

ARTICLES

THE SCIENCE OF ADMINISTRATIVE LAW, JURIDICAL METHOD AND EPISTEMOLOGY: THE ROLES OF PARADIGMS IN THE ERA OF THE CRISIS OF MODERNITY*

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Abstract

This article discusses the relationships among science of administrative law, legal method and epistemology. Its aim is to assessing the results that epistemology has achieved outside the legal sector, in order to verify if, and to what extent, they might be used in this context. This essay assumes that the science of administrative law, apart from a few isolated voices, proceeds by utilising general and different models (“paradigms”) and employing them incessantly. Even in the era of the crisis of modernity, it appears very profitable to use the general approach, shaped by Kuhn and Lakatos, based on the idea of the paradigm: the science (and the legal one, too) is characterized by the application of these models to gain critical knowledge and solve riddles. As a matter of fact, if this approach undoubtedly serve to explain how science functions and progresses, it cannot be denied that the “truth” has to be present both as the final objective of the scientist, as well as an objective criterion for evaluating the science. In conclusion, this article expresses the idea that a theoretical filter which aims to be legal science, alongside its capacity to be used to solve riddles, has to admit and allow space for some residue of falsification, even if minimal.

* The theses contain in this paper were proposed and discussed at a meeting during the Seminars on the Theory and Philosophy of Law at Bocconi University entitled *Metodo giuridico, scienza e uso dei paradigmi* on 15 November 2011: I would like to thank the organisers (Damiano Canale and Giovanni Tuzet) and the participants for the inspiration and suggestions they provided me with.

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1. *Premise: law, science and “Weltanschauung”.*

Method is a question widely raised by legal science, recently too and in administrative Italian law as well¹: aim of this paper is to

¹ S. Cassese, *Il sorriso del gatto, ovvero dei metodi nello studio del di pubblico*, in *Annuario AIPDA*, 2006, 87 ff.; G. Rossi, *Metodo giuridico e diritto amministrativo: alla ricerca di concetti giuridici elementari*, in *Dir. pubbl.*, 2004, 1 and ff; A. Travi, *Il metodo nel diritto amministrativo e gli “altri saperi”*, in *Dir. pubblico*, 2003, 865 and ff.; A. Romano Tassone, *Metodo giuridico e ricostruzione del sistema*, in *Dir. amm.*, 2002, 11 and ff.; L. Benvenuti, *Metodo giuridico, autorità e consenso*, in *Dir. amm.*, 1998, 661 and ff.; S. Cassese, *Alla ricerca del Sacro Graal (A proposito della Rivista di diritto pubblico)*, in *Riv. trim. dir. pubbl.*, 1995, 789 ff. (according to Cassese, it is impossible to identify “one” legal method, since it depends on the specific subject and on the characteristics of the problem); A. Orsi Battaglini, *Il puro folle e il perfetto citrullo (discorrendo con Sabino Cassese)*, in *Dir. pubbl.*, 1995, 639 ff. (who conveys the idea that a particular autonomy of the legal field – and of the scientific method – might be identified). See also L. Benvenuti, *Interpretazione e dogmatica nel diritto amministrativo*, Milan, 2002. With respect to the debate that has been going on between Cassese and Orsi Battaglini, (which also involved the theoretical program of the new legal journals) see G. della Cananea, *Legitimacy and accountability in Italian administrative law: a critical analysis*, in M. Ruffert (ed.), *Legitimacy in European administrative law: reform and reconstruction*, Groningen, Europa Law Publishing, 2011, 66. The question of method is not a concern only for Italian lawyers. Consider, e.g., M. Loughlin, *Public*

analysis this problem, linking it to a more general reflection about the philosophy of science.

As a matter of fact, the basic concern that guides this inquiry is that of assessing the results that epistemology has achieved outside the legal sector.

This appears to be particularly necessary in a moment in which many certainties appear to be fading, certainly in the scientific sector, but, perhaps, even more in general, in the “Weltanschauung” which mankind employs to provide meaning to their experiences. It seems to be really difficult for lawyers to remain blind to these novelties, also because the relationship with science connotes (or, more accurately, connotes to a perhaps greater extent than in the past) many aspects of legal regulation and the work of its interpreters.

Since, as we will seek to demonstrate, the “Weltanschauung” just mentioned also has an essential role in science, it will be necessary to consider some contributions of philosophy.

Finally, and this is one of the most interesting aspects of the analysis that follows, we will have to verify if, and to what extent, each of the areas considered (philosophy, epistemology and law) might integrate with the others or, at least, offer suggestions to solve problems in their own fields.

It needs to be clarified at the outset that we are well aware that different sectors display specificities that are entirely their own, and which prevent inappropriate cross-pollination. We maintain, though,

Law and Political Theory, Oxford, 1992, 13 and ff. (discussing the analytical method and the relationship between public law and political theory); P. Badura, *Die Methoden der Neueren Allgemeines Staatslehre*, Erlagen, 1959 (the traditional method is still considered satisfactory by Badura). On the influence of the German legal culture in Italy, see G. Della Cananea, *On Bridging Legal Cultures: The Italian Journal of Public Law*, in *German Law Journal*, 11, 2010, 1281 and ff. On the perspective of an European Legal Science, see A. von Bogdandy, *Prospettive della scienza giuridica nell'area giuridica europea. Una riflessione sulla base del caso tedesco*, in *Foro it.*, 2012, V, 54, and the comments of E. Scoditti, R. Caponi, M. Cranieri and R. Pardolesi, G. Grasso and A. Palmieri, in *Foro it.*, 2012, V, 242 and ff.

that a common denominator, albeit a limited one, can be traced and that this allows the identification of profiles of analogy and permits a consequent “decanting” between sectors.

2. *Various scenarios, beginning with an intuition of Pugliatti.*

In a slightly unorthodox way compared to tradition, we intend to proceed by outlining firstly some scenarios (from among the many that might be identified) in which the problem of the method and the relationship with the philosophy of science might arise. The aim is to use them as the background or as problematic starting points that might provide food for thought.

Some of these scenarios may appear to be very far removed from the themes of law and “legal science” understood in a narrow sense: nevertheless, we hope that the reader might “postpone judgment” until the point when this material will be used to support the overall argument.

In this phase of approaching the problem, however, a first, almost evocative fact might be mentioned. It has to do with the teaching of Salvatore Pugliatti, according to whom law is a practical “science”: the lawyer cannot appeal to a predefined stability and unchanging foundations², but has to follow the flux of history.

The emphasis on the practical aspects of legal “science” is particularly interesting insofar as the idea of a frame of reference is often felt by scholars in the legal sector specifically from a methodological point of view and, in any case, emerges clearly in numerous theoretical reflections.

The relationship between a theoretical frame of reference and a changing reality constitutes therefore an essential problem that must be taken into consideration. It is important, as a matter of fact, to establish whether that flux can be organised within a model that tends towards constancy or, at least, to outline limits within which that frame remains constant.

² S. Pugliatti, *Continuo e discontinuo nel diritto*, in *Grammatica e diritto*, Milan, 1979, 88 and ff.

A further problem is that of identifying that “denominator” that is common to the various fields which we mentioned above, intended not as the only model of reasoning, but, at least, as a “common tendency” which cannot be overlooked.

3. *First scenario: the schools (as “groups of scholars”) and administrative law.*

Filling a gap that exists in the history of our legal studies, Italian doctrine has recently outlined the evolution of the Italian science of administrative law³.

It is thus possible to make use of an overall picture of the “schools” of administrative and public law – intended as homogeneous groups of legal scholars, basically sharing similar research programs – that have flowered, developed and eventually (which is often a negative phenomenon, as far as it increases the risk of a sort of cultural homogenization) died out in Italy.

Sometimes the “schools” set out from a very clear idea – a “world vision” or *Weltanschauung* – from which flow various applicative consequences⁴.

Without pretending to clearly circumscribe the various Italian scientific communities, it is sufficient to consider the writings of those who are inspired by the liberal formula. Normally, they look at the administration and at its activity above all from the point of view of the threat to the liberty of citizens. They are concerned with lessening the impact of public authorities in view of an enlargement of the “publicist regime” of the activity itself. On the other hand, we should consider those voices that underline the parity of relationships between citizens and, again, those involved in drawing up in a particular way the legal situations of those who have to deal with the

³ Cf. in particular A. Sandulli, *Le schede biografiche dei professori italiani di diritto amministrativo*, in L. Torchia, E. Chiti, R. Perez, A. Sandulli (editors), *La science del diritto amministrativo nella seconda metà del secolo*, Naples, 2009 and A. Sandulli, *Costruire lo Stato*, Milan, 2009.

⁴ On the culture of Italian administrative law, see S. Cassese, *Cultura e politica del diritto amministrativo*, Bologna, 1973 (French translation by Michel Morabito, *Culture et politique du droit administratif*, Dalloz, 2008).

administration. Even in the schools where there is a great freedom in the formulation of scientific works and, in any case, an intention to rigorously respect the normative fact rather than expressing the "should be", on careful examination, a "model" is followed. Such model is characterised by the idea that those working in the legal field, the lawyer, must stick to the data, that is to say "positive law".

In the writings - obviously those that are more "considered" and methodologically "aware" - of the members (or followers) of the various "schools" the basic premises are not only widely respected, but applied with rigour and abundance in order to deal with increasingly specific problems. Proceeding along a very significant path that might even appear to be inexorable in terms of further study, these premises are utilised in a systematic way to frame particular legal institutions (from public services to property, from global law to actions that can be heard before an administrative court all the way to touching very special institutions: everything that is real puts itself forward as the object of analysis), which, seen in the light of a certain point of view, are described and placed in a wider horizon of meaning⁵.

Recalling a number of aspects of the discussion that bloomed in the 18th century in the bosom of art criticism, it might also be used an expression that began to be heard in that period: "academism". The reason is that the norms that are applied draw their inspiration from a hierarchisation of reality or forms. This, however, is based on a logic of rationalisation and coherence that, often, appears as the most evident proof of the scientific character of the activity that is carried out.

There is a sort of almost inexorable demand, or, at least, tendency of the model to always seek out new problems, respecting a well-defined principle axis that represents one of its basic characteristics.

⁵ What we are seeing, therefore, is an effort to lead increasingly detailed questions back to the general model (in fact, there is no lack of explicit recognition of the fact that the analyses constitute the clarification of something that is already present *in nuce* in that model), which, in turn, is clearly moulded on an idea that is strong and, it must be observed, not ideologically neutral.

Reading many of the contributions by the followers of the various schools, though, it can be noted how multiform reality (in our case: normative reality) sometimes does not bend easily in front of these premises. Nevertheless, such premises are never abandoned, as though they could not be challenged. At most, in "frontier areas", that is, in those cases that are not directly connected with the founding idea, concessions or adaptations are allowed, but hardly ever abjuration.

The effort to hierarchise reality - which we mentioned earlier - is, therefore, fairly impressive, so, to continue provocatively, we are not standing before a democratic form of experiencing the world, given that it is dominated by a cultural and theoretical structure that is very rigid and that cannot be changed.

4. Second scenario: choices of legislative policy.

Even if normative output, especially in recent times, often appears disorganised and uneven, some Italian reforms appear to be strongly characterised by a functional point of view. Even a quick look at changes undergone by the legislative framework governing employment in the public administration (Legislative Decree 150/2009) shows how a basic "programme" emerges and appears to be clearly defined that inspires the whole intervention, thus shaping the various juridical institutes that are disciplined.

That basic programme is often nourished by (and reflects) a specific ideological option, whose force ends up bending various legal institutions, that might assume an appearance that is different compared to the past. That appearance would appear largely incoherent where considered in isolation; however, this may be understood and explained in the light of the founding idea that inspires the reform. For instance, the reduction of the discretionary powers conferred at the senior civil servants ("dirigenti") in Italy is the consequence of the decision to impose a model based on the meritocracy. To make sure that this program works, a set of legal rules established by Parliament has been issued, absorbing - and substituting - the room for the decisions adopted by "dirigenti".

Then there are cases that are less affected by this influence (for example the recruitment): insofar as they are positioned further away from the “heart”, in an ideological sense as well, of the reform, for them the maintenance of a more traditional or less-conditioned appearance does not disturb the overall design.

5. *Third scenario: that awful mess in East Anglia.*

A number of e-mails leaked - apparently following an intrusion by a hacker - from the Hadley Climatic Research Unit (CRU) at the University of East Anglia in Britain have given rise to a fierce debate about the status of science in view of the summit held in Copenhagen in 2009. Some of those e-mails, in fact, appeared to betray the concern of the senders that data would be diffused that was contrary to the thesis of global warming, even going so far as revealing an intent to manipulate that data⁶.

In response to the controversy that was unleashed by this situation, the authoritative journal *Science* published a letter signed by numerous scientists on *Climate Change and the Integrity of Science*⁷ where among other things we read: “There is always some uncertainty associated with scientific conclusions; science never absolutely proves anything...”. It also added: “Scientific conclusions derive from an understanding of basic laws supported by laboratory experiments, observations of nature, and mathematical and computer modelling. Like all human beings, scientists make mistakes, but the scientific process is designed to find and correct them. This process is inherently adversarial—scientists build reputations and gain recognition not only for supporting conventional wisdom, but even more so for demonstrating that the scientific consensus is wrong and that there is a better explanation. That’s what Galileo, Pasteur, Darwin, and Einstein did. But when some conclusions have been

⁶ These events were discussed by M. Tallacchini - to whom I am therefore grateful - during the course of the conference *Il cambiamento climatico: una nuova sfida per il giurista*, held on 19th November 2010 at L. Bocconi University, Milan.

⁷ *Science Magazine*, 7 May 2010, vol. 328.

thoroughly and deeply tested, questioned, and examined, they gain the status of *well-established theories* and are often spoken of as *facts*".

Science, therefore, does not offer certainties. This leads to a rethinking of its own epistemological status⁸: law too should take note of this.

To view the problem from the very restricted and particular position of administrative law, we can observe that there are evident reflections flowing from such a consideration on many legal institutions. The most important ones are those concerning the causal connection and the distinction between technical evaluations and technical verifications.

6. *Fourth scenario: the judge and the access to the fact.*

One of the most significant problems at the heart of the Italian administrative process, before the Administrative Court⁹, is constituted by the investigative powers of the administrative judge.

The new code for Administrative Process (Legislative Decree No 104/2010) has undoubtedly increased such powers, even though uncertainties and criticisms remain with reference to some evidence and the overall architecture of the investigation stage (think of witness, allowed only in written form; therefore the possibilities of using this source of evidence are more restricted than in civil trial).

Here we intend to underline the legal provision concerning the non-contestation of the facts affirmed by the adverse party. Such legal provision has been introduced in an unsatisfactory way by Art. 62, para. 2, Legislative Decree 104/2010: "Except in the cases provided for by law, the judge has to employ as the basis of his decision the evidence provided by the parties as well as the facts not specifically contested by the parties".

This is a rule for judgment and, therefore, a formal "anti-epistemological" restriction¹⁰, in the sense that it impedes the judge

⁸ In general, cf. the observations of D. Morgan, *Beyond Epistemological Pluralism: Toward an Integrated Vision of the Future*, in *Futures*, 19 May 2011.

⁹ In general, see F. G. Scoca, *Administrative Justice in Italy: Origins and Evolution*, in *IJPL*, 2009, 119 and ff., available at <http://www.ijpl.eu>.

from verifying the fact by ascertaining its truth. Consequently, the rule might lead to a variance between what emerges in the trial (where, in principle, only what is proven is considered true) and truth *tout court*, prejudicing the fact that the truth should be a condition of justice of the decision¹¹.

7. *Some initial observations.*

Having reached this point of the analysis it would be opportune to pause in our discourse and make some clarifications, while confirming that the cases dealt with are very different to each other (it is one thing to talk of science, aimed at defining theoretical filters and without any prescriptive elements, and quite another to consider a legislative reform or a trial, where that aim is lacking and these contents instead prevail).

The science of administrative law, apart from a few isolated voices, proceeds by using general models and employing them incessantly. These models have a nucleus that tends to immutability and a periphery that is modifiable (see *supra*, paras. 3 and 4). In this respect, they are similar to the structure of the planet earth where there is a very dense internal nucleus (which, among other things, is experimentally unknowable) and intermediate areas until we arrive at a crust in movement.

The description of the world offered by legal science is mutable and depends in large part on the model employed. We should not be surprised by this, given that “hard science” too continues to question itself about its relationship with truth and the possibility of providing immutable certainties (para. 5). This is an

¹⁰ To use an expression employed by M. Taruffo, *La semplice verità. Il giudice e la costruzione dei fatti*, Bari, 2009, e.g. on page 150.

¹¹ M. Taruffo, *La semplice verità*, cit. at. 10, 134, which also wonders about the relationship between epistemology and ideology in the judgment (cf. 131; 135-13). The trial, on the other hand, is not held to be an institution wholly oriented at the true, but, above all, one aimed at the decision: in this sense P. Ferrua, *Il giudizio penale: fatto e valore giuridico*, in S. Nicosia (editor), *Il giudizio. Filosofia, teologia, diritto, estetica*, Rome, 2000, 207. On this subject cf. S. Jasanoff, *La scienza davanti ai giudici*, Milan, 2001.

essential change, nourished by very famous events or discoveries, which have undermined the possibility of a totalising description of reality: from the theory of relativity to Gödel's incompleteness theorem (according to which there is no all-encompassing set of axioms which is at the same time complete and coherent; in other words, there exist, even in a system such as that of mathematics, elements that cannot be explained by the standards of the rules within the system itself), all the way back to non-Euclidean geometry. The difference is also fundamental for the law, both because it was used to using logical schemes adopted from hard science (it is not fortuitous that in both cases we speak of "laws"), as well as because the traditional role of the law itself was simply to act as a spokesperson for the results of science. Epistemology lays bare the uncertain character of science and, therefore, the law has to rethink its own rules (at least to the extent to which it has drawn up procedural paths taking as its inspiration the presumed rigour of science) and is forced to equip itself, autonomously it would seem, that is, emancipating itself from science at least in part, to deal with the problems that science does not resolve.

Although there is a flowering of a certain methodological scepticism in both fields and despite the fact that the theoretical elaboration of the legal method often leads to more articulated and refined results (indicated in the following paragraphs), at least from the point of view of the concrete progress of science this function is accomplished by the abovementioned models. They are regarded as instruments that serve to provide certainty, perhaps with suitable adaptations compared to the past. Nonetheless, in stating this, without underlining that the use of a very powerful means of inquiry renders uncertain that portion of reality not captured by the model, we cannot forget two other serious problems: the possibility to reach the truth and the immutability of the model.

The hierarchisation of reality, the formalisation of the rules and modelling move away from the true¹²; often, rather, in science,

¹² On closer inspection, even the Luhmannian model of the differentiated social systems employing binary codes (cf. *Rechtssystem und Rechtsdogmatik*, Stuttgart, 1974) moves away from reality, given that the code itself lets only a part of the

hypotheses do not consider reality (think of the so-called thought experiments). More generally – it is the example of legal proof (mentioned in para. 6), to which the system of powers of certifying and certification might come near – we can reach truths that, usually, are described in various ways: acceptable, trial level, provisional. These, however, do not necessarily coincide with the “truth”, which, intended as a correspondence to the facts, there can only be one of¹³.

On the other hand, the models are not immutable, in the sense that they can change over time. Where this happens, the past is forgotten or the “extraneous material” is marginalised. Variability also exists on a spatial level. It is sufficient to consider the framing of environmental problems in Europe and in South America to become aware of the impossibility of mechanically transferring reconstructive schemes formed by European science to a context that is marked not only by natural, but also by social and institutional characteristics that are completely different and distinguished by concerns and “world visions” that are far removed from our own.

8. *Towards a postmodern condition?*

This overall breaking-up of the framework of reference, which at an epistemological level has sometimes encouraged behaviour marked by scepticism (and we also find this in the juridical sector¹⁴), is no more than a specific reflection of a more general crisis which has also struck the vision of history and the experience of mankind within it.

external complexity penetrate inside the system, that part, precisely, that the system can tolerate.

¹³ M. Taruffo, *La semplice verità*, cit. at 10, 84.

¹⁴ Given the impossibility of reconstructing here the fairly complex overview of the most recent reflections, we refer to the analyses – at least of a wider perspective – carried out by a number of scholars of Italian administrative law: A. TRAVI, *Il metodo nel diritto amministrativo e gli “altri saperi”*, cit. at 1, G. ROSSI, *Metodo giuridico e diritto amministrativo: alla ricerca di concetti giuridici elementari*, in *Diritto pubblico*, 2004, 1 and ff.; and S. Civitarese Matteucci, *Miseria del positivismo giuridico? Giuspositivismo e scienze del diritto*, in *Dir. pubblico*, 2003, 685 and ff.

And thus appears the third level of investigation, which was mentioned above (para. 1), which leads us to the overall consideration of the knowledge mankind has of history and reality.

With regard to this, it has become an established practice to appeal to postmodernism; it is true that this has almost become a cliché¹⁵, used now, in numerous sectors, from philosophy to architecture¹⁶, in opposition to the ideology of modernism; nevertheless, within the limits in which the category allows a greater clarification of the theory being put forward here, its analysis appears to be relevant in the framework of this study.

The term, while not unknown in previous reflections¹⁷, was employed in philosophy by Lyotard¹⁸, who is remembered for having linked postmodernism to the crisis in the great metaphysical narratives invoked to give a totalising sense to life (the Enlightenment and the various “isms” of the past: Marxism, idealism and so on) and possessing a claim to universality. These gained legitimacy through their reference to a future whose inevitable unfolding is/was foreseeable. Such meta-narratives were dismissed by Lyotard as “fables for adults”¹⁹, even if this constitutes only a part

¹⁵ Cf., *ex multis*, M. Ferraris, *Tracce. Nichilismo Moderno Postmoderno*, Milan, 1983.

¹⁶ Cf. the exhibition *Postmodernism – Style and Subversion 1970-1990* at the Victoria & Albert Museum, London.

¹⁷ See the indications of M. Köhler, “Postmodernismo”: *un panorama storico-concettuale*, in P. Carravetta and P. Spedicato (eds), *Postmoderno e letteratura. Percorsi e visioni della critica in America*, Milan, 1984, 109 and ff. and U. Mattei and A. Di Robilant, *International style e postmoderno nell’architettura giuridica della nuova Europa. Prime note critiche*, in *Riv. critica dir. priv.*, 2001, 92.

¹⁸ J. Fr. Lyotard, *La condition postmoderne*, Paris, 1979.

¹⁹ The contributions of later authors have been essential, such as Beck and Bauman: U. Beck, *What is Globalization?*, Cambridge, 1999 and Z. Bauman, *Modernity and the Holocaust*, Cambridge, 1989; given the impossibility of paying proper attention to all the lines that have evolved, it is enough to underline the extent to which the delimitation of what we intend by postmodern appears to be dubious. This, in fact, depends on the identification (an operation that is anything but easy) of its correlation, that is, of the concept of the modern, which is distinguished by the characteristics of rationality and subjectivity, which postmodernism intends, if not to surpass historically, at least to fight in the light of an awareness of the significant fracture that began to take place from the 1970s onwards, which would render it impossible to establish an objective meaning of reality.

- the best-known - of his analysis: above all, in fact, Lyotard emphasises the profound changes (social, institutional and technological) that have marked the last few decades and that have brought about the end of the "fables". That is, he observed that those meta-narratives that had dominated modernity, did not survive the collision with history. The examples are infinite: not everything that is real is rational; communism spectacularly betrayed its promises; the market has not always favoured homogeneous enrichment.

Such a complex of events has led to a situation - the current post-modern one - in which, without the comfort of those stories, the legitimisation of rationality cannot derive from an ultimate foundation. The meta-narrative, in other words, has ceased to perform a legitimising function. As a consequence, rationalisation in concrete terms is not the only criterion for identifying man's meaningful experiences.

On the other hand, the myth of progress appears to have been superseded²⁰, with the consequent reflections on the idea of a constant domination of nature, while knowledge and morality are deprived of their essential foundations; using a series of pairs of opposites, it follows that the means win out over the ends, apportionment and differentiation over unity and homologation, dissent over consensus, the periphery over the centre, deconstruction over construction²¹, incompleteness over universalistic completeness²².

The perception, in such a context, of the impossibility of knowing the ultimate truth has in the end led to a marked scepticism.

The point of view of the inquiry that has as its essential axis the postmodern has obviously not spared legal science, which, perhaps more in the past than in our own epoch, has sometimes been enchanted and conditioned by it. Although we can debate the exact

²⁰ G. Chiurazzi, *Il postmoderno*, Milan, 2002, 7 and ff.

²¹ On the relationships between post-structuralism and post-modernism cf. F. D'Agostini, *Poststrutturalismo e postmodernismo*, in *Analitici e continentali. Guida alla filosofia degli ultimi trent'anni*, Milan, 1997, 405 and ff.

²² Cf. G. Fornero, *Postmoderno e filosofia*, in N. Abbagnano, *Storia della filosofia*, IV, 2, Turin, 1994, 377 and ff.; P. Rossi, *Paragone degli ingegni moderni e postmoderni*, Bologna, 1989, I. Matteucci, *Il postmoderno*, Naples, 2009, 9 and ff.

borders of juridical postmodernism²³, that point of view, above all in America²⁴, has taken aim at the legal structures of modernism²⁵ and, bringing to an end neopragmatism²⁶, has sometimes encouraged positions that are both sceptical²⁷, and anti-foundational, supporting the idea according to which the law, indecipherable in itself, would only consist of interpretation, an operation that is always arbitrary²⁸. Effectively, rejecting the myth of the completeness of the system and the possibility of discovering absolute and universal truths, in the absence of a universal foundation of the law (as well), it would not be knowable as objective reality on the part of the subject and could not put itself forward as the object of a theoretical reflection: hence the flowering of a sceptical epistemology.

The question is widely investigated, above all by the philosophers of law (far less by administrative lawyers), to whose reflections we turn²⁹, though it has to be emphasised that the

²³ Cf. P. Barcellona, *Diritto e nichilismo: a proposito del pensiero giuridico postmoderno*, in *Riv. critica dir. privato*, 2005, 207 and ff. and P. G. Monateri, "Jumping on someone else's train". *Il diritto e la fine della modernità*, in *Riv. critica dir. privato*, 2001, 123.

²⁴ As regards the European "novelty", constituted by its attention to current law and doctrine of pre-natural law, cf. P. Barcellona, *Diritto e nichilismo*, cit. at 23. On the issues in the text cf. also U. Mattei AND A. Di Robilant, *International style e postmoderno nell'architettura giuridica della nuova Europa*, cit. at 17, 89 and ff.

²⁵ P. G. Monateri, "Jumping on someone else's train", cit. at 23, 129. cf. also A. Di Robilant, *Movimenti e scuole post-realiste negli stati uniti d'America*, in *Digesto IV – Discipline privatistiche. Sezione civile (Aggiornamento II)*, Turin, 2003, 894-895.

²⁶ R. A. Posner, *The Problems of Jurisprudence*, Cambridge, 1990.

²⁷ M. Ronsenfeld, *Interpretazioni. Il diritto fra etica e politica*, Bologna, 2000.

²⁸ The debate is boundless. Cf., *ex multis*, the observations of E. Gliozzi, *Postmodernismo giuridico e giuspositivismo*, in *Riv. trim. dir. proc. civ.*, 2003, 03, 801 and, on opposite fronts, the positions of P.G. Monateri, *Interpretare la legge (i problemi del civilista e le analisi del diritto comparato)*, in *Riv. dir. civ.*, 1987, I, 531 and ff. and of F. Gallo, *L'interpretazione del diritto è "affabulazione"?*, in *Collana di Diritto Romano*, 2005.

²⁹ Cf., as well as the authors already mentioned, B. Romano, *Relazione e diritto nel postmoderno - Una discussione iniziale*, in *Riv. internaz. filosofia diritto*, 1988, 735 and ff.; C. Douzinas, *Postmodern Jurisprudence: The Law of Texts in the Text of Law*, London - New York, 1991; E. Jayme, *Osservazioni per una teoria postmoderna della comparazione giuridica*, in *Riv. dir. civ.*, 1997, I, 813 and ff.; G. Minda, *Teorie postmoderne del diritto*, with presentation by M. Barberis, Bologna, 2001, in part. 367 and ff; M. G. Losano, *Sistema e struttura nel diritto*, III, Milan, 2002; V. Scalisi, *Categorie e istituti del diritto*

panorama is fairly articulated and that the total arbitrariness of the interpretations is a formula declaimed – and perhaps only by a few – rather than truly professed.

For our purposes it is worth underlining that a paradigmatic sector, not by chance of growing interest for the law as well, that seems to express many of the characteristics of postmodernism is the environment, which in fact we have already mentioned for other reasons (para. 5): it is sufficient to mention here how, faced by environmental problems, we can see the abandonment of blind faith in science and progress and the surpassing of the meta-narrative of endless progress³⁰.

In summary, a significant correspondence appears between the “shattered world vision”, science that has lost its certainties and legal science, characterised by an epistemological status that veers towards methodological anarchy: have we therefore entered the age of post-modernism? The answer would appear to have to be emphatically negative, as we will try to explain in the come course of the next few paragraphs.

9. The urgency of a different world “vision” and the assistance of philosophy of science.

In reality, postmodernism too is not immune to criticisms and objections, at least to the extent to which it becomes a critique that remains anchored to the presuppositions of the modern, limiting itself to recording the failure of its internal logic; on the other hand, the will which runs through it to abandon the requirement to find a rationality and a possibility of knowledge lays it open to the

civile - Nella transizione al postmoderno, Milan, 2005 (significantly inspired by Pugliatti); ID., *Regola e metodo nel diritto civile della postmodernità*, in *Riv. dir. civ.*, 2005, I, 283 and ff.

³⁰ F. Fracchia and A. Marcovecchio, *Il cambiamento climatico: problema e opportunità per il diritto*, in F. Fracchia and M. Occhiena (editors), *Climate change: la risposta del diritto*, Naples, 2010.

accusation of neo-conservatism, becoming a choice to flee from the world³¹.

What we intend to highlight here is however the fact that postmodernism, insofar as it is not yet definable in a chronological sense, but as a “vision” that is different with respect to modernism, becomes a new type of meta-narrative, in different ways often inspired by deconstructionism. The urgency to identify a horizon of meaning, therefore, remains and, as will be said again, creates a tension – we spoke earlier of a “common denominator” – which can also be detected in the other sectors being looked into here.

In reality, there is also a need to discuss the absolute novelty of postmodernism, that is, about the fact that the thinkers of the early 20th century (therefore long before the era of postmodernism itself) still naively believed in the “narrations”³²; on the other hand, there is no shortage of examples from the past in which the old unitary narrations appeared to have been surpassed, opening phases that led to a new narration all the same³³.

In any case, it has been underlined how postmodernism does not yet represent the surpassing of modernism, but rather its radicalisation³⁴, its internal deterioration and, thus, a weakening of its essential traits³⁵.

³¹ This is the criticism of J. Habermas, *Moderno, postmoderno e neoconservatorismo*, in *Alfabeta*, 1981, 15 and ff., quoted by I. Matteucci, *Il postmoderno*, cit. at 22, 18.

³² Cf. M. Taruffo, *La semplice verità*, cit. at 10, 34. An early example of awareness of the crisis of modernity can be found in A. Tilgher, *Relativisti contemporanei*, Rome, 1921.

³³ Think of the crisis that the history of thought experienced during the 14th century with regard to the expectation – which evolved in the 13th century thanks in part to the use of Aristotelian logic – of being able to have access to a totalising construction and elaborating great unitary syntheses capable of organising knowledge of all aspects of human experience. The awareness of this crisis was very acute in Pertrarch and Ockham: in the centuries to follow it however a new form of narration would emerge, that of the Renaissance.

³⁴ A. Giddens, *Le conseguenze della modernità. Fiducia e rischio, sicurezza e pericolo*, Bologna, 1994, 57.

³⁵ G. Vattimo, *Nichilismo e postmoderno in filosofia*, in G. Vattimo (editor), *La fine della modernità*, Milan, 1987.

The criticism is of interest insofar as it leads us to view with caution the points of view that intend to liquidate the past totally, almost as though a new “phase” might excise all connections with the past³⁶ and, above all, exhort us to distrust the idea according to which today there lacks the tension towards a “unity” of meaning.

The truth is that, even when the narratives of modernism – think of political ideologies – have had to endure the harsh lessons of history, they were not completely abandoned, but underwent a transformation, perhaps changing from a criterion to describe reality objectively to an axiological element that is useful in indicating the “ought to be”, but always within an overall scheme of investigation.

It is fairly essential to recuperate whatever is useful in the critique elaborated by postmodernism of modernism, exhorting scientists to emerge from their naiveté. Think, for example, of the fact that the former reproached the latter for employing a model of interpretation that was too closed and complete, while multiform reality imposes a more “open” model. We could also add that its methodological restlessness and propensity to see the single sectors of knowledge as linked with one another, are reasons that postmodernism exalts and that scientists cannot ignore, just as they cannot ignore how much postmodernism pitilessly exposes, and it matters little that this is no more than a degeneration of modernism. Consider the emergence of new problems, such as the awareness that development is not limitless. Consider also the diminishing importance of some typical structures of modernism, such as sovereignty and the relationship with science and space, juridical space as well, that has to be guaranteed to emerging countries.

It is very significant that many of these reflections, located on the level of philosophy, could well be applied – and have been applied – to the other two levels under consideration here (that of science *tout court* and that of legal science³⁷), in confirmation of the

³⁶ This aspect is also very evident in the passage between various “regimes” and institutional structures: cf. P. Grilli di Cortona and O. Lanza (eds), *Tra vecchio e nuovo regime. Il peso del passato nella costruzione della democrazia*, Bologna, 2011.

³⁷ For a specific critique of postmodernism in the juridical field see P. Barcellona, *Diritto e nichilismo*, cit. at 23, 220 and ff. See also *infra*, para. 11.

close relationship that unites the various sectors, a relationship rendered more meaningful by the fact that the theme of the world vision has immediate reflections on all forms of human experience, starting with science.

If this is true, taking up again the methodological position outlined in the course of para. 1, we might even think it is possible to draw from one of these sectors certain minimal elements that would be capable of clarifying the problems that are of interest to the others.

With reference to the theme of the new world vision ("Weltanschauung"), the "problems" lie precisely in the fact that there was no lack of urgency in identifying a «criterion», a «horizon of meaning» and a «foundation» to order reality in the "postmodern" context (even to explain the passage from modernism to postmodernism, the subject of a new narration) and to gain knowledge. This, all the same, has to consider the new complexity and, above all, scientific uncertainty, without that necessarily leading to a perspective of mere deconstruction of the real and the total abandonment of a hierarchical frame of reference.

Fundamental assistance for identifying a new foundation arrives in the shape of epistemology, which for some time has dealt with the problem of identifying models that offer "unity of meaning" or, at least, has sought to respond to the relative urgency.

10. *The new epistemological model: from science to philosophy.*

Science is not empirically verifiable. Thanks above all to Popper the model of so-called inductive ascent has been rejected, a model which, on the basis of a supposed principle of induction, from hypotheses created from empirical facts and repeated observations, arrives at general laws³⁸ that can be verified³⁹. Having heeded the

³⁸ K. Popper, *The Logic of Scientific Discovery*, London, 1959. Inductive generalisations - all swans are white - can always run up against a counter example: the black swan.

³⁹ All the other hypotheses would have to be excluded, which is normally impossible.

warning to not make the same mistake as the naïve inductivist turkey (who, even on Christmas Eve, was convinced he was going to get a good feed every day), it has to be added, though, that the falsificationism of Popper⁴⁰ has also entered a crisis, once it had been acknowledged that the state of science he had imagined was unlikely to be that of a “permanent revolution”, which moves from the definition of conjectures to falsifications which, in turn, determine the abandonment of the hypothesis. Against the fact that it appears to be counterintuitive to affirm that science should work to demonstrate that a thesis is mistaken, it has been observed that a large part of the activity of the scientist is not aimed at a “critical revision” of the paradigm, but rather at its “exploitation”. Where the scientist identifies an answer that, in reality, does not correspond to the model, they do not modify it, but “change” reality, in the sense that they minimise those answers or interpret them differently, introducing perhaps auxiliary hypotheses.

That is, Popper’s criterion pushes the existence of “normal” research into the shadows. This is the position of Kuhn⁴¹, according to whom normal research is a convergent activity that leans heavily on a permanent consensus acquired through scientific education and reinforced by successive activities in the scientific profession⁴². Reality is always filtered by a paradigm: science (“normal” science at least) consists in an activity that is aimed at solving the “riddle” in the light of that predefined “paradigm”. That activity, then, is recognised by the scientific community.

The scientific revolution takes place when the paradigm changes, determined by an excess of anomalies (failures of the paradigm, which is unable to explain reality) which cause a crisis in

⁴⁰ Which, for the purposes of the definition of what science is, surpasses the criterion of verifiability - so magic would also be science - asserting that only refutable theories are scientific. Later, Popper partly modified his previous position: *Poscritto alla logica della scoperta scientifica*, Milan, 1984.

⁴¹ T. S. Kuhn, *La struttura delle rivoluzioni scientifiche*, Milan, 1962.

⁴² To do what they do, scientists “must assume a complex group of intellectual activities”; “divergent” thinkers are therefore numerically limited: T. S. Kuhn, *La tensione essenziale*, Turin, 1985, 246-247

the research programme. In this case, the world vision mutates, as does the language and, often, the geography of academia.

The last step we intend to underline here leads us to Lakatos⁴³ (we do not therefore go as far as the methodological anarchy of Paul Feyerabend), who turns to the idea of the research programme, identified by his basic “metaphysics”, which led to a negative heuristics (which paths of research are best avoided) and a positive heuristics (which paths to follow). The nucleus of the research programme, made up of non-falsifiable hypotheses, is called hard core, and, in certain ways, corresponds to the Kuhnian paradigm; but to this is added a protective belt, made up of auxiliary hypotheses destined to experience the impact of controls, and be the object of continuous adaptations. A corollary of the thesis is that according to which the “progressive” programmes (which allow a better explanation of new facts) prevail over regressive ones, exactly as happens in a conflict between “schools” of thought.

For our purposes it is of interest to underline that Lakatos’ model allows the “absorption” into the “metaphysics” which inspire the hard core of a number of ethical assumptions, as well as ideologies, prejudices, interests, symbolic aspects and political lines of the scientific community.

Science, furthermore, would not necessarily be able to reveal the complete truth or to offer absolute certainties, which was of course confirmed by the events that began with East Anglia case.

These motives also seem to be extremely interesting on the level of philosophy and world visions: the idea of science that works by paradigms, although perhaps incapable of defining all the characteristics of science itself, provides useful starting points for understanding not only how scientists work, but also their behaviour on the level of the vision of history, where – as we mentioned – the analogous urgency of the unity of meaning has not, in reality, vanished.

The paradigms correspond in part to the meta-narratives: a view of history continues in the successive models, elaborated by communities of individuals, who give sense to human experience. A

⁴³ I. Lakatos, *The methodology of scientific research programmes*. Cambridge, 1978.

harsh lesson from history is not enough to justify a total deconstruction and the abandonment of previous hypotheses. The models are needed to hierarchise reality, at least to the point in which the anomalies are not excessive and uncontrollable; these, though, are not completely closed and complete models (allowing for modifications and failures in the protective belt), nor are they neutral, insofar as they possess an ethical-ideological-political hard core, which is often the result of the transfiguration of the past.

The interpretative models which best allow for the explanation of new facts tend to prevail over the others.

Modernism and postmodernism too, like the other great narrations of the past, are no more than paradigms, whose sustainability, from the perspective indicated now, has to be obtained in relation to the fact that they constitute traces (impregnated with values) that are useful to frame, explain and resolve the problems tied to the experience of man in history.

11. ... *to arrive at legal science.*

A similar pattern of analysis can be adopted for the legal scholars' work, considered as "science"⁴⁴.

We intend therefore to go beyond the sometimes convincing criticisms aimed at postmodernism in the law, which repeat, though in part transfiguring them, the doubts raised in philosophy and that we recall here very briefly, using an analogy.

On closer inspection - in its most extreme form at least - postmodernism can be reproached because the doctrine of natural law, sapping its foundations from within, moves towards historicism (but also sometimes towards relativism)⁴⁵: if it is not possible to approach reality and universal truth, then historicism itself is debatable, so it cannot be demonstrated that man is a mere accident

⁴⁴ As regards the possibility finding methodological models that are common to the natural sciences and historical-social sciences, cf. E. Campelli, *Da un luogo comune. Introduzione alla metodologia delle scienze sociali*, Bologna, 2009.

⁴⁵ Cf. L. Strauss, *Diritto naturale e storia*, Genoa, 1990, *passim*.

of history and found on this a single theory that is superior to any other.

Postmodernism too, at least admitting that it repudiates the existence of true and totalitarian interpretations, remains harnessed to the following alternative: the assertion (and thus the negation) is true, but in this way it would fall into the same vice it reproaches modernism for, contradicting the fact that everything is the result of interpretation; on the other hand, this is a mere interpretation and, as such, it is empty of epistemological value: it does not find a “terrain” on which to reside and impose itself on other interpretations and, in any case, it is not suitable for founding a theory⁴⁶.

In any case, as we said, what matters here is not dwelling upon such well-known profiles, also because such rigid historicism is probably not a type of behaviour that is found in daily juridical reflection, where a healthy dose of “realism” is not often lacking⁴⁷. It proves to be more interesting to proceed along a different path, that is, employing the theses of Lakatos and Kuhn, observing how before judgment these have not been used in a generalised way up to now by Italian juridical culture, though it often refers to them⁴⁸. In truth, perhaps more accurately, it could be observed that, although not “theorised”, the paradigmatic model is often actually applied concretely, to the extent that the Kuhnian perspective integrated with correctives *à la* Lakatos allows, with a fair degree of accuracy, the description of the “isms” present in juridical reflection and the analyses of the philosophy of law.

⁴⁶ P. Barcellona, *Diritto e nichilismo*, cit. at 23, 224 and ff. In truth, and this is highly significant thinking back to what we clarified previously, it is not even correct to affirm that in all cases the outcomes of postmodernism in philosophy have been that of denying the possibility of “knowledge” or that some form of foundation, while denied verbally, was all the same invoked (perhaps referring to economic rationality). The tension towards transcendence and the necessity to find “something” behind mere interpretation, therefore, does not spare postmodernism: cf. again the critical analysis of P. Barcellona, *Diritto e nichilismo*, cit. at 23, 212 and 214.

⁴⁷ Albeit in the field of a richer and more articulated position, cf. *ex multis* R. Guastini, *L'interpretazione dei documenti normativi*, Milan, 2004, in part. 100.

⁴⁸ Cf. e.g. A. Travi, *Il metodo nel diritto amministrativo e gli “altri saperi”*, 868, note 9 and V. Villa, *Costruttivismo e teorie del diritto*, Turin, 1999, 19.

In any case, in this way, the model outlined in the paragraphs above allows us to confront, by simplifying it, a series of problems that in the course of these thoughts have so far remained hidden, but that have all the characteristics of being unavoidable: is the work of a lawyer scientific or, better yet, do they act according to modalities that are analogous to those that a scientist employs? Are there criteria to prefer one model over another?

12. *Some characteristics of legal science and the criteria for evaluating the models.*

Working on the hypothesis that science is not the necessary discovery of the truth⁴⁹ (which is, at most, the horizon of the scientist's investigation), but rather the application of paradigms to gain critical knowledge and solve riddles, by means of an initial approximation (cf. next para.), the task of the scholar of law would be scientific, irrespective even of the revelation of an external truth or the achievement of the result of a universal knowledge.

It can then be admitted (and this, in fact, constitutes common experience) that legal science is not monopolised by a single theoretical filter. The models, furthermore, are variegated in terms of their depth and extension: some filters are concerned with specific sectors (the environment as duty; power as authority; the administration in an objective sense), while others have a much wider extension.

From these points of view - the lessening of the urgency to find the truth and universal explanations, pluralism of models - more than one analogy with postmodernism can be detected⁵⁰, but it is not

⁴⁹ On this subject cf. D. Marconi, *Per la verità. Relativismo e filosofia*, Turin, 2007.

⁵⁰ Which does not mean forgetting the peculiarities of juridical science compared to other sciences (or to the activity of lawyers as practical operators of the law), which have already been listed on other occasions, recalling, among other things, the profile of its *object* (in law we find the essential mediation of the language which transcends natural phenomena), which also influences the fact that, unlike the other sciences, lawyers do not limit themselves to influencing the image of their own "object", but *model* it, going beyond the mere "fruition" of a language. The legal scientist, then, compared to other operators of the law, beyond the fact of using a

necessary to adhere to this to reach these conclusions, which are compatible with the point of view of the paradigms.

It is, thus, sufficient, if necessary, to introduce a few secondary but important correctives: in particular, it is worth repeating, there is no monopoly of a model and, rather, the various paradigms often share certain aspects, in a sort of cross-pollination (for example, the concept of public interest), and then differentiating themselves in other areas of the filter of which they are the expression, thus providing a much more agitated picture compared to the idea according to which, in a given period, there exists a single winning model.

It still has to be observed, though, that, despite the negation of the existence of an objective external reality (the law as distinct from its interpretation), pure postmodernism too still employs paradigms; moreover, methodological anarchy is also a model and not a factor that leads to divergences between models.

It is true that other schools apply the model of a more "solid" reality, that is, of a law that is seen as "other" compared to the interpretation and/or whatever emerges after having made the paradigm work. Nevertheless, the fact that the "anvil" on which the "hammer" falls is more consistent in the theories that offer objective importance to juridical reality would not in itself be an indication of the greater dignity of science, precisely because, according to Kuhn, to achieve that the "true" would not be essential: the epistemic framework, in fact, seems safe where the model is made to work with rationality and coherence (a concern which is also present in postmodernism as it is in the economic analysis of the law) to resolve problems.

Therefore are all the theoretical filters equivalent (including, as well, that which is outlined and followed here, and which sees in legal science the collective application of research programmes with the abovementioned characteristics)? Would it not be a sin of pride to

technical filter, has the possibility of effecting a *free choice* in terms of the object of knowledge and enjoys a greater *distance* from subjective involvement and the contingent case.

imagine a hierarchisation among these and that one “knowledge” might teach something to the others?

The answer appears to be negative, for seven groups of reasons, sufficiently explored by the philosophy of science.

First, the paradigms can be classified, bearing in mind their internal coherence and the rigour with which scientists operate⁵¹. The postmodernist theoretical filter at its purest, as we said, appears unconvincing to the extent that it falls into the vicious circle summarised above (para. 11).

Second, referring to Lakatos, progressive research programmes, that best allow the explanation of problems and new facts, are superior to those that are recessive (think, from this point of view, of the extreme “power” of the thesis of the plurality of the systems). In any case, a model that draws on a solid reality (norms, institutional facts, living law and so on), which, therefore, offers greater resistance and, above all, is external, so to speak, allows the hypothesising of many more riddles to solve and provides a greater number of answers. Compared to the most extreme postmodern model, then, this will always be able to raise a further problem in relation to this theme, that of the difference between natural reality, juridical reality and interpretation⁵², an articulation that is in turn simplified by those who render law and interpretation indistinct.

Third, a model rejects the existence of an “anvil” would retreat from the possibility of a paradigmatic revolution in the style of Kuhn and, therefore, would appear essentially conservative, relegating the possibilities of evolution only – so to speak – to its own internal dynamism.

Fourth, again on the basis of the “recording” of the problems to which the scientific paradigms offer a solution, the models which reject uniform and abstract perspectives will be better, forcing themselves instead to take into account the plurality and differentiation of the contexts, just as those that in some way allow the presentation of evidence as regards the question of the role of the

⁵¹ On the operations of the lawyer, cf. F. Carnelutti, *Metodologia del Diritto*, Padua, 1939.

⁵² The three levels are recalled by P. Barcellona, *Diritto e nichilismo*, cit. at 23.

spurious material in relation to the law appear preferable (e.g. ethics, ideology of ethics, "unofficial" elements, experiences that might be distant from science and so on), rather than those which seek to avoid it. The importance of metaphysics - in part already grasped by Popper⁵³ - and philosophy is that of directing the construction of the hard core: this is always present in legal science (cf. para. 2), as it is in the other sciences. Can it be denied perhaps that there exist very precise world visions behind the theory of relativity or, previously, that of atomism?

Fifth, where then the theoretical filter refers to other sciences, it has to take into account the characteristics of the science. There is no such thing as the dogma of immaculate observation, so, for example, the law cannot merely act as the spokesperson for an objective science.

Sixth, if science is a collective operation and not the fruit of individual action, the theoretical filter must be open to the contribution of the various subjects, and declare itself willing to accept criticism and dialectics. Even if this appears to be antidemocratic, it is however natural, and to some extent salutary for the functioning of science itself, that the community should stem the criticisms aimed at radically weakening the foundations of the research programme and, as a result, bringing about the extinction of the same. Obviously, what has been said (for reasons of coherence if nothing else) must never lead to behaviour that is obstructive or censorial, which is the negation of the "declaimed" framework of science.

Finally, it does not seem to be impossible to order the paradigms in the light of their correspondence to "facts" and, therefore, to the truth. This is quite a delicate issue, which leads to a solution that is perhaps unexpected in the light of the premises outlines here so far. It is held, then, to be necessary that, at least where it is possible, as happens in law (it would be a different matter with the so-called thought experiments), that there should exist a minimum connection to reality (in this case, juridical: norms, institutional facts and so on, that take their place "before" arriving at

⁵³ K. Popper, *Realism and the Aim of Science*, London, 1983.

the natural facts), bearing in mind that if the control provides a positive result, the hypothesis is not verified absolutely, but only provisionally, while awaiting further controls.

On the other hand, science and scientists are unlikely to be willing to welcome the paradigmatic idea uncritically, given that they too claim the search for truth as one of the essential elements of their own horizon. We have come a long way, therefore, from the ideas of Kuhn and Lakatos. If these undoubtedly serve to explain how science functions and progresses, it cannot be denied that the truth has to be present both as the final objective of the scientist, as well as an objective criterion for evaluating the science.

In general, the reason for this affirmation can be understood, once again by making a "leap" between levels, and thinking of the Holocaust: if the correspondence to reality were irrelevant, if everything were merely the fruit of interpretation, we would fall into an inadmissible relativism which might lead, on the historical level, even to denying terrible events and a utilising criticism to obscure irrefutable facts. Adhering to this order of considerations - the real world is always out there - permits the immediate introduction of a criterion of judgment and evaluation among paradigms as well. What is preferable - as, on the other hand, Popper said when criticising Marxism - are the models that admit and allow space for some residue of falsification, even if minimal. Certainly the facts (which in law are the objectified fragments of normative reality in all its declinations, including that of case law) can be interpreted in turn by the theoretical filter, which has precisely this specific task, but it is not permitted to eliminate them from the horizon of reference. For example, this is what happens when a scientific conclusion comes into open contrast with a norm or assumes the inexistence of a jurisprudential direction that is equally valid.

It will be objected that here we are going back to Popper, in the sense that the anomaly leads to the rejection of a theoretical filter, opening up to a phase of revolutionary science, or that, by stating this, it enters into an irremediable contradiction with the presuppositions outlined above, where it was stated that the paradigm would be insensitive to anomalies (it is not insignificant

that the discovery according to which neutrinos go faster than the speed of light has not led to the debunking of the theory of relativity). In truth, in order to avoid antinomies, a few simple correctives in the paradigmatic model would appear to suffice.

First of all, it should be noted that Lakatos' thesis also admits that, at least in the protective belt, the model has to endure the clash with reality and might mutate: the auxiliary hypotheses have precisely the function of defending the nucleus, identifying the adaptations of the hypotheses (the auxiliary ones, in fact) without abandoning the research programme⁵⁴.

Second, however, the connection to reality, in order to avoid complete relativism, goes further, in the sense that when the number of anomalies is excessive the hard core is changed as well or (which is not that different) the research programme is abandoned, not unlike what happens when a fundamental change is registered in an institutional system that leads to the appearance of a new structure irrespective of the formal limits of a previous Constitution.

Third, it seems there is another level, an intermediate one between the two extremes outlined so far, constituted by the confirmable hypotheses, given that a scientific theory seeks to last in time and not to simply be dispensed with⁵⁵.

⁵⁴ From this point of view the analogy with the autopoietic theses is clear (cf., *ex multis*, H. Maturana and F. Varela, *L'albero della conoscenza*, Milan, 1987; J. H. Holland, *Adaptation in Natural and Artificial Systems*, University of Michigan Press, 1975; cf. also G. Bocchi - M. Ceruti, *La sfida della complessità*, Milan, 1985), according to which the external environment is the source of perturbations, but it is always the system that selects those stimuli with a view to its own survival. The intention is therefore to affirm that scientific paradigms are similar to "autopoietic organisations" which do not adapt docilely to the environment, but elaborate their own internal response to stimuli.

⁵⁵ We could, for example, sound the content of the paradigms or research programmes with a view to identifying their "strata", perhaps working on the model proposed by D. Gillies and G. Girello, *La filosofia della scienza nel XX secolo*, Bari-Roma, 2010, 266 and ff. This is articulated on four levels: that of the assertions observed (through a comparison with experience), that of the assertions that are confirmable but not falsifiable, that of the falsifiable laws and that of the metaphysical assertions.

A theoretical filter which aims to be legal science, alongside its capacity to be used to solve riddles, has at least to admit these various possibilities, without rejecting them *a priori*, although it is often easier to find out a mistake than to reach the truth.

13. *An overview: science and second life; science, philosophy and law; science and truth.*

Thus we have identified a final criterion for evaluation and, even more than that, for qualifying a model as scientific: the habit of confronting reality and the connection with the same, which is sounded with a impressive obstinacy thanks to the natural aptitude of science for solving real riddles coherently. Science - at least there where reality is accessible - is not the equivalent of "second life": in fact, it is not sufficient to employ an abstract linguistic game for it to exist. In all the cases it comes up against the metaphysical and/or philosophical heart of the model.

This minimum of shared traits can also be found in philosophy and legal science, where the reality is objectively in the norm. Incidentally, it is important to add that if philosophy nourishes science (which then influences legal science), there also exists an inverse movement, which goes from science to metaphysics. The theme in fact is not totally new to scholars of the philosophy of science. Here we can underline that legal science, with its anthropocentrism, can help philosophy and ethics, reminding them - for example, in the environmental field, but the warning also applies for the economic sciences - to place man at the centre of their reflection; on the other hand, it (and the law that is its object) can dictate rules and protocols to "manage" situations of epistemic uncertainty (think of the principle of precaution, elaborated specifically with this aim).

It is useful all the same to insist on the theme of the connection with reality and the correspondence to the true.

It can probably be hypothesised that this correspondence is not a condition that opposes science; stating otherwise, all those who over the previous centuries maintained with rigour, passion and

method theses that were then proven wrong by reality would not have been scientists.

We will attempt to answer this question in para. 14; for now we add that we have to expect scientists, when they apply the paradigms to solve a riddle, have as their final horizon the truth, which is pursued in the light of the premises and argumentations that are typical of the model, even if there will always a margin of uncertainty, without which, among other things, science might not even be able to justify itself. The correspondence of the assertions to events (and, therefore truth) becomes a criterion for evaluating the theory when it is possible to gain access to the truth; a residual criterion is, in the other hypotheses, the tendency of the theory to reveal the truth (conformability or verifiability of the assertions).

Therefore, the progressive research programme is not thus only because it explains new facts, but also and above all because it formulates assertions that correspond to the truth.

The landing place for these reflections lies in the sense that a thesis that accepts the connection to reality and the possibility of its being superseded, or, in any case, that demonstrates a capacity to learn from the errors of the past, is preferable to one which denies this confrontation, in the same way that one which defines with clarity the verifiable assertions, the falsifiable ones and those that are not falsifiable but conformable is superior to the models that are ambiguous. Moreover, as we said, no scientist, interrogated about the aims of their work, could seriously affirm that it is not that of discovering reality and approaching the truth, so realism is a good criterion for ordering research programmes, in legal science as well, where the reality is that of the institutional facts, norms and living law.

We could ask ourselves if the connection to reality also exists at the other levels we have dealt with (that is, the process and vision of human history and experiences).

In the process, by its very nature, the reply ought to be positive, with the warning that here the operator also has as his reference final “factual” reality and not just an objectified fragment of juridical will. As a consequence, the paradigms that, bringing too

much proceduralisation to the action and impeding a confirmation or a falsification, or referring again to a truth reached by means of a simple agreement, moving away from reality and are, therefore, unsatisfactory; this is also an indicator to criticise legislative choices – having considered the difference to a scientific theory – relative to the access to the fact on the part of the judge. Certainly it could be objected that it is a problem of ideology – once again – to accept the risk of a deficit of truth, sacrificing its relative value on the altar of efficiency, of simplification and of the urgency to ensure a decision in any case⁵⁶. As regards legal proof, though, the criticism can reinforce itself recalling the trap of the inductivist turkey: the regularity on which they are based – taking for granted that this is their origin – does not lead necessarily to the truth.

Also as regards the models elaborated to organise the world vision (the “isms”), their correspondence to reality does not seem to be irrelevant: the example of war crimes or that of the gulags confirms the importance of the denials of history.

The breadth of the non-falsified hypotheses (and, therefore, corroborated albeit only provisionally) and of those that are confirmable, despite the meagreness of the auxiliary hypotheses necessary to reduce the anomalies⁵⁷, in conclusion, constitute an excellent criterion of evaluation, to be added to the others listed earlier.

What we have observed does not lead to the definition of “one” specific theoretical filter capable of scientifically representing the juridical dimension: moreover, the aim of this paper, starting from a number of minimal indications to (also) understand how administrative science works, was that of admitting the plurality of schools (and, therefore, of paradigms) and defining a minimum basis to carry out an evaluation of the worth of the various theories, linking between them the levels of epistemology, philosophy and legal science.

⁵⁶ M. Taruffo, *La semplice verità*, cit. at 10, 134 and ff.

⁵⁷ An elementary canon of economics, in fact, renders preferable those theses that do not require continual adjustment because of the addition of auxiliary hypotheses.

Rather it should be noted that scientists and, more generally, thinkers, follow the paradigms in which they are immersed.

Nevertheless, there are those who have the strength to change point of view from time to time, to overturn the logical connections of discourses or use ironic strategies, standing out as a "free thinker"; analogously, whoever manages to grasp the hard core of various models appear like someone who is able to "understand the points of view of others": perhaps, though, more correctly, they are, above all, able interpreters of a postmodernist or deconstructionist paradigm.

14. *Some final thoughts on the theme of academia, appearance, aesthetics and phlogiston.*

It absolutely cannot be stated that the best filter (because it is the most coherent, most powerful, able to solve new problems and more firmly anchored in reality) will necessarily be the one that wins.

What is certain is that, in the competition between models, one filter takes the place of or lines up alongside another, not necessarily less structured, so that we cannot share the idea according to which research and the "world vision" develop along the line of the weakening of the previous paradigms. Nevertheless, the prevalence of the models and schools, juridical as well, giving that we are dealing with a social undertaking, also and above all depends on the strength of those who propose the theoretical filters and - on the theme of comparative legal analysis - on the importance of the original juridical system.

The plurality of the schools corresponds to the fragmentation of scientific theses, to the impossibility of necessarily gaining access to the "true", but also to the complexity of the structure of the "Academia". This leads to the elaboration of specific languages that are used inside them. A sort of "code", in fact, that is the semantic reflection of the theoretical filter.

We mentioned briefly comparative legal analysis. If the theoretical filter has to measure itself against reality, the reasoning cannot be constructed following only a structuralist model. Alongside the existence of invariable constants, the connection with the real

appears, also for the purposes of defining the basic elements to be subject to comparison. The analogy between linguistics and comparison is well-known, the latter having often belonged to the categorical apparatus, mutated precisely by the oldest form of structuralist linguistics, which evaluated a term on the basis of its position within the system⁵⁸, rather than on its correspondence to reality. Thus, as suggested by the other part of linguistics⁵⁹, it is instead necessary to organise the elements that form part of the categories gathered round a prototypical centre. The prototype should be identified taking into account perceptive salience, that is, indications from reality, as well as their relationships with the culture and ideology within which to identify its function. The theme is taken up again here⁶⁰ because it corresponds to the paradigmatic model and the foundationalism that runs through the previous reflections. From the first point of view, the prototype exhibits strong analogies with the hard core; instead the other elements of the category - think of the case of colours - fade towards the edges, contaminating themselves (the protective belt). From the second point of view, the premise is that there exists a world "out there", just as there exists an anchorage to reality for the categories as well - the use of the term "table" rather than "furniture" is not arbitrary - used by linguistics, but also by law and comparison to conceptually organise their own object of study, as well as values and ideologies (which are so important in the realities that are the object of comparison). The categorisation employed, taking its inspiration from the use of the paradigmatic system, used to identify the best and most efficacious level of comparison, appears to give adequate importance to these assets. In any case, categorisation has a pre-linguistic value and this also has to be applied for juridical language and the related comparison.

⁵⁸ V. A. Gambaro, P.G. Monateri, R. Sacco, *Comparazione giuridica*, entry in *Digesto priv.*, 1989, II, 54.

⁵⁹ We refer here to the works of E. Rosch; v. in particular *Cognitive Representation of Semantic Categories*, *Journal of Experimental Psychology*, 1975, 192-233. but cf. also R. Langacker, *Foundations of Cognitive Grammar*, Stanford, 1986.

⁶⁰ Allow me to refer to my book *Elemento soggettivo e illecito civile dell'amministrazione pubblica*, Naples, 2009.

It could be objected that the system that we have outlined claims to have an application that is too wide and transversal with regard to phenomena that are quite different to each other: from the world vision to science, to legal science and linguistics⁶¹.

Having re-emphasised that the minimum common denominator is made up not of a single paradigm, but rather of the tension towards the paradigmatic behaviour and the search for a unity of meaning that repeats certain structurally recurrent characteristics, such an ability however does not appear to be a defect.

Rather, this manifests itself in other fields as well. Think of aesthetics⁶² and art, which can be rebuilt following a similar pattern. We will limit ourselves, for obvious reasons of containing the discourse, to offering a mere suggestion, on the basis, among other things, of a number of assumptions that cannot but be expressed apodictically⁶³.

Art – to quote a successful definition⁶⁴ – is characterised by its own internal legality, in the sense that the artist produces the work contemporaneously with the definition of its “law” and, therefore, never acts randomly, but forms the product. This “body of precepts” is fairly similar to the paradigm, with the peculiarity that the paradigmatic panorama is much more complex: if, in fact, there often also exists an artistic “thread” in whose furrow the artist locates himself, it cannot be denied that the specific model can also be created from time to time and prove to be the result of individual initiative (not only: often it does not exist as an abstract idea before

⁶¹ As regards normative reforms, they share with science the definition of a model soaked in ideology, but they do not have the truth as their horizon, since they sometimes have to regulate relationships, produce juridical effects, resolve conflicts and so on.

⁶² There is no shortage of connections between philosophy of science, epistemology and art: cf. for example the experience and work programme of Sarat Maharaj (*In other's words*), which were pointed out to me by D. D'Orsogna (to whom I owe a debt of gratitude for other suggestions as well).

⁶³ On the theme of aesthetics, given the impossibility of conducting further investigation, we limit ourselves to mentioning S. Givone, *Storia dell'estetica*, Rome, 1988.

⁶⁴ L. Pareyson, *Estetica. Teoria della formatività*, Turin, 1954.

the work of art), so that paradigmatic revolutions are much more frequent and complicated than elsewhere. It is significant then that the model should have its own very evident ethical hard core *à la* Lakatos. It seems to be necessary here, furthermore, that the paradigm should have the capacity to be “applied”, and, in fact, that legality does not remain an end in itself, but guides an experience and a creative and expressive “work” of the artist that, in the end, can be judged as “achieved” (*je ne cherche pas, je trouve*, said Picasso) specifically in relation to the paradigm.

Obviously there are differences. A specificity of art is that the paradigm has to be nourished not only by metaphysics, but also by what we might call the talent or expressive ability of the artist, so that – while aware of the delicacy of the theme – it is held that to be art it is not sufficient to have an idea, even a brilliant one, if it is married to a banal talent in realising it. On the horizon of the work then appears its relational capacity, that is, its communicability with respect to its user. This, furthermore, unlike the classic Kuhnian paradigm, is created not to solve a riddle (rather, it usually creates a problem or a tension that it offers to solve and overcome itself or, on the other hand, to nourish: hence its self-referential and autopoietic character), but with different aims, which it is not possible to analyse here⁶⁵. Finally, the work need not necessarily correspond to reality: rather, this disparity sometimes measures its value and never determines the mutation of the paradigm, but the “changing” of reality⁶⁶.

According to Pareyson’s thesis, therefore, the respect for the rules that the artist has employed – and that is very similar to the “paradigm” – is the criterion with which to evaluate the work, while it is indifferent whether or not it conforms to an external set of precepts or to the truth. The analogies with the first impression that was obtained from the paradigmatic formulation, therefore, continue. This finds correspondence in the fact that the users of the art, as

⁶⁵ Among philosophers we find disparate indications: to represent a completed experience, produce an expressive effect, know, grasp the objectified will, reveal the truth of the myth and so on.

⁶⁶ As regards the problematic borders between “work of art” and “real world”, let’s consider the idea of Seurat to paint the wooden frame of his pictures.

Heine had foreseen, placed in front of the work, should to some extent abandon their own legality (and, therefore, also a judgment of truth), precisely because they have to entrust themselves to the legality created and proposed by the artist.

Within certain limits, the artistic experience approaches the thought experiment of the scientists, where there lacks the possibility of emerging into the real (which does not, however, prevent evaluating whether or not the paradigm is coherent) .

The allusion is of interest for us, insofar as, according to Pareyson, art is the only experience governed only by the criterion of the result in relation to its own internal legality: and it is no coincidence that the author leads it back to a fact that is essentially interpretative.

We thus arrive at an essential indication that is able to overcome the limits of aesthetics⁶⁷: the mere respect of an internal legality, in the law as well, irrespective of its external connections, would resolve itself in an “artistic” form.

On the other hand, though, referring to common experience, in aesthetics too an external foundation (it can be discussed whether this relates to beauty, pleasure or some other factor) is often important to guide the judgment of the user of the art. This allows us to confirm a further reason for useful reflection from a wider perspective: the paradigm can be viewed from inside (or, at least, as a mere paradigm) or as an external object of recognition (and it is no coincidence that the studies of semiotics in relation to art are very advanced⁶⁸) and in the world.

And it is by employing the creation-contemplation of art pairing that we perceive that the final judgment can change,

⁶⁷ There are, however, interesting attempts to pass from the aesthetic level into other fields (one case: that of political philosophy): cf. A. Ferrara, *The Force of the Example. Explorations in the Paradigm of Judgment*, New York, 2008.

⁶⁸ From another point of view, cf. N. Bourriaud, *Estetica relazionale*, Milan, 2010. Obviously important is the reference to U. Eco, *Opera aperta. Forma e indeterminazione nelle poetiche contemporanee*, Milan, 1962, where the interpretability of the work renders it open, underlining though the necessary characteristic of objectivity of the interpretation itself as a condition for opening, implying a minimum of “order” in order to avoid incommunicability.

suggesting the rejection of unitary and universalising formulations. Looking at the creative moment ("production") and, therefore, at the model and its success on completion, we can form a particular judgment on the work of art; placing ourselves in the position of the user, once the process is concluded or has taken place ("contemplation"), art is no longer just a process of the application of the model, but is condensed, in the external world, in its effective success, which, in turn, can be compared with a different parameter (the "external connection", as happens for science).

Art too, therefore, can suggest something to the other levels, in particular to science, with which it shares the paradigmatic approach: in not wishing to consider the two distinct moments, there is a risk of falling into an inadmissible relativism (looking only at the first point without being concerned about the ability to guarantee a correspondence to the world), or into an excessive contraction of the constitutive characteristics of science, marked by the single criterion of the truth.

In conclusion, the status of science has also to be granted to the activities carried out by the scholars of the 17th century who, rigorously applying a paradigm, came up against the mysterious phlogiston (an element that was believed to be present in all combustible bodies and which was invoked to explain the very processes of combustion), but we cannot but recognise that *ex post* that turned out to "bad" science.