

# ABOUT FRANCISCO DE VITÓRIA. PROJECTIONS IN TIME. SOME THEMES

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## **Abstract**

This text corresponds to the speech given on October 10<sup>th</sup> 2025 at the Colloquium entitled *The discourse on human rights from Francisco de Vitoria to the present day*, held at the University of Salamanca between 9 and 11 October 2025. The Colloquium was an initiative of an Organising Committee, in which Professor Esther Quinteiro (University of Salamanca) and Professor Cláudio Brandão (PUC Minas Gerais) deserve special mention.

## **Keywords**

Vitória. Positivism. Pluralism. Method and Law. Law and Politics.

[1] Francisco de Vitória, despite the prominence he enjoyed at the School of Salamanca and the important collection of topics he dealt with, is today, as an intellectual, somewhat confined to the mere historical dimension. This confinement is perhaps less noticeable in Spain, where he continues to be considered and studied from a broad perspective. In Portugal, however, the legal themes he cultivated are almost the only ones that still earn him references, and even then usually only in brief lines that do little to distinguish him from his

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contemporaries, as if he were a fungible personality in an undifferentiated whole.

It could be assumed that his erasure outside Spain is explained by the fact that he often focused on problems that, at the time, affected the Crown's relationship with the West Indies. However, when his work is considered as a whole, this assumption falls apart.

In addition to being a leading figure in theology *stricto sensu* and humanism, in the sense of a timeless focus on humanity as a community and on the individual as a unique and unrepeatable being, his work refers to subjects that are now the subject of renewed attention in legal science, international relations and economics. Among others, fundamental rights, political science, in particular the limits of civil power and what could almost be described as the anticipation of the social contract, international law, in particular the law of war, and economic science, with regard to taxation, labour, fair wages, inflation and price as a reflection of the value of goods. These alone show that his contribution to European culture and to research in some areas of contemporary science deserves attention, regardless of the country where it occurs or the nationality of those who consider it. In short, he was an author who did not limit himself to the traditional aspects of a certain field of knowledge. He tried to go further.

Furthermore, with regard to Portugal, the School of Salamanca had a significant impact on the Schools of Coimbra and Évora during the humanist period, through which Vitória's contribution spread throughout the country. However, these schools are now the subject of little attention, seeming to be viewed more as a collection of memories stored in a chest whose lock is somewhat jammed by time

and lack of use, than as moments of remarkable creation in various fields scientific<sup>2</sup>. This is somewhat paradoxical in a country that has not had so many outbreaks of high intellectual construction linked to university centres in its history, but perhaps explains why Vitória has been dragged into the same chest. However, at the time it was very well known and few prominent national authors did not read it, through the class notes written by students and later published. The same happened in other countries. Why did the flame of which it was an exponent go out? There are possible causes, but this is not the time to expose them<sup>3</sup>.

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<sup>2</sup> The School of Coimbra had among its ranks some of the most prominent names, including several with roots in Spain. One need only think of Francisco Suarez, who, although based in Évora, spent time in Coimbra, or Alfonso de Castro, a criminal lawyer who anticipated Beccaria on certain issues, without the Marquis apparently realising it, or without mentioning the influence he had received from him. In this regard, I would like to highlight the contribution made by Professor Sílvia Alves, currently perhaps the leading Portuguese expert on the history of criminal law, to the Colloquium. Listening to her quote passages from Alfonso de Castro's texts, it was almost as if one were hearing the message contained in *Dos Delitos e das Penas*, written much later.

<sup>3</sup> It is interesting to note that an author such as Grotius quotes Vitoria without hesitation, showing that he held him in high regard, even though they took different paths. Hobbes, the great theorist of rationalist absolutism, quotes Grotius extensively but overlooks Vitoria. It is impossible that he did not know him as an author and had not read some of his notes. He was too cultured and intelligent for that. Religious wars were at their height in Europe and left their mark. The animosity between England and Spain, which reached its *climax* with the initiative of the Spanish Armada, was to make everything Spanish abhorrent in the eyes of the English. Multiplied by other situations and by the countries of the Reformation, could this

This Colloquium is, together with others, an initiative that commemoratively seeks to highlight his legacy to humanism, not only in its historical dimension, but also, and perhaps even more importantly, in its possible relationship with the present day, in a world where new doors to knowledge are opening almost daily, albeit not always in the best way or with the best intentions. The collaboration in this effort was commendable and, to that extent, the organisers deserve to be congratulated.

## I

[2] The following intervention does not intend to revisit Vitória and his themes. There are participants in the Colloquium who will do so in a much more profound and assertive way than we could.

The figure of the theologian served as inspiration for us to reflect on themes that, although they transcend him – since they project themselves beyond his time – can be linked to the timeless profile of his work. Being to a certain extent perennial, this dimension was the anchor through which we linked them to the person.

A preliminary summary of the main themes taken into account is justified.

a) The first focuses on the issue of knowledge, understood in a broad perspective as knowledge extended to multiple areas, regardless

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be a possible explanation for the question left in the text? It does not repel us, for the absurd interdependencies between science and politics are timeless.

of the field or subject, and as a context for research and scientific and cultural reflection in general.

The motivation for this line of thinking came from the conviction that Vitória was an intellectual who was open to issues that were still rarely addressed at the time, as they fell outside the current themes considered relevant, useful or even lawful. It was the realisation that some of these themes had only a remote affinity with theology, even though in a broad sense this discipline could serve as an umbrella under which all knowledge could be sheltered, that suggested to us that we were dealing with someone open to *broad knowledge*.

Vitória assimilates, in fact, components of the innovative line that was beginning to make itself felt. Although her work is, in many respects, dated, it is clear that the openness she displayed was part of a path that many intellectuals would later follow and which would become particularly visible during the Enlightenment at different levels. The path was that of the breadth of knowledge, motivated by the idea that useful elements for improving knowledge of the world could be extracted from all subjects and that the use of human reason as an instrument was valuable for achieving such breadth. These two levels would result in an exponential increase in knowledge over time and give rise to lines or currents of thought that are striking today, in some cases conflicting, on the understanding of the human condition and its relationship with nature.

It is worth clarifying this line of thought and its underlying objective a little further.

At the time of Victoria, when the School of Salamanca took its first steps at the University created at the beginning of the 13th

century, knowledge was still expressed within a framework marked by a strong compartmentalisation of the branches of knowledge<sup>4</sup>. There was a lingering influence from times dating back to the end of Roman rule, when, due to various circumstances, it had become difficult to value knowledge as a whole that could be concentrated in the same individual under different valences, from which valuable reflections could be extracted and transmitted. Overlapping boundaries were certainly perceived, but the divisions were accepted formally or informally. In some ways, this segmentation corresponded to what we might today call *narrow-band knowledge*, which, as a formative and cultural paradigm, is once again tending to impose itself to the detriment of the other. It is also similar to today's specialisation, although the particularism that accompanies it, given the level at which it occurs, makes comparison difficult in this case.

With Humanism, the breadth of knowledge would be recovered as a goal and many would take it on, becoming *broadband* intellectuals. This breadth became, in a way, one of the hallmarks of the era. Knowledge was associated with a possible worldview. In later periods, particularly during the Enlightenment, broad knowledge would even become synonymous with erudition and belonging to the intellectual "elite of the elite." It was therefore common for the leading figures of European culture to be notable scientists in fields that, at

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<sup>4</sup> Isidore of Seville was an exception, as evidenced by his *Etymologies*. For some reason, this work became the European encyclopaedia of the following centuries, at least until the 13th century. It was apparently understood as incorporating a relatively complete body of knowledge, with no other works of similar scope appearing in the immediate future.

first glance, were completely different. One need only recall figures such as Hobbes, Leibniz, and Goethe, among others, to understand this.

The nineteenth century, perhaps as a result of significant progress in the study of nature and the inherent increase in available information, began to see some regression in this regard. The distinction between exact sciences - which, in addition to mathematics, tended to include those that dealt generally with nature, even though in fact many of these can only be considered as such in part - and the humanities, was the cultural response to the progressive distancing between those who focused more on the social dimension or the classical problems of philosophy and those who focused on nature, its origin and essence. The separation was gradually accepted, although with varying incidence and intensity depending on the location and circumstances. Naturally, in countries where knowledge had not evolved as much, or as quickly, the separation took longer.

The reasons varied. In some cases, the specificity of mathematics used as a common resource in some areas of the natural sciences made the latter more difficult to access and therefore more reserved. In other cases, pure disinterest in the experimentalist vocation that guided the natural sciences acted as a demotivating factor. Other reasons certainly existed. In the opposite direction, a similar drift occurred. The general trend was, therefore, for naturalists to concentrate on their domains, disconnecting themselves from the humanities and vice versa. It is interesting to note that the phenomenon also occurred within these two areas, between fields that could be integrated into them. There, too, compartmentalisation gained strength. Perhaps this was an inevitable consequence of the

increase in the global body of knowledge, but it was also the result of an attitude that valued each person's intellectual backyard, enhanced by emerging individualism and liberalism.

In any case, some humanistic areas were naturally more sensitive to the value of knowledge from a broad perspective. This can still be seen today when the work of certain intellectuals linked to these fields is observed. One such area was law, and there is a fundamental reason for understanding this greater sensitivity to such value. Law is a field in which concerns and questions associated with all aspects of human activity and knowledge naturally converge. Scientists in general, regardless of their field, as social beings need the law. Lawyers, as holders of knowledge that is necessary for everyone, can make it available all the better if they know something of the knowledge of those who resort to them. Lawyers therefore have, in abstract terms, a vocation in terms of availability – perhaps enhanced by the rationality naturally inherent in the legal profession – although in concrete terms the idiosyncrasies of each individual are decisive. In some other areas, something similar also seems to occur, albeit for different reasons. This is the case in medicine, but in this particular area, the vocation seems to focus on a more restricted set of knowledge outside the *core*.

The variation between *broad knowledge* and *narrow knowledge*, its causes and implications for European culture in general and for some of the major issues that run through it, was therefore one of the aspects we set out to reflect on.

b) In conjunction with the line just mentioned and, in a way, as a consequence of it, the profile of the 17th-century Salamancan theologian led us to other themes.

The most relevant in this group focuses on the involvement of reason, *stricto sensu*, as the human capacity to produce new knowledge through its own powers, including reflection. In this sense, we can speak of natural reason, although in a different sense from that given to this expression by theology, signifying the rationality present in man through the soul, that is, through the spirit that connects him to God and which, with death, will return to its origin. In this sense, natural reason had a divine foundation. From a purely human perspective, natural reason stems exclusively from the capacities of the being itself, independently of any relationship with the divine. The idea that, if God did not exist, natural reason would nevertheless exist, fits into this perspective.

The theological universe that shaped Vitória did not neglect the Christian vision, keeping it firmly integrated into the matrix. But, and this point is relevant, it tended to progressively value human reason as an instrument dedicated to knowledge. Over time, for many authors, it would even become the instrument to which, par excellence, all scientific knowledge had to be linked. With Descartes, in the final phase of Humanism, it would reach a level of recognition that would no longer be questioned, despite the fact that, in modern times, with notable arguments, intuition had been proposed as an alternative. Particularly visible in the natural sciences, which were influenced by experimentalism, this openness would also occupy a similar position in the humanities when, at a later date, Kant took it as the foundation of his work.

The association of human reason with extraordinary advances in knowledge and the unravelling of the mysteries of nature, which occurred mainly from the 19th century onwards, generated a

widespread conviction among the intellectuals who scrutinised it that through it a full understanding of nature would be achieved. In a way, this was a more solid revival of the Enlightenment conviction that reason was the gateway to truth, a belief that had never truly been forgotten. The decisive impact would occur at the end of the first quarter of that century, essentially through the school of thought that would be called positivism.

Founded in the field of emerging sociology, the idea that rational knowledge is positive and that it draws its strength from experimentalism gathered momentum and became a broad spectrum current in European thought, probably the most influential in recent centuries in various areas of knowledge. At first, it seemed to be more suited to areas geared towards experimentalism. Sociology and the natural sciences fit into this framework better or worse. But it quickly colonised others. Associating positivity with reason or focusing solely on it, some scholars even ended up postulating the *death of God* as unnecessary in the face of the expectation of a full rational explanation of human existence. Others, also claiming reason but following different paths, not so much, thus opening up interesting cleavages within the same basic stance that can still be found today.

As a school of thought, positivism would also migrate to the legal sphere. At first glance, the connections were not obvious. Experimentalism would hardly fit into such an area. The connection to nature was also not clearly perceptible. In any case, what motivated the jurists who moved in this direction was not the search for a connection between law and nature, especially since natural law, as a secular concept, had existed since time immemorial and, as a Christian concept, at least since the 5th century. What motivated them was the

very foundation of law and the level at which its roots should be positioned on the scale of normative perception.

The path they followed was that of valuing human reason in the construction of a framework model for such matters. The main consequence was the refusal to recognise any role for divine reason in this foundation and the placement of law at the strictly positive level, to the detriment of the suprapositive. The reason of the people served this purpose when the need arose to base political society on this line of thinking. Since the reason of the people is only a particular form of human reason with undeniable legal utility, without expressly saying so, legal positivism generally strengthened strictly human rationalism, thus contributing to the devaluation of the need for God, anticipated by others through the idea of his death.

The connection between reason and the positive, the expression of this concept in the field of law and its dominance in the field of natural sciences is, therefore, another aspect on which we propose to reflect.

c) In conjunction with the previous line of thought and, in a way, also as a consequence of it, we will now turn to a third reflection. In this case, the connection to the Salamancan theologian is neither direct nor obvious. But it is possible to find it indirectly. These are aspects linked to *the magna quaestio* of the relationship between science and God, in which, between extreme positions, namely mutual exclusion and indissoluble connection, there are others.

By bringing Vitoria closer to human rationality in the realm of knowledge, his contribution became associated, albeit remotely, with the foundation on which currents of modern European culture were forged. His theological training did not allow him to doubt the

primacy of the divine in relation to the world in its many aspects. Nor did such a possibility surely occur to her mind. But, as in the case of the distinguished Jesuit Francisco Suarez, who can be said to have anticipated jusrationalism by postulating, in circumstances that were absurd to him but which he rationally equated, the possibility of human reason serving as the foundation of natural law, a line of reasoning later used by Grotius in the design of his jus rational system, the simple consideration of human rationality as an adequate instrument for understanding concrete relational situations in life, such as the question of fair price, allows us to consider Vitoria as a brick in this edifice. In this specific case, in terms proportional to the intellectual projection he enjoyed.

Positivism, particularly through the contribution gathered from Darwin's work, later established the unnecessary need to resort to God to explain the evolution of nature and life. Legal positivism, for its part, established the unnecessary nature of the concept of suprapositive law, particularly that which had a divine foundation and had been the basis of theological thought in this field since St. Augustine and especially St. Thomas. Reason arrived at positivism, regardless of whether it presented itself in the guise of human reason in general or the reason of the people.

At various times, the alliance between positivism and reason seemed to inevitably rule out the possibility of God having a place in the edifice of science. In explaining the origin of nature and life, Darwinism would prove to be powerful. Pure exaggeration, for some. In fact, also resorting to reason, metaphysical thinking soon contradicted the arguments at stake, showing that the line in which the divine had a place could continue to be worked on. When the

problem of the origin of life expanded to the plane of the origin of the Universe itself and its genesis, and the impossibility of resorting to Darwinian biological evolution led science to other explanatory paths of similar meaning, once again deistic thinking, equally armed with reasoning based on rationality, opposed it, keeping the alternative open.

Human reason is therefore still far from being a peaceful one-way street, at the end of which definitive and complete knowledge will be achieved. It is not so in the humanities and may not be so in the natural sciences. In any case, reason is not at the service of predefined ideas. It is reason itself that defines the path that beings must follow in the search for knowledge.

Some aspects of this *magna quaestio* will be the ultimate topic of reflection, for which our limited knowledge only allows us to consider possible questions and answers. Obviously, these are not necessary, unique, and even less definitive.

e) One more note. The references contained in the following text are not original. They can be found in publications of different kinds, in the humanities and natural sciences. Some of them are available in accessible public repositories. In the latter case, particularly on subjects more related to physical and cosmological issues, namely in texts of uncertain or unknown authorship, it is only recommended that an effort be made to discern between what is correct or possibly correct and what is invention or mere conjecture without proof. This is often not difficult. Then there are works of scientific dissemination which, because they are by known authors, are easier to evaluate in view of their credibility and scientific background. Even in relation to these, however, they must be read

with a critical eye. There remain the specialist works, and only those who are comfortable with the topics and language used can extract information from them. This is not our case, except in certain areas. The effort made in the text was therefore essentially to organise data and try to present it in a coherent manner, seeking to support reflections on it. At the end, some reference works are indicated.

## II

[3] The outline sketched of Vitória was that of someone who valued knowledge in its broadest sense. Broad, in the sense that the theological basis assimilated in France and Valladolid, as well as its implications, did not prevent him from opening up to marginal subjects. It was certainly the humanist flame flickering in her individual openness to the unknown, equally assumed by other intellectuals of the time, with greater intensity as the 16th century progressed, albeit at different levels depending on the protagonist.

It had been a long journey before such openness became clear on the European intellectual scene.

In the period following Roman rule, usually characterised as the Middle Ages, most scholars in Europe operated within the confines of the Christian view of the world and society, which became dominant after Constantine. Exceptions did not prevail because political sentiment had progressively integrated – in some places very quickly – the associated religious doctrine. Whether out of conviction or lack of access to literary sources incorporating divergent elements, the human universe in which knowledge was concentrated had taken refuge in the model of the world incorporated therein.

The certainty that it reflected the will or reason of God, as Augustine of Hippo and later others had thought, devalued the individual expression of curiosity as an impulse to question the unknown. If it did exist, however, the environment did not facilitate it. Investing in a human characteristic with such potential meant valuing knowledge for its own sake, leading to dialectical debate and dilemmas of reason. It implied compromising with some doubt as to the static nature of God's plan, understood as predefined and known only within the limits of revelation.

The rationalist constructions of antiquity, particularly those of Aristotle, were not unknown. However, they were shrouded in uncertainty as to their compatibility with Church doctrine and were therefore *scientia incerta*. The incorporation of dialectics as an intellectual tool available for academic debate in universities, then on their way to consolidation as centres of learning, would, however, be normalised by Thomas Aquinas. It occurred consistently in those dedicated to law, from the moment Belleperche and Revigny imported it from Paris. To that extent, paired with grammar and rhetoric, both of which were already in common use because they were less prone to metaphysical doubts, dialectics and with it the validation of human reason insofar as it did not contradict divine reason, ceased to be a problem.

The appreciation of individual curiosity as a means to better understand the mysteries of the world, however, implied difficult ruptures due to the potential implications for dominant religious parameters. It was done in seemingly more innocuous subjects, such as law, since this could ultimately be seen as a reflection of a higher order of a divine nature. In subjects geared towards an intimate

understanding of nature and even social balances, it could easily be understood as reflecting a hidden desire to penetrate what had not been revealed by God. In short, it could be understood as revealing a desire to go beyond the knowledge available to humans, perhaps even suggesting a willingness to reinterpret rules that were considered to be in force, thereby interfering with the understanding of the universal order. That is why it was dangerous. Not so much in the objective scope of the word, since the screening of ideas was not yet dependent on structures wielding almost absolute power, as would later occur in the Counter-Reformation, so that this path would hardly entail a greater risk to personal integrity<sup>5</sup>. It was dangerous on a personal, subjective level, in view of the eschatological dimension of life and its divine framework, as most people would understand it. It implied the danger of entering the realm of pride potentially associated with the desire for knowledge, putting salvation at risk. It was an uncertain domain and the ground to tread seemed fragile, even to the most open minds.

Some time later, among reformist and Catholic intellectual elites, albeit with varying degrees of intensity, the model of the world in which human beings were essentially extras in God's plan gave way to another. This did not happen simultaneously across Europe, nor did

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<sup>5</sup> An interesting example, albeit prior to the humanist era, is that of Ibn Rushd, known in Christian Europe as Averroes, who, living in an area of Muslim dominance – al-Andalus – which was by nature dogmatic in religious terms, espoused Aristotelian and iconoclastic views. Another example, this one later, is that of Francis of Assisi, who, although within the confines of Christianity, departed from the dominant line in many respects, particularly that of the Dominicans.

it happen suddenly. It was rather a slow process, initially based on the search for works from Antiquity that were thought to be lost, but in reality many were simply forgotten in monastic libraries, whose reading motivated some to propose new paths and others to accept to follow them or eventually develop them. Humanism did so with the reevaluation of Greco-Roman culture, for some as a factor of personal satisfaction, for others as a way of approaching a new way of looking at God. Curiosity was a divine gift placed in the heart of man, just as natural law was in the Thomist view. It was not necessarily a malevolent attribute. Whether to use it well or badly was up to each individual, as was all human behaviour, and only the concrete use could be accounted for. It was divine in itself, part of the immortal soul, for man had been created in the image and likeness of God. It had to be taken into account, lest the higher design that had made it freely available be devalued.

Whether this understanding was genuine or merely self-justifying, for those to whom openness to human rationality led to some metaphysical doubt, it opened the door to a new way of looking at knowledge.

From a model of conditioned knowledge, we moved on to a broader one based on curiosity, in which human capacity and intelligence were boundless except insofar as they implied the rejection of God. Along these lines, with hesitations, retreats and advances, reason as a strictly human attribute would gradually take over the path leading to knowledge in the major areas of learning. These areas were then, as they are today, essentially two: those devoted to nature, in which dialectics is merely an instrument that helps to scrutinise the truth, and those devoted to the humanities, in

which it is a decisive instrument in the validation of opinion, all the more relevant as it is accepted by all or by the majority. With regard to the former, opening doors in a wall where previously there were only windows facing the divine. With regard to the latter, opening new doors alongside the old ones. In common, a path in which human reason would seek to appropriate the most visible places, but without apparently being able to completely and definitively dislodge metaphysics from them.

[4] Along the way, the intellectual connection between the humanist era and the present day was outlined. During this long journey, questions and doubts arose that together formed an intricate network, for which answers were sought through dialectical and experimental means. As a rule, natural reason was used to substantiate them.

For some time, the most prominent areas of knowledge in this journey were those associated with theology and law. Theology, as a field of knowledge dedicated to interpreting the relationship between man and the divine, often had sufficient breadth to encompass topics that today would be considered the domain of pure and hard philosophy. Law, as knowledge dedicated to regulating relations between individuals within secular society. As a sub-area within law, in the divide between the divine and the human, canon law sought to bridge the gap between the two.

Why do we emphasise theology and law, given that other areas of knowledge have existed since ancient times? It is mainly because they identify intellectual domains on which society has long tended

to base its understanding of its particular organisation and the very existence and meaning of humanity.

Divine reason was the mainstay of theology. Natural reason, in its strictly human dimension, was used essentially to contribute to the formal coherence of the reading of the divine, without reserving its own space in the understanding of the world. In view of the progression of the sufficiency of human reason in this path, it tended towards abstract themes specific to the religious dimension, without prejudice to the concrete ascendancy it maintained in society through the intervention of the Church in the field. Nevertheless, in Humanism, by giving greater weight to human reason, it managed not to become excessively marginalised. The dilemma of the apparent antinomy between reason and faith, worked on by theologians in the 20th century, clearly identifies a theme in which divine and human reason engaged in dialogue.

Natural reason, as a strictly human attribute, was the fundamental pillar of law. Jurists used divine reason when circumstantially necessary in matters over which they felt they did not yet have full control. This was often reluctantly, especially when close to the dynamics of political power. However, the progression of human reason's sufficiency in understanding the world did not remove law from the position it had occupied since the emergence of universities. It adjusted, integrating the innovations suggested by Humanism and Rationalism, even managing to reinforce its status as top knowledge.

As for canon law, the basis for its existence lay in the conviction of theologians and canonists that the Church, for its purposes, was a society distinct from secular society. Whether for this reason, or

because it related to it in terms of collaboration and in some cases even supremacy, it needed a system of rules, that is, a law. However, the dependence of some of these rules on divine reason and, therefore, on theological knowledge, did not allow it to completely detach itself from theology or to fully adjust to secular law. In any case, as it also applied to secular society, it used the contributions of human rationality implicit in secular law, whenever the divine dimension of canon law did not prevent it.

In short, theology and law were for a long time the pillars of European culture. None of the other areas of knowledge confronted them to such an extent until the Enlightenment was already consolidated. The emergence of universities in the medieval period, of which those of Paris and Bologna were paradigms followed throughout Europe, as well as the teaching provided in them, are revealing in this regard.

With the progressive autonomisation of philosophy in relation to theology and the prevalence of law as a broad-spectrum social science from the late 18th century onwards, and in particular with 19th-century liberalism, theology became confined to circles close to the Church. Naturally, the same period also saw the emergence of new knowledge in the naturalistic field. In any case, between the old dualism and the new knowledge, law was able to preserve the greatest share of visibility. The connection to human reason was certainly not foreign to it, and in this field, positivism would be a current of thought that played an unavoidable role.

In this context, that is, in the 19th century and part of the following century, the figure of the jurist managed to maintain its previous relevance and even see it grow. At the same time,

professional diversification was beginning to make itself felt at the upper levels of society, with potentially reductive effects on the breadth of knowledge traditionally cultivated by the intellectual elites. Why would seemingly contradictory trends coexist? This is what we will reflect on next.

[5] Until sometime in the 20th century, although the *timing* may have varied from place to place and situations may have taken different forms, there was often an explicit or subliminal association in Europe between the figure of the jurist and a broad capacity for intervention in society. This association was rooted in the idea of *authority*.

What kind of authority was this, given that the meaning of the word is not unambiguous?

In its current meaning, the concept was associated with some kind of *connection to political power*. It stemmed from the exercise of a portion of state power, in the uncompromising sense of a higher governmental structure accepted as legitimate by the whole or by the majority. With this scope, it was usually related to functions exercised in the judicial or bureaucratic spheres at a higher level. In another sense, it was related to the idea of *socially recognised knowledge*. It meant recognition that, regardless of any connection to political power, this attribute was attributed to those who were recognised as having a level of knowledge or value considered by society to be superior to the norm, valued even when the respective contours were not precisely known. It existed on a different level from that of the State. When there was a relationship with the public entity, the two meanings of authority converged in the same figure. If it did not exist,

or was tenuous, it would exist in the second meaning, as the condition of jurist was sufficient to be intuited as a perception.

There were thus two meanings potentially linked to the figure, the second of which was rooted in the condition of jurist, while the first cumulatively required the exercise of certain functions. For the latter, we will continue to use the term *authority* for convenience. For the former, we prefer *auctoritas*.

*Authority* does not pose any difficulties, as it was linked to notable situations in all politically organised societies and throughout history, varying only in its contours. *Auctoritas*, on the other hand, given its particular characteristics, deserves greater attention.

Its foundations include factors that are partly incorporated into a cultural background dating back to ancient times and partly resulting from empirical observation by society of the environment in which the jurist operated.

The cultural background fits in with the idea, present throughout the generations, that jurists had always assumed, formally or informally, a prominent social position, which, through this and their training, gave them access to levels of influence that were not available to most people involved in other functions. This background was in some ways common to all jurists, given the identical training they all received. Its origins can be traced back to ancient Roman times, when jurists, despite not yet being civil servants, occupied the top of the social pyramid, a position of prominence that would only be challenged at a certain point by politicians with a military

background. This image has survived the following millennia with ups and downs, but has always remained essentially the same<sup>6</sup>.

Empirical factors, on the other hand, are more subtle. They included objective and subjective qualities that, to varying degrees, were associated, or appeared to be associated, with the jurist and his discourse. They were empirically perceived in society when the focus was on the figure and his surroundings. The following are relevant: a) the awareness that he had an intellectual education associated with the University, which was considered the seat of knowledge and whose most prevalent model in the collective imagination was that which linked it to the law; b) the idea that, except for those related to the relationship with God, he knew the rules in force and that these rules were those that in a normal situation – not vitiated by war – governed society; c) the idea that he intervened in complex social cases that could result in life or death, wealth or poverty; d) the idea that he was a source of advice, as he had answers that clarified widespread ignorance; e) the idea that he had access to and used language that was difficult for the common people to understand, which, like Latin in the religious sphere, created a certain aura under which truth and justice dwelled; f) finally, the idea that he had the ability to persuade or convince through his speech.

For a long time, even though modernity may have introduced adjustments, this scenario did not change significantly. There was no

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<sup>6</sup> It should be noted that even at the time of the dissolution of the Roman world, when barbarism prevailed, rendering the figure of the jurist seemingly irrelevant, when the new power surrendered to the convenience of surrounding itself with a cultured elite, jurists quickly regained their former prestige.

reason for this to change, as culture remained concentrated in a small human universe, or, if you will, an intellectual elite, only occasionally penetrated by members of lower social groups, when personal qualities made it feasible and circumstances allowed it, as was the case with entry into a monastic institution composed of *magistri* and possessing a library with resources.

[6] From the 19th century onwards, the spread of education in Western societies advanced significantly. In some countries, this happened quickly. In others, it took longer. The Portuguese case appears to be one of the latter, but it did not miss out on progress<sup>7</sup>. As it is interesting in many ways and can serve to illustrate certain aspects, we will focus on it occasionally in the following lines.

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<sup>7</sup> In part, the country's backwardness in this field was due to the clumsy intervention of the Marquis of Pombal when he expelled the Jesuits. The main reason for the expulsion was that, as an Order, they constituted a centre of resistance to Pombal's Enlightenment and the exercise of his despotic power. Part of their influence stemmed from their preponderance in education in general, due to the dysfunction between the content of education and Enlightenment rationalism. However, the truth is that the Order maintained many primary schools throughout the country, where, in addition to Christian doctrine, children learned to read, write, count and some rudiments of other subjects. Only a minority attended these schools, but they were the only ones available to the middle and lower classes who wanted to embrace what today would be called "social mobility" in an accessible way. With the expulsion, this avenue of learning was destroyed and never replaced. It simply disappeared, and the price was paid in significant delays in the eradication of illiteracy. It was only later, with liberalism, that new attempts were made at this level, developed in the First Republic and then in the Second Republic.

Regardless of variations across Europe, the resistance of *auctoritas* as an integral part of the figure of the jurist remained strong. Can contributing factors be identified? We believe so.

Access to university did not progress as quickly as access to primary and secondary education, and so the pool of available lawyers, although gradually increasing, remained insufficient for the profession to cease being associated with an elite. Training in other scientific areas was gaining importance and enrolment in these areas was also gradually increasing, but the knowledge conveyed there – except perhaps in medicine, but in any case to a different degree and for other reasons – still did not rival law in terms of perceived social importance.

Cumulatively, a new factor would contribute in the same direction. Although objective, the contributory effects were felt empirically by society. What is this factor and why can it be separated from the previous one?

At its core was industrialisation, understood as a surge of economic development with far-reaching repercussions on European societies. Becoming clearly visible in the 19th century<sup>8</sup>, one of its effects would be the accumulation of capital essentially in private hands, enhanced by the limited interest of the public sector in direct involvement in the economy, since the welfare state was still little more than a recommendation in papal encyclicals. This surge led to

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<sup>8</sup> It would enter the 20th century at cruising speed. In the case of Portugal, only in the second half of this century, although there are some examples dating back to the previous era.

the growth of the business fabric and induced the need or convenience of calling on people with higher education to fill senior positions in companies linked to traditional activities converted to industry, larger-scale commercial activities and new tasks, such as services. As the human universe capable of fulfilling such requirements and the mly available in greater numbers continued to be those coming from law schools, we then see the frequent distribution of positions associated with such functions among lawyers, in national and even international entities, in the context of some capital circulation. The most available universe was used, and the phenomenon occurred widely, although it was more socially visible in countries where the industrial segment was smaller, capitalism was more incipient, and higher education was even less diversified. This was the case in Portugal.

As can be seen, these were not state-level positions. Nor were they, in many cases, positions with a markedly legal content<sup>9</sup>. In reality, they were positions that today would be described as management, administration, internal monitoring and economic guidance. And even though specific higher education courses already existed for such subjects, lawyers were used both because they were more readily available in terms of numbers and, perhaps – and this is not insignificant – because of *the authority* that accompanied them. Viewed with the distance that time allows, it would seem that society

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<sup>9</sup> It was the Thomist and Christian vision that remained and remains firmly rooted in theology and even in other areas of humanities.

continued to see lawyers as the natural holders of broad competence for tasks of this calibre.

Were lawyers really well prepared to keep up with this surge of innovation in the economic fabric? If the question is considered rigorously, it must be admitted that this was not always the case, but it did happen, and often with results. Perhaps the popular adage applies here: *in the land of the blind, the one-eyed man is king*.

In any case, there is a certain paradox in this reality. Despite being in an era in which society was already dealing with the diversification of higher education and a certain availability of graduates suited to new professional areas, the position of the jurist still seemed to benefit from traditional ballast. It therefore makes sense to ask the following question. Given that *auctoritas* resulted largely from society's empirical perception of the figure, is it acceptable that this association, even when combined with the greater availability of human resources with higher education, alone explains the wider access to functions outside the immediate sphere of law, or are there other factors that can provide more solid support for this reality? We believe that the answer is yes, and to understand this we will refer to the idea already covered by the expression '*broadband knowledge*'<sup>10</sup>.

It is worth clarifying the essential meaning of this expression, but not before emphasising two aspects.

The first is to make it clear that it is not part of the usual scientific lexicon or everyday language. It is merely the semantic form

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<sup>10</sup> See point 2 above, referring to Francisco Vitória.

adopted to characterise a cultural reality perceptible in certain periods in Western Europe, which we use in a neutral sense, that is, disconnected from any suggestion of value, positive or negative, even subliminally, of the content with which it may be filled. We believe that this is already clear, even without having been emphasised at the time.

The second consists in the fact that it is not a concept formally established by law or other official means. Nor, as far as we know, has it been developed in doctrinal texts or in referable intellectual currents. In short, it would probably be futile to try to establish it outside the concrete reality in which it can be glimpsed from facts. It is, therefore, to some extent cultural, even if it can only be applied to social segments that are part of the higher intellectual class and, at least in part, close to power.

The third consists of its usefulness in associating it with formative paradigms that are perceptible at certain moments, since in certain circumstances and areas of knowledge it seems to have been considered relevant by society and, to a certain extent, adopted as an operational guideline in the design of the model provided by the State.

In these cases, it will be possible to speak of *broadband* or *narrowband training*, as the case may be.

With all due respect, as we have already said, we will focus in the following lines on the Portuguese experience and, within it, on the legal area. With regard to the former, because it is the one we know best and seems interesting to us as an example. With regard to the latter, for reasons already mentioned, it is the figure of the jurist that we have mainly associated with the *authority-auctoritas* binomial that we have been discussing. There is also a third reason for focusing

on the Portuguese experience. While it is true that each politically organised space has experienced and continues to experience its own realities, the Portuguese case has experienced a set of elements at this level, some of which can probably be compared to other national experiences. Not all of them, certainly, but some. In any case, the sequence described is in itself illustrative of the alternatives available to political power in relation to this issue. This is another reason why we consider the experience to be an interesting example.

[7] We identify *broadband education* as a valid educational paradigm in the field of higher education that was still evident in part of the 20th century, but whose roots may go back to the end of the previous century. It appears to be based on two pillars, one relating to *the pre-university phase*, i.e. the final phase of education when future career choices are made, which we will call *the entrance exam phase*, and the other relating to *the university phase* itself.

Associated with the first was the idea that teaching, and in this specific case, teaching geared towards future legal training, in addition to prioritising subjects that were particularly suited to this purpose, should be delivered within a framework characterised by high standards in terms of content and, in particular, the assessment of results. Associated with the second was the idea that legal training itself would benefit if, in addition to dogma and positive formalism, it valued the incorporation of complementary knowledge in this field. Although some of this knowledge was related to subjects that could be learned at other higher education institutions, if integrated into legal training, it represented added value for the lawyer as *the final product* to be made available to society, as it incorporated components with

which the law had a special connection. It was essential that it be taught by teachers with legal training, so that the connection would not be broken. The breadth thus provided would contribute to the training of *broad-based lawyers*, i.e. professionals who, in addition to positive law, were knowledgeable about aspects of the environment with which the legal profession dealt, in particular those related to the human dimension.

Nothing extraordinary, one might say. The law applies by nature to all social life, as it is in the law that society finds the boundaries between what is lawful and what is unlawful, both in general and in the various areas of application. A thorough mastery of knowledge that is complementary or collateral to positive law would therefore broaden horizons and, at the same time, provide a better understanding of the social context in which the lawyer was likely to intervene. The only question would be the calibration of this knowledge and its articulation with the *core* curriculum, essentially consisting of civil, criminal and procedural matters, with emphasis on the former, to which administrative and international matters were later added. All this is true! However, it is one thing for this to occur naturally of one's own volition, and quite another for it to be part of a model suggested, induced or imposed by organised society itself, to be enforced within itself.

In fact, until approximately the last quarter of the 20th century, this paradigm was evident in Portugal, at least in relation to the legal system. University entrance exams emphasised a core set of subjects<sup>11</sup>

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<sup>11</sup> History, philosophy, Latin and a certain variety of modern languages.

that would serve as a basis for future law students to build on their *broad* education. In university education, in addition to dogma and formal logical frameworks<sup>12</sup>, relevant notions of legal policy, economics, history and philosophy, and occasionally other subjects, were considered valuable. This collection was the result of accumulated experience and, as long as the paradigm remained in place, its operationality persisted. In short, jurists had access to a broad educational foundation that expanded their ability to understand the world and enabled them to make more informed interventions. In part, and not irrelevantly, it was this education that, at a time when other higher forms of knowledge were already beginning to be available to fill new professional niches, enabled them to remain a viable alternative in filling those niches.

It must therefore be acknowledged that this was no longer an *auctoritas* based solely on an empirical foundation of perceptions and a greater quantitative expression of the universe of jurists. Beyond all this, there was a broad substratum of knowledge beyond the legal sphere, induced by the model that supported it. The *broadband jurist*, as we called him, was the result and beneficiary of this paradigm, which began to take hold when the teaching methods that dated back to the pre-Enlightenment period were replaced by liberal ones,

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<sup>12</sup> Frameworks based on Roman law, reorganised during the 18th and 19th centuries and then based on codifications.

although it was only towards the end of the 19th century in Portugal that this became more visible<sup>13</sup>.

Does this mean that the paradigm described was solely responsible for the jurist's continued success and the preservation of his *auctoritas*? Not necessarily. The *breadth of knowledge* did not depend solely on the teaching assimilated. It also depended on the idiosyncrasy of the agent and would be greater if the interest in accessing different types of knowledge was also fuelled by his own initiative. However, the fact that basic training promoted this was the natural incentive that served as a starting point. Knowledge motivates knowledge, that is, it motivates the desire to deepen one's knowledge and, to this extent, the training received based on the model established a basic cultural standard that would easily tend to improve.

[8] It is not possible to assert that this path occurred in the same way, even if at different times, throughout Europe. But in some countries this may have been the case.

The truth is that in Portugal – in this particular case – from a certain point onwards, a gradual shift away from this paradigm can be seen, in favour of another with different characteristics, which would eventually prevail. The first signs of this can be seen in the early 1970s<sup>14</sup>.

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<sup>13</sup> In Portugal, this change began around 1836, when the university reform that year reorganised the teaching of law at the University of Coimbra (Cf. A. Pedro Barbas Homem, *A reforma dos estudos jurídicos...*, cit.).

<sup>14</sup> However, it was not until the end of the 20th century that the figure of the jurist in Portugal lost its pedestal and became a professional with a status similar to that of

What reasons can explain this change? Two can be mentioned among others: the possible entry of the former into a process of social erosion and the existence of unavoidable economic pressures geared towards a preference for specialised training, reducing the space available for *broadband lawyers*. Although the second seems more tempting, the first was probably decisive at the outset. In contrast to the previous paradigm, we refer to the new paradigm as *narrow-band training*.

It is also worth clarifying the meaning of the term, bearing in mind that the caveats mentioned above regarding the other term apply here too, in that it should not be interpreted, even subliminally, as implying any kind of positive or negative value judgement.

It is also a model based on two pillars, but differs from the previous one in terms of substance and intensity. The first incorporated the idea that, without prejudice to the attention and care deserved, university entrance exam preparation should take into account criteria appropriate to the new times and be sensitive to the abilities of the recipients. Essentially, the idea was that it was not

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most other professions associated with higher education. In other countries with a Western tradition, this may have occurred at different times, depending on local parameters. Regardless of location, did this mean that the jurist ceased to be associated with the idea of *auctoritas* from then on? Not necessarily, but such an association came to be made not with the figure in the abstract, but with the specific individual who distinguished themselves for particular professional, political or intellectual reasons, in a logic similar to that which applies to any other activity, since socially recognised knowledge in an open society is not exclusive to any one group.

intended to contribute to the training of an elite of excellence, but to provide essential general training within everyone's reach. The second incorporated the idea that university legal education should not ignore the fact that the future path of graduates was likely to be one of specialisation, and that it was up to the education system, without prejudice to the provision of fundamental legal frameworks, to open up space early on for the choices to be made by each individual in achieving this goal. If necessary – or, more likely, doing so – by taking away curriculum space or teaching time from previously valued surrounding or complementary knowledge, to the benefit of specialised knowledge.

It should be reiterated at this point that the change is also not formally enshrined in legal or other texts. It is a perception arising from a comparison between realities that have followed one another over time without any apparent solution of continuity. In any case, as far as Portugal is concerned, understanding the change cannot ignore internal legal changes that took place in the early 1970s<sup>15</sup>, as well as external reform suggestions from the EU, which came to fruition in the early 21st century<sup>16</sup>, which the national political power - in this regard differing from what happened in several other European states

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<sup>15</sup> It would become known as the *Veiga Simão Reform*, named after the government official responsible for higher education who published it in the early 1970s, and which would come into force in 1972. The process was then interrupted by the democratic revolution of 1974, and did not continue as planned, but some of the ideas that shaped it remained.

<sup>16</sup> It would become known as the *Bologna Process*, as it was discussed in its final form and recorded in official statements at a meeting held in this Italian city.

- voluntarily chose to adhere to, even though it was not obliged to do so. It is also necessary to take into account other types of influences present in society and accepted without resistance in the educational environment.

The internal and community legal impulses do not pose any difficulties. As for the others, two can be identified, which should be observed with some attention as they incorporate interesting political components.

The first basically consisted of a different assessment of the body of knowledge to be made available at the time of the entrance examination and the level of demand regarding the results of the respective teaching. Probably the trend towards specialisation that was penetrating the legal field also had an impact at this preliminary stage. Although at this level one cannot really speak of specialisation, the fact that it was gaining ground at university level may have led to the acceptance of a narrower education, more focused on specific topics, periods and uses, in accordance with the importance that was recognised for them, perhaps, for what was considered to be a better and more modern understanding of society.

In the Portuguese case, the political changes that took place in the country from 1974 onwards, when full democracy was introduced, cannot have been unrelated t<sup>17</sup>. The concrete effect on the humanities

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<sup>17</sup> The democratic revolution of 1974, which apparently had as its main objective the introduction of a liberal democratic political model similar to that which existed in most of Europe, quickly incorporated several others that were not necessarily or easily compatible with each other. It ended up becoming the stage on which social groups or segments with different ideologies and, consequently, different plans for

and, in particular, on subjects geared towards future legal training, was a certain investment in segmented perspectives of knowledge and historical and social evolution, deemed more in line with the

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state organisation, fought each other with some degree of violence, hoping to secure control of the state apparatus, or what remained of it, and then adjust it to their purposes. Some of these objectives, even if they did not initially occupy an essential part in the revolutionary manifesto, were difficult not to be integrated into it due to the very nature of things. Others, however, did not, resulting in clear deviations from the initial objective of the revolution. Among these was the conversion of the idea of liberal democracy into popular democracy. At a certain point, the idea of popular democracy was so widespread among large segments of the population as the only form of non-fascist democracy that it seemed almost impossible to recover the other. Consequently, there was a spread of related concepts, words and ideas, benefiting from a very high level of political illiteracy in society, which had clearly been promoted by the previous dictatorial regime, leading to a process of social assimilation of the principles of popular dictatorships that seemed irreversible. Among these new ideas, one that stood out was that everything that had existed politically in the previous phase and everything that had emerged after the revolution but was not in tune with popular democracy was fascist in nature. This is where the connection to the point mentioned in the text lies. University entrance exams and, for many, education in general were so contaminated by fascism that they would have to be radically changed to make them useful for the desired political change. This idea lost momentum when, by a stroke of luck in November 1975, conditions were in place to return the 1974 revolution to liberal democracy. But the ideological impact had been heavy and it took a long time for the ballast to erode until it was only a distant memory, which in reality only happened well into the 21st century, when the young or adult generation of 1974 had already disappeared or reached advanced ages. This weight effectively or subliminally explains the feeling of necessity regarding the introduction of readjustments in secondary education, which included the university entrance exam.

prevailing political vision that accompanied the change. The example of history teaching is illustrative in this case, but can probably be extended to other subjects<sup>18</sup>. The shift that was beginning to be felt internationally towards English as a lingua franca, also felt in Portugal at the time, leading to the devaluation of the learning of other languages previously considered relevant, may also have had some effect, as access to sources was naturally limited.

As for the second impulse, it can be associated with the increase in the number of candidates with access to university entrance exams. Although more complex, it applies to all areas of knowledge and not mainly to law, and even though the phenomenon is shrouded in specific circumstances experienced in Portugal at the time in question, it is particularly interesting because it applies to other environments where similar circumstances exist.

It has to do with the universe of candidates for university entrance exams, which included future higher education students. In Portugal, this education became available to almost 100% of the possible universe in the last decades of the 20th century, i.e., it reached its full potential, representing an extraordinary social gain by

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<sup>18</sup> Instead of a chronological, sequential-based education, a more thematic education was preferred, distributed across subjects taken as epistemological units, which were then inserted into the general evolutionary process. However, in subjects such as this, a comprehensive chronological overview of events, supplemented by possible explanations or interpretations of them, is valuable because only then can a clear understanding of the evolution itself be obtained. On the other hand, segmentation was more easily adapted to the underlying political logic and, from this perspective, it made its way.

providing, in abstract terms, the same opportunities for all. It was one of the notable advances brought about by the change in the political system. However, it incorporated an important change, albeit one that was not immediately apparent.

This consisted of shifting the average level of education in this now full universe to a different point from what could be found when such education was selective at entry and exit, in terms of the knowledge required and obtained<sup>19</sup>. This was happening in university entrance examinations, but it had repercussions on the universe that would attend higher education. The new standard of completeness led to the convenience of adjusting teaching and assessment requirements, otherwise final achievement levels could be lower. Such a decline, although mathematically understandable, would be politically and socially unacceptable, so the most reasonable alternative was to adjust the requirements of education to this new

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<sup>19</sup> For a long time, access to higher education was gained through two extremely selective exams, taken at the end of secondary education. One exam marked the end of secondary education and the other was an entrance exam for higher education. These exams further narrowed down the pool of secondary school students, already narrowed down by similar exams taken at the end of primary education, in terms of access to higher education. Those selected in both stages – primary and secondary school – corresponded to the culturally best groups successively identified. Obviously, the cultural averages of these groups were higher than the averages that could be obtained when the universe that reached universities had not been restricted through such a number of stages. This is not to mention that the universe with access to university entrance exams was itself already the result of selection within the total universe of young people, depending on their economic and social status.

point, referring those who were dissatisfied - because there would always be some - to seek tailor-made solutions outside the system. The thematic segmentation mentioned above, for example, was in line with this adjustment.

As for university legal education in the sense of greater specialisation, this was reflected in changes to the curricula and the duration of the education itself. The pressure for adjustment at this level may have come from different sources, including the university entrance exam students themselves, economic convenience, or adaptations to the labour market.

The former are understandable in themselves. Specialisation at university level functioned in part as segmentation did at entrance exam level. Economic factors may have been the real cause of the reduction in the length of general education, which in most cases was shortened by at least one year, with the burden of compensating for the time lost being shifted to postgraduate education, which was dependent on the choice of those interested and paid for at their own expense rather than by the State through budget . Among those related to the labour market was specialisation, which had been accelerating rapidly since the end of the 20th century, for which the positivist State was partly responsible when it entered into a legislative drift that was almost impossible for professional lawyers to keep up with.

The new paradigm was applied to most higher education courses.

In the case of legal training, it can be summarised in a few lines. Definition of a minimum training level for the figure of the lawyer to be unquestionable – the general course – and to have almost full access

to most legal functions, although not necessarily all<sup>20</sup>. Pressure to ensure that the training obtained in the regular period is supplemented by postgraduate training paid for by the interested party<sup>21</sup>. Elimination or reduction of the teaching of related subjects, namely some of those that were previously understood as added value in the training of *broadband lawyers*<sup>22</sup>. Admissibility of obtaining a certain level of legal training in less time than that required for the general course, but sufficient to enable access to less demanding legal activities or support activities outside the legal sphere<sup>23</sup>.

It was in this context and broadly around the parameters mentioned above, albeit with variations, that the paradigm we call *narrow training* emerged, and with it the lawyer who can bear the same designation, which is now dominant, at least in Portugal.

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<sup>20</sup> For the exercise of certain functions, such as the judiciary, complementary postgraduate training became required, as the training obtained in the general course was not sufficient.

<sup>21</sup> The master's degree essentially replaced the year of general education that had been eliminated. This was optional training, paid for by the interested party, which meant significant savings for the State in public higher education – traditionally the most representative in the collection of jurists – and additional revenue for the universities, which were grateful for this because the State was progressively reducing the budgetary allocations that had previously been almost exclusively their only source of income.

<sup>22</sup> This was achieved through outright elimination or by making it optional, with the obvious exclusion of significant segments of the student body.

<sup>23</sup> The reinstatement of the bachelor's degree, initially planned and then abandoned, which would only cover part of the legal training obtained in the full general course.

Has the change been advantageous or disadvantageous? It is clear that each model has advantages and disadvantages, and it is difficult for the assessment to be immune to the subjective assumptions of those who make it. But this is neither the time nor the place to consider them.

### III

[9] The changes described were not only the result of specific political events, new economic needs or undeniable social pressures, which became unavoidable in the maelstrom of time. They were also possible because the intellectual environment made them feasible, in the light of ways of thinking about society politically, developed mainly from the 19th century onwards. In short, they were possible because there were currents of thought that shaped the elites to which jurists belonged or with which they identified. Some were already remote in the 19th century, with only traces remaining. Others gained consistency from then on, and are therefore closer to us.

The remote forms are now mainly relevant in historical terms. Even so, some had a more lasting impact than others. Of these, it is worth remembering some that are mainly associated with the Enlightenment, even though their components date back to earlier times.

Although there were different Enlightenments, some more rationalist than others, some more secular than others, the cult of human reason, understood by some as an extension of divine reason and by others as independent of it, was the vector that united them. Overvalued or simply valued as the foundation of the validity of

human choices and knowledge in general, it became indispensable to the men of science of the time, among whom philosophers occupied a particularly visible place, and, through them, indispensable also to political thought and intervention.

The idea that a purely rational understanding of the causes and effects at work in physical phenomena and the social fabric is unavoidable spread progressively throughout the intellectual world. The Church itself, although it continued to preserve the primacy of the divine in essence, was not immune to the potential of this line of thinking. The thinking underlying the papal encyclicals of the late 19th century is proof of this, for although the social positions proposed were based on Christian doctrine, they were equally defensible on the level of pure human rationality detached from the divine. This was partly why they were so widely accepted and led to the emergence of political currents that encompassed large segments of 20th-century secular society. In this vein, it can be understood that the Enlightenment, by recognising the ultimate power of the people and consequently associating their will with full legitimacy for the creation of law, paved the way for the state founded on reason to make its advances throughout the liberal era. The rationalist thinking of the 18th century thus laid part of the foundations for a later model of social organisation, in which many of the factors mentioned above later became visible.

Similar ways of thinking are rooted in liberalism, which is seen as the precursor to the main organisational models of society that are evident today. Although, when viewed from the present day, they are also historical, they are essentially contemporary because several of them are still present. One of the main ones, if not the main one, was,

in our view, positivism, within which legal positivism emerged as an aspect associated with law.

When positivism moved from the social to the legal sphere, it carried with it the Enlightenment idea that the people, as the ultimate holders of power, could shape the state according to their will and, through their representatives, freely create the law that governed it. The reason of the people was identified with the law, and the positivisation of fundamental laws gave way to constitutions, thus completing the circle. Only the people were the guarantors and judges of their own decisions. The separation of powers established in the Constitutions would mitigate the circularity of power control, although it only worked when those in power accepted the game of constitutional self-limitation, which did not always happen, as history clearly shows.

What remained in this new era of previous conceptions relating the state to law? One deserves particular attention. It is natural law.

The preservation of a natural right which, although with obvious limitations, had previously been the only barrier to monarchical despotism and other abuses, with the advent of positivism became confined to a core group of jurists whose way of thinking refused to recognise the absolute power of the people. Did this confinement mean the inevitable erosion of the concept? In part, yes. However, in addition to those of a theological background who operated within metaphysical parameters, the group of jurists who identified with it included those of a secular and rationalist background whose thinking had been the basis for the Constitutions. Characterised as rationalist jurists, they claimed human reason, not automatically identifying it with the reason of the people, and to that

extent did not yield on the recognition of a suprapositive law conditioning the positive, although they diverged from the theological in their foundation. They made some readings close to positivism, it is true, but through them and the natural law theorists of theological ascendance, some space continued to exist for natural law as a background current.

In any case, it became a minority view, as pure and simple positivism, focusing on constitutional law, ceased to invoke natural law, perhaps because the use of natural law terminology carried with it a baggage that could seem misleading. This was the case in the Western world, but in the world of different political cultures, the question did not even arise. The law remained linked to power, and as this belonged to those who actually held and applied it, the circle regenerated itself as long as no external forces intervened to break it. When this happened, a new cycle began, in which only the protagonists were different.

The omnipotence of the State was therefore making its way into the field of law through positivism, but occasionally encountered obstacles. These were not exactly insurmountable obstacles, but as the State claimed to be immanent in the will of the people, at certain moments they came to the fore and it was difficult to overcome them without resorting to force. 's problematic imposition \*since, rationally, it should only be used when the State itself and the values established by the Constitution were at stake, although in essence such a procedure continued to be acceptable to many of those involved in governance. This dilemma has not disappeared with time, as we can see by looking around us, even in democracies that until recently were considered consolidated.

Where were the pitfalls? Precisely in the thinking of intellectuals, particularly jurists, who, regardless of their secular or religious orientation, shared a reactive stance towards the State's full legal dominance. These obstacles were often surmountable, but they gained intensity among segments of society close to the Church, since rationalist jurists from the 18th century onwards had adjusted more docilely to the State in terms of the regulation of social life. At least in the circles mentioned above, and possibly in others, the idea that the State was not the absolute master of the law therefore remained alive.

Nevertheless, it can be accepted that positivism became the dominant bible in the legal world throughout the 19th and 20th centuries. It dispensed with dilemmas of political and ethical conscience, in this case on the part of those who did not want to concern themselves with minutiae. As for political conscience, because it stemmed from what was enshrined in the Constitution. As for ethics, because the attitude of politicians towards society and its values should be guided by political conscience. Failings would be criticisable if they fell under the purview of the law, but only in that case. Not everyone followed this easy path, but for the majority, who were not particularly concerned with fundamental reflection, it served its purpose.

Moral and religious conscience remained. Morality was more complex, but if the law did not cover it, what could be done? The state would always view the divergence from the perspective of positive law. It would be seen as an offence consciously committed in the name of a personal conviction that the state could not support. In practice, it would always have the last word, leaving the problem with those who felt it, in most cases without significant repercussions.

As for the religious issue, the question was more profound. It was based on matters of faith, and non-compliance with the law went far beyond the mere morality of the agent. It was a matter of complying with a higher command that was considered beyond question by the State and its law. In this case, the law would be unlawful and compliance with it might not be an option in various circumstances. The political power had no choice but to invoke the separation between Church and State and use force. On the other hand, the right to belief was a positive right. Breaking the law in the name of faith could not be accepted by the State, but from the agent's perspective, it would be supported by both the constitutional framework and the suprapositive. In the former, at least implicitly. In the latter, expressly. The punitive reaction would be understood as an abuse and a lesser evil for the offender in the face of the greater evil constituted by sin. It would also be unlawful in the face of suprapositive law. The State faced difficulties, whether it gave in or not, since at the heart of the matter were questions of faith. If the matter was relevant, the punitive act would always be considered by those targeted as abusive and based solely on force.

The situation was therefore more problematic when divine law specifically conflicted with positive law. The dilemma would cease to exist if it could be demonstrated that belief in God had no possible rational basis, since it would then follow that anything that resorted to the transcendent was, in itself, irrational. The state would have a clear conscience and its hands free, and the underlying problem would be rendered meaningless, becoming treated as absurd superstition with the same value as others that had long been rationally classified as such, including by the Church itself. The use of force, if necessary,

would be reinforced in its legitimacy, as the supposed illegality of positive law would not even be considered.

But it was no easy task because the segment of humanity that identified with metaphysical belief had accumulated knowledge and argumentation that was dialectically very capable. Just as the existence of God was not rationally provable, neither was his non-existence. There would always be a subtle margin of doubt for those who did not accept atheism as a dogma of faith, including agnostics. As for the rationalists, they were an easier obstacle to overcome, as differences could always be debated within the framework of rationality and its interpretation.

[10] The path of positivism in general, and legal positivism in particular, since it was on this that its foundations were based, would receive unexpected support in the second half of the 19th century in view of the dilemmas it had to deal with, which at first were not fully appreciated. This was the publication, in 1859, of Charles Darwin's book *The Origin of Species*, whose impact was felt most intensely from the 20th century onwards.

Darwin's work was carried out in the field of evolutionary biology and its content is sufficiently well known that no summary is necessary. It is impossible to know whether the author was fully aware of its implications outside the natural sciences. It is even conceivable that he only partially realised this, as the ideas contained directly or indirectly in his work were taken outside their original scope. This may not even have occurred to him, as he died twenty years after the publication of his work.

The initial reaction of the elites to Darwin's work does not seem to have been generally positive. Judeo-Christian beliefs about the genesis of humanity were still deeply rooted, even though rationalism was gaining ground. The text had iconoclastic potential and such a stance, before being accepted, had to be assimilated. Nietzsche, who died almost twenty years after Darwin, was certainly familiar with the naturalist's work and would have realised that it lent significant support to the idea of *the death of God* and the deification of natural, human and secular reason. Not so much because it was responsible for the emergence of humanity, but because the work suggested that the transcendent had not intervened in its evolutionary path. It would have been nature. And if God had not intervened in the path, it would be reasonable to understand that he had not intervened in the emergence either. In any case, it followed from the work that the divine figure was not necessary for the evolutionary meaning of human society.

Why did Darwinism provide strong support for positivism? At first glance, the fields would be sufficiently distant for such a connection not to be evident, and there is no evidence that motivations in this sense were incorporated into the work, so it can be assumed that the author's concerns were strictly naturalistic and not philosophical, much less theological. If they existed, they were *in pectore*.

In fact, the connection was not immediate. It came after extrapolation beyond the subject matter in which the research was originally conceived had been worked on. The issue was complex. Natural selection credibly attested that species had evolved according to their greater fitness for survival. At the time of Darwin, genetic

selection was not yet known.<sup>24</sup> may have already intuited it, but if so, there was no clear evidence. Only some time later would Mendel publish the observations that would become known as the laws of heredity, and even then the implications of his work were still only remote constructs. Before Darwin, Lamarck had thought of a force that guided evolution in a certain sense, but he had not achieved widespread acceptance, much less demonstrated it. It was more a personal conviction than scientific evidence. Darwin would go on to demonstrate that variations in living beings existed and tended to persist when they were advantageous, because the disadvantageous ones tended to disappear or restrict their expression. The fittest survived and the process was permanent. It would always be active, so evolution was continuous, but in a sense that was impossible to predict in advance, as it would depend on factors and advantages that would only reveal themselves in the face of circumstances. This evolution had been attested to in the microcosm he had observed in detail on the Pacific islands and had allowed him to infer that it applied to all living species, including humans. Later, it would be realised that greater or lesser adaptation to survival could also depend on chance, but the general lines were the same as long as it adjusted to a need.

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<sup>24</sup> Without evidence, we admit it as a possibility because often bursts of knowledge that for circumstantial reasons have remained in the shadows or in the dark tend to become evident only after others, other than the recognised authors, take them up again. This possibility is reflected in Portuguese popular culture in the phrase "*he was right before his time; it's as if he wasn't...*". The same phrase, with more or less the same meaning, certainly exists in other cultures, because it is intrinsically rational.

Later still, it was realised that this chance could depend on random genetic mutations and th , but the principle remained the same. The awareness that chance could be manipulated, ceasing to be chance, was still far off.

Based on the assumptions of Darwin's work, it could be rationally accepted that God had not created man in his image and likeness, if the biblical statement was understood literally, as tended to be the case since the genesis of Christianity, since the man of today is not the man of yesterday and God, by definition, does not change. Ultimately, the origin of humanity would lie in a single cell with the capacity for duplication, which appeared somewhere in the past, on Earth or beyond, and which over time gave rise to many others and then, over millions of years, to increasingly complex beings, until animal and plant life as we know it today emerged.

This interpretation, although it did not completely overturn the assumption of the divine, dealt it a heavy blow, as it presupposed a basis capable of supporting the rejection of the transcendent. If human beings did not depend on God to evolve, it could be accepted that God had no intervention in creation as it exists. And it did not seem absurd to take this line of thinking further. If he had no intervention in creation, what intervention had he had? Apparently none! Would it not then be more reasonable to assume that God was merely a creation of the human spirit? Curiously, it allowed for a hypothesis that today constitutes one of the possible lines of thought that accept the existence of the transcendent. Perhaps it was not even noticed. In any case, it was not explored and, moreover, it would not be entirely in tune with the assumption that God is love and supreme good, present in Christian theology.

Natural law, eternal law, and divine law would therefore be intellectual constructs that human beings have arrived at to fill gaps in scientific knowledge, in short, the insufficiencies of reason. Human law would be the only rationally admissible law and, to that extent, since human beings have chosen to live in community and organise themselves into states<sup>25</sup>, positive law, the law constituted by the state and based on the reason of the people, would be the only acceptable law as such.

This way of understanding law did not resolve all issues either. It did not allow consciences to be denied belief in the transcendent, as this was eminently personal, but it did allow the suprapositive implications drawn from it to be rationally disregarded. Nor did it guarantee that positive law would incorporate the best solutions, or even the fairest solutions, but this problem had to be resolved by the organised community through reflection and collective decision-making, in short, through the reason invoked by the organs of the

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<sup>25</sup> This phenomenon, imagined by Enlightenment theorists as the result of deliberate intention, did in fact occur, but naturally, between ten and eight thousand years BC in the Eurasian area, taking into account relatively recent archaeological discoveries in Anatolia, which attest to what appear to be the oldest known examples of the transition from gathering communities to agricultural communities. The emergence of the so-called "fertile crescent" dates back to this time, with the emergence of organised communities, stabilised on the ground. The spread of this model to Europe in general would eventually transform the human landscape of the continent, although it is unclear whether this occurred through the migration of peoples who brought the model with them, or whether the model was transmitted between neighbouring human communities. Much later, the state would emerge from these organised communities.

state. There was some room here for the suprapositive dimension of justice based on jurationalism, but this was a minor detail that could be rationally resolved by resorting to reason, provided that one forgot that this reason might not be the reason of the people, since it was the latter that provided the basis for positive law.

This, then, is essentially the support that scientific Darwinism gave to legal positivism and allowed it to consolidate itself as the dominant orientation in its field, by removing from the path a significant part of the pitfalls embodied in theological natural law. As for jurational law, it did not really constitute a problem, since its roots were the same. It was as if it were a rebellious brother of positivism, like a prodigal son who would always have a place in the house, not his father's, but his brother's. The detail mentioned above could fit into this understanding.

[11] Twentieth-century law was largely shaped in this melting pot. Variants emerged within positivism, some extreme and with complex implications, as seen in the twentieth century at the Nuremberg trials, others condescending with subtle ways of thinking. New currents emerged that claimed their own identity, such as sociological, structuralist, libertarian, and pragmatic currents, but it is difficult not to see positivism, formally or informally, as the dominant one.

This period was accompanied in Western societies by strong economic progress and, especially, by a progressive democratisation of society. These two aspects gave rise to apparently new needs, which were initially met by the available pool of jurists, as mentioned above. While a substantial part of the wealth was concentrated in small social

groups, the rest also unequivocally reached the rest of the population. It was scarce, but before it was almost non-existent. In order to respond to emerging problems, the State concentrated on producing legislation, which led to the increasing complexity of the law and the gradual but progressive creation of new areas in this field.

The State's legislative zeal became almost obsessive – essentially still Voltaire's old rationalist conviction that, if one wants to have good law, one must burn the old laws and make new ones – leading to the practical impossibility of the *broadband lawyer* being able to fully understand the legal system and respond to all requests. Cumulatively, easier access to legal training led to larger numbers of licensed lawyers, creating a pool of available human resources that had to be employed or else a social problem would arise. Specialisation became a necessity. It became the possible response to the situation created by development and led by the State within the positivist logic. The *narrow-band lawyer* emerged, who was well or very well versed in certain subjects, but less so in others. They still knew the principles, but in many cases it became unnecessary to know them in depth, as others specialised in them and their transposition to the court. The jurist becomes a cog in the wheel of a system that defines his function. A curious substitution of *God's plan* for *the plan of positive reason*.

This is the moment to leave social and legal positivity behind and enter the final part of the journey we have set out to follow, for which the relationship between Darwinism and the idea of God served as a gateway.

#### IV

[12] We suggested earlier that Darwinism, without prejudice to its scientific merits, failed to establish a path capable of definitively supporting the rejection of belief in the transcendent and that, consequently, positivism did not find in it the definitive solution for rationalising the relationship between human beings and the surrounding nature. Given the implications, it is worth revisiting this point, albeit briefly.

It can be accepted, without significant room for doubt, that Darwin's work had a remarkable impact on the consolidation of the basic ideas embodied in positivism. In the years that followed, there were extraordinary developments in the experimental sciences, particularly in the second half of the 20th century and the first quarter of the current century. Due to their relevance to the topic at hand, we highlight some developments in particle physics, genetics and astronomy, whose implications for corroborating Darwin's theory could only be perceived at that time, even though the distance in time from the publication of the work had almost made it forgotten.

At first – these moments do not correspond to stages linked to specific researchers, but only to intellectual acquisitions of humanity – Darwinism showed that evolution occurs naturally, by itself. Secondly, through subsequent scientific progress, it was realised that the shaping of evolution did not depend solely on needs. It also, and even mainly, depended on genetic heritage, with the potential most suited to the specific circumstances inherent in it determining survival, without necessarily eliminating less suitable characteristics. Thirdly, it was realised that genetic heritage could change due to chance or error and that the mutations most suited to future needs were more likely to become dominant through successive

generational transmissions, precisely because non-carriers found it more difficult to survive, and transmission did not occur as effectively. In a fourth, it was realised that changes in specific situations could lead to the extinction of species due to their inability to adapt, if the genetic characteristics they had received were not capable of responding to their needs. Finally, it was realised that genetic heritage was manipulable and could be altered to respond to specific needs, with the changes introduced eventually being transmissible to future generations.

Did this revolution in knowledge contain proof of *the death of God*? It certainly meant strong support. But did it imply *death*? In fact, genetic progress reinforced the idea that the evolution of humanity must have occurred along a path shaped by nature, an idea that devalued the possibility that a prior and superior intelligence had interfered in it.

Paradoxically, this idea clearly conflicted with the fact that evolution could, after all, be influenced by humans through genetic manipulation. We do not know whether such manipulation has already occurred on a substantial scale, although it seems almost impossible that it has not already been repeatedly experimented with in secret, since there are countries that do not oppose it. In any case, science has made clear that it is possible. In this way, while the genetic revolution postulated the absence of God's interference, it also said that evolution could depend on an external intelligence acting upon it and not just on nature.

In short, the genetic revolution indirectly admitted a path that positivism did not appreciate as a hypothesis, by opening a new door to external interference in natural evolution. Now, if manipulation

was humanly possible, could it not have occurred through an equally superior non-human intelligence? And if this was possible, why would the original creation of the conditions for evolution to take place not be possible, even if restricted to the first link on which all others naturally depended?

That is why we said that scientific progress did not close the door to the metaphysics of creation. But in concrete terms, it is undeniable that for the vulgus and science less interested in the debate of ideas, Darwinism and positivism were powerful ways of understanding evolution and rethinking the relationship between the world and the transcendent.

[13] What about non-living nature? Would similar reasoning apply to it as to the evolution of the environment in which life had developed, that is, would it apply to the place we call Earth and, ultimately, to the Universe itself, as the space in which the planet exists and humanity arose?

This question clearly could not be answered based on the genetic framework summarised above, since the one to which it would apply did not presuppose life. For the most ardent defenders of divine primacy, it might even appear as a potentially unassailable refuge. A kind of Masada. Perhaps the evolution of humanity did not depend on God, and perhaps not even its very appearance. But what did the emergence of the rest depend on, the physical space we call the natural environment? Put another way, this question would be more or less as follows: how did the world come into being and, ultimately, the space we call the universe?

In fact, the knowledge available on this dimension seemed, until a certain point, too limited to be able to incorporate a convincing denialist response regarding the divine. To the perplexity of many who took refuge in this understanding, the answer was nevertheless refined with data from astonishing scientific discoveries made in the late 20th century and the first decades of the current one, to such an extent that at a certain point it seemed to be in tune with denialism, albeit with different foundations. Just as the unconquerable Masada had ultimately been accessed through the genius of Roman military engineers, according to Flavius Josephus' account, so too did that refuge collapse. And even though the response moved away from Darwinism, it indirectly reinforced it, as it was yet another field of nature from which God was removed. And with this reinforcement, positivism was also strengthened.

[14] What were these answers, supported in this case no longer by genetics, but by particle physics and astrophysics, that is, by the physics of the extraordinarily small and the physics of the large and extraordinarily large, and why did they apparently lead in the same direction that genetics had initially suggested? To see this, let us recall data that anyone can access even without specialised knowledge. In short, knowledge that lawyers and others versed in the humanities can easily understand, as it has already been described in accessible terms.

The origin of the Universe was initially explained by the theory known as the *Big Bang*, first proposed by Lemâitre – as in the case of genetics, he was a priest concerned with the problem of origins – and later developed by numerous astrophysicists. Today, it is the most

widely accepted explanation in the scientific community. As its main points are well known, we will only briefly refer to them here.

The Universe would have had a rationally understandable beginning – and not an eternal existence as traditional theology understood – having started from a tiny point beyond human imagination, but not infinitely small, since infinity is not a mathematically useful concept. A hyper-hot and hyper-dense point in which everything was concentrated, then suddenly expanded and cooled until it reached the plasma phase, which, upon reaching a certain level of cooling and lower density, allowed the emergence of light (basically the biblical *fiat lux* – once again an astonishingly interesting expression, because it is so precise, taken from texts dating back to the dawn of time, from eras when no knowledge existed on these subjects) and matter as we know it today. At this stage, the Universe continued to expand more slowly, continuing to do so until the present day. We find ourselves somewhere in this interim.

Throughout this process, after the plasma phase, matter began to clump together. Clusters of gases and stars formed, called galaxies. At an advanced stage, among billions of others, the galaxy where the Sun exists, which we call the Milky Way, consolidated, most likely from the aggregation of smaller galaxies, and within it arose the solar system and the planet Earth, where, when the right conditions were met, life emerged. Science has even managed to approximate how long

ago the Universe began, as well as the age of our own planet and its expected future duration<sup>26</sup>.

This scenario, developed through models and direct or indirect experimental data, although not absolutely certain, has managed to establish itself as reliable, to such an extent that science generally accepts it. While this is a stable description of the past, doubts remain about the future of the Universe. That is, whether it will continue to expand until it becomes an empty space devoid of heat, matter as we know it, and life, or whether it will regress to a point similar to its initial state, eventually giving rise to a new similar cycle. The long-held belief in eternal stability now seems unlikely.

Other questions could be raised, such as that of the multiverse, but as they are in the realm of hypothesis, they can be left aside. In any case, they would not be relevant to the topic. What is important is to reflect on whether the acceptance of the *Big Bang* theory can be used to argue against the transcendent as an intervening entity in the origin, now from the perspective of the Universe and not of life itself, that is, of Humanity.

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<sup>26</sup> The Earth has existed for about four and a half billion years and the solar system for a little longer, although it was only later that the planet Earth became suitable for life to emerge, when the cooling was already compatible. Life may have emerged around three and a half billion years ago, based on traces left in rocks dating from that period, but these were extremely small, microscopic, cellular forms or little more. Complex life, similar to what we know today, i.e. visible life, did not exist until around 500 million years ago, i.e. much later. The earliest period in this Palaeozoic era is usually called the Cambrian period. The well-known images of *trilobites*, of which there are still marine animals similar in form today, belong to this period.

At first glance, one might admit that this is the case. The fact that the theory postulates the appearance of the Universe at a moment that can almost be taken as synonymous with "nothingness" - although this nothingness, as physical logy admits, is only synonymous with the absence of matter, space and time as we perceive them today - would not even allow us to speak of a time prior to that moment. If it did, the question of what existed before would necessarily arise, leaving some logical space for the admissibility of the divine. In fact, the *before* is a temporal concept dependent on how we measure time. As is generally accepted today, time is a dimension linked to the physical universe that pairs with three other perceptible and measurable dimensions<sup>27</sup> . Together, they are usually referred to as *space-time*. Therefore, if space-time does not exist, time does not exist. Since time did not exist at the moment of *the Big Bang*, it would be absurd to imagine a *before*. The concept of a previous time would therefore be meaningless.

This construction, now generally accepted, seems to take away space for God's intervention through its assumptions, because it admitted creation, but not an act of creation. There is no act if there is no possibility of it having taken place because there was no time for such an act to occur. Although difficult to understand for those of us who operate on the plane of common rationality, it is logical from a theoretical point of view and therefore did not fail to be perceived by minds operating in the field of specialised science. Without space,

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<sup>27</sup> For ease of identification, they can be identified by length, width and height. And, who knows, perhaps by half a dozen other dimensions, most or all of which are not perceptible, but only equatable if certain unifying theories, such as *string theory*, which have been worked on for a long time, prove to be correct.

there are no dimensions. Since time is a dimension, it ceases to make sense as a concept. The cause exists before the effect. If there is no time for the cause to exist, there is no act of creation insofar as this would be the cause. Naturally, provided that time is a dimension and not just a perception, it is certain that the former understanding is the one that is generally accepted. Therefore, the construction satisfied those who moved in the field of anti-deism. Perhaps it was a good example of *Ockham's razor*, a concept that has been considered reasonably valid since the 13th century. Rejecting a timeless, omniscient and omnipresent being, because its admissibility may not fit the simplest model of creation, would be the best explanation.

[15] In any case, even though it was impressive, it left loose ends. First of all, because it went against common sense, which postulates a necessary origin for every existing object, in short, a cause. But the question of the *zero* moment also raised doubts, and it is in the context of these doubts that the aforementioned loose ends can be better understood. How could one accept that something could arise from nothing without any apparent cause? Wouldn't that be evidence of a prior power? Here, resistance to the closure of the door that the construction was attempting to close, a closure that positivism would view with fondness, could be glimpsed.

The resistance mentioned would apparently be overcome again by contributions from particle physics, that is, physics at the atomic scale. And they did so in such an impressive way that once again the dismissal of the idea of God seemed to impose itself.

It became apparent from the late 19th century onwards, although the fundamental developments occurred in the following

century, that there are two models that simultaneously explain the functioning of the cosmos. The physics of the human and higher scale and the physics of the very small scale, at the atomic level<sup>28</sup>, usually referred to as general physics or mechanics and quantum physics or mechanics. At the atomic level, the rules are different from those perceived in the *normal* dimension and sometimes appear to contradict common sense, as is the case with concepts such as quantum entanglement<sup>29</sup>, the uncertainty principle<sup>30</sup>, the tunnel

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<sup>28</sup> As is well known, the atom does not constitute the smallest scale of matter. The particles that make up its nucleus (protons and neutrons) are themselves made up of smaller particles, called *quarks*, of which more than ten possible variants have already been discovered, this difference being reflected in the different mass and *spin* of each one.

<sup>29</sup> In the field of quantum physics, although through processes that are not yet fully understood, it is now known beyond doubt that information can occur instantaneously between two particles without contact between them or any apparently comprehensible form of transmission – known as *entanglement* – with the same effect operating on both simultaneously. It is as if they were side by side and one imitated the other, and it is suspected that this can occur at immeasurable distances. Apparently, what is thought to be distance in space is not. Or it is, and distance does not have the effects that it is rationally thought to have. How this occurs and why is a matter that may one day be fully explained.

<sup>30</sup> The idea that the essential elements relating to a particle (location, mass, velocity) can only be measured probabilistically, since the observation of one affects the others, preventing their direct measurement simultaneously. Hence the well-known paradox of '*Schrodinger's cat*', the feline known by the name of the famous physicist in whose house it lived. Based on certain assumptions, the physicist said that if the cat were enclosed in a box under certain conditions and out of his visible range, the cat could be both alive and dead at the same time, and not just in one of those situations. Although it seems absurd, quantum physics explains it.

effect<sup>31</sup> , the Higgs field<sup>32</sup> and others that are very difficult for the average person to understand and even fraught with difficulties for physicists and cosmologists.

These two branches of physics are now, however, unquestionable in the field of science. The first has apparently held no secrets since Newton formulated the principles of gravity. New knowledge is constantly being added to the second, which acts as small building blocks in the surrounding structure, reaching stages almost daily that were unthinkable a few decades ago.

From this picture, we highlight one aspect that is relevant to the topic.

Science today considers it relatively certain, in the light of quantum physics, that matter can arise where it did not exist before, through so-called quantum fluctuations<sup>33</sup> .

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<sup>31</sup> The possibility that certain particles are simultaneously particles and waves and can therefore pass through physical barriers without being affected, or only minimally affected.

<sup>32</sup> The Higgs field within this paraphernalia is one of the most recently demonstrated concepts, leading its proponent, physicist Peter Higgs, to win the Nobel Prize a few years ago. As a field, it is similar to a magnetic field, that is, the space where a certain force is felt. In this specific case, the space where this field is felt is the entire Universe and can be imagined as a "glue" that fills its entirety. The greater or lesser adhesion that particles feel when moving within this space with "glue" is what distinguishes the mass of the particles. In this field, a specific particle, the Higgs boson, is responsible for transmitting this force.

<sup>33</sup> Quantum fluctuations are sudden and unpredictable changes in the amount of energy at a point and can occur in a vacuum, where there is apparently no energy.

This fact has implications for what was said earlier, since it was doubts about the possibility of matter emerging where nothing existed that kept open the possibility of transcendent intervention. And we can see the importance of this, since the fact that nothing existed in terms of matter at the moment *of zero* would not, after all, prevent its appearance without external intervention. It would arise on its own in certain circumstances. In a way, the moment of *zero* or *absolute nothingness* would not exist, since the absence of matter does not mean that other ways of filling this absence are not conceivable. Or, if you like, matter exists in potential, and there is no true void. Energy would be one of these forms. In fact, the relationship between matter and energy is now considered absolutely unquestionable since Einstein established the mathematical formula that governs the transformation of one into the other, which allows us to understand part of the process that occurs in innovations that are part of our daily lives, from the operation of nuclear power plants to climate issues, the heating of the houses we live in, or simply the combustion engines of the cars we have become accustomed to<sup>34</sup>.

The implications of this fact, when transported to the world of philosophy, would once again seriously reinforce the de-scientification. Perhaps it could even be the final word on the subject. The Universe began a long time ago in terms of current time, at a stage

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Physics understands that this is a serious possibility to explain the emergence of *the Big Bang*.

<sup>34</sup> Petrol is matter in itself, but it contains energy, part of which is transformed by the engine into heat and then into motion, the latter being the factor that makes it directly useful to humans.

when time did not exist, and today it is made up of matter as we know it. However, it did not have to be created by an external, superior and prior intelligence, as it may have arisen in the very situation of its absence through quantum fluctuations that triggered the process when the conditions for it were met. What conditions triggered the process is still not well understood, although physics hopes to get there. With the possibility of matter arising without external interference, that is, without an external cause, the problem of the creation of the Universe from the *Big Bang* was explainable. Therefore, the circle that began with Darwinism, now in a field not directly related to life, seemed to be closing. Positivism could rest easy.

It is clear that this type of reflection is not usually attractive to jurists, who are primarily concerned with pressing real-life issues. They only deserve some attention from those who, resorting to non-legal or theological knowledge, that is, moving in a *broad spectrum*, see themselves in speculation and, within this group, those who seek to support themselves in a mental discourse imbued with logical meaning and not just intuition or utility. This is why, even unconsciously, positivism is naturally accepted by the legal community and society in general. By pragmatically recognising the State's exclusivity in determining the law, security is valued over other values, with any antinomies being referred to the moment of choosing who will exercise the power to create the law and to the act of assessing the conformity of that exercise with what is laid down in the fundamental law. Now, when security is confronted with justice, it tends to be preferred by the common people. Being able to predict possible boundaries within which life will move is generally considered more advantageous, due to its easier connection to the

concrete, than speculating on the justice of behaviours, which is more connected to the abstract. The prevalence of nature in the course of humanity would therefore be at an advantage. The old law of the three states would make sense.

[16] But has the contribution of physics through the creation of matter via quantum physics really closed the debate? Has belief in the divine been definitively confined to the right to believe itself, with no room left for pure and simple rationality to be invoked? Is the scientific community now faced with a construct that definitively removes God from creation, or, if you will, removes reason from faith, and that, over time, the picture described, more or less refined by science, will become part of the Genesis of the Bible of the new age?

For many, yes, but we believe that not for everyone, because the resilience of belief in the relationship between *everything* and God can find rational arguments to survive, even in a scenario such as the one described. It is with the possible answer to this third or fourth moment, in which we successively placed the antinomy between nature and God in the process of creation, that we close the chapter. Perhaps tedious due to the copying of references taken from physics, but which we considered necessary to state and organise so that the sequential stages could be understood.

[17] The answer can be divided into two parts, one of a general nature, philosophically framing the second, and the other of a strictly scientific nature.

The first recalls the intrinsic force with which belief in a supernatural power has been rooted in humanity since time

immemorial. It responded to the need to understand the seemingly incomprehensible and to overcome the consequences of the seemingly unacceptable, only beginning to yield in a more visible way with the Enlightenment.

Looking coldly at its implications, it must be admitted that it identifies a space of personal comfort that facilitates the overcoming of the deepest traumas of human beings when consciously perceived. It is even possible that, in the early stages of the humanisation of living beings, a common belief in a higher reality asserted itself as advantageous in the struggle for survival, due to the cohesion it induced in the group - admitting a Darwinian facet in this reasoning - and that later the belief remained as a cultural element transmitted from generation to generation until some began to transform it into religion, that is, into a structured and coherent set of ideas geared towards a metaphysical vertex associated with certain values. For all these reasons, regardless of scientific advances, it is unlikely that belief in the transcendent will ever be completely replaced by pure rationality, no matter how much knowledge advances. There will always be a place in many minds that will give it shelter.

The second moves on a non-subjective plane, incorporating reflections on the possibility that the natural creation of matter *ex nihilo*, as mentioned above, is in full harmony with certain areas of scientific knowledge. Without contesting the construction, they circumvent it on the basis of plausible reasons for rejecting self-creation, either because it is impossible or at least improbable that it has occurred.

Some data should be kept in mind as context. Without prejudice, of course, to reason being the engine of knowledge, it is equally true

that this fact alone does not allow us, in abstract terms, to take for granted the antinomy between science and God. To take it for granted would require proof by facts or definitive evidence, which has not been unequivocally achieved at any stage, since for every door that seemed to close, a window opened that could potentially be converted into a new door. At most, such lines proposed readings that disregarded the need to resort to God to understand data and stages of the evolution of nature and the Universe, which were highly impressive - it must be admitted - because they were imbued with rationality and in some cases supported by experimental evidence.

It should also be remembered that, although the assertion of the absence of definitive proof may raise a smile among those who take it for granted that God and human reason are diametrically opposed, in fact the rapprochement between the two does not necessarily entail inescapable inconsistencies<sup>35</sup>. One need only recall the possibility of genetic manipulation by human beings, mentioned earlier, for one of the anti-deist arguments to collapse. The alteration of life is, in fact, possible through the actions of an external intelligence and, most likely, within some time, if not already, the very creation of life through the combination of genetic components, the four bases of the genome, in a suitable environment, which makes it possible. It would

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<sup>35</sup> In addition to the difficulties that have been pointed out on the basis of science itself, there remains the question of the very concept of God. It is usually viewed from a theological perspective, but this is not the only possible perspective. As this is not relevant to the matter at hand, suffice it to say that it can be associated with a conscious will that has the potential to shape the environment in which life and nature arose and exist, without drawing any religious conclusions.

remain open to question whether this external intelligence is non-human, in the human sense that we know, which, let us grant, is not the same thing.

Why, nevertheless, despite the construction outlined in the previous stage, can we admit the existence of new windows that prevent the definitive closure of the path compatible with God? Essentially because there is data to consider that cannot be dismissed, so that, as in previous stages, the minimum to admit is that doubt and debate will continue.

The data to be considered revolve around the fact, apparently irrefutable and widely accepted by the scientific community, that the Universe does indeed exist as reality. In other words, that it is not a *matrix* Universe, even though this concept subliminally includes a certain idea of God, as can easily be understood when one recalls the well-known film from which the term was taken.

Let us see how they can be described and whether, in the end, it can be said that the path they follow fits Ockham's razor, but now seen in the opposite direction to that previously mentioned. Looking at it as reality, it is necessary to accept that the Universe enjoys a remarkable balance. It has existed for at least some thirteen billion eight hundred million years<sup>36</sup> and is expected to last at least as long again. It has evolved, changed and will continue to evolve and change along lines that, given current knowledge, can be anticipated in general terms. It is not known whether it will expand eternally until

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<sup>36</sup> This is the most widely accepted estimate in astrophysics. However, there are interpretations that point to a higher number.

it reaches emptiness and absolute cold, or whether it will shrink until the *Big Crunch*, and in this case, how long it will take to reach the point of maximum expansion, just as many other things are not yet known, such as the nature of *dark matter*<sup>37</sup> and *dark force*<sup>38</sup>, which

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<sup>37</sup> These are concepts that are now common knowledge, the basic principles of which can be found in multiple sources, particularly on the Internet, and which we will therefore limit ourselves to summarising. The term 'dark' does not refer to any colour. It is used in a metaphorical sense, meaning only that it is not directly visible. It therefore refers to something that must exist because its effects are perceived indirectly. Dark matter corresponds to something that supposedly fits the concept of matter because it has gravitational effects, but which does not correspond to anything visible or to matter as it is constituted under the standard model of physics, and is now almost fully accepted by science. It has nothing to do with antimatter, whose existence has long been proven, and whose composition and effects are known. It raises some questions, but they are not related to the topic at hand. Dark matter must exist in the Universe because otherwise galaxies would not exist as they do. They would apparently dilute into space. It is estimated that in certain places in the Universe there are concentrations of this matter due to indirectly perceived effects. It is probably made up of particles that do not fit the standard model of physics, either because the model is wrong, which seems unlikely, or because there is still much to discover about the structure of matter and the model in which it is organised. Apparently, there is much more matter of this nature in the Universe than there is 'normal' matter. In any case, its existence cannot yet be considered unequivocally certain. Some astrophysicists admit that it may be an illusion, caused by the exponential concentration of information in certain areas of the cosmos.

<sup>38</sup> Dark energy is also an unknown quantity in the universe that must exist in order to understand its evolution, but, like dark matter, it is still shrouded in speculation. It appears to have effects that are contrary to gravity. The idea, as a lawyer might explain it, is as follows. With the original *Big Bang*, the Universe underwent a sudden expansion comparable to an explosion that, from its starting point, projected

are now considered by most astrophysicists to be real and not merely hypothetical<sup>39</sup>. But one thing is clear. It enjoys remarkable stability, and the possibility of it disappearing or changing suddenly is to be rejected, even if the probability is not zero.

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its contents outwards in all directions in a sphere. As space did not exist, only appearing as the Universe expanded, nothing prevented the debris from the explosion from advancing indefinitely according to a force of expansion (Hubble constant) until, at a certain point, it was so far apart and so cold that the Universe diluted into space, virtually returning to "*nothingness*". Gravity, however, existed and would counteract the expansion of the debris from the explosion (galaxies and other bodies). At a certain point, the expansion force would no longer be able to prevail and the Universe would reach equilibrium. From then on, the Universe would begin to contract until it returned to its starting point. What would happen next is not plausibly imagined by astrophysics, but only hypothetically. A new *Big Bang*? The end of everything? Other alternatives? Dark energy seems to counteract gravity and favour expansion. Without taking it into account, certain data collected in the Universe do not add up. It is therefore generally accepted, although its nature is unknown. It is also unknown whether it will be sufficient to prevent the end of expansion, causing it to continue, or whether it will allow a point of equilibrium to be reached. Recently, there have been indications that this force may not be a constant, i.e., that it has varied depending on certain circumstances, with the effects of this possibility still difficult to predict. For many, its existence does not seem questionable. The truth is that even in this case, doubts about its existence cannot be completely ruled out, because there is still much to discover about the structure of matter and the model in which it is organised.

<sup>39</sup> At least with regard to *dark energy*, there are now also theories that question it, proposing other explanations for the effects that have been interpreted as evidence of its existence. As for *dark matter*, experiments are underway to find physically detectable traces of its existence and explanations for its nature, the results of which are eagerly awaited.

Regardless of the evolutionary path it will follow, stability manifests itself at all levels, from the very small - the atomic level - to the large and very large - the universal level. In the former, three fundamental forces give stability to matter and, in the latter, on the scale of the cosmos and inherently to that of human beings, a fundamental force gives it expansive or contractive cohesion. In short, the four fundamental forces that govern matter in general and form the basis of the standard model of physics are now almost universally accepted. It is not yet known what level of interference *dark matter* and *dark force* will have on this balance, but every day we advance a little further in our knowledge of them.

Why is there stability in this whole and why does the Universe not suddenly crumble, suddenly changing from cosmos to chaos? For one simple reason that can be broken down into many reasons that can be traced back to one underlying cause. Because there is stability in the forces at work, which interact with each other in a predictable and expressible way through mathematical formulas, preventing the structure from collapsing. These are called *constants* and have precise values, even though some are not yet known with complete accuracy<sup>40</sup>. It is worth clarifying this further. These are forces that operate at both the atomic and universal levels and are stable. That is why they are called *constants*<sup>41</sup>. For situations that are fundamental to the

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<sup>40</sup> This line of thinking, along with others, is developed by Stephen Meyer, one of the most sceptical contemporary authors regarding the abandonment of the deistic hypothesis.

<sup>41</sup> Some of the main ones are the speed of light, Hubble's constant, Planck's constant, the gravitational constant, etc. There are others.

balance of the Universe, there are forces that have a constant value, which apply to the whole, as it is understood. If the value of these forces or of any one of them changes, the universal balance will not be maintained, probably in the short term. However, the Universe has existed long enough to prove that this change does not occur. If it did, it would collapse and consequently life could not exist. In short, the *constants* keep the Universe stable and are the factors that ultimately allowed the existence of the environment in which life exists, as we know it, an environment in which evolution took place and remains orderly according to the evolutionary pattern that surrounds us.

Some examples, taken from common knowledge today, may serve as illustrations. The first illustrates why gold does not naturally turn into mercury and vice versa, when the difference between the two is minimal in atomic terms, as medieval alchemists paradoxically seemed to suspect<sup>42</sup>. The second illustrates why the planet we inhabit

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<sup>42</sup> All atoms, regardless of the matter they give rise to (gold, iron, mercury, oxygen, etc.) are made up of a nucleus composed of neutrons and protons, surrounded by electrons at certain energy levels. The atom is usually configured, fictitiously, as the set consisting of the Sun and the planets around it. The Sun would be the nucleus and the planets the electrons. All the elements that exist in nature are constituted in this way, varying only in the number of protons and neutrons in the nucleus and the number of electrons around it positioned at one or different levels. This can be illustrated by saying that the essential difference between gold and mercury (despite one being solid and the other liquid, one being yellow and the other black) is the existence of seventy-nine protons in the nucleus of gold and eighty in the nucleus of mercury. If one proton were removed from the nucleus of mercury, it would turn into gold. Apparently, ancient alchemists, such as Paracelsus and others, imagined the existence of a proximity between these two metals – how they arrived at this is

does not shoot off into space, becoming a wandering planet as happened to the moon in the science fiction film *Space: 1999*, which was shown on television in the 1980s<sup>43</sup>. The third illustrates the

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impossible to know, but perhaps modern chemists or physicists can put forward hypotheses – and tried to achieve the transformation, believing that the "philosopher's stone" would be the appropriate instrument to achieve such a transformation. They were right if the "philosopher's stone" (stone of knowledge) is understood as a significant metaphor for knowledge that is not yet known. They never succeeded. Why did they fail to achieve a change that today would be theoretically possible, but which would be useless due to the energy requirements and economic cost involved? It is clear that they did not have the necessary knowledge and technical means to achieve it. But also because there are forces within the atom with precise values that maintain the articulation between protons, neutrons and electrons in a stable framework. It is only because these forces are stable that matter is stable. Otherwise, someone might be lucky enough to see the mercury in an old thermometer at home turn into gold, or someone might be unlucky enough to see the wedding ring on their finger suddenly fall to the floor and turn into mercury. It would be curious to observe this, but it will not happen because the forces that hold atoms together are constant, requiring certain gains or losses of energy that are easily calculated by physicists for one atomic equilibrium to give way to another, keeping the world globally stable.

<sup>43</sup> The Earth revolves around the Sun and does not shoot off into space, as happened to the moon in the old American series from the 1970s called *Space: 1999*, which was shown on television, as some will remember, and which, although somewhat naive by today's standards, thrilled young and old alike. Why doesn't it shoot off, as happens when you swing a weight tied to a string in circles and then let go of the string? Because there is the force of gravity that prevents it from moving away from the Sun, which is constant and measurable as a function of the mass of the object and the distance, with the Earth at every moment at the exact point in its orbit that allows it not to shoot off and get lost in space - as is the case with so many wandering

possibilities that are opening up for the future of the Universe, as astrophysics allows us to anticipate today<sup>44</sup>. These examples illustrate constant forces, i.e. forces with precise values that are known or in the process of being known. Among other things, they are what give stability to the world and the Universe. They are therefore fundamental to our surroundings. We know that without them everything would disintegrate, or at least *everything* we know as we know it.

Why do constants have the values they do, enabling stability in the universe? No one knows, but we can speculate. The most obvious answer extrapolates Darwinian logic to this field and says the following: these are the values that have proven capable of enabling stability. The only values compatible with the subsistence of the

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planets that are now beginning to be found - and not fall into the Sun, burning up immediately, and humanity with it.

<sup>44</sup> It is not known whether the Universe will continue to expand eternally until it dissolves into emptiness and absolute cold many billions of years from now, or whether it will begin to contract until the *Big Crunch*, followed eventually by a new *Big Bang*. It is assumed that it will expand forever, but this is not certain because there are doubts about the precise value of the force that governs expansion – the constant named after the famous astronomer Hubble – and consequently its relationship with the force of gravity, which acts in the opposite direction, attracting objects in the Universe, including galaxies. We know that it is a constant, and only when it can be rigorously determined and related to gravity, and when the values of the so-called *dark force* we mentioned can be inserted into this relationship – which is still unknown but seems to counteract gravity and may not have a constant value – will we know the fate of the Universe. However, the Hubble constant exists and is waiting to be known with precision.

Universe as it exists today have been preserved, because otherwise we would not be here to worry about the issue. That is why they are constants.

But how were the values expressed in them fine-tuned, given that in abstract terms there would be a virtually infinite number of possibilities for each one? Continuing along the same lines, one would say that it was by trial and error. Among all the possibilities, those that do not correspond to the *constants*, as we know them, proved to be incompatible with the stability and subsistence of the Universe. It would suffice for one fundamental constant to be different for the cosmos not to have come into being, because it, as a whole, follows an order of general equilibrium. There would therefore be a certain similarity with the emergence of life in Darwinian logic. This arose and evolved because the conditions were right and the components combined in a viable way. Evolution corresponded to the solutions that were viable at each moment. Something similar would have happened with the Universe.

Once again, we are faced with a highly impressive solution in the non-deist line, in which nature finds its own path between the cosmos and potential chaos. Once again, the door closes on God. The thing is, doubts and objections can also be raised against this intellectual construct. If it was by trial and error, there must have been many attempts before one worked. This is evident. Were there many universes attempted by nature, and did they all fail except the one we know? Are there other possible equilibriums between constants, which led to other universes beyond ours, in this case one of the possible meanings of the expression multiverse? No one can answer this, and it is unlikely that it will ever be possible. We only know that

what exists and what we know works. These are reasonable doubts for which human reason is unlikely to find answers. This opens up a first flank to the insufficiency of the construction.

There is, however, a strictly rational objection that disregards the possibility that the answer based on the idea of trial and error is valid.

The Universe has been functioning and in equilibrium at least since the cooling of plasma, which occurred a few hundred million years after the *Big Bang*<sup>45</sup>, allowed the appearance of matter as we know it and the emergence of light for the first time: basically, the biblical *fiat lux*. Given that there are so many universal constants, and that the values that can be tested for each one tend towards infinity, how many attempts would have been necessary, through trial and error, to achieve the harmonious combination that made our current existence possible, and how long would it have taken?

This is a mathematical or statistical problem for which there is no answer. But not only because it is impossible to indicate a correct or approximate number of attempts or a probable time frame. As has been understood by authors involved in reflecting on this matter<sup>46</sup>, the number of possibilities and the time needed to test them would be immeasurably large. So large that it would tend towards infinity, and

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<sup>45</sup> Physics admits that such cooling would have lasted for a period of about three hundred million years, that is, a little longer than the time between the present moment and the moment when the first reptiles that would become dinosaurs appeared on Earth.

<sup>46</sup> See Stephen Meyer (op. cit.), whose work sheds light on many of the aspects mentioned above.

infinity, as we have said, is usually rejected as a usable value, as it limits the possibility of achieving acceptable results. In any case, it would certainly exceed the currently estimable time for the existence of the Universe as we know it, which would make the hypothesis impossible. Furthermore, if time did not exist before the *Big Bang*, as has been understood by scientists of great merit<sup>47</sup>, the answer would always be absurd. There would not be enough time for the right solution to be reached since time has existed and before the *Big Bang* there was simply no time. Admitting a magic trick would obviously be out of the question.

Interesting reading. If mathematically or statistically it does not seem possible to admit the existence of sufficient time to have arrived by trial and error at the values that the *constants* impose for equilibrium to exist, the possibility remained open that they had been calculated or programmed by an intelligence, in values adequate for them to function. They would correspond to those that could enable the emergence and evolution of the Universe and nature, including life. To ask whether the Universe has been monitored since then, or whether, once the path was outlined, its evolution was left to nature, is a pertinent question, but one that is irrelevant.

With the above reflection, we only want to mean that the hypothesis of God has not been resolved by science in a denialist sense and that rationality has not yet closed the door on it. Will it succeed? The history described suggests that no is not a possible answer. To each his own personal quest, however.

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<sup>47</sup> E.g. Stephen Hawking, himself an anti-deist.

[18] The text can now be reconnected to Francisco Vitória.

In light of what was initially stated, Vitória can be considered a *broad-minded intellectual*. Specifically, a *broad-minded theologian*. He was a scholar of a discipline that did not prevent him from spreading his attention to topics outside the scope of his original training, in which he felt there was a dialogue between the basic knowledge he had acquired and other fields.

It could be said that theology has always been concerned with issues that transcend the metaphysics of the relationship between man and God, since ultimately everything can be traced back to the divine and, therefore, Vitória's intellectual attitude is nothing remarkable. However, it is undeniable that a significant number of earlier theologians and those who lived with him, when addressing profane topics, tended to choose those that could be more clearly linked to the divine dimension. It was natural law as an extension of eternal law. It was the problem of just war as a problem of justice and therefore related to an attribute of God. There were others too. In the case of Vitória, the breadth of topics covered went beyond the interrelationship between the human and the superhuman. He was concerned with social, economic and legal issues and, within these areas, with aspects of everyday reality shaped by human behaviour, seeking to explain them and attempting to anticipate solutions to problems, particularly social ones. With the distance that time allowed, she essentially tried to proceed as jurists, economists and politicians do in modern times.

Guided by transcendent values, undoubtedly, but making it clear that he was also concerned with earthly matters, guided by curiosity

and the desire to access the knowledge that the times heralded. He was a Humanist intellectual who anticipated aspects of the understanding of social phenomena. Alongside *narrow-minded* intellectuals, he stood out for his openness. There were others in his time. Certainly. But that in no way diminishes the dimension of his spirit. Perhaps that is why his prestige and apparent untouchability by the political and religious powers with which he lived were so notable.

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