access the historical truth of what actually happened, and so it remains something about which it is more reasonable to doubt than to believe. *Wunder*, on the other hand, expresses the intensity of our special relationship with God, which leads us to recognize His action in deeds that are completely natural (and therefore not miraculous), and through which He calls upon our faith and unveils to us a particular message. Miracles cease to be concrete events having an objective nature and instead involve the realm of understanding within a personal subject. Such a "subjective perspective" of miracles would, furthermore, have the advantage of leading human reason to recognize God's action and the testimony of His wonders in everything around us.

Bultmann's thought aimed to overcome the contemporary difficulty of speaking of miracles as deviations from the order of natural laws (deviations which the scientific mentality would consider impossible). For Bultmann, no one is obliged to give credence to incredible narrations but we do need to direct our sensitivity toward acknowledging "signs" as subjectively and existentially meaningful. However, this approach brings about an inevitable consequence: miracles are weakened in conjunction with the historic reality of Jesus Christ's life and preaching, which may then come to be totally denied. The life of Christ was interwoven with miracles to a great degree, and this whole approach culminates in/ ends up assimilating the Incarnation and Resurrection into the process of demythification, two events whose accurate interpretation and historical position have a fundamental value for Christianity. Furthermore, Bultmann makes the relationship between miracles and scientific thought unnecessarily controversial. Although it is indeed legitimate not to put the burden of discerning a miracle upon science (inasmuch as miracles possess theological, spiritual, and existential dimensions not pertinent to science, see below VI.2), it does not follow that science, in order to remain faithful to itself, must deny the occurrence of anything that seems to go beyond its own realm. In general, the distinction between *Mirakel* and *Wunder* closely recalls the distinction between the Jesus of history and the Christ of faith, one typical of Bultmannian exegesis, thus giving itself over to the same limitations. Just as the meaning of faith in Christ, deprived of all connection with the history of Jesus, would not make sense, so too a believer's wonder which does not originate in miraculous historical events (whose existential understanding can, however, certainly depend upon the disposition of the subject) would end up dissolving itself into a generic feeling of stupor, whose appeal no longer flows from reality, but solely from an interior experience.

Concerning the role of the subject, Maurice Blondel's (1861-1949) thought appears more balanced and of greater interest. As already mentioned, he focused upon the value as a "sign" that a miracle has for the subject, thus reevaluating the personalistic and existential dimensions of miracles (in which faith is at stake) but without simultaneously denying their link to history. At first glance, the semiological aspect could appear to be superior to the ontological aspect, as seems to be the case in the following text from *Action* (1893): "We must be quite clear as to the nature of the expressive symbols which alone can bring to man, from outside, the positive answer he is calling for: they could not be anything but signs with a double meaning, precisely because the sovereign originality of the interior life admits only what it has somehow digested and vivified. [...] But to recapture being under sensible species, to admit that a particular, contingent, and limited act should contain the universal and the infinite, to take from the series of phenomena one phenomenon that ceases belonging to the series entirely, that is the wonder. Spiritual grandeur has nothing of the brilliance that forces assent by imposing itself on the senses, nothing of that evidence that does violence to the understanding without making provision for the heart's entire freedom.

What is visible to the eye, what is clear to thought seems to contradict and hide its invisible beauty. Hence it would be almost easier to believe in them without the sensible and reasonable in them" (*Action*: *Essays on a Critique of Life and a Science of Practice* [Notre Dame, IN: University of Notre Dame Press, 1950], p. 364). However, in Blondel's thought the "factual" (external) and "intentional" (internal) dimensions remain bound together because the event which the subject judges to be a "miracle" also intersects with the fields of philosophy and physics, in addition to being a sign addressed to the subject himself. In fact, we read in another text from several years later: "Far from denying the reality of them or their ability to be discerned, I always put my concern in pointing out that miracles are not solely a physical prodigy pertinent exclusively to the senses, to science, or to philosophy, but that they are also at the same time a sign addressed to every person, a sign of a spiritual order and of a moral and religious character, a sign which does not so much reveal the existence of a First Cause (of which natural facts alone are enough to make us certain), but rather the goodness of a God-Father who manifests His special intervention and which thus authenticates a supernatural gift" (*Revue du Clergé français*, April 15, 1904, p. 405).

In conclusion, miracles legitimately participate in the dynamic rapport between faith and reason. The diverse understandings of the relationship between faith and reason therefore have consequences for the discussion about miracles. In fact, the historical and objective importance of miracles is denied not only by a deistic, and ultimately skeptical, perspective but also by an atheistic rationalistic vision as well as a fideistic one. There is future work to be done, patiently drawing together the psychological-semiological and ontological dimensions of miracles. This must be done with regard for their necessary and undeniable Christological reference, while convinced that the judgment of the subject, and therefore one's existential option for faith, must be guided by the knowledge one draws from the physical and metaphysical order. This last approach, which is without a doubt demanding, must also assume the burden of addressing the question of how a miracle can be discernible in a rationally meaningful way.

V. The Natural Sciences and an Understanding of the Ontological Dimension of a Miracle

Among the tasks of an interdisciplinary treatment of the miracle there is not only the development of a theology respectful of scientific epistemology [20], but also that of employing scientific knowledge within the theological problem of the "recognition" of the miracle. Blaise Pascal (1623-1662) claimed that 'if there were not any standard to discern them [miracles], they would be useless, and there would be no reason to believe in them.' (Pensées, n. 759). If theology rashly discarded the problem without precisely identifying what a miracle is or is not, it would fail to assign miracles any specific role in the process of preparing towards faith, thereby also undermining the value they have within the economy of divine revelation. One may wonder whether, and to what extent, scientific knowledge may contribute to the discernment of miracles.

1. Miracle's Possibility and its Recognition: Psychological, Ontological and Semiological Dimensions.
Science is not qualified to pass judgment on a miracle's recognition, since it is not a scientific notion but a theological-religious one. Any definition of a 'miracle' theologians may want to give will always contain a reference to God as an agent, which suffices to exempt science from the burden of proof, since God's agency lies outside the scope of science's investigation. This is confirmed by the fact that the Magisterium [21] of the Catholic Church does not offer a specific 'definition' of a miracle. The latter is left to theology, which, whenever it suggests the possibility of recognizing a miracle, has to evaluate cautiously the way it refers to the realm of natural phenomena and to the relevant epistemology. Rather, the Magisterium is more concerned with clarifying a miracle's content and purpose. Generally speaking,

with no reference to specific Biblical passages, miracles reported in Scripture are supported by a number of elements: their historicity and non-assimilation to purely symbolic or even mythological narratives (cf. DH 3009, 3034, 4404); the value of proof, obviously in conjunction with other factors, to move people towards faith (cf. DH 2753, 2779); the impossibility of accepting faith's willingness to recognize a miracle, on the one hand, while denying its accessibility by reason through scientific agnosticism (cf. DH 3485), on the other. Overall, the psychological, ontological and semiological dimensions of a miracle take shape in these arguments, although they have not been systematically spelled out by the Magisterium.

Precisely bearing in mind the three above-mentioned dimensions, one must also point out that science is not entitled to offer any conclusions concerning the semiological dimension, since it is a domain of understanding which pertains to a personal subject and not to the scientific method The content of the sign in question pertains solely to the dialogue springing from God towards man; it is a sign which man can comprehend or choose freely to overlook. Yet there is a certain relevance of science in *confirming* the psychological-anthropological dimension. In this context one may legitimately wonder if the 'extraordinary marvel' reported vis-à-vis a certain phenomenon should be justified by its real anomaly, exceptional nature or impossibility, or if it is only fruit of ignorance and of credulity. As Saint Augustine already claimed, there are also *false* miracles which have to be unveiled (cf. *De civitate Dei*, X, 16-21).

A judgment on a miracle's ontological dimension, on the other hand, is more complex and so requires more in-depth examination. A good starting point is the request, addressed by the Church to scientists in Canonical trials, to certify that the causes of the event under investigation are unknown to those employing the tools of the scientific method. Based on the above remark, the formulation of this conclusion is never fully conditioned by the specific epistemology we have of the laws of nature [16] . Scientists may also want to add two qualifications, if requested, both of which are available within their method. They may legitimately argue whether, on the basis of the current acquisitions, there is any chance whatsoever that this event may historically happen, and whether the ignorance concerning the causes determining the phenomenon itself may reasonably be overcome in the future. It will be up to theologians to evaluate this information within their specific processing, depending on the 'definition' of miracle they choose to employ. Strictly speaking, science cannot be asked to judge whether a given event belongs to nature or not, or whether its causes originate from a realm *other* than the natural one. The scientific method would indeed be incompetent, since all the phenomena that it studies are in some ways 'natural,' and 'natural' is the order of the causes that it can look for, whether they are known or still unknown. From this point of view, only by proceeding *bottom-up* could scientists affirm that they are faced with a 'physically impossible phenomenon;' in other words, that in this specific case our ignorance regarding the causes is not likely to change with the progress of science [22]. Such a judgment will always be very difficult to express, and rightly so, because its formulation in these terms would lie outside the scientific method *stricto sensu*, requiring the contribution of common sense, of forms of real assent, and of illative sense.

By re-employing a distinction between two different types of events: extraordinary events, highly unlikely or still unknown, but all in some way still natural, on the one hand, and physically impossible events (therefore radically associated with God's creative action), on the other, a theologian may be able to re-interpret the three typical dimensions of a miracle in the terms outlined below.

In the case of events belonging to the first category, the psychological aspect would refer to the subject's amazement at the miracle of being, at the beauty of nature, at the free enforcement of its laws or even at the coordinated and favorable unfolding of its processes. The ontological aspect would be absorbed into ordinary divine Providence, in secondary causes as dependent on God as the primary Cause, or at any rate encompassed within divine action discreetly operating through choices left to freely act in the plies of

nature; we would not be witnessing a “new” creative act by God, but the act by which He creates, sustains the existence and determines the phenomenology of all things. The semiological aspect would refer not so much to the objective and determinate content, but to the subject’s interpretation of a certain event, by acknowledging its relevance as a divine word that is constantly revealing and calling us. The events in question would certainly be judged as extraordinary or highly unlikely happenings, but they would be ‘possible,’ for someone who thinks along the lines of scientific rationality. The ‘objective’ dimension of their recognition would depend on the confidence level of the measures done as accepted by theologians, and provided by the scientific method, whereas the ‘subjective’ dimension would as always be entrusted to the miracle’s recipient, since it is a sign *directed to him or her*.

In the case of the second type of events, labelled as ‘physically impossible,’ the psychological aspect is paramount. As we have seen, science may only confirm them approaching them from below, as they are events beyond its understanding, for at the very heart of this wonder is the subject as a human being, not as someone employing the scientific method. The ontological aspect, due to the radical nature of the sign, would express a mysterious relationship with the ‘new creation,’ pointing, as it were, at a window opening on the ‘new world.’ The sign in question would not just show what nature is able to do or recover when fully aligned, in Christ [18], with its Creator, but above all what nature cannot do, since it belongs to the one who has the power to create and recreate. This power consists in part of a profound knowledge of natural causes, that is, precisely how the latter are known and governed solely by their Creator. For instance, walking on the water may in the future be understood as a possible phenomenon, due to new knowledge about the force of gravity, which could imagine the action of gravitational screens; yet the act as such would not cease to be a miracle, since only the one who controls nature and its force as their Creator could employ them, as Jesus did on the Lake of Gennesaret in a way inaccessible to humans. Finally, for physically impossible events the miracle’s semiological aspect, despite keeping its usual subjective structure – again on the basis of the sign’s radical nature – would be enriched with an important objective significance, thereby acquiring a universal and easily communicable value. In both types of events, therefore, the Creator’s own ‘signature’ can be read: in the former case, by those spoken to by the sign, in the latter, by all those who come to learn about it.

2. God’s Actions in Conformity with Nature, or against Nature, according to Thomas Aquinas. One last idea comes from the criticism raised by philosophical thought, and later adopted by scientific thought, concerning the supposed contradiction of an action of God that surpasses the natural order, an order created and sustained by God himself. That which was observed by Voltaire and by Deism (see above, IV.1), and then implicitly taken up by those who find little sense in regarding miracles as “new interventions” of God in nature, had already been an object of consideration by Thomas Aquinas (1224-1274). Also, centuries before St. Thomas, St. Augustine (354-430) had offered a partial solution by simply recalling that the “rule” of nature is God Himself, thereby introducing a distinction between the wondrousness of the event in itself and the wondrousness which depends upon the knowledge we have of it. This last clarification has been used by others, among them A. Flew, to illustrate the “provisional character” of the concept of miracles. “For we say,” St. Augustine wrote, “that all portents are contrary to nature; but they are not so. For how is that contrary to nature which happens by the will of God, since the will of so mighty a Creator is certainly the nature of each created thing? A portent, therefore, happens not contrary to nature, but contrary to what we know as nature” (*The City of God*, XXXI, 8, 2).

Developing the thought of St. Augustine, St. Thomas held the thesis that the work of God can never be said to be “against nature”: “Since the order of nature is given to things by God, if He does anything

outside this order, it is not against nature. Wherefore Augustine says [*Contra Faustum* XXVI, 3]: 'That is natural to each thing which is caused by Him Who disposed all things in nature by measure, number, and order' […]. God fixed a certain order in things in such a way that at the same time He reserved to Himself whatever He intended to do otherwise than by a particular cause. So when He acts outside this order, He does not change" (*Summa Theologiae*, I, q. 105, a. 6, [17] ad 1um and ad 3um). The *Quaestio* 6 of *De Potentia Dei* is entirely dedicated to the question of miracles (see also *Summa Theologiae*, I, q. 105, aa. 6-8; *Summa Contra Gentiles*, Book III, chapters 101-102). Aquinas starts with the Augustinian affirmation that God does not do anything against nature because that which God does is the nature of each thing. Then he attempts to demonstrate that miracles are not the effect of a changeable will, but a kind of interplay between the action of God in His ordinary Providence and the action of God outside of it, with no tension or contradiction between them: "God does not act by going against the laws of nature on account of a changeable will: God indeed from all eternity had foreseen and wished to do that which He works in time. Therefore, He fixed the course of nature in such a way as to order beforehand in His eternal will that at times He would have acted contrary to such a course. In acting by going beyond the course of nature, God does not totally eliminate the order of the universe, in which lies His goodness, but only the ordering of a particular cause to its effect" (*De Potentia*, q. 6, a. 1, ad 6um and 7um). A miracle is not a "correction" of creation, as the Deism of the 18th century ironically posited, but a manifestation and almost a continuation of the same creative power: "The skill of God is not exhausted in creation [23]; therefore God, on account of it, can do something in a diverse way than that of the course of nature. One cannot therefore conclude that He acts against His own skill if He works against the course of nature: indeed, even a craftsman can bring to fruition another work by means of one's skill in a way diverse from how one had done before" (*De Potentia*, q. 6, a. 1, ad 12um).

St. Thomas' insists upon the ontological dimension of miracles in an attempt to help the interlocutor recognize, in miracles, the presence of the Creator Himself. Certain particular works that can be carried out exclusively by Him who created the world enhance the preparation of the human intellect to welcome the revelation of God in a way far better than other criteria of a merely personal or subjective order. The appeal Aquinas made to the "surmounting" of the forces and potentialities of nature is, in light of this, explicit and spans a wide scale of convincing evidence: "Now the power of nature is surpassed in three ways: firstly, in the substance of the deed [...] and these hold the highest rank among miracles. Secondly, a thing surpasses the power of nature, not in the deed, but in that wherein it is done; as the raising of the dead, and giving sight to the blind, and the like; for nature can give life, but not to the dead; and such hold the second rank in miracles. Thirdly, a thing surpasses nature's power in the measure and order in which it is done; as when a man is cured of a fever suddenly, without treatment or the usual process of nature; or as when the air is suddenly condensed into rain, by Divine power without a natural cause, as occurred at the prayers of Samuel and Elijah; and these hold the lowest place in miracles. Moreover, each of these kinds has various degrees, according to the different ways in which the power of nature is surpassed" (*Summa Theologiae*, I, q. 105, a. 8 [17]; cf. *Summa Contra Gentiles*, Book III, ch. 101). These are reflections that even today maintain a certain relevance to the dialogue with the sciences on account of their ordered and systematic presentation. The natural sciences (while not formulating judgments regarding what is or is not a miracle) can come to understand and describe the "forces of nature" in order to clearly indicate that which "supersedes nature according to what has been observed," noting that which seems unusual in the subject and seems to go against the common experience of such events. We have here the criteria of a modern statistical approach regarding the plausibility of a certain affirmation whose "confidence interval" could increase according to the accuracy of our observations. The responsibility falls to the "researcher" (in this case, searching for God and His revelation in history) to determine what degree of certitude suffices to motivate a reasonable interest in a miracle, understood as a significant event in the formation of his or her free choice of faith.

VI. Prospects and guidelines for theological work

In tune with the rationale of Fundamental theology, a miracle must be presented to a scientific audience, like any other audience, according to its first and principal meaning, that is, as a *sign*. Herein lie its Biblical roots and its proper coordinates within a personal relationship between God [13] and man. As repeatedly mentioned, a miracle's content is incomplete if seen solely as a record of an extraordinary event, or even a physically impossible one, something exclusively aimed at surprising and shocking humans. Miracles are prodigies, but they are such insofar as they are signs of salvation and of mercy, divine signs by which God himself manifests his presence alongside human persons, enhancing their dignity, freeing them, lifting them up and comforting them. Wherever almighty acts springing from or affecting nature are present, they do not exhaust what God wishes to communicate or to reveal to humankind by working miracles. Again, in line with the contemporary theological approach, one will always have to underline the Christological reference of a miracle, of any miracles. Both the miracles in the Gospels [24], and those by which God can continue to call upon man throughout history, are made manifest in a nature that by God's design remains philosophically and salvifically bound up with the mystery of the Word Incarnate. They reveal how creation 'belongs to Christ' and receives from him meaning and consistency. This explains why miracles, as stated earlier, are not a form of violence on nature: they could never be the product of a balance of power between the Incarnate Word and a creation subjected to him – rather they show that, from a semiological and ontological view-point, all creation is ordained towards Jesus Christ, the Word by whom and in the sight of whom all things were made.

The necessary Christological reference affords a miracle a decisive key to its proper understanding: as Romano Guardini (and many other theologians after him) pointed out long ago (1959), miracles are the 'sign' of the future cosmic transfiguration and an eschatological foretaste. They safeguard and disclose the seminal grounds for the 'new creation,' almost as a guarantee that it may indeed be 'ontologically possible,' in Christ, and does in fact take place, because He is the Author of creation, the one who sums it up, recapitulates and renews it. In this sense every miracle occurring in nature, and not only evangelical miracles, nonetheless has a foundational relationship with Jesus Christ's own Resurrection, as a first fruit of the new heavens and the new earth (cf. *Is* 65,17; *2Pt* 3,13; *Ap* 21,1). Those events mentioned above as 'physically impossible,' which do not belong to nature because they are other-than-nature, highlight a miracle's eschatological profile. Even though they occur in nature, they do not spring from its maternal womb as the origin of natural dynamics, be they known or still unknown, likely or unlikely: they can only originate from the one Who creates and sustains nature itself, shapes it and establishes its causal mechanisms. Like Jesus' risen body, physically impossible events are 'windows' on the new creation; they proclaim it, generate it as a first fruit, and reveal its make-up of matter and nature, sensitivity and joy. However, one must not forget that the new creation also mysteriously encompasses the restoration and reconciliation dimensions, both related to the kingship of the Risen Christ over creation, as shown us by St. Paul's and St. John's theologies. This also allows us to ascertain a certain eschatological reference in the healing and restoration miracles, traditionally associated with messianic revelation and the new times it leads into.

Contemporary theology also finds useful guidance in this eschatological reference from the lexical point of view. When we talk about miracles we no longer need to insist on the notion of a 'suspension of natural laws [16]' or on the idea of their 'derogation,' nor do we have to speak of events 'against nature.' In Biblical language the laws of nature are the expression of the divine covenant and their stability is a sign of God's faithfulness, of the irrevocable nature of salvific plans (cf. *Jer* 31,35-36; *Wis* 11,20; *Job* 38,4-7). Hence, whenever Scripture refers to signs and prodigies the main message it transmits to man is by no means the violation, breaking or overriding of natural laws, but the sense of a divine act of mercy and salvation for man. As it chooses the language or the images that best express the

relationship between the divine *sign* and nature, theology can therefore explore different formulations, more in line with the Biblical background and more compatible with a reasonable scientific epistemology. Thus, some have rather seen it as the 'restoration of the pristine order of nature' (cf. Borasi, 1987, p. 388). This phrase would provide the advantage of forging a connection with Christ's own redeeming action, restoring order where nature is disrupted by man's sin; but it has the potential disadvantage of presenting the normal course of natural events as something imperfect, as well as having to bear the burden of explaining why man's sin has induced physical damage to nature itself, rather than, more reasonably, in our own relationship with it. The fact that a miracle's deeper truth should be sought in the idea of restoration or healing is also suggested by the well-known Pauline image of the 'pains of childbirth' in which the whole of creation groans awaiting the cosmic and final manifestation of the filial redemption already effected by Christ (cf. *Rm* 8,22). These pains are not the pains related to healing or to repairing damage inflicted, but those of a new birth, of a generation which frees by recreating. The eschatological orientation of expressions such as 'transcending' nature, or alternatively 'transfiguration' or 'uplifting,' render them more suitable for denoting acts directly connected with Christ's resurrection, although only the first of them shows patently that God does not only act on nature by transfiguring or raising it, but that, being able to recreate it, God transcends it.

As a sign accomplished for man's sake, a miracle is a *revelatory event:* first of all, as a significant message for man regarding his own salvation; and secondly, as revealing something about created nature. A miracle reveals that nature is not an ontologically closed or confined area, which concludes or exhausts God's action, but that it is permanently open to the being it shares. God can recreate nature alongside nature itself; nature can include in its bosom something which transcends it and yet still belongs to it. Yet a miracle reveals what nature can do, even when it wholly transcended, if it is fully subject to the Word Incarnate, to his word and to the Paschal mystery. In both cases what emerges is nature's potential of 'being associated with the mystery of Christ's humanity,' a humanity that has been mysteriously present since all eternity, in the silence of Father's Love. 'A miracle — as Romano Guardini put it — is an absolutely positive process, set in the order governing the world's sustenance and enhancing its future prospects. The act of working a miracle, as such, belongs to God's own sheer initiative, and therefore precedes the realm of competence of all natural laws. As soon as it has been accomplished, though, its effect fits with utmost precision in the world's own set-up. It is absorbed by its laws and fitted into its objective contexts. Due to a miracle, the world itself does not lose the slightest part of unity and precision — so much so that one could even say that a miracle constitutes their supreme evidence, as well as their accomplishment. The world is available for a miracle. It waits for it to happen' (Guardini, tr. it. 1997, pp. 34-35).

The predominantly semiological nature of a miracle, which the ontological aspect must yield to somewhat, authorizes theologians to hold that not all that man perceives as a miracle caused by God has to necessarily require divine acts formally distinguishable from the course of ordinary Providence. The Old Testament already used some of the terms habitually indicating a miracle, such as the Lord's 'mighty deeds' (Hebrew *gedulôt*) and 'wonders' (Hebrew *nipla'ôt*), even in cosmic contexts, stressing the 'miracle' of the works of creation and that of God's providential care for all things. This is another sign that strikes and attracts the subject, a proof of the ontological dependence of the universe on its Creator, conveying a certain manner of God's calls on his creature. Many of the events that in all sincerity we call miracles may have an explanation which does not require transcending the natural order. Nothing prevents us from thinking that the passing of the Red Sea during the Jews' exodus from Egypt may have been made possible by the favorable event of an ebb tide lasting long enough for the transit of the fleeing people, or that an unexpected healing, entreated from God by a sincere believer, may be accomplished thanks to the sick person's powers of recovery. The miracle's psychological perspective is still unchanged and valid in these examples, whereas its ontological aspects would be incorporated into the

agency of ordinary causes.

At the same time, the necessary balance between the semiological and ontological aspects does not allow for ‘miracle theology’ as a whole to be absorbed into God’s ordinary Providence, choosing to exclude other causal actions of God on and in nature [12], that we might consider extraordinary or special. Such a view would fail to explain the essence of a miracle, as a sign of God, which is forceful, striking and shaking when it crosses a person’s path. The Christ event, the miracles pointing to him and deriving from him, represent, on equal footing with the whole history of salvation, a sort of bursting of God into people’s lives. In addition to ordinary divine Providence, there must be the also possibility of miracles showing the character of immediacy and of the unusual, as events which shake and heal, placing the burden on man to recognize the Creator’s hand in them. They are works that are often meant to surprise, but always surely meant to stir up or confirm our faith. This is the meaning of Jesus’ appeals in the gospel of St. John: "Believe me that I am in the Father and the Father is in me, or else, believe because of the works themselves" (Jn 14:11). Or also: “If I had not done works among them that no one else ever did, they would not have sin; but as it is, they have seen and hated both me and my Father.” (Jn 15:24). These “powerful works” (Gr. *érga*), which no one else has ever performed, are not miracles *only*, since they refer to the entire Christ earthly, particularly His death and resurrection, but they are *also* his miracles.

A miracle is and always will be a *religious event*, for it concerns the relationship between man and God, and must therefore always be presented as such. Yet, the wide range of categories underlying the notion of miracle makes it very difficult, perhaps impossible, to put forward a universal definition of it, since it touches on cognitive, philosophical as well as scientific contexts, each undergoing its particular historical development. There are, nonetheless, unambiguous traits pointing to a miracle’s recognition which can be brought together into a sort of definition as a working hypothesis, useful for theology, fundamental theology in particular, in addressing different contexts. By taking other authors’ contributions as a starting point (cf. Latourelle, 1987, p. 373; Padgett, 2012, p. 535), I offer here a possible definition of miracle aimed at its recognition:

it is an event of divine revelation perceived by a human subject, within his/her religious relationship with God, as an extraordinary and wonderful sign of God’s merciful and saving presence in his might and love; an event in which God manifests his presence as a Creator freely exerting his causal action from nothing and on nature: both by bringing about in nature and in history something other-than-nature, and by causing within nature what pre-empts and reveals in it the eschatological logic of the submission of the whole of creation to the Paschal mystery of the Word incarnate; and, also, by bringing about the wise dispensation of his benefits to man, through his provident dominion over all things.

The above formulation looks meaningful also for those familiar to a rational scientific context. The relationship between God and nature is described in terms of a causal action ultimately resting on God’s status as a Creator. Any possible difference between God’s ordinary and special actions is not based on such categories as ‘intervention’ or ‘efficient cause.’ Rather it is made intelligible by radically stating his status as a creator *ex nihilo*; or his universal design of creation and salvation, centered on Jesus Christ’s Paschal mystery and therefore pertaining to the order of final and formal causality; or, finally, the cognitive perspective belonging to the personal and religious spheres characterized by the notion of Providence. The ontological levels involved here are also relevant for scientists. Indeed, the scientific method, from within itself, is able to appreciate the need for those logical and ontological foundations that make scientific knowledge possible – the scientific method itself has no authority over such foundations, but it recognizes their existence reasonable and understandable. Supported by a suitable metaphysical approach and by an adequate philosophy of nature, theology can show science that the Author of a

miracle can exert his radical causality on those foundations, because he is their first Cause and their ultimate reason. Theology can thus introduce a miracle as something that, despite occurring in nature, must *point to a subject other than nature*. The reference to such an "otherness," that is God's as subject, does not point to the idea of intervention or efficient causality on things, but rather to the idea of ontological or formal causality, a notion that, far from contradicting, degrading or overriding the scientific method, simply *trascends* or *underpins* it, providing nature with the necessary information for its own sustenance and operations. Such an otherness is perceived by researchers who reflect on science from a philosophical point of view and in some cases it is thoroughly postulated, as happens when reflecting upon the "theory on foundations." (cf. Strumia, 2009; Tanzella-Nitti, 2010).

Just as individual scientists – when supplementing scientific method with common sense, with spontaneous philosophy, as well as with other reasonable sources of knowledge, guided by their illative sense – manage not to confine themselves to recording the occurrence of unusual events with unknown causes, but are able to conclude that the event observed is *more exceptional* than the mere ignorance of its causes may suggest (as in the case of the multiplication of bread, of walking on water or rising from the dead), because they exceed any "natural" behavior, whatever meaning one wishes to give this adjective; so too, the scientific method, formally called upon, can conclude that the cause of some events (for instance the reversibility of irreversible phenomena) is not simply unknown, but such a cause has to have a relationship with the whole of reality, similar to the very foundations of being and knowledge, although the scientific method is inadequate to deal with these foundations and may only point at their existence. If it is presented in these terms, a miracle does not make science suspicious, because it points at science's foundations. As remarked by Luciano Baccari, "science assumes the very existence of its object, that religion expresses in its cosmological eloquence; someone who is afraid of the argumentative (cosmological) reason cannot be called religious, nor someone who is afraid of miracles be called a scientist."(Baccari, 2005, p. 161).

VII. The Presence and Reality of Miracles in the Experience of Faith

1. Do Miracles Happen Today? The question is not rhetorical and two considerations are enough to prove it. The first consideration is that there are various historical sources, beginning with the 17th century, which report numerous testimonies of episodes considered to be unexplainable and about which even scientific observation was able to offer certain documentation. For the most part they are healings that occurred in some religious context, that is, a context related to prayer or other manifestations of faith. Particularly known in Europe (in part for their impact upon public opinion) are the miraculous healings which have taken place in Lourdes, France at the site of the Marian apparitions of 1858. The second consideration is that the Church undertakes a specific trial-like process in order to verify the miracles attributed to the intercession of those people for whom, after their death, the causes of beatification and canonization have been opened. The procedure, which started with Benedict XIV (1740-1758), has received a precise codification in the legislation of the Roman Catholic Church. The canonical trials of this type have been countless, each one accompanied by appropriate documentation whose analysis and evaluation is entrusted to commissions of experts in the medical-scientific field.

One cannot doubt that the "topic of miracles" continues to belong to the life of faith of the Church. In praying, the faithful quite often invoke miracles on behalf of someone. Such requests for miracles, however, may stem from various intentions, including attitudes which can even distance themselves quite a bit from an authentic Christian religious life. At times, the crucial Christological-salvific reference is lost and asking for miracles becomes an appeal for "extraordinary deeds" sought out for utilitarian purposes. Or, seeking after miracles may at times give rise to expressions that could even contradict some

central aspects of Christian Revelation. Further considerations on this theme are offered by the document from the Congregation for the Doctrine of the Faith, *Instruction on Prayers for Healing*, published on November 24, 2000.

Within an authentic experience of faith, a further example of miracles is that which we could call "spiritual miracles"; that is, those conversions of heart that the people of God ask for themselves and for others, and which are possible to experience under the form of the fruits of the Spirit, realities which certainly escape the realm of any formalization or statistics. Concerning this last type of "miracles" the three dimensions of a miracle may also be found. The objective aspect is that of an unusual event represented, for example, by the radical, sudden, and stable way in which one decides to live according to a Christian commitment, a commitment which had always been held back up to that moment. The semiological aspect could refer, for example, to the fact that this same event is understood as a sign or message addressed by God to someone. The ontological aspect, on the other hand, here concerns a different order, that of grace. These are events that demand nothing from science inasmuch as neither the laws of nature, nor phenomena which can be objects of empirical experiments, are involved (though common sense and possibly the psychology of religion might accept the presence of something uncommon or extraordinary). Nonetheless, precisely due to the lack of an "empirical background" against which to evaluate the occurrence of something which exceeds the natural order, this genre of spiritual miracles are not considered in the trials of the canonization of saints. Though their significance for the life of faith is clear, in the context of canonical procedures they are not considered proof of a miraculous event having taken place.

Concerning medical healings, which represent the great majority of events the Catholic Church today qualifies with the term "miracle," the healings claimed to have taken place at Lourdes for almost 150 years (since the beginning of Marian devotion there) have been numerous. Over a thousand healings have been claimed, but canonical procedures have been issued for only about seventy of them. Among the most well-known, the case of Marie Ferrand is worth mentioning. Sick with tubercular peritonitis, she was accompanied in person to Lourdes by her agnostic doctor Alexis Carrel (1873-1944) who would later win a Nobel Prize for medicine in 1912. In 1902, he was an eyewitness to the event which became the determining factor for his conversion to Christianity (see Carrel, 1950). Salvino Leone (1997) offers a comprehensive catalogue of the unexplainable healings officially recognized by the Church as having taken place between 1858 and 1976 in this small French town. The most frequent cases involve various types of neoplasia, multiple sclerosis, and tuberculosis, but sudden healings of compound fractures and blindness were also frequently recorded. Dario Composta (1981) gathered an ample, more general collection of extraordinary events examined by the Church between 1920 and 1970. A more popular work is the research published by Alfred Lapple, which presents the anthological documentation corresponding to more than twenty miracles that occurred in various places and for which there is sufficient historical record (see Lapple, 1989). He reports of, among other things, the bringing back to life of the fourteen-year-old Jerome Gerin who drowned in 1623 at Ornay, near Geneva. The young man was brought back to life a day after his drowning through the intercession of Blessed Francis de Sales (1561-1622) when Jerome's body was recovered from the water. Pope Alexander VII (1655-1667) was able to formalize this miracle on the occasion of the canonization of the French saint. Another well-known event which was historically well-documented by the civil authorities was the "Miracle of Calanda" (near Saragossa, Spain). In 1640 a young Spaniard, Miguel Juan Pellicer, unexplainably received the restoration of his right leg, three years after it was amputated following a grave accident.

Regarding phenomena not arising from medical healings but instigating vast devotion nonetheless, the exceptional formation of the image of Our Lady of Guadalupe merits our attention. The image appeared in 1531 on a rough fabric of jute cloth as proof of the messages of spiritual conversions delivered to the

Indian Juan Diego and which even today remains in an optimal state of preservation due to unknown causes. Among events of greater public interest, the “Miracle of the Sun” stands out. It took place in Fatima, Portugal on October 13, 1917 and was interpreted by the majority of those present as a confirmation of the Marian apparitions at Cova da Iria. The phenomenon (anomalous motions of the sun on the celestial sphere) was not, however, recorded by any scientific observations and was the object of often contrasting descriptions. These varied descriptions point to the possible presence of psychological factors on the part of the observers and suggest some reservations regarding the physical-objective value of such an event.

2. The Evaluation of Miracles in the Canonical Procedure for the Canonization of Saints. The probative role of miracles in the canonical trials for beatifications and canonizations is a significant example of the interdisciplinary analysis of miracles (cf. Gutiérrez, 1998). John Paul II reformed the canonical procedures for the evaluation of miracles (*Divinus perfectionis Magister*, January 25, 1983), but the general structure is still the same as the one set up by Benedict XIV (*Opus de Servorum Dei beatificatione et Beatorum canonizatione*, 1747). Canonical inquiry includes a judgment regarding the sanctity of life and the heroic degree of Christian virtues evident in the candidate for canonization. The inquiry is performed through a canonical trial, a trial that, naturally, has the limited certitude of every historical reconstruction. For this reason, the Church wants to seal her inquiry with a guarantee that has God alone as its author (see above, III). The proof of a miracle having taken place and the examination of the virtues in a candidate’s life have a complementary value. The first seeks the divine “signature” on a judgment (that is, the eternal salvation and beatific vision of a faithfully departed person) of which only God Himself knows the outcome. The second assures that an extraordinary deed recognized as a miracle does not lose its reference to Christian sanctity and therefore to a spiritual and religious context. It aims to avoid the risk of reducing a miraculous deed to something simply marvelous (or even magical).

In order for the Church to formulate the testimony of a miraculous healing, the decree of Benedict XIV required the simultaneous presence of seven criteria (cf. Leone, 1997, p. 35). They are as follows: i) it is necessary that the sickness be considered grave and serious, something which renders a cure impossible or at least extremely difficult; ii) the extraordinary deed must not overlap with that which could reasonably be considered the beginning of a natural healing; iii) no medical cures can have been applied regarding the illness in question, or if they have been applied, they must not have caused any positive effect; iv) the healing must have taken place immediately and instantaneously; v) the healing must have taken place totally and definitively; vi) the healing must not have followed upon any physiological crises which at times resolve certain pathologies in an unexpected and sudden way (for example, by means of the expulsion of foreign bodies); vii) the illness, in the end, must not have returned after a certain period of time. Even though they reflect the language of the time, the criteria given by Pope Benedict XIV show a noteworthy formal rigor, respectful of the methodology of the sciences.

Today as in the past, the Church does not ask medical experts to judge whether or not a miracle has taken place, or to define what a miracle is. Rather, the church asks medical experts simply to determine whether we find ourselves before an event, perceivable by our sense experience, which goes beyond the order of known natural causes (at least according to the current “state of the art” knowledge held in a specific scientific field). In the evaluation of the evidence for the trial, “The case must above all be accompanied by the necessary documentation so that the members of the medical Committee are able to establish the precise diagnosis, the therapy used, and the prognosis in order to give, in the end, their own opinion regarding how the healing occurred. Regarding how the healing occurred, only if the majority of medical experts respond that the fact appears to be unexplainable according to scientific knowledge can the proposed case then pass on to be examined by the staff of theological consulters, and after that by the members of the Congregation (for the Causes of Saints)” (Gutiérrez, 1998, p. 502). It is worthwhile

noting that for many of the extraordinary events recorded in history (one thinks of the Miracle of Calanda or of the first healings at Lourdes in the 1850s), the significant advances in medicine in the last two to three centuries have not modified the "current state of knowledge" to such a point requiring judgment on these past miracles be altered. Leone observes that, "to respond to the ambiguous question 'what does medicine think about' such facts, we can say that to think anything about such phenomena is not relevant to its epistemological status, i.e., to medicine's specific nature. In a certain sense, given the empirical-experimental (and not speculative) nature of such a discipline, there exists a total *impossibility* for medicine to enter into such a question" (1997, p. 38). In other words, medicine [25] as a science is not asked to determine anything about such miraculous events. Instead, the situation of one who practices medicine is different. Here the author emphasizes that it is necessary to avoid, "two contrary attitudes, both of which are incorrect. On the one hand, there is the attitude of *positivistic determination* in which a doctor, while assessing the occurrence, seeks any means, even resorting to artificial acrobatics, to dismiss the unexplainable event […]. On the other hand, the attitude of *fideistic naivety* is one that seeks to 'favor' an interpretation of the phenomenon as arising from unnatural causes, perhaps by manipulating some of the information, and being ready to discover traces of the supernatural in every event related to the illness or to the sick person in question" (pp. 38-39). I add to this that if medicine can remain "impassible," the personal involvement of doctors as sincere researches of the truth of things is not confined, in negative terms, to avoiding the risk of falling into one of the two attitudes mentioned above. In positive terms, the researcher's involvement would include the desire "to want to understand more" possibly leading, as in the case of Alexis Carrel, to a greater and less reductive (and therefore truer) scope of understanding one's own "object" of study, that is, the human person and human life.

3. Eucharistic Miracles: A Special Case Concerning Faith and Science. The Eucharistic conversion, that is, the substantial change of the bread and wine into the body and blood of Jesus Christ cannot, strictly speaking, be considered a "miracle." In fact, there is nothing that appeals to the senses in an unusual or miraculous way as is required by one of the three traditional aspects associated with the theological approach to miracles (see above, III). The theology and Magisterium of the Catholic Church speak of the Eucharist as a "mystery" rather than as a miracle. Nonetheless, through the course of history, several unusual and observable events related to the Eucharist (events which specifically implicate phenomena that can be experienced) have taken place. Such events are commonly called "Eucharistic miracles." Classical anthologies on the Eucharist offer a recapitulation of them (with much detail in A. Piolanti, *L'Eucaristia. Il mistero dell'altare nel pensiero e nella vita della Chiesa*, [Roma: 1957], pp. 1025-1061; a summary is provided by Birot, "Miracoli eucaristici," in I. Biffi, *Enciclopedia eucaristica*, [Milano: 1964], pp. 819-830). Some patristic works give accounts of Eucharistic miracles, but records are more frequent starting with the Middle Ages. In medieval and modern times various cases have been reported. The following concern consecrated hosts which have bled: Lanciano (8th century); Ferrara (1171); Alatri (1228); Florence (1230); Bolsena (1264); Berlin (1510). Hosts seemingly preserved intact for a very long time are recorded in Morrovalle (1562), Favernay (1618), and Siena (1730). Miraculous healings took place in Paris (1725) and during moments of Eucharistic adoration or benediction at the Marian shrines of Loreto, Lourdes, and Fatima. The historical reliability of the documents is not always acceptable, but in a number of cases it was possible later on to carry out scientific analyses of the relics in question. In this regard, the events which occurred in Lanciano, Bolsena, and Siena are of particular interest to the sciences.

The episode which took place in the 8th century in the monastery of Saints Legonziano and Domiziano concerns the experience of a Basilian monk who, troubled by doubts about the real presence of Christ in the Eucharist, during the celebration of the Holy Mass witnessed a sensible transmutation of the Eucharistic species into flesh and blood. The relics of that conversion are preserved today in the church of St. Francis. The fragments of flesh have undergone chemical-biological analysis and were observed to

have the nature of muscular fibers, identified as myocardium tissue, whereas the clots of coagulated blood turned out to be human type AB blood, which is the same type revealed on the Shroud of Turin [26]. A detailed description of the history of the miracle and the analysis can be found in the account of B. Sammaciccia (*The Eucharistic Miracle of Lanciano* [Lanciano: 1976]).

The Eucharistic miracle of Bolsena, depicted by Raphael in a well-known fresco in the room of Eliodoro in the Vatican Palace, took place in similar circumstances. Also during the celebration of Holy Mass, on an altar at the church of the martyr St. Christina, a priest who was desirous of increasing his own faith in the real presence of Christ in the sacrament saw blood flowing from the consecrated host. In the church of St. Christina, in Bolsena, there still remain traces of blood upon the marble and stones of the altar and on the floor of the church. Traces of blood also remain on the cloth used as a corporal (today conserved in the Cathedral of Orvieto). The miracle happened in the same year (1264) that Pope Urban IV, residing at that time in Orvieto, accepted the insistent requests of Blessed Eva of St. Martin to promulgate the liturgical feast of *Corpus Domini* (Body of Christ). For a historical account of the event, one can refer to the work of A. Lazzarini (*Il miracolo di Bolsena. Testimonianze e documenti dei sec. XIII e XIV* [Roma: 1952]).

Lastly, in Siena, a large number of consecrated hosts were stolen during the sacrilegious theft of a ciborium on August 14, 1730. The hosts were found several days later and displayed for worship by the faithful with great solemnity, but popular practice at the time discouraged their sacramental consummation, unconsciously leading to a veneration which would prolong itself throughout the ages. From that moment onward, some 250 hosts have remained incorrupt and can be venerated by the faithful in the basilica of St. Francis in the Tuscan city of Siena (historical account found in G. Odoardi, *Il Miracolo eucaristico di Siena*, in Piolanti, op. cit. 1957, pp. 1035-1061). Various observations over the years have established the unexplainable preservation of the species of bread. This was confirmed by people who devoutly consumed samples of these hosts and also by repeated chemical analyses (cf. S. Grimaldi, *Uno scienziato adora*, [Siena: 1956]). While they each have their own particular details, the miraculous nature of the events reported at Lanciano, Bolsena, and Siena all consist in the presence of visible effects connected to the anomalous behavior of biological and chemical substances. In the first two cases, they are the effects of a change of substances that can be experienced. The third case involves the permanent appearance of characteristics which would be expected to change, and whose behavior does not seem that of an ordinary substance.

VIII. Concluding Remarks: Miracles and the Dynamic Relationship between Science and Faith

Miracles—and here I am referring above all to the Resurrection of Jesus Christ and His miracles from whose distinguished relationship with the cosmos flows the understanding of every other miracle—are, and continue to be, signs of both the credibility of faith and salvation. A purely symbolic, subjective, or metaphorical interpretation of them would be theologically insufficient and would imperil the understanding of Christian Revelation. From this point of view, I suggest that the affirmations of the First Vatican Council (1870) are still relevant today: “God has willed that to the internal aids of the Holy Spirit there should be joined external proofs of His revelation, namely: divine facts, especially miracles and prophecies which, because they clearly show forth the omnipotence and infinite knowledge of God, are most certain signs of a divine revelation, and are suited to the intelligence of all” (DH 3009). The same Council held it to be contrary to the deposit of Revelation to maintain that “Miracles can never be recognized with certainty, and that the divine origin of the Christian religion cannot be legitimately proved by them” (DH 3034).

The problems scientific epistemology [4] can encounter when trying to interpret the status of the laws of nature are not such as to oblige theology to detach itself completely from the sciences, orienting its work toward defining and understanding miracles while losing contact with the scientific observation of nature. This bridge "from theology to the sciences" does not "stand or fall" with the concept of the laws of nature [3] (or with the understanding we have of these laws). Rather, it stands or falls with the realism [27] of our knowledge of nature, i.e., with our capacity to place ourselves before reality as something which is not ambiguous and about whose behavior our intelligence can draw conclusions that are certainly partial and capable of improvement but are nonetheless true and in certain respects are also non-reformable. This is the "epistemology," in my opinion, with which a bridge between the theological explanation of miracles and the rationality of the sciences "stands or falls."

In the dynamic rapport between faith and reason, miracles alone are not enough to bring about an act of faith in a person. The Gospels show a clear "circularity between faith and signs." Signs are wrought so that one will believe, but to recognize them as signs a right disposition of the heart is necessary. As Blaise Pascal has pointed out, miracles give proofs but they do not prove, they rouse faith but by themselves are not enough for having faith. A judgment of the heart, not just the rationality of logic, is required and the gift of grace is necessary as well (cf. *Pensées*, nn. 750, 754). The disposition we need for "recognizing a miracle" is an openness to faith, not a manifestation of an already formed faith. Miracles maintain their appeal as "preambles of the faith." Though insufficient by themselves, they are significant factors whose appeal the human person can reasonably use within the logic of a strategy that employs the "convergence among different signs," as J.H. Newman explained so well. The path toward the search for God does not stop at miracles, but once one has understood their intimate relationship, one should patiently ascend from "miracles" to "The Miracle" of Jesus Christ Himself, of His identity and credibility, and of His resurrection. This is the only miracle that on its own can justify a human choice toward the act of faith, allowing it to remain a fully "reasonable and humanly adequate" choice, an act whose being brought to fulfillment always remains a gift of grace.

Theology can overcome the opposing obstacles of interventionism and an anonymous naturalism, continuing beyond them along its course of *intellectus fidei*. The determination that "facts exists which surpass the natural order" continues to be meaningful also for scientific rationality. The discernment of miracles remains an important, and in certain cases attractive, interdisciplinary activity, not because it is directed toward investigating oddities, but insofar as it helps us to understand up to what point God can transform and elevate a nature which He created in Christ and for Christ, and up to what point nature is capable of "revealing" such a Christological ordering and centrality.

I shall conclude with two final questions. Can we say that life is a miracle? Or, also, can we say that the universe [28] is a miracle? If, as we have seen, it is not justifiable to "assimilate" the notion of miracle into the complex, emerging, ever unpredictable and creative processes of nature, when we consider the universe and life "in their singular and surprising uniqueness"—the universe as "the totality of that which is placed into existence" and life as "my personal and unrepeatable life"—a path is thus laid towards a new reflection. The psychological, ontological, and semiological aspects, characteristic of every miracle, all appear to be verified. In both cases, the universe and life, we are dealing with sensible facts, facts which can be experienced, but certainly also extraordinary facts whose "gratuitousness" brings an amazement that goes beyond the order of nature. I say this in the sense that the universe points beyond itself, and one's personal existence points beyond life as such. Their author is God, in that both of them bear His signature, or better, His image. Both of them are for us a sign, which by means of the two classical paths of reason, the cosmological and the anthropological paths, bear for us the message of the existence of a Creator, better yet, of *my* Creator: "You formed my inmost being; you knit me in my mother's womb. I

praise you, so wonderfully you made me; wonderful are your works! My very self you knew; my bones were not hidden from you, When I was being made in secret, fashioned as in the depths of the earth. Your eyes foresaw my actions; in your book all are written down; my days were shaped, before one came to be" (*Ps* 139:13-16).

Read also: Gospels [8]
Laws of Nature [3]
Mystery [2]
Nature [29]
Realism [27]
Additional Related Documents: Augustin of Hippo, On the Theology of Miracles [30], 426
Thomas Aquinas, On the Theology of Miracles [17], 1265-1274
Jacalyn Duffin, Religion, Medicine and Miracles [31], 2009

Documents of the Catholic Church related to the subject:
Abbreviations and complete titles of the documents [32]

Council of Ephesus, DH 260; DH 2753; DH 2779; Vatican Council I, DH 3009, 3034 [33]; Pascendi, DH 3485 [34]; Humani generis, DH 3876 [35]; Dei Verbum, 4 [36]; Lumen gentium, 5 [37]; PCB, The Historicity of the Gospel, 21.4.1961, DH 4404; CDF, Instruction on Prayers for Healing [38], 23.11.2000, ORWE 6.12.2000, pp. 9-10. John Paul II: General Audiences from 11.11.1987 to 13.1.1988 [39].

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Links
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