SCIENCE UNDER THE YOKE OF VALUE

A PHENOMENOLOGICAL INQUIRY INTO THE EVALUATION MACHINERY

Maurizio Borghi, Ivo De Gennaro and Gino Zaccaria

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Science Under the Yoke of Value examines how science today is fundamentally governed not by an autonomous quest for knowledge and truth, or by the advancement of society, but by coercion to cater to a machinery that feeds on, and in its turn produces, self-implicating values of "quality", "impact", or "productivity", with disruptive consequences for scientific life as a whole.

Drawing on phenomenological analysis and the insights of thinkers like Plato, Aristotle, Galilei, Kant, Husserl, Einstein, Heidegger, and Arendt, this book exposes how scholarly pursuits worldwide have become subjugated by non-scientific values. It challenges the uncritical acceptance of evaluation practices that threaten to transform academia into a self-perpetuating system where scholars labour under what the authors aptly term "the yoke of value". Readers will gain profound insights into the philosophical underpinnings of academic evaluation, moving beyond common discussions of "bureaucratization" or "corporatization" to question the very concept of value that drives these systems. This book uniquely interrogates why enormous resources are devoted to evaluation systems without examining whether these values truly serve science or society, thereby diverting attention from the true menace to present-day scientific enquiry. This critical analysis helps scholars understand the mechanisms that "magically" prevent questioning of the system itself, offering a framework to recognize how scientific autonomy has been compromised and what this means for the advancement of knowledge.

This volume will appeal to STEM scholars, philosophers, and social scientists alike, interested in scientific integrity and the autonomy of research. University administrators, policymakers, and anyone concerned with the purposes and trajectory of scientific research in contemporary society will find this analysis essential for understanding the current crisis in scientific and academic life.

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Truth is always under threat.
Only the menace it bears inside
can save it.

Contents

Preface

This book deals with an issue that is familiar to every scholar of every field who works inside and outside academic institutions worldwide: the mounting impairment of scholarly endeavours caused by counter-scientific evaluative practices. Since these practices subjugate scientific research and teaching by reducing them to values which are themselves not scientific, we speak of a "yoke of value". Furthermore, since those practices form a system which displays a machinal character, we speak of an "Evaluation Machinery".

Some of the phenomena we focus on are widely discussed under headings such as "bureaucratization", "corporatization", "auditocracy", and others, or they are dealt with in debates centring on different forms of scientific or scientometric malpractice, or evident flaws of different modalities and tools of academic self-regulation and governance.

The approach we adopt in this volume differs from that of contributions pertaining to other disciplines, or to policy-related reflections of different kinds and provenance, by reason of its philosophical, or rather phenomenological, character and style. This character implies that our analysis cannot forego interrogating and clarifying the scope[1] and implications of the concept of value, which other analyses, when they speak of evaluation, take for granted.

It is surprising how in this day and age efforts to design and implement, revise and optimize systems of evaluation are ubiquitous and carried out with great expenditure of means and energy, while one rarely, if ever, comes across attempts to determine a concept of value which would make plausible the eminent role with which the pursuit, control, and enhancement of value are credited. It is as if everyone was pledging allegiance to a throne and its reign, without showing any interest in asking whether that throne is held by a good king (as everyone keeps repeating) or rather by a brutal despot. However, where value rules, there are neither reigns nor kings nor subjects, but only dungeons and jailors and forced labourers – we, the scholars.

Cui bono? To what avail?

In what perspective and with what promise does all of this happen? Based on what notion of knowledge? In light of what concept of research and education? According to what understanding of technology, politics, and society? Following what idea of the role of science and scientists within a human community? Inspired

by what awareness of the tradition in which we stand and of what that same tradition holds in store?

Do we have answers to these questions? Do we even have ways of asking them?

One of the points of this book, which also helps to understand the success of the ongoing subjugation, is that the Evaluation Machinery "magically" exonerates us from having to address these and other questions.

Acknowledgements

This volume is the result of a close collaboration between the three authors.

Some chapters are revised, adapted, and updated versions of previously published essays.

By integrating new insights with earlier research, we have created a cohesive and comprehensive work which reflects our shared commitment to – and concern about – scholarship.

CHAPTER 2 is a substantially revised version of Gino Zaccaria's (2022) essay "Time and Value", published in *Academic Freedom in the European Context: Legal, Philosophical and Institutional Perspectives*, edited by Ivo De Gennaro, Hannes Hofmeister, and Ralf Lüfter, 3–19. London: Palgrave Macmillan.

CHAPTER 3 is a substantially modified and adapted version of Ivo De Gennaro's (2020) essay "Despotic time and truthless science", *European Review of History: Revue européenne d'histoire* 27 (5): 582–97.

CHAPTER 4 is a revised, expanded, and adapted version of Ivo De Gennaro's essay "The Value Discriminant: How Metrics Threaten Academic Freedom", *European Review*. 2025:1–14. Published online DOI:10.1017/S1062798725000158.

CHAPTER 7 is a revised and extended version of Maurizio Borghi's (2022) essay "Anonymity as a Threat to Academic Freedom", published in *Academic Freedom in the European Context: Legal, Philosophical and Institutional Perspectives*, edited by Ivo De Gennaro, Hannes Hofmeister, and Ralf Lüfter, 95–116. London: Palgrave Macmillan.

CHAPTER 8 is a significantly expanded, modified, and adapted version of an article by Ivo De Gennaro and Gino Zaccaria (2018) on "The Fiction of Peer Review: Phenomenology of a Catastrophe", published in *eudia, A Yearbook for Philosophy, Poetry and Art* 12: 1–15.

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We would like to thank all those – students, friends, and colleagues – with whom we have discussed, both privately and publicly, the central theme addressed in this

book: "the yoke of value", which weighs on the meanwhile globalized academic world, and the role played by the "mindset of evaluation" in our scientific existence. This issue rose to our attention as a disconcerting development at the turn of the century: the university, which had long been losing its role as a "place for the pursuit of truth", was now beginning to transform – silently in regard to questions of sense, noisily by virtue of an empty rhetoric proclaiming so-called "scientific excellence" – into a structured corporate system which requires every academic institution to compete in the global knowledge market. Almost thirty years on, the "existential derailment" of the university has experienced a remarkable acceleration. Thus, this is a long-lived expression of gratitude! It takes us back to our first published work on the subject, a volume not accidentally entitled *The Dictatorship of Value (Teaching and Research in the Planetary University)*, which came out in 2011 (the text is available for free download at the following address: https://www.academia.edu/35603309/The_Dictatorship_of_Value_Teaching_and_Research_in_the_Planetary_University).

The wider research framework of this book is a long-standing collaborative project entitled *ScienzaNuova* (www.scienzanuova.org), which provides a forum for the dialogue between philosophy and the natural sciences (for further context see below, 209 sqq.)

Finally, we wish to thank Dr. Stephanie Parsley for her invaluable assistance in adapting the manuscript to the publisher's guidelines and for her crucial contribution to the copyediting of several sections of this volume. Her attention to detail and demonstrated professionalism have greatly enriched our work and contributed significantly to its textual quality.

She – A short dialogue on the use of pronouns in this book

A: So, how should we address the issue of pronouns in this book? Should we use forms such as "he or she", "they", or something similar? It would be nice to avoid forms that feel clumsy or unnatural.

B: I agree. The systematic use of "he or she", or even "s/he", is cumbersome, and "they" risks being overly generic. Let us find a better alternative.

C: Perhaps we could use "she" for all genders, inspired by the suggestion that it is related to the Old Norse sjá, which carries the meanings of "seeing" and "becoming aware".

A: Hmmm, interesting. But is this relation reliable? Shouldn't we be sure of that etymological proposal first?

C: You're right; however, as far as I know, there is no scientific support for it. In fact, the standard etymologies of "she" never mention anything like this, not even remotely. I can't even remember where I first saw it.

B: Yet the merit of this hypothesis is that it invites us to hear the pronoun "she" as hinting towards awareness …

A: … just like Plato's "creative etymology" of truth hints towards the divine errancy of things …[2]

C: … and isn't awareness indeed the fundamental trait of human existence, beyond any gender distinction?

A: Indeed. In this sense, awareness holds the same rank as mortality, which gathers in itself all genders as much as it releases them into their difference.

B: So, is it settled then that we are going with "she" only?

A: For a moment, I thought we had found a genuinely promising way to deal with a quandary one cannot choose to not be involved in. In fact, I still think that is the case. But, I suddenly see so many ways in which this suggestion could be misread or misunderstood, and I fear there are even more that I don't see. I must admit that this makes me hesitant to use "she".

B: You might have a point there.

C: I, too, see the point. However, don't you think that, in time, those misunderstandings are bound to dissolve, whereas the promise of, for lack of a better word, the "she-human" will become more apparent?

A: When you say: "in time", do you mean something like "in the long run"?

C: Yes and no. What I mean is this: as soon as there is time, those misconceptions (which I suspect are due to a lack of time) will have sufficient space to dissolve, just as that promise, as soon as there is time, will finally shine.

B: I must say that this restores my confidence in our idea. Therefore, I propose to stick with "she". Let us, though, adopt some kind of graphical marker, such as writing "she" in caps or small caps, or in italics, as a sort of reminder that through the sound "she" we hear the trait of human awareness and of the "she-human".

C: I find this proposal truly liberating!

A: So, do we finally agree?

B: We do indeed. We just need to decide what the most suitable solution would be. Once we've done that, we can but place our trust in time and set out on our path.

C: I am sorry, but I need to specify what I meant by "truly liberating".

A: Go ahead, then.

C: What I meant is this: once our decision was about to come to fruition, the "etymological speculation" concerning "she" liberated (at least to my ear) an entirely new sense of "he", too.

A: I see, although I am not entirely sure what this implies. So, please, continue.

B: Yes, what is this new sense of "he"?

C: Well, now "he" no longer sounds like a merely "masculine" term in opposition to a merely "feminine" one. Rather than there being a contrast or an opposition …

B: … there reigns a sense of unity instead …

A: … within the preservation of difference; and therefore a richness of diversities gathered in equality.

C: Precisely. In the sound "he" we can now hear the echo of "she", the resonance of awareness …

A: … and of mortality!

B: Hence, in a sense everything remains the same, yet nothing is as it used to be.

C: There is no need, then, to devise "graphical solutions" or other expedients.

B: Time will tell. As will our path.

Notes

1 We use the word "scope" both in the sense of "reach", "realm", "sphere", "horizon", and in that of "end", "aim", "purpose".
2 Plato, *Cratylus*, 421 b 2–3.

Introduction – The yoke of value

The title of this book suggests that present-day scientific research is subjugated and that the yoke under which it is placed is "value". We believe that this circumstance constitutes a threat to science itself. The idea that subjugation is a threat to science is not surprising, as it is generally accepted and commonly codified that scientific research must be free and cannot, therefore, tolerate being deprived of, or restricted in, its freedom and autonomy. Specifically, it is understood that scientific inquiry must be defended and sustained in its task of harbouring within itself the unknowable origin from where the changing forms of knowability, to which its endeavours respond, spring; by implication, science itself must maintain an openness towards the advent of new forms of knowledge (including an entirely new and different notion of scientificity) and thus remain capable of being shaken in its foundations; in one word: it is understood that science must guard its *philosophical trait*, and this means: its *fundamental fragility*. Unless we subscribe to a position which, at any time, identifies reality with a set of extant facts, then scientific inquiry is as well-founded as it remains firmly open to transformations in the very sense and meaning of "reality" and, in this sense, *fragile in its foundations.*

However, what is perhaps unexpected is that the restraint which threatens science's freedom, and therefore science itself, is, in fact, "value". If asked to indicate "threats to science", we would most likely name factors such as political pressure or ideological control, or, over the past one and a half centuries, elements of heteronomy arising as a consequence of the increasing marketization and commercialization of the academic world as a whole. These named phenomena certainly threaten the freedom of scientific inquiry; however, they are not the focus of this book, even though the phenomenological clarification of the way in which, in our time, "value" subjugates scientific research also sheds light on the nature of the attacks on its freedom which originate from outside the academic sphere.

In fact, the threat which we diagnose in the following chapters does not come upon science from an extra-scientific sphere. Rather, it is an "intra-scientific" threat, namely, to return to the image of the yoke, a subjugation to which science, or more precisely scientists and scientific institutions, subjects itself; put differently, it is a self-inflicted subjugation – to value.[1] It is clear that, for value to function as a yoke that science brings on itself, what we understand as "value" must have an intrinsically a-scientific, if not counter-scientific nature.[2] Indeed – and this is a crucial

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determination of our diagnosis – we consider the kind of "value" which is found in practices of "scientific *evaluation*" as entirely alien to scientific truth, and "evaluating" as an unsound form of opining through values,[3] which is utterly unrelated to scientific thought and truth-based judgement.

Specifically, by "value" we mean a computable unit which, as such, supports a variety of computational operations. While values play a substantial role in the domain of scientific inquiry – and in what we will characterize as "technicized science" in particular – a value in and of itself is not scientific. Now, since values appear in science but are not per se scientific, and science, although it deals with values, is not itself a computationally graspable value, values cannot be applied to science *as* science, and science cannot be reduced to values. In short, science cannot be evaluated.[4] While it is always possible to perform value-based, or, as we shall also call them, "valorial", operations on entities which, to the evaluating eye, appear as values in a scientific context, what these operations grasp is not the truth of science; nor is this grasping itself truly scientific – even when it applies techniques and methods *derived* from science.

The "yoke of value" now shows itself more clearly as the subjection of science to measures which cannot be traced to scientific truth, or even the struggle for it. This subjection is a threat to science in that the latter's autonomous unfolding is hampered by factors which, while being deaf to scientific truth, possess the power to affect its scope and course. The most pernicious and dangerous of these effects ensue when the subjection is self-imposed, to wit, when scientists and scientific institutions themselves adopt a-scientific criteria when it comes to understanding and governing their endeavours. This can lead to a situation of merely apparent freedom, in which no visible hampering takes place, as the scientific character of research and teaching – to wit, the autonomous pursuit of truth – is nipped in the bud and eventually altogether forgotten.

The valorial criteria and evaluation practices being diagnosed here as threats to science are widely acknowledged and discussed in the academic world. Impact factors, citation indices, ranking algorithms, tokens of "success", and other similar measures are known for their methodological limits and the dangers they involve; their arbitrary nature and the malpractices they foster are evident; the arbitrariness they establish, when only the concern for what is true should hold sway, is difficult to deny. As a consequence, influential warnings against their use – individual and collective – become more and more frequent, as do bans against their improper use enacted by academic institutions. Hence, a systematic collection and analysis of such implements of subjugation would certainly have to be regarded as a meritorious undertaking. However, it would hardly yield fundamentally new insights.

The diagnostic forays which constitute this volume do not aim at such a synoptical, let alone exhaustive, account; in fact, better documented and technically more informed analyses than those provided here are available on several of the named and on other relevant phenomena. The specific, and to an extent novel, contribution we intend to give addresses two aspects which are missing in the current planetary debate, both within and beyond the academic sphere.

The *first* aspect concerns the actual scope and depth of the havoc brought on by the mentioned practices and underlying mindsets, and the level of vilification and devastation of scholarship and education they provoke. Indeed, the "dictatorship of value" destroys the very ground on which scientific inquiry could grow and blossom; it unsettles the very basis for scholarly existence; it vitiates the space in which what Kant named "the public use of reason" might unfold. That dictatorship elicits the basest, most unscientific instincts and breeds "scientific workers" for whom, ever since their earliest training, a responsibility for truth is inconceivable. In this manner, it drives the deterioration of academia, insofar as the latter, according to its initial notion, was meant to be (for the benefit of the community at large) the site where the capacity of scientific inquiry to base itself on the *struggle* for truth could be nursed and regenerated. The aim of the analyses which fall under this aspect is to substantiate the unacceptability of the machinery of evaluative practices which increasingly rules every moment and phase of academic life; in short, its plain incompatibility with the scientific spirit. We shall henceforth indicate the said machinery, whose nature and traits are elucidated in the following chapters, with the expression "Evaluation Machinery".

The *second* aspect we address, and which we find only marginally touched upon in current debates if not absent altogether, is the peculiar structure of scientific knowledge in our time and its relation to the said machinery. The diagnosis we propose will show how the very form of contemporary scientific inquiry, which we indicate with the word "technicized", exposes it to the threat of subjugation by evaluative practices; moreover, it will highlight how that threat is functional in distracting scientists from a different, intrinsic threat – we will call this a *menace*: a menace which affects and informs the very core of that inquiry.

Thus, the aim of this book is to show how the Evaluation Machinery poses a *threat* to scientific practice, *all while* science itself, in its "technicized" form, is affected and informed by a fundamental *menace* – this is, in short, what the following chapters offer to the worldwide scholarly community.

In current discussions around scientifically questionable or downright a-scientific practices in the domain of science, the latter is mostly taken as a known form of intellectual labour, whose nature – roughly defined as the pursuit of truth for the advancement of humanity – does not call for closer scrutiny. It seems that, apart from continuous progress and the refinement of methods, science is forever the production and improvement of explanatory knowledge concerning some chosen aspect of reality. Hence, it is explicitly or implicitly suggested that, if only the mentioned harmful and distortive practices were amended, or – when they are manifestly untenable – dismissed, scientific research would automatically return to its full autonomy and thus be restored to its role as a pillar of our progressive civilization.

However, not only is this representation insufficient, but, in our view, it also impairs the ability to diagnose the threat that science brings upon itself when it allows the coarsest form of "opining through values" (i.e., evaluation) to prevail over scientific judgement.

The phenomenon that, in a comprehensive, often nebulous sense, we commonly refer to as "science" has undergone profound transformations in its character and

scope. Modern science, despite its many analogies to previous forms of scientific inquiry, is so profoundly different in its fundamental stance vis-à-vis "nature", in its understanding of itself, and in the thrust of its interrogation. In this book, we identify two basic, interrelated traits of modern science which ever more overtly drive and underpin its progress and determine the shape in which it appears today. These two traits are "technicization" and "societization".

By *technicization* we mean the circumstance that the scientific method, driven by an anonymous will to dominance and control, increasingly assumes and shapes reality by means of concepts and hypothetical constructs (i.e., models) which, based on the manner in which they produce the knowability, or cognizability, of reality itself, are functional to the intentions of that will. In other words, the focus of modern scientific inquiry is no longer the hypothetical and eventually (albeit provisionally) proven discovery and explanation of a *given* reality, to which its cognition conforms (for instance, reality given as creation); rather, science designs hypotheses and assumptions as operative tools in order to *engineer* a cognizable "reality" which is effectively available in a computable and controllable form, and on that basis incrementally "researchable". We call the devising and crafting of productive tools (be they "theoretical" or "practical") "technics"; hence the term "technicization" as a name for the trait which informs modern science as founded by Galileo Galilei.[5] Technicization implies that scientific inquiry is based on and proceeds by means of computed quantities, or values. Such values are generated within a theoretical framework; as such, they differ substantially from the a-scientific values produced by the Evaluation Machinery (the so-called H-index is just one of many examples we might call to mind). However, arguably, the constitutive reference to computational values plays an adjuvant role in the recent emergence of the odd phenomenon that scholars interpret the scientific standing of their work based on those a-scientific values.

By *societization* we intend the related circumstance that scientific investigation is increasingly prompted by, and hence oriented towards, societal problems – and not just from a thematic point of view but from a structural one – which, in turn, have the form of "problems of life". Hence, scientific investigation is no longer a preeminent access to some form of *given* truth offering the basis for the configuration of a human community, which relies on that truth in its deliberations; rather, that investigation is now an integral component – a "module" – of a societal reality informed by the drive to an ever more effective and, for that purpose, effectively plannable and steerable satisfaction of "vital needs". In compliance with this demand, science assumes a conceptual and methodological, as well as organizational and logistical, structure that is as functional as possible to the solution of problems which emerge in view of that satisfaction being met. Seeing that sheer "will to life" must, above all, will its own willing, its needs are, by definition, insatiable and bound to continually outgrow themselves. Hence, the *movens* and sense (or directionality) of "scientific progress".[6]

As mentioned above, the traits of technicization and societization are interrelated in that they originate from, and cater to, the one and the same "will to will", the harbingers of which are laid out in Nietzsche's metaphysics of the "will to power".

That "will" delineates, for scientific and technological progress, a horizon of total computability and makeability for the most effective and efficient steerability.

The intertwining of technicization and societization has a perceptible implication for scientific inquiry, namely a narrowing of the scope of its freedom. Such narrowing results from the increasing focus on the makeability of all things material and immaterial, pursued through the theoretical and practical design of closed, cybernetically structured, automated circuits of production and management. If we recall the previously given definition of scientific freedom, namely science's capacity for "harbouring in itself the unknowable origin from where the changing forms of knowability, to which its endeavours respond, spring", one can see how that freedom will be reduced when the criterion of scientificity consists in the successful pursuit of an ever higher level and quality of performance, and the required and rewarded mode of thinking is predominantly, if not exclusively, computational, that is, value-based.

Provided there is some truth to this diagnosis, it follows that the way in which contemporary science faces both external and internal threats will be different from that of earlier, let alone pre-modern, forms of truth-seeking inquiry. Progressive technicization and societization will cause science to be increasingly shaped as a provider of high-performance problem-solving tools within a specific natural environment and social context – one that is *already pervasively informed and engineered by modern science and technical devices*. This interpenetration of technicized science and technics-driven reality can fuel both the temptation for science itself to strive to become the moulding force of society – an attitude known as "scientism" – and the interest of power (whether it be state or corporate power) to instrumentalize science and gear it to its own purposes. In fact, measures amounting to political instrumentalization and subjection to political control – in short, the "politicization" of science – and which employ a range of tools, ranging from outright coercion and purge to thematically selective funding schemes, seem to become more prevalent (under all forms of political regime) as the technicization and societization of science advance. The specific form of politicization of science, which is based upon, and in turn sustains, the Evaluation Machinery, is described under the title "policyzation" in Chapter 6 of this book, by reference to its alignment to centrally dictated *policies*. Policyzed science is indeed a key element of what we call "the policy factory". Today, when we say "science", we mean policyzed science, without its policyzed character, let alone its underlying technicized and societized structure, coming into view as such.

However, while the politicization (and, of late, the policyzation) of science is one thing, its societization is another.

Societization results from a drive that acts within the "logic" of science itself, causing it to morph from a purely definition-based form of knowledge (i.e., one in which a purely theoretical decision concerning the sense or being of an object gives rise to a scientific paradigm) to one that proceeds by definitions which are based on and functional for "vital" problems (i.e., the urgency of life itself, making its call through specific "problems", seizes the power of definition and, on that basis, summons and moulds a scientific "task force" equipped with functional approaches, fitted tools and effective methods).

By contrast, politicization forces contingent political or ideological objectives on scientific investigation. Analogously, "policyzation" subjects scientific inquiry to policy measures and their supposed "impact" (frequently replicating the very same political and ideological objectives, albeit under the guise of "neutral", "evidence-based", and "science-informed" wording). Once the driving force of scientific work consists in meeting a politically motivated goal or in providing actionable scenarios to policymakers, science itself is uprooted from its source (even the previously mentioned "will to will"), rendering it, as a consequence, unfree. The more exclusively it pursues the production of (from the *scientific* viewpoint) arbitrary results, while increasingly ignoring its own blindness regarding the scientific implications of its findings, the more irresponsible it becomes. Finally, while *societization* responds to a necessitating force that, albeit residing outside the scope of scientific inquiry itself, pertains to the "ontological" dimension which is constitutive of science (so that "societized" science *is still science*), politicization and policyzation – being exclusively interested in the achievement of pre-established results through the effective use and development of tools and techniques diverted from a genuine scientific attitude – negate scientific interrogation, so that politicized and policyzed science are *no longer science*.

An analogous consideration applies to technicization. Technicized science operates with functionally produced quantitative measures to test and optimize its models of a computationally steerable and controllable, ultimately self-making reality. For reasons pertaining to the scope of technicized science itself, it relates to itself (that is, it orients, monitors, assesses, validates, and corrects itself) through quantitative or quantifiable values which directly or indirectly mark the degree of subjection of a modelized reality to appropriately fed and operated control circuits geared to self-enhancement;[7] in short: science understands itself and is seen as remaining on a scientific path based on the reference to such values.

Formally speaking, this reference to and focus on quantitative parameters also applies to the tools and procedures by which scientists and scientific institutions *evaluate* scientific endeavours. Hence, when making scientificity and scientific rank contingent on numbers which count, say, patents or acquisition of funds or various "audience levels", one is, in a sense, doing what modern science habitually does, namely computing values. However, as pointed out above, there is no way – if not in a purely rhetorical and mystifying way – to construe these latter measures as (even "indirectly" as so-called "proxies") scientifically meaningful. Put differently: a "success" in terms of publication in a high-impact journal, for instance, has *strictly no correlation whatsoever* with scientific progress as understood in the domain of technicized science. It follows that gearing scientific activity to similar measures amounts to a loss of scientific self-awareness, to a "desensitization" of scientific research with respect to genuine scientific rank, and, ultimately, to the rule of utter arbitrariness in the domain of science.

We thus come to a provisional diagnosis concerning the (self-inflicted) subjugation of science to a crude form of opining through values known as "evaluation": the "yoke of value" shows itself as a sterile, toxic epiphenomenon of the value-based inner drive of science towards its progressive technicization and

societization. If science itself, based on fundamental ontological turns which are not in science's purview, is on a path heading towards its societized technicization and technicized societization, then the rendition of science to an increasingly machinal and automatized quagmire of freedom-thwarting evaluation practices appears as a spurious *derailment* from that path. As such, that rendition stands in the succession of other – more recognizably "humanistic", but similarly untimely and misguided – previous attempts to embed science in a framework meant to somehow secure its standing as the fundamental and guiding knowledge of humanity. The scope of such pseudo-foundational endeavours was presumably provided by the failure of the project of an ontological foundation of science, the reasons for which will perhaps become clearer thanks to our discussion of the technical character of science itself (below, Chapter 5).

Those previous attempts to "consolidate" the status of science, which included efforts to devise an epistemological or methodological underpinning of scientific inquiry, were referred to as *Entgleisungen* (literally "derailments") in a remark on the path of science made by Martin Heidegger in the second half of the 1940s.[8] A derailment implies that something disengages or deviates from a rail. In the case at hand, the derailment indicates science's aberration from "the secure rail of its technical nature". In addition to the attempt to provide an epistemological foundation to the sciences, Heidegger identifies two further "derailments", namely: "the overstating of 'science' as if it could ever offer a knowledge in the sense of a constitutive experience, championed [that overstating] by the philosophy of culture"; and "the theological interpretation of the sciences as a way to God" (Heidegger 2015, 388). If one compares these earlier and rather insubstantial attempts to validate scientific knowledge (and make it what it cannot be) with the more recent derailment represented by the Evaluation Machinery – through which the majority of scientific institutions and scientists nowadays assess, mould, and govern scientific research – one cannot help but notice the unprecedented coarseness and carelessness of the machinery. Among the most flagrant examples of coarseness is the misuse of words drawn from metaphysical ethics (such as "value", "virtue", "best practice", "excellence", etc.) to feed the prevalent "valorial" rhetoric.

Indeed, the oppressive rule of a-scientific metrics and factitious morals over supposedly "autonomous" science is so flagrant that one is left to wonder what would induce the scientific world to a similar evisceration. The threat it brings against itself consists in demeaning practices, which hollow out scientific inquiry and breed academics trained to home in on those very metrics instead of pursuing scientific truth (an attitude which also spawns commonly known malpractices, from p-hacking to citation gaming, etc.), and to mistake successful evaluation and the ensuing rewards for true scientific achievement.

However, this threat has a deeper implication, which only becomes visible if we do not limit ourselves to assuming the present form of scientific research as obvious and given but attempt to diagnose its present character (as outlined above) with regard to its relation to truth and, consequently, its capacity for generating meaningful knowledge, where "meaningful" implies: in support of the creation of a human world.

In this book we argue that it is precisely the drive to technicization and societization that constitutes *a menace to science*. This menace is *intrinsic* to the very foundation of science itself and, as such, fundamentally different from the threat represented by a- or counter-scientific (yet meanwhile internalized) evaluation practices. In short, that fundamental menace resides in the very trait that moulds scientific research as such and hence shapes its changing guise and thrust. This trait is not, in itself, scientific, but neither is it simply extra-, a-, or counter-scientific. Because of its original power to determine the method and scope of scientific inquiry, we can refer to it as "archi-scientific" (from Greek *archē*, "origin, principle; element, realm; first power, command"). If science, by virtue of its constitutive archi-scientific trait, is driven towards ever more accentuated forms of technicization and societization, then what does this imply? In what sense does this imply a menace to science as such?

It was mentioned above that "[t]he intertwining of technicization and societization has a perceptible implication for scientific inquiry, to wit, a narrowing of the scope of its freedom", the latter being understood as the "openness towards the advent of new forms of knowledge (including an entirely new and different concept of science)", and thus as science's *fundamental fragility*.

However, as we must now point out, that freedom and openness also determine the capacity of scientific inquiry to expose itself to and let itself be informed by the relations of sense which together constitute what we call a human world. These relations include: the overwhelming powers of nature, withdrawn in their provenance and implications; the proximal foreignness of non-human life; the ever-returning unknownness of the features of the divine; and the unfathomable depths of human existence. From the contention with these traits arises the measure which, for any one epoch, shapes the proceedings of productive ingenuity, the provisions of law, the precepts of religion, the rules of power, the stipulations of custom, and the purviews of scientific knowledge itself.

In other words, that openness and that fragility determine the *ethical scope* of scientific inquiry.

As long as science maintains its openness to those measure-giving, world-shaping fundamental sense relations – which is the same as saying: as long as it maintains its *philosophical trait – it can serve as a trusted guide and reference for endeavours to build a human world in accordance with that bestowed epochal measure*.

It is now clear that the narrowing scope of technicized and societized science's freedom entails a constriction of its ethical scope; more importantly, this narrowing of freedom constitutes a menace to science's capacity for ethical regeneration. As science – mostly unbeknownst to itself – faces this menace at the level of its ownmost rationale, it would be misguided to opine that some other-than-scientific knowledge could come to its rescue. Only by contending *on its own terms* – that is, as a free (albeit within constraints) and truth-seeking endeavour – with the manifestations of the menace (which traces to the dimension of its archi-scientific rationale) can scientific inquiry hope to recover its dignity as a world-preserving knowledge.

A likely[9] adjuvant in this effort is the dialogue with philosophy. Why? Because the defining task of philosophy, insofar as it regains, in turn, its original mandate, is to explicitly hearken back to – and fittingly bring to light from out of its first principle – that archi-scientific dimension, thus constituting itself as a true *source* of human autonomy and liberty. As such, philosophy is also called to mediate science's recognition of other forms of human world-building – first and foremost, that which takes the name of "art":[10] the original, dimensioning, and (in its own way) autonomous form of measuring.

By contrast, freedom-thwarting practices spawned by the "yoke of value" cannot be expected to *sustain* science in its independent examination of its ground or in its free struggle for ethical regeneration. To the contrary, wherever that examination and struggle are still alive – to wit, wherever there surfaces and persists a *free* scientific endeavour – they will eventually be tracked down and quenched by the system of standard-setting, scrutiny, and "incentivization" put in place by the Evaluation Machinery and fiercely determined to preclude the one condition scientific inquiry cannot do without: "study time", or, in Greek, *scholē*.

Thus, the threat represented by the "yoke of value" finally seems to be aptly diagnosed: not only does this matrix of valorial measures threaten the free unfolding of science, but it threatens science in its very capacity to deal with the "true", intrinsic threat, namely the *menace* to its very core that it faces as its technicization and societization advance. As a "derailment" in the described meaning, the subjugation to counter-scientific values poses a threat to the menaced fragility of science; in short, it is "a threat to the menace", and therefore to "the promise of…" which that very menace bears, *provided that and as long as it is recognized and assumed as such*. In fact, the pernicious nature of this "threat to the menace" resides in its capacity, if not to divert science from the "rail" on which it proceeds towards its accomplished technicization, then, at the very least, to obfuscate and discourage all vistas and attempts that might arise where the philosophical "archi-fibres" of scientific interrogation come alive and which enable science to be itself and only itself.

Finally, the question of the origin, urge, and scope of practices informed by the yoke of value returns. Philosophical – here, specifically phenomenological – analysis can provide some diagnostic elements in that respect. However, it remains difficult to account for the extraordinary triumph of evaluation over science in academia and to shed light on the motivation which leads scientists and scientific institutions to inflict upon themselves such science-debasing, truth-taunting procedures in the name of "accountability", "quality assurance", and "excellence", justified by the pursuit of blurry, scientifically arbitrary goals.[11] As our diagnostic endeavours still struggle for sufficient measure and clear-sightedness, it seems advisable to slow down and make time for scientific communities and policy-makers to critically examine their practices. In fact, we fail to see any valid argument, rooted in the care for the true thriving of science, that would not sustain a moratorium (a precautionary stop of the doings of the Evaluation Machinery) as a way to initiate a renewed meditation and dialogue around the scope and future of scientific inquiry.

Notes

1 It is important to distinguish "intra-scientific", which here means "*inside the sphere* of science", from "*inherent in* science".
2 On the difference between a-scientific and counter-scientific see below, paragraph 4.3, 71.
3 We distinguish between "thinking through values" and "opining through values". The former is the foundational thinking inaugurated by Nietzsche's metaphysics. "Thinking", here, is the (philosophical, artistic, scientific, etc.) opening of perspectives and scopes within which "subjects" (or "forms of life") can measure whatever they encounter as a value, that is, as a condition for outgrowing their own level of power (in short, for "becoming more"). "Opining through values", in turn, is such measuring of power *within* those "creatively" opened perspectives and scopes. As we will attempt to show in this book, the evaluative practices in the scientific domain not only do not qualify as a "thinking through values" (for they lack any genuine foundational, or creative, trait); they do in fact not even attain the dignity of a true "opining through values", in that the successive rounds of "outgrowing", driven by such practices, merely boost naked numerical values in a way which, covered by the rhetoric of "continuous improvement", *weakens* whatever genuine scientific endeavour is involved in (i.e., is subjugated by) them. The sterilizing evaluative mechanics, the empty "numericalism" which is increasingly controlling scientific life, appears as a self-referred process which measures without meaning and evaluates without value.
4 On the unevaluable character of science, see De Gennaro (2014).
5 We adopt the word "technics" as the name for all human involvement with things (be it "theoretical" or "practical") which arrogates for its own purposes the definition of their "sense" or "being". The constitutive trait of technics will be named "technicity". As will be shown in Chapter 5, all western (including ancient Greek) science is characterized by a "technical" trait; what we identify as the "technicization" of science refers to a decisive modification of that very trait. That modification leads to a progressive dissolution of the distinction between science and the "practical arts", as the scientific method itself becomes a tool (i.e., an "epistemological filter" of sorts) for constructing and manipulating reality. Hence, technicization is not merely an incidental feature of modern science but a structural one, insofar as the latter operates through models to make the world cognizable in a manageable and controllable form. Later in this book we will distinguish between "epistemic" (i.e., Greek) and "mathematical" (i.e., modern) technicity to indicate the ancient and modern "style" of theory, respectively. Moreover, we will differentiate "poietic" (i.e., Greek) from "logistical" (i.e., modern) technicity to denote the ancient and modern "style" of productive ingenuity or expertise (as found in the aforesaid "practical arts"), respectively. Finally, we will borrow and transform the Greek-Aristotelian word *atechnia* to define a specific defective form of mathematical technicity as "speculative ill-technism", while the corresponding defective form of logistical technicity will be referred to as "applicative ill-technism", where "ill-technism" is to be intended as a lack of true or sound technicity, hence as a "degenerative" and even "abusive" form of it. (As one can see, we avoid using the term "technology" in our discourse, the current meaning of which – roughly "the complex of notions, methods, and tools employed for the satisfaction of human needs and the transformation of the world" – does not serve our diagnostic effort well and indeed obfuscates the distinctions which are necessary for an adequate intelligence of our present reality.) (On this topical point, see below, 130, note 11.)
6 Societization is at the basis of the recent emergence of problem-oriented, typically "multidisciplinary" scientific fields, such as "sustainability science". However, an essential distinction between the trait of societization and the phenomenon of "policyzation" will be drawn in Chapter 6.

7 Control circuits geared to self-empowerment imply successive cycles of consolidation and potentiation (or increases in power). Their form can, therefore, be described as a spiral.
8 Besides its literal meaning, the German word *Entgleisung* also indicates a lapse or gaffe. The issue of such "derailments" is a pivotal theme of this book. For more on this topic, see De Gennaro (2023).
9 For the meaning of the words "likely" and "likelihood" in this and other passages of this book see below, 195, note 1.
10 This mediation is not realized in what of late is becoming known as "artistic research", in which art seems to be charged with the task of somehow making up for the detachedness of technicized science from human reality.
11 One might surmise that in this perplexing acceptance there is a role for some kind of "epistemic guilt", which is a distortion of the responsibility towards truth and of the duty to stand up for it and preserve its meaning. Epistemic guilt transforms the sense of duty into an instigation to self-punishment, which involves a constant need to justify one's work through external interventions of quality control and accreditation. We will return to this issue in the Dialogue which concludes this book.

Bibliography

De Gennaro, Ivo. 2014. "Evaluating the Unevaluable: Scientific Research in the Epoch of the Will to Will." *Heidegger Studies* 30: 17–32. Accessed April 30, 2025. https://doi.org/10.5840/heideggerstud2014302.

De Gennaro, Ivo. 2023. "Wertvolle Entgleisungen: Zur Gefährdung der akademischen Freiheit heute." In *Akademische Freiheit. Orte und Regeln des freien Wortes im Wandel geschichtlicher Kontexte*, hrsg. von Tilman Borsche, 255–71. Freiburg/München: Verlag Karl Alber.

Heidegger, Martin. 2015. *Anmerkungen I–V (Schwarze Hefte 1942–1948)*. Gesamtausgabe, Bd. 97. Hrsg. von Peter Trawny. Frankfurt a. M.: Vittorio Klostermann.

1 On the machinal trait of evaluation

> Humanity ruthlessly employs every single man as material for firing its big machines: but to what avail, then, the machines, when all single men (that is, humanity itself) only serve to maintain them? Machines, which are to themselves their own purpose – is this the *umana commedia*?
>
> The ideal is to build the most complicated of all machine-beings, developed by the dumbest of all possible methods.
>
> Friedrich Nietzsche[1]

1.1 Machine and *automaton*

The fact that we speak of an "Evaluation Machinery" implies that we detect a machinal character in the myriad of processes and operations which perform the evaluation of "scientific products". According to the *Oxford English Dictionary*, the adjective "machinal" means "of or relating to a machine or machines; mechanical". In the case of evaluative practices, this machinal character is by assumption modified in that it does not simply constitute a machine, but a machinery. What, then, is a machine?

We define a machine as "a system of automatisms". An automatism, in turn, indicates an occurrence marked by the absence of purpose. This characterization echoes Aristotle's elucidation of the automatic (*to automaton*) as a peculiar kind of cause (*Physics*, 195 b 35 sqq. [Chapters 4–6]).

At a certain point of his discussion on events which occur "by automatism", Aristotle resorts to a linguistic device to highlight a constitutive trait of these events: he suggests focusing on the word *to automaton* and, for the sake of argument (i.e., without implying an etymological basis for this), to read in it the dictum *auto matēn*, that is: "itself in vain" (197 b 22 sqq., esp. 29–30). In fact, the Greek word *auto* means "itself", whereas *matēn* can be rendered as "in vain", "at random", "without reason", "idle"; it is the accusative of *matē*, which indicates "a folly" or "a fault". A stool – this is Aristotle's example in the immediate context – was standing there *for someone to sit on it*; when it toppled over, that did not occur *for the purpose of sitting*: it happened, he says, *apo tou automatou*, namely, as we would say, "accidentally" or "by mistake". The toppling itself can be qualified as *matēn*,

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in the sense that, while there certainly was a cause for it (e.g., a structural failure or an external impact), the occurrence as such is marked by a "void", or absence, of purpose, notably the absence of the very purpose for which the stool was standing there in the first place.

Aristotle's discussion of different kinds of cause, and in particular of what occurs "accidentally" or "coincidentally", is too analytically refined for us to integrally account for it here and to unfold in detail its implications in the context at hand. However, even if we did manage to give such an account, this would likely be useless, as there seems to be a decisive element which preemptively forbids any reference to Aristotle's elucidation of the *automaton* in the context of our considerations concerning the machine as a "system of automatisms": this element is the fact that his characterization of something as occurring "by automatism" only applies to events which do not occur "necessarily" or "for the most". Why is that? In a world in which stools *always* or *mostly* topple over, any instance of toppling over would be what we *expect* a stool to do. Hence, seeing that toppling over belongs to what is expected to happen with or to a stool, we would not refer to a particular occurrence of toppling over as being "accidental" or "coincidental". However, since that which occurs *systematically* does so *always* or at least *for the most*, the very expression "system of automatisms" is by implication impossible, and our reference to Aristotle's elucidation of the *automaton* as what is "itself in vain" is precluded. Indeed, who would want to claim that a cogwheel in a machine turns "accidentally"?

And yet there is a meaningful way in which we can speak of the machine as a "system of automatisms" and retain a reference to Aristotle's explication of the automatic as what is "itself in vain" or "purposeless" or, as we could also say, "for nothing". As stated above, in a machine nothing is accidental: every component has a precise function or purpose, namely that of contributing to the running of the machine itself; that is, of being a condition for the work it performs. However, as a component *of the machine*, it has no purpose *for itself*: indeed, that component is either *ab ovo* "for the machine"; or, if it had *itself* a purpose (or a purpose *for itself*), that purpose remains silent, unfulfilled, "absent", in favour of the component's functioning within and for the system of the machine. Hence, whenever a thing operates as part of a machine, it is either *itself* devoid of a purpose, or the purpose it is otherwise seen to have for itself must be relinquished. It is in this sense that any component of a machine is "itself for nothing", to wit, "automatic", and the machine itself can be defined as "a system of automatisms".[2]

1.2 The science-machine

A paragraph in Nietzsche's *Human, All Too Human* is entitled "*The machine as teacher*". It reads as follows:

> The machine teaches through itself the interlocking of human masses, in the case of actions in which everyone has only one thing to do: it provides the model of party organization and warfare. On the contrary, it does not teach

> individual self-importance: it makes out of many <things> *one* machine, and of each single unit a tool to *one* end. Its broadest and most fundamental work is to teach the benefit of centralization.
>
> (Nietzsche 1999a, 653; II, Section 218)[3]

Nietzsche sees humanity as a whole growing into an "ever more tightly intertwined 'machinery' of interests and performances", which implies an "ever more economic consumption of man and humanity" (1999d, 462; 10[17]). This machinery constitutes "an enormous wheelwork of ever smaller, ever more subtly 'adapted' wheels; […] an ever growing becoming-superfluous of all dominant and commanding elements; […] a whole of enormous force, whose single factors represent *minimum-forces*, *minimum-values*" (1999d, 462–63; 10[17]). While this machinery serves what, in his view, is the "inevitably forthcoming overall economic management of the earth" (cit), *for humans* the machinal character maintains a mortifying, debasing trait: "The machine is impersonal, it deprives the piece of work of its pride, of its individual element of *goodness* and *faultiness*, which is attached to any non-machinal work, – that is, of its bit of humanity" (1999a, 682–83; II, Section 288). This, however, leads to a reaction:

> *Reaction against the machine-culture*. The machine, itself a product of the highest intellectual capacity, mobilizes, in those who operate it, almost exclusively the lower, unthinking forces. True, in doing so it unleashes on the whole a massive amount of force which otherwise would remain dormant; but it does not give the impulse to rise higher, to do better, to becoming an artist. It renders *active* and *uniform*, – however, in the long run, that elicits a counteraction, a desperate boredom of the soul, which through that boredom learns to crave for changeful leisure.
>
> (1999a, 653; II, Section 220)

As a consequence, the aim of making man "as useful as possible and bringing him as close as it is acceptable to the unfailing machine" (1999d, 459; 10[11]) requires making "*something disagreeable agreeable*" (1999d, 459; 10[10]); to this end, man himself must

> be endowed with *machine-virtues* (– he must learn to perceive the states in which he works in a machinally-useful manner as those which have the highest value: for that purpose it is necessary that the *other virtues* be as much as possible spoiled for him, that they be made as dangerous and infamous as possible).
>
> Here, the first stumbling block becomes the *boredom*, the *uniformity*, which all machinal activity entails. To learn to bear *this*, and not merely to bear it, but to learn to see a higher allure playing about boredom: this was so far the task of any high school system.
>
> (1999d, 459–60; 10[11])

A humanity raised and educated to adopt "machine-virtues" is "adapted" to functioning as "a tool to *one* end". This end is not its own but the working of the machine, namely, its producing ever more "enormous" amounts of force: functioning as a minimum-force wheel of a machinery at the service of the machinal "overall economic management of the earth" is "itself for nothing", in other words, it is "automatic". In this sense, what is done in a machinal context is done automatically; that context itself is "a system of automatisms".

In Nietzsche's diagnosis, the "ever more economic consumption of man and humanity" for the ever more highly performing "economic management of the earth" is as inevitable as it is, in itself, senseless or idle. In other words, it is "for nothing" – unless man recognizes that which necessarily belongs to it, namely "a countermovement" which can endow this enormous system of automatisms with a sense. This countermovement has the form of a humanity which finally rises to this epochal development in such a way as to be capable of achieving what the merely "adapted" humanity is incapable of; to wit, drawing on the "enormous machinery" for that humanity to grow *itself* or *as such*, that is, *as* a humanity.

While this is not the place for a further discussion of Nietzsche's diagnosis of the machinal economy of the earth and of what, based on that diagnosis, offers itself as the only "way out" for humanity from its becoming ever "smaller" on its path of adaptation, our meditation on science under the regime of the Evaluation Machinery can, however, derive an important indication from his characterization of the machine, read in conjunction with Aristotle's analysis of the *automaton*.

As will become clearer based on the determination of the "technical" trait of science (and notably of the sense in which, with regard to the modern age, we can speak of a "technicization" of science itself), the entire enterprise of scientific research is marked by a trait of increasing machinalization geared to a *single* end, namely the production of ever-growing forces and performances, which *single*, however, appears to be "itself for nothing", or, put differently, merely "for its own sake". As will also be laid out, technicized-machinalized science acts as a module and driver, intertwined with other modules and drivers, within the comprehensive system of "world society" operating the machinalized earth. In this context, "practicing science" becomes the "automatic" production of "innovations" for the solution of problems emerging from societal life in interaction with the "earth-machinery".[4] Insofar as the path of science is one of a growing technicization, and scientific work assumes an increasingly machinal character, institutions for scientific training will ever the more exclusively turn into training machines in which future researchers "learn to see a higher allure playing about boredom".[5]

What will be argued in more detail later on in this book regarding the "technicization" of science, and hence its machinal character, remains a *hypothesis*. This hypothesis and its implications flow from what is only *one* diagnostic approach among others (we call it "phenomenological"), all of which can and should be the object of criticism and discussion, first and foremost within the community of scholars itself. Indeed, one would expect there to exist an ongoing animate dialogue about the momentous issue of the nature and horizon of scientific

knowledge in our epoch. And yet, such a dialogue is scarcely taking place. Our assumption as to why this is so is that the Evaluation Machinery itself, and the addiction to its practices, is playing a significant role. Hence, while sufficient insight into the evolution of science is fundamental for the considerations of this book, its main thrust is precisely that of formulating a founded diagnosis of what appears to be a major impediment to that dialogue and, more generally, to science's self-reflection concerning its status as a constitutive form of human knowledge.[6]

Finally, we see the Evaluation Machinery as constituting a threat to science (one that is unnecessary and perfectly avoidable) insofar as it obnubilates and suppresses the discussion about that which can be viewed as a constitutive and critical, hence "promising" and "fertile", menace to scientific knowledge; namely, its being menaced, in its technicized and machinal form, in its very status *as a form of human knowledge*. To reiterate a point made in the *Introduction*, what we call "Evaluation Machinery" appears in our analysis as "a threat to the menace", a threat which scientific knowledge, in our age, must face. While the origin of this "threat to the menace" is the same as that for technicized science, the two are separated by a chasm. To mark this separation, we shall now introduce a distinction between systematic science *as a machine* (in the above specified sense) and the system of the evaluation of science *as a machinery*.

1.3 The Evaluation Machinery

In common usage, "machine" and "machinery" are partially synonyms. For the latter, besides meanings taken in a theatrical or literary context, the *Oxford English Dictionary* lists the following acceptations: "machines, or the constituent parts of a machine, regarded collectively; the mechanism of a machine or machines" and "as a count noun: a system of machinery (literal *and* figurative); a particular kind of machinery; a particular organization, means of action, or procedure". Based on these acceptations (which are also reflected in Nietzsche's use of the word *Maschinerie*), we could say that as technicized science has a machinal character (meaning that a distinct technical-methodical "machinery" is identifiable for every scientific field), today's "world of science", with its industrial and societal ramifications, constitutes "a machinery"; or that "the system of science" is, in turn, part of "the machinery of the world".

However, when we speak of the Evaluation Machinery, we do not mean to imply that the whole of evaluative procedures (each of which has its own machinal character) constitutes "one big machinery". While in our perspective this remains a correct assessment, for the purpose of the present analysis the word "machinery" is meant to indicate an additional and specific trait. For not only does the Evaluation Machinery adopt the machinal character it finds in science, but it applies it (to science) in a *manner* which – and this is the decisive point – *is itself not scientific*. In other words, evaluation operates *on* technicized-machinal science, but not *in the manner* of the latter; rather, it operates *on* science *only machinally*, and therefore never deals with science *as such*.[7]

This latter circumstance shows itself in the fact that evaluative procedures – unlike those of the technicized sciences – are not based on the previous *theoretical* constitution (or production) of the "theme of inquiry" or "object of knowledge", which is then investigated in successive rounds of model building and experimentation; rather, those procedures rely on purely operative, a-, or rather counter-theoretical parameters for producing their "results"; namely, purely operative, in turn, a-, or rather counter-scientific "models". Indeed, while these "models" have scientific research as their object or theme, nobody would seriously suggest testing their capacity to grasp (and on this basis sustain) *scientific* truth experimentally. Thus, evaluative practices are, in a sense, "meta-scientific" without in any way participating in the scientific character; rather, they remain entirely alien to the scientific subject matter they are meant to deal with. Finally, their "meta-scientific character" merely resides in the brute power they exert over science itself; a more proper term for that character would, therefore, be "para-scientific coercion".

We should note that forms of meta-scientific knowledge endowed with traits which maintain some link to science itself do exist. For instance, "the theory of science" (or "epistemology") is meta-scientific in the sense that, by availing itself of tools and perspectives drawn from logics and philosophy, it attempts to establish criteria and norms which are meant to clarify and consolidate the scientificity of and promote the growth of science itself. Analogously, "the sociology of science", while being scientific itself, is meta-scientific in the sense that it makes science the subject matter of sociological research. The result of a sound epistemological inquiry into technicized science – notwithstanding the fact that its foundational purpose remains a derailment from the "secure track" of the "technical essence" of science[8] – will still involve some sense of and reference to scientific truth, hence a sense of and reference to the menace to that truth, and therefore a sense of and reference to whatever restoratory forces that menace either bears inside or points to, no matter how distant. Analogously, the findings of a sociological investigation of technicized science (e.g., regarding the organizational or power structure of the "scientific machinery") will have the form of sociological truths and will, therefore, in their own way and within their own limits, attest to the dangers weighing on that truth, as well as, by implication, to the restoratory forces that danger either bears inside or points to.

What about the "revelations" of an "exercise of evaluation"?

Evaluative practices, as suggested by terms such as "scientometrics", are "meta-scientific" in the sense that they carry out metrically oriented, machinal-quantitative operations on parametric proxies which *stand for* "scientific events". "Metrically oriented" means having the sheer fact of measurement as their purpose.[9] Hence, the methods and results of those practices are entirely alien, or detached, from science itself, *including* its problematic traits, its scope of self-reflection, its struggle with the menace it bears inside, and its openness to the perspectives and forces, thanks to which its truth can be regenerated and restored. Thus, the machinal operations of evaluation, too, will be *apo tou automatou*, that is, "themselves for nothing", namely devoid of the purpose and sense of what is in play, and merely functional to the *one* end which is the "alienated" performance of the machinery

itself. For what is relinquished and forsaken in this instance is the very purpose and sense of – albeit technicized-machinal – science, consequently its allegiance to truth and, with it, any *sense* of menace and restoration and any *perception* of provenance and destination; to wit, that kind of sense and perception which can still be awakened in any genuine scientific endeavour, no matter how far it has come in the way of its technicized-machinal configuration.

Scientific inquiry, whatever its epochal form, implies the vibrancy of attempt and the spur of promise; the sudden appearing of truth and the dispiriting revelation of appearance; the awe before the vastness of the unexplored and the constriction of aporia; the thrilling anticipation of a breakthrough and the harsh disillusionment of a setback; the trying struggle with the unknown and the unexpectable bounty of failure. At this point, it cannot come as a surprise that none of these traits are to be found in the brazen mechanical routines and hollow sentences of "evaluative exercises", authoritatively declared and thoughtlessly passed off as "objective" and "neutral". For that supposed "objectivity" and "neutrality" simply bear witness to the circumstance that, while going through the computational phases of the Evaluation Machinery, science is finally "redeemed" and "unburdened" from any commonality with *itself*; to wit, from having to bear truth contending with untruth, blindness struggling for insight, strength yielding to fragility, and unshakeable conviction being assailed by gnawing doubt. In one word: at the very moment one enters the sphere of evaluation, one *ipso facto* exits the realm of science.

The word "machinery" in the expression "Evaluation Machinery" is meant to mark this chasmal and unbridgeable distance between the void machinal practices of evaluation and those, still attainable by the admonishments of truth, of the technicized "science machine". As stated above, the Evaluation Machinery is a "system of automatisms", irrecoverably (because constitutively and "in principle") estranged from scientific truth, and yet applied to technicized-machinal science and the ways in which the latter holds the place of truth in our epoch. The automatization of that machinery by means of non-human automats (as in the case of "AI-powered peer review")[10] is but flagrant evidence of the fact that the nature of such evaluative operations means that they need not be carried out by an intelligent being endowed with a sense for truth or, rather, with the *awareness* that the *engagement* with truth is constitutive of their own selfhood.

Based on this preliminary characterization of the Evaluation Machinery, we can summarily sketch out what its procedures will result in, depending on the evaluator's and the evaluatee's respective understanding of and engagement in scientific practice:

Case A – *An evaluatee dedicated to "the quest for truth".* Seeing that dedication to the quest for truth implies that every thought and act be guided and informed by that quest and what it requires, the evaluated scholar will carry out his inquiry knowing that, certainly from the point of view of institutional and public recognition, each and every one of his actions – be they tacit or explicit – is from the outset and invariably voided of its scope and meaning by a machinery which systematically knocks out any scientific judgement.

Case B – *An evaluatee resolved to pursue "evaluative success".* Since the pursuit of evaluative success is in no way (if not accidentally) correlated to scientific content,

and the quality control processes of the evaluation machinery equally have no (if not an accidental) scientific bearing, this attitude will result in scientific atrophy. In other words, the domain of science will either be populated by enslaved sophists or by *automata* implementing the meaningless purpose of value enhancement for its own sake.

Case C – *An evaluator committed to "the advancement of science".* A scholar who lets himself be enlisted in the Evaluation Machinery in good faith, to wit, with the aim of exclusively promoting "the pursuit of truth", will find that his endeavour does not (if not accidentally) register with the procedures of that machinery, which as such is blind and insensitive to the truth. Typically, while serving a system which, in its blind and deaf "neutrality", systematically suppresses the word of science, he will at best be able to perform some level of damage control, mostly by finding ways of tricking the (inherently noxious) system itself.

Case D – *An evaluator limiting himself to the implementation of an evaluative procedure.* This "performer" will either carry out a scientifically meaningless task (hence effectively contributing to the damage implied by the treatment received by the protagonist of case A) or be more or less effective in serving some kind of extra-scientific interest. Typically, he will be standing in the spot of an algorithm, which will soon replace him.

Case E – *An evaluator-evaluatee, who, as a scholar and scientist, becomes aware of the multifarious violence perpetrated by the Evaluation Machinery against scholarly existence, the dedication to the pursuit of truth, and free and creative inquiry.* This "scientist-philosopher" (somehow remindful of the "freed man" in Plato's myth of the cave) will know that his attempts at diagnosing the said machinery, and drawing his former fellow prisoners' attention towards it, will be fed into its control circuits, and hence (regardless of his "score" or "ranking" or what not) founder in the unresponsiveness of the "Deaf Automat". In other words, any attempt at highlighting said "automatic violence" will always be "filtered" and read through the lens of the machinery itself, which will result in an enhancement of its power.

Under the regime of the Evaluation Machinery, the landscape of scientific research will be the result of changing combinations of these heterogeneous ways of engaging in, or with, "scientific activity". The more effectively that machinery will be able to optimize its self-referred and absurd performance, the more inhospitable the environment will become for true inquiry and teaching, and the more unlikely it will be that a scientific endeavour finds propitious conditions or the necessary encouragement for its existence. If it is true that, as Nietzsche states, "[t]he more accomplished the machine, the more morality it requires" (1999b, 580; 40[14]), our analysis suggests that the machinal aberration, as we view the Evaluation Machinery, will be in need of the most dire and inane moralistic rhetoric. What else could this nauseating moralism be if not the presentable apparel of the subjugation of free scientific inquiry to "the (ir)rationale of value"?

1.4 The proxy fallacy

Among scientists, and in the wider sphere of science policy, it is commonly understood that the metrics employed for the purpose of evaluating scientific activity do

not provide *direct* measures of that activity, or measures of that activity *as such*, to wit, of its "quality". Instead, it is said that those metrics compute and measure that which *can* be computed and measured, in other words, the so-called "proxies" of scientific quality. Proxies are measurable variables which, by virtue of a supposed "proximity" to intrinsically immeasurable phenomena, are deemed to be suitable as their "proctors" and representatives. In other words, as proxies are considered to somehow approximate the phenomenon of interest, it is also said that it is reasonable for them to "stand in" for the latter in a computational exercise. As a consequence, the results of computations based on one or more proxies of the phenomenon are considered to be applicable, to a significant extent, to the phenomenon itself.[11]

Proxies are widely used in different fields of scientific inquiry, notably in the social sciences. For instance, given that the phenomenon of "anxiety" is seen to be difficult or impossible to measure on a large scale, to establish the impact of a certain economic policy on the level of anxiety within the population affected by that policy, one may resort to examining changes in the consumption of drugs designed to treat or dampen states of anxiety: should it turn out – "all other things being equal", of course – that the consumption of such drugs rises in conjunction with the implementation of the said policy, in the social science perspective it would be legitimate to claim that, under certain circumstances, that policy causes, or is in some measure likely to cause, an increase in the level of anxiety. For examples of proxies in other scientific domains, we could refer to the so-called Turing test in informatics, which introduces a proxy for human thinking, or to Einstein's physical theory of time, in which a proxy of time (clock time), by virtue of a singular inversion, is actually framed as the phenomenon itself, which human or "subjective" time can only approximate.[12]

This is not the place for a methodological discussion of the use of proxies in different domains of scientific research. For our purposes, it suffices to note the *formal* analogy between such proxies and the parameters used in evaluation processes: given that, in those processes, the primary objective is to carry out an exercise of measurement applied to science, and that science itself – to wit, scientific truth, scientific dignity, scientific rank – does not lend itself to being measured, "scientificity" is, in a first step, subsumed under, and hence replaced with, the not yet quantitative notion of "scientific *quality*"; in a second step, quality itself is broken down into a series of measurable items, which, by virtue of their supposed proximity with the phenomenon to which they are assigned as "quality features", serve the original objective of feeding a computational control circuit. For instance, to pick just two well-known examples, an index calculated on the basis of the number of citations of a certain number of publications (i.e., the so-called H-index) is declared to be a proxy of, and thus suitable to stand in for, a scholar's "scientific value"; or the "scientific weight" of a scholarly article is established based on the alleged "generally agreed-upon" rank of the review or journal where it was published, that rank being expressed in the form of computed "impact factors", "seals of quality", "consultations with experts", or the like.

As the weaknesses and flaws of the proxy method and the potential distortions and absurdities it produces are fairly evident, it is striking how a consequent

debate about these "imperfections" (namely, one that would go beyond mere technicalities) seems to be impossible. Our considerations on the difference between "machine" and "machinery" suggest that *one* reason for this impossibility is that *there is simply nothing to debate about*. Indeed, while in the case of proxies used in science there is still some reference to truth to anchor a debate and a critique in, a similar reference is missing when it comes to rankings, indices, and the like in the context of scientific evaluations.

In a hypothetical dialogue between philosophy and the sciences, the former could, for instance, bring into play Kant's considerations on the impossibility of constructing mathematical concepts of "qualities" (Kant [1781] 1990, 658–59),[13] or refer to Husserl's reflections on "the mathematizability of fillings" (Husserl [1936] 1982, 34).[14]

By contrast, how would one rely on such sources in a hypothetical debate about the "flaws and merits" of the H-index, indicators of "social impact", or similar metrics? What would a counter-argument to an objection based on those sources look like or draw on? It is evident that not only such a counter-argument cannot be formed, but that, in the domain of evaluative practices, there is literally *no ground for a scientific, let alone a philosophical, argument in the first place*. This points to a circumstance to which we will return in Chapter 5 of this book: the Evaluation Machinery in its own "style and manner" seems to draw "strength" from, and at the same time seal, a progressive "de-philosophization", to wit, the alienation from their provenance which the sciences themselves have been undergoing on their path of technicization, societization, and increasingly machinal configuration.

The flagrant fallacy and barefaced implausibility of letting random parameters stand in for what only scientific judgement can assess admonish us to take the seemingly unstoppable momentum of the Evaluation Machinery – in a manner of speaking, the relentless expansion of the "evaluation bubble" – as a "positive" phenomenon, or simply as a *phenomenon*; namely, as "something" that, while showing itself, also reveals that thanks to which such showing becomes likely in the first place. In light of the rapidly diminishing distance between (and hence the ready identification of) the proxy and what it is supposed to approximate, the nonchalance with which warnings and provisos are swept off and forgotten, the carelessness and temerity with which oft-denounced and widely acknowledged damages produced by evaluative practices are, against better judgement, ignored, we see our task neither in contributing to an amendatory debate concerning those practices (what, indeed, is there to amend?) nor in engaging in a search for the psychological, sociological, political, economic, or even neurological "causes" of the scholarly community's (including our own) more or less willing compliance with them.

Rather, in keeping with our phenomenological approach, we feel compelled to ask questions such as the following: What are the mentioned proxies actually *identical* to, that is, to what kind of claim or injunction are they the *fitting response*? What bestows its force on the popular "argument from pragmatism" (i.e., the reference to supposedly peremptory "practical needs" and "operative requirements"), which seems to instantly demolish all caution and brush aside all prudence when scientific work is assessed? What is the nature of the enigmatic, all-defying,

self-asserting "will to evaluate", that is, to quantify, measure, rank, and, on that basis, correct, plan, and steer "science" in a timeless and "temporicidal"[15] race to machinal (or "systematically automatic") "excellence"?

Notes

1 First citation: Nietzsche (1999a, 337) (I, Section 585). The Italian words "umana commedia" appear in the original. Second citation: Nietzsche (1999c, 93) (25[316]).
2 The circumstance that a "system of automatisms" is *a system* is based on the relation to a perceiving, conceiving, productively operating human awareness which recognizes that system as such. Hence, an assembly of automatisms, explicitly projected to run without such an awareness, is not, strictly speaking, a system; by implication, it is not a machine, but merely an automat. The notion of an entirely "self-driving" or "autonomous" car is a case in point: a car which is no longer driven by a human being but by interconnected algorithms is not even a car anymore (hence, the "senseless" accidents such "cars" produce). Nietzsche, whose position on machines will be discussed in the following paragraph, became aware of and reacted to the circumstance that present-day man was not capable of recognizing the enormous "machinery" in which the "overall economic management of the earth" consists as such, that is, *of using it for his own purposes* (1999d, 462; 10[17]). However, if unsustained by human awareness, that "machinery" remains without a purpose; to wit (in our sense of the term), it remains an automat, within which (as, again, Nietzsche warns) man, confined to the role of a mere cogwheel of said automat (hence himself a "human automat"), is bound to "become less". The distinction we introduce between "machine" and "machinery" has precisely this point in view: because human interaction with the "system of evaluative processes" is either tokenistic or a stand-in for a coming algorithm or purely authoritative; in short, because it is by design not apt for making that "system" work *for the benefit of science*, that "system" *is not a system* but, by design, an automat. For this reason we do not speak of an "Evaluation Machine", but of an "Evaluation Machinery".
3 In translations of modern and classical texts, we offer explanatory remarks or alternative translations within square brackets […], whereas angle brackets <…> enclose additions that are to be read as integral parts of the text. Unless otherwise specified, translations into English are ours.
4 Detailed elucidations of "technicization" and "societization" as constitutive traits of contemporary science will be given in Chapters 5 and 6, respectively.
5 This boredom is not of the "fertile" kind, in that it does not reveal nothingness to human thought, but rather locks in the experience of total meaninglessness, which perfectly suits the feeling of abandonment to "mere life".
6 The scope of this dialogue is discussed in Chapter 5, 115, and in the Appendix.
7 As anticipated in the Introduction, the values with which evaluation operates are not *scientific*, that is, theoretically generated, values. In fact, as will become increasingly clear in the course of this book, speaking of a "theory of scientific products" behind the design of evaluative parameters hollows out the very notion of theory.
8 See below, paragraph 4.3, 70.
9 Strictly speaking, the purpose of such measuring practices is to measure measurement itself, namely, the effectiveness of the *sheer fact* of measuring; in other words, what is measured is the capacity of measuring "for nothing" (see below, paragraph 4.3, 70–71).
10 See below, paragraph 8.7, 189 sqq.
11 The etymology of "proxy" is not from Latin *proximus* (a contraction of *propissimus*) but from *procurare* ("manage, take care of"); a "proctor" (from *procurator*) is someone who manages someone else's affairs. However, a proxy's suitability for representing, and standing in for, something else is based on some form and degree of proximity or

approximation, by virtue of which the proxy can act, for certain intents and purposes, *as if* it were the represented thing. Such proximity can be established by legal means (e.g., by granting power of attorney), based on power relations (e.g., in the case of a so-called proxy war), or inferred by virtue of an assumed factual correlation.

12 This topic will be dealt with more extensively in Chapter 5, 91 sqq.

13 The page number corresponds to 714–15 in the first (A) and 742–43 in the second (B) edition of the *Critique of Pure Reason*, which Kant himself published in 1781 and 1787, respectively. The context is Kant's distinction between philosophy, namely, "*rational knowledge from concepts*", and mathematics, namely, rational knowledge "from the *construction* of concepts", where "*constructing*" means "setting forth a priori the intuition which corresponds" to the concept itself (Kant [1781] 1990, 657–58). Kant lays out that those who opine that the difference between the two forms of knowledge consists in the fact that philosophy has as its object only quality, while the object of mathematics is only quantity, "take the effect for the cause" (659). In truth,

> the form of mathematical knowledge is the cause of the fact that the latter can only concern quanta. For only the concept of quantities can be constructed, that is, set forth a priori in intuition. By contrast, qualities can be set forth in no other than empirical intuition. Hence, a rational knowledge of qualities can be possible [likely] only through concepts.
>
> (659)

14 In Section 9b and Section 9c of *The Crisis of European Sciences* (Husserl [1936] 1982), after outlining the knowledge of the world which is obtainable by approximation to the ideal forms of geometry, Husserl discusses the possibility of extending "the method of measurement by approximation and constructive determinations" "into *all* real qualities and real-causal relations of the concrete world, into everything which is ever experienceable in a peculiar experience" (34). Given that the "material fillings [contents] – the 'specific' sensorial qualities" which "concretely integrate" "the spatial-temporal form-moments of the corporal world" "*cannot* be treated *directly*, in their gradualities, in the same way as the forms themselves", the question becomes if the qualities, which, in pure mathematics, are "abstracted-away", and which, again, are "not themselves, directly, mathematizable", can become so "indirectly" (34). The problem of "*indirect mathematization*" is dealt with in Section 9c, "The problem of the mathematizability of 'fillings' [contents]" (34–38). At the outset of his treatment of the issue, Husserl recalls the "*profound reason*" (34) for the mentioned impossibility, namely, the circumstance that, in the case of sensorial qualities, there is no analogon to the "objectivizing action" (36) of approximation in applied geometry; the simple reason for this being that for those qualities there are no idealities which could, in an analogous manner, grant "real" measurability.

15 On the notion of "temporicide", see below, Chapter 2, 36.

Bibliography

Aristotle. 1950. *Aristotelis Physica.* Edited by W. D. Ross. Oxford: Clarendon Press (Oxford Classical Texts).

Husserl, Edmund. (1936) 1982. *Die Krisis der europäischen Wissenschaften und die transzendentale Phänomenologie*. Hamburg: Felix Meiner Verlag.

Kant, Immanuel. (1781) 1990. *Kritik der reinen Vernunft. Hrsg: von Raymund Schmidt*. Hamburg: Felix Meiner Verlag.

Nietzsche, Friedrich. 1999a. "*Menschliches, Allzumenschliches*." In *Kritische Studienausgabe*, Bd. 2, hrsg. von Giorgio Colli und Mazzino Montinari. München: Deutscher Taschenbuch Verlag.

Nietzsche, Friedrich. 1999b. "*Nachlaß 1875–1879*." In *Kritische Studienausgabe, Bd. 8*, hrsg. von Giorgio Colli und Mazzino Montinari. München: Deutscher Taschenbuch Verlag.
Nietzsche, Friedrich. 1999c. "*Nachlaß 1884–1885*." In *Kritische Studienausgabe, Bd. 11*, hrsg. von Giorgio Colli und Mazzino Montinari. München: Deutscher Taschenbuch Verlag.
Nietzsche, Friedrich. 1999d. "*Nachlaß 1885–1887*." In *Kritische Studienausgabe, Bd. 12*, hrsg. *von* Giorgio Colli und Mazzino Montinari. München: Deutscher Taschenbuch Verlag.
Oxford English Dictionary. Continues *Oxford English Dictionary*, 2nd ed., 20 vols. (first published in 1989). Continually updated at https://www.oed.com/

2 Time and value (temporicide in the Evaluation Machinery)

> The ancients used the word σχολή [*scholē*], *ozio* [leisure], to describe the places, periods, etc., of study, and also the studies themselves (hence, without taking account of their origin, we still say *scuola* [school], and *scolare* for *student*, and the English say *scholar* for a man of letters, whose etymology would suggest an idle person) which for most of us is the only or main *activity*.
>
> Giacomo Leopardi[1]

2.1 Insidiousness: threat and menace

This chapter functions as a *lead-in* to the following one, where "lead-in" should be understood in its literal sense: not merely a "presentation" of the topic, but rather a path that leads into the latter's domain so that it can be brought into focus. In this case, the topic is "value" – its concept and its use within the mechanical structure of "quotation" (in the sense of "rating") applied to today's scientific enterprise, which, as clarified in the previous chapter, we call the Evaluation Machinery.

In a sense, or rather, in an *essential* sense, "value" *loves* "the machine"; a love that is reciprocated. But what could possibly be born from such a "sentiment" or "passion" when their nuptial bed finds its home within the house of science? Perhaps an aid to the smooth management of the abode, or more likely an insidious threat to the structure itself of the building? And, if so, what character will this threat assume? Could it be a menace already deeply rooted in our sciences? Or is it, rather, a threat hanging over them as something that comes from the outside – an "outside" that is the Evaluation Machinery? Or could there be two insidiousnesses – one internal (intrinsically "scientific") and the other external (extrinsically "machinal") – which meet, or clash, with the consequence that, as we suggest in the *Introduction*, the external one ultimately launches an attempt upon (i.e., attacks) the internal one? And again, if that were the case, what would be the sense of such an annihilating attempt? What could possibly be the meaning of an annihilating assault launched by a certain type of insidiousness (in the form of a threat) on another one (in the form of a menace)? Could it be that the attempt upon the *menace* perpetrated by the *threat* results in a "state of affairs" in which science is abandoned to its fate of de-philosophization? Could it be that, in the lengthy, labourious,

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and critical genesis of our sciences, when the *threat* insidiously undermines the *menace*, ultimately making it disappear, the former in a subtle way ends up shaping our overall vision of science itself, so that everything, in that genesis, seems to be proceeding in the best possible manner?

These questions will be addressed and resolved to the extent that, at a later stage of this book (see below, paragraph 5.4, 114 sqq.), we will try to show what kind of threat arises from the Evaluation Machinery.

Why do we not, however, proceed directly to the analysis of "the threat" and "the menace" and the sense and implications of their "clashing"? Why is it necessary, at this point, to address the issue of time to lay the basis for that analysis? The reason is this: *every insidiousness – whether it takes the shape of a menace or that of a threat – maintains a peculiar relationship with time.* To act insidiously always means to play a cruel joke on and with time: to wear it out and deface it, to overturn and subtract it, to confer upon it a "hostile aspect", and all this in order for a *being* (whether it be a man, a thing, or a world) – as it is subjected to, or subjugated by, an insidiousness – to lose the sense of sound measure, that is, the freedom of a genuine, veritable existence. When an evil looms, it is the looming itself that becomes the prime "timer", the force which gives or takes away, decides, and directs.

*

Let us now freely approach the issues mentioned so far, in view of showing their inner relation. This approach could bear no other title than the following: "Time and Value". We use the adverb "freely" because we will address what that title implies without presupposing any previously obtained knowledge or results.

We begin by rewriting the title as follows: "Time *and* Value". The speech sound "and" conjoins; that is, it conveys the trait of being-together: this *with* that, that *with* this. However, in our case, "and" does so in a singular way: it is not to be understood as signalling the joining of two given concepts, but rather as marking an *inter*-relation, a mutual concern, between the two. This means that the sense of value, in order to assert itself as such, thus finding its primary use in a human community, also requires (and imposes) a certain conception of time; just as time itself, in order to be accepted as and inhabited according to what it is, indicates the way in which the sense of value must be understood within that same human community. Time and value are gathered in "a between", or rather in an *original betweenness*, which attunes them and sustains them in a reciprocal tension.

How should we proceed? Clearly, by posing the following two questions:

What is time?

What is value?

However, with which question should we start? And, most importantly, in what manner should our questioning be conducted?

From these first few lines, it becomes clear that we are dealing with an unusual sphere of sense: we are posing questions about the *being* of time and the *being* of value, but not about time *tout court* (as a notion and an instrument) or value *tout court* (as a principle and/or "idea", or as a guide for action). Indeed, the *being* of

time is surely not *time*, to wit, it is not temporal (nor is it anything extra-temporal or "eternal"), just as the *being* of value is certainly not a value, to wit, it is neither value-based ("value-form") nor evaluable (or invaluable). However, the fact remains that their belonging to the said betweenness has a specific character; it compels us to begin with the clarification of the *being* of time. It is not difficult to notice that every *being*-a-value necessarily presupposes an enduring time, a time-in-*being*: if something has (a) value, that is, if it *is* a certain value, it can *be* so because it subsists, abides; that is, because it has or obtains a *time of being*.

Thus, the aforementioned questions now find the following joint formulation:

What is time, knowing that its being is nothing temporal (nor something extra-temporal)?

What is value, once we are aware that its being does not have a value-based trait?

2.2 Time²

A key point in the logic of the present attempt consists in the following: we cannot establish the being of time by adopting its common formula, taken as being conceivable and trustworthy without any verification. This is especially true when the conceivableness and trustworthiness of this formula are obtained by referring to clocks; or (if we want to go back "in time") to water clocks, or to clepsydras; or, if we look at the sky, to the movement of the stars and the galaxies; or even – if we look within ourselves and at our everyday world – to the so-called "sensation" of the equally so-called "passing of time" or "transitoriness". This is certainly not to negate the movement of clocks, clepsydras, heavenly bodies, or life! Nor do we intend to confute or refute, in general, movement itself or – to use a more philosophical word (although only in appearance so) – "the world's becoming". Nevertheless, in observing such movements (which, depending on the case, are variations, rhythms, turns, passages, currents, progressions and paths, cycles and circles, sequences, series, concatenations and alternations, and so on), the being of time does not show itself, also because in things such as clocks and clepsydras, stars and living beings, skies and countries, matter and spirit, mass and energy, time itself is manifestly presupposed, and therefore already holds and prevails, insofar as it has already been understood and interpreted, in one way or another, by us mortals.

We mentioned the common formula of time, namely, time as a sequence or flux of moments. Now, this notion resides in a "thought" that has an ancient origin: it comes from the Aristotelian phenomenology of temporality, which is elaborated in Chapters 10–14 of Book IV of *Physics*, whereas Chapters 1–9 deal with space, or, more specifically, with place and locus (*topos*) as well as with void and vacuum (*kenon*). A complete analysis should, therefore, follow this order, even if Aristotle does not provide any reasons for the arrangement of his analytics. Indeed, why does his inquiry into space precede that of time, and what are the relationships between *topos* and *chronos*? The philosopher does not provide any answers to these questions.

At any rate, in Chapter 11, after some very delicate passages, Aristotle arrives at his determination of the being of *chronos*.[3] In this well-known determination, the philosopher interprets *chronos* – which here means "time" *qua* "stable duration" (but not *qua* "temporal interval") – as an *ordering element* of human understanding and experience of being and of the sense of things in a world. This is an understanding that the Greeks assigned to the constitutive aptitudes of *nous* as a trait of *psychē*, or, as we say in English, of "noetic psyche". The order conferred by *chronos* to the noetic psyche is that of "before and after"; to wit, the ordering of "antero-posteriority". That is why, according to the philosopher, *chronos,* intended as duration, in short: duration-*chronos* – which emerges as such thanks to *nyn*, i.e., the noetically noticed and glimpsed moment – possesses the feature of *arithmos*, which in fact means harmonic order and gathering, from which stem the (secondary) meanings of number, numeral, digit, and cipher. In sum: the duration sparked or ignited by the moment is the (also numerable) durative order of antero-posteriority.

Thus, after some phenomenological steps which we omit here for the sake of brevity, we can obtain the common formula of temporality:

> Time is the dimension of the qualitative or quantitative calculation of the duration that elapses and flows on the basis of the format "one-after-the-other", a format consisting in the time-line, or also (using an expression commonly found in physics) in the "arrow of time".

Or:

> Time is the sphere of the qualitative or quantitative computation of the period (i.e., the amount or magnitude) that occurs, passes, and runs out according to the structure "one-after-the-other" – a structure that consists in a temporal sequence, or (according to the customary terminology used in physics) in the "arrow of time".

This concept of time – which, as we can see, is "intrinsically circular" and fully justifiable in itself, and to which we can attribute the abbreviated denominations "contingency-time" or "contingentized time" – shows itself, therefore, as a "daughter" of the Aristotelian notion, the philosophical clarification of which was characterized – as previously mentioned – by a phenomenological intent.[4] By this we mean that, in this clarification, the reference to man (i.e., to mortals) is kept within view (and alive). In fact, the Aristotelian elucidation of *chronos* aims to bring temporality into focus as a trait of the existence of mortals in their understanding of the being of things; to wit, as a temporality which (in the terms employed above) attunes and orders the noetic psyche while being in its turn pre-attuned and pre-ordered by the latter, and which we will call (using an adjective that is no longer Greek) "existential time" or "existence-time" (not to be confused with a supposed "psychological", "subjective", "non-physical", or "philosophical" time, or similar improper notions).

A crucial question suddenly emerges here: was existential time, existence-time, fully grasped in Aristotle's physical analytics? The matter appears all the more crucial the more we consider such analytics to be the genesis of subsequent, including present-day and forthcoming, attempts at determining "the nature" of time. The fact that the nexus between space and time remains unclarified, and indeed obscure, already answers the previously asked question. In Aristotelian phenomenology – and in all its philosophical derivations and affiliations (including Bergson's analytics) – existence-time was indeed considered, but insufficiently so. It only began to emerge in the early 20th century in Husserl's philosophy (Husserl 1928) and later – in a way that remains unrecognized (as far as we can see) by current philosophy – in Heidegger's thought (Heidegger 2007).[5]

However, all of this occurs precisely in an age of neglect for existential time, which, at this point, is covered by… which time? Which temporality? Which sense of time and space? We cannot resolve such a crucial issue here. We know, however, that that covering element consists of *a spatio-temporality that is planned and established on the very basis of existence-time itself*.[6]

Meanwhile, our interrogation of time – or rather, of its *being* – includes a more precise term. That interrogation can now be formulated as follows:

What is existential time (i.e., existence-time), taking into account that its being is nothing temporal (or even extra- or supra-temporal)?

With that in mind, what we are about to state might appear as a sort of verbal sleight of hand: *we can only fully grasp the being of existential time if we question the very sense of being itself*. As we pause for a moment to reflect on what we have just heard, we may observe that our dismay at the artifice of these words goes along with a touch of surprise at the pretentious nature of the interrogation. "The very sense of being itself"!? Somewhat bewildered, it seems that all we can do is step back and withdraw from the game altogether.

But *this* bewilderment is only the other face of the irritation our discussion has provoked from the very start. In an attempt to soothe that irritation, let us characterize our situation in the face of the question concerning the scope of being – a situation which in philosophy is defined as "aporetical" – by paraphrasing in the following terms the well-known passage on *tempus* from Book XI of Augustine's *Confessiones* (1996, 126 [XIV 17])[7]:

> What 'is' being? If we do not ask ourselves this question, we will know it (in other words, we know the being of being); but if we attempt to explain it to ourselves, then we no longer know it (i.e., we are left without words).[8]

In fact, as far as "being" is concerned, things stand exactly as follows: we know it as an empty and indeterminate concept; hence, we cannot explain what it means; however, we understand it fully and in a perfectly determined manner. To us, "being" seems like an abstract and vague wording; nevertheless, we perceive its meaning concretely and clearly in every instant of our existence.

So, what does "being" finally mean?

We will now follow a path that is only seemingly "linguistic": we will, in other words, consider an ordinary statement in which the verb "to be" is presented in the singular third person form of the simple present tense – the little word "is".

Consider the following simple statement: "the seminar is in room 3". What does this "is" mean here? Answer: it means "takes (or will take, or is taking) place". Now, we can see how, in the expression "to take place", both space and time are invoked – indeed, for an instance of sense *to take place* means that it obtains or "is obtaining" for itself the necessary temporariness. If that instance – as is the case in our example – consists of a scientific activity, its fulfilled taking-place requires a time that consistently sustains it in what it must be: just a seminar… but *truly* a seminar. Or, in other words (at least one hopes), the genuine semination (sowing) of trustworthy and accurate knowledge.

In the expression "taking place", the English language implicitly refers to an existential space and time; that is, to an *occasion for the generation of a sense*, or to a *dimension capable of holding-accepting something meaningful*, sensible, reliable, conceivable; in short, *something true*. But we must be more rigorous and say this: in *taking place*, there is an implicit trait of taking aside and then giving and extending, granting and providing, offering, etc. And in what way is an existential place – a dwelling or abode, which may receive a truth suited to the being of man – offered? How, if not through time? An existential place *will exist*, *will be able to subsist* and *stand* – i.e., it will have its own original "spacing", its own "engagement-in-space" – only by virtue of a certain time, which, in turn, must be given; that is, only through a *gift of time*.

Taking place – to wit, the act of being, or, better yet, *being* (without premodifier) – thus signifies *a gift of time that offers space in the form of a place suited to, or fit for, a sense; or rather, in the form of placing and safeguarding the true*. In short: a *gift of time = opening of a place or site devoted to verity*. Thus, the statement "the seminar is in room 3" actually means a time that offers (or will offer) a place for a seminar that (as mentioned above) *is truly such* (to wit, a semination of *something true*), is given, gifted. The "is" contains an implicit reliability, an expectancy, a hope for (a certain) verity.

We are struck as we learn that the little word "is" holds all of this within itself. However, that's how it *is*! Other examples of this kind could be proposed, and we would always and invariably find these same meanings.

What, then, is existence-time? We may answer: existential time consists in a gift, a favour, namely, in *that gift or favour (which is never evaluable, negotiable, or plannable) that generates the conceivability of a place dedicated and suited to the safekeeping of sense and the care for verity*.[9]

We will, therefore, speak of "space-of-time", a formula that, in our discussion, obviously does not mean "temporal interval" (where one presupposes that time may be divided into abstract spacings, i.e., spatially informed fractionations or segmentations). Rather, "space-of-time" indicates a "place-space", generated by virtue of time-as-(a-)gift, time-as-favour, in the same way as, for example, with the sayings "an act of grace" and "a position of responsibility", one does not mean to say that grace is divisible into acts (there are also graceful intentions or graceless

inertias), or that responsibility may be broken down into positions (there are also "positionless" or "status-free" responsibilities, or responsible and responsive errancies), but rather that a determined action *comes from* grace, is the result of a surge of grace, clemency, and decency; and that a position must be *attuned to* and *informed by* responsibility, seriousness, and truth.[10] In an analogous sense, we can therefore speak of a space-of-time and understand it as a space-by-time (which, in turn, is short for "[a] space-by-way-of-[a]-gift-of-time"). In order to indicate the entirety of this constellation of temporal and spatial traits, we will also speak of "spaciosity", which resonates with openness, immensity, and frankness.

The way in which *being* speaks (in all its uses) *simply and constantly* reminds us of the original meaning of existential time as a gift and a favour (against the background of a refusal and a naysay); and this is so regardless of our personal opinions, ideas, or theories concerning whatever its meaning or *value* may be.

However, if existence-time is a gift that makes space, a favour that offers and generates a place for sense and truth (and therefore for the [ever-temporary] meaning of verity, and also for falsity in all its articulations until the annihilation of the very meaning of the true), and since each gift, like grace, contends with refusal and denial and struggles within the nay-say, it (existence-time) cannot be insurable or repeatable. Moreover, since each gift (just like grace) arises *from* contending with refusal and denial and struggles *within* the naysay, existence-time is, therefore, neither ensurable nor repeatable. Existential time is – always and abruptly/instantaneously – unique, perpetually unwonted and sudden; it eludes and fleets (i.e., it is fugacious), even though it neither runs nor elapses; it bides in itself, even if it does not stay still; it is neither linear nor circular, neither cyclical nor spiral nor helical (it is neither *spati-form* nor a *simili-space* in any sense); in fact, it is not geometrizable under any guise; it rejects (i.e., disconfesses and disengages) any sort of computation, for in any computation it dissolves and vanishes; it is only *firm* (i.e., it gifts firmness and tenacity), *immense* (i.e., it offers immensity and magnitude),[11] and *profound* (i.e., it confers depth and sharpness); and it is – let us say – that which must be awaited, obtained, cared for, and instituted in every sphere of the world and of human existence. It is intrinsically contentious. And it may be that it never arrives.

As Sophocles has Ajax claim at the beginning of the third monologue of the eponymous tragedy (v. 646), existential time is *makros kai anarithmētos*, "immense indeed, and therefore *anarithmetical*"; that is, not subject to any number or cipher, or to any figure that grasps it through counting, and thus inestimable (i.e., "free from any estimate") and unevaluable (i.e., "severed from every form of evaluation"). Its sooth[12] does not possess a value-form; it is, therefore, *value-free*.

Existential time is rare. It is pure *extemporaneity*. Its denegation, however, is common and frequent, as it occurs by force of the previously mentioned spatio-temporality informed by contingency-time, the clarification of which we have to leave aside.[13]

Existential time is the most precious fruit of being. It is the luxury of perfect frugality, an original richness without which every prosperity and well-being would irreparably degenerate into insatiable opulence; that is, into the most indigent misery, leading ultimately to slavery masked as "freedom".

Thus, we become aware of a fundamental mode of existence-time, which we implicitly referred to (and not by chance) in the example of the seminar and the room, with the intent of explaining the little word "is". It is that particular placing of the gift of time, without which any "genuine act of creation"[14] is not conceivable, that the Greek philosophers grasped perfectly within the word *scholē* (normally rendered as "leisure"), along with its opposite *ascholia* (commonly translated as "occupation"), even though, as mentioned, their thinking was burdened by an insufficient understanding of existential time.[15] On the basis of *scholē,* the Latin *schola* was formed, from which the term "school" derives, while, following the model of the term *ascholia*, the Romans coined the noun *negotium*, in which the negation of *otium* (i.e., leisure, or recreation) as a trait of *scholē* appears to be implicit; this notion of *otium*-leisure can be understood as the recreational condition of the so-called "break" or "recess", which, paradoxically, denotes the off-time from classroom attendance and scholastic commitments.

There is no general consensus on the etymology of the word *scholē*, although it is commonly traced to the Greek verb *echein,* "to hold, to have", but also "to hold or have oneself", i.e., "to be". Hence, it likely contains the meanings of withdrawal and concession, and thus indeed of gift; in other words, of giving favour *without expecting any reward or advantage in return*. *Scholē* is not, therefore, so-called "free time", and even less is it idleness or leisure, a pause or a break, and so on, which are but consequences or mere suspensions of contingency-time and also, therefore, afflicted by the lability of the moment.

Rather, *scholē* is existential time itself, which is *as such* (transiently) *affranchised* from the threat of being attacked by value and computation. In fact, we can indicate with the name "frankness" the element in which we suddenly become aware that (finally) "there is time": *this* time, gifted "in frankness", is *scholē*. It is the time which generates itself only where it is already *awaited* by the human act of entrusting oneself to *studium*, whose original sense is "care for the sense of verity", which is, furthermore, the first meaning of the Greek word *philosophia*. How are we to indicate the time-character, the "temporal temper", of this affranchised – and therefore "by sooth" *frank* – time?

The western tradition of music, with its tempos and paces clear of metronomic computations, could show us a way.[16] Yet, which one among the various musical tempos should we refer to? Naturally, it is the tempo of waiting, which here we can understand as the very coming to be, the timely becoming-time of time itself (its "self-temporalization", as it were); the tempo of "letting time be", of allowing it to generate itself *as itself, in itself, and for itself*: a gift and nothing else. This time is the tempo of *adagio* (or even *largo*): it is the "infinite instant" in which one becomes aware that silence does not subsist "before" sound, just as sound is not merely the rupture of a "preceding" silence and thus something which comes "after" silence. One realizes that sound and silence, stillness and resonance, stasis and movement, and light and darkness are *simultaneous*. Herein lies the sooth: this simultaneity is the tempo of adagio, the time of *scholē*.[17]

Adagio literally means "at ease". It evokes an existential state of meditative quiet. Thus, we could understand *scholē* as the "ease" which finds its own temporality in the

adagio (as the temporality of caution, awareness, and farsightedness, rather than as mere slowness). Only the adagio or *scholē* – "school" as the tempo of adagio – suits *studium*. And only "in adagio" may human genius (i.e., wisdom, sagacity, ingenuity, acumen) be truly rapid and ready; in other words, timely and tempestive.

Yet another word that conveys the sense of *scholē* in English is the term "truce", which has the same root as the Italian noun *tregua* (truce) and the German verb *trauen* (to trust). Thus, we find an exemplary form of the aforesaid contentious trait of existence-time: *scholē* is that truce which generates trust in the truth, insofar as the truce itself must be contended for with the hostility and fury of computation. Therefore, we call *scholē* (as the time of *adagio*) "the truce *of* verity", as this truce is the only "state of being" within which, and thanks to which, one can fight *for* the very sense of verity. In short: the truce in which *scholē* consists is a truce *for the sake of verity*. No being can, in truth, generate itself without *scholē*, that is, without the truce of verity. The latter is, *in truth*, a truce of time.

To sum up, we can say the following: if the ultimate sense and sooth of "schooling" (i.e., schooling oneself, schooling others, letting oneself be schooled, etc.) consists in *studium*, the first sense of *studium* rests in the spaciosity of *scholē*. There is no school without *studium*, and there is no *studium* without the truce of verity, that is, without *epochē*. The latter, a Greek word which seems to share the same root with *scholē*, indicates (notably, in the sphere of phenomenological philosophy) the suspension of all forms of validity, values, and interests. "Epochal" *scholē* is *the existential-temporal sphere* of every human understanding and creation, which cannot, however, subsist by itself but needs to be founded, instituted, and erected again and again by and within the *polis*; hence, it is an eminently political institution, or better yet, it is the political institute *par excellence*.[18]

Every concept or project of a school is bound to be thwarted and eventually to fail if *first and foremost* it does not draw back to the point where the genuine sense of *scholē* can be rigorously pre-conceived and pre-established in order for the latter to be finally taken as the first source of the institution and life of the school itself.

What would a school be if it were not, every day and in the first place, a "school of (the gift of) time (that offers space for a place)"? If we are to speak about academic freedom, this seems to be its horizon and scope: *scholē*, or *tempus pro spatio academiae*: the spaciousness for and of creative ingenuity and ingeniousness – *the school of the spaciosity of a world*.

2.3 Value

Similarly to the issue of the being of time, the being of value cannot be grasped by appealing to, or playing on, what the word "value" signifies in our everyday lives: whether it be what appears as a quality or a merit, as a virtue or a relevance; whether we seem to grasp it in a principle or a price, a number or a cipher; whether we happen to perceive it in a certain type of good or simply in something that is efficient and, in this sense, "valid".

The notion of value was mentioned above when discussing the adagio of *scholē*, the truce of verity. Thus, the essential point has already appeared. Why, then, does

value undermine and threaten existential time? What does "to evaluate" mean? What is an evaluation?

The meaning and structure of the verb "to evaluate" points us in the right direction: "to evaluate" is formed on the French *évaluer;* the latter traces to the Latin verb *valeo* (*valere*), which conveys the traits of strength and force, power and potency (*validare* means "to strengthen", while *validus* means "strong", "forceful", "powerful", "efficient"; finally, the related verb *valescere* indicates the acquisition of power). Specifically, "to evaluate" means to compute the profit and usefulness deriving from something that already "has the value of…"; the gain and revenue deriving from a thing consisting of an already given value, that is, from an *actual* strength or power.

Notably, the noun "evaluation" and the related verb "to evaluate" do not have a long tradition. They first entered the English language some 200–250 years ago and have since seen a remarkable expansion of their usage:

> The concept entered the English language in the 19th century, initially used in financial and academic contexts to describe assigning value or worth to something. As the word evolved, it broadened to encompass various types of assessments beyond monetary worth, including effectiveness, significance, and potential. Today, "evaluate" is a vital term across numerous fields, from education to technology, emphasizing the importance of objective assessment in diverse contexts.[19]

Hence, "evaluating" has acquired, and is increasingly acquiring, all possible metaphorical and figurative meanings – from estimating to establishing, from considering to analysing and studying, up to discerning, distinguishing, and therefore judging – to the point that an assessment or a verdict only has substance and meaning, or rather is "of value" to us, if it produces, or rather *is*, a rating.

Let us focus on what today is a virtual equivalence of "evaluating" and "judging". It could seem that, after initially coexisting with the verb "to judge", the verb "to evaluate" has gradually intersected the latter's meaning before eventually attaining the aforementioned equivalence. However, this "shift" turns out to be a mounting prevalence of the sense of "to evaluate" over that of "to judge". That prevalence, in turn, soon solidifies into a "full-fledged semantic and pragmatic colonization".[20]

What could this be followed by if not a complete takeover leading up to a "dictatorship of value" and a consequent "purge" of the original dignity of judging? This, it seems, is precisely where we are today.[21]

Let us be clear: what we have just described is not a mere linguistic evolution. *In truth, it is the symptom of a silent and worrisome transformation of our mindset*.[22]

Yet, a genuine act of judging will never be an act of evaluating; it is, in fact, by its own constitution, an act of thinking, a meditation that is, first and foremost, directed towards understanding the sense of something in order to safeguard it within its sooth and verity, *whatever the latter may be*; in other words, to defend it from the voracity and impetus of the circuit of usefulness and profit, from the market of ratings, and therefore from the debasing sphere of value mongering, and finally from the coils of business.[23]

But life does not judge, one might say; rather, it evaluates, as it is only interested in strength and power, in force and potency. That may well be! However, the point remains: scientific judging pertains to the adagio of *scholē*, to the soothing truce of verity, while the act of evaluating – precisely in its *substituting* the faculty to judge and thus saturating every act of thinking, every meditation (and remedy) – erects the (chaotic) regime of *ascholia*, to wit, of rush and rushing, hurrying, urging, and fretting. Evaluating threatens and offends existential time and, "in the meantime" (namely, while the threat proceeds and grows stronger *thanks to the very time it threatens*), establishes within the various creative communities the dominance of "unease" (i.e., of "counter-adagio") and systematic harassment (a dominance that unleashes arbitrariness and a despotism masked as "procedure").[24] What should surprise and disquiet those same communities (to which the authors of this book, too, belong) is that they themselves are the perpetrators and bearers of this threat, for it is a true "countersense" that has insinuated itself in our very existence as scholars.[25]

Previous considerations beg the following question: What might be the fate of our scientific schools, our research departments, and institutes, and, more generally, of our arts and our systems of higher education and advanced studies, if we entrust the judgement of and verdicts on their activities to agencies that carry in their very titles – and therefore in their action programs – a methodical (and thus meticulous and pedantic) reference to the act of evaluating?

2.4 The besieged *scholē*, or: the "temporicidal" threat to the freedom of science

To conclude, we shall quote some English, French, Spanish, German, and Italian ministerial acronyms which, by now, should sound quite different from what our value-addicted ears were used to. In England, Research Excellence Framework; in France, *Agence d'évaluation de la recherche et de l'enseignement supérieur* (AERES); in Spain, *Agencia Nacional de Evaluación de la Calidad y Acreditación* (ANECA); in Germany: *Zentrale Evaluations- und Akkreditierungsagentur Hannover*; in Italy: (1) *Agenzia nazionale di valutazione del sistema universitario e della ricerca* (Italian National Agency for the Evaluation of the University and Research Systems [ANVUR]), (2) *Valutazione della qualità della ricerca* (Evaluation of Research Quality [VQR]), (3) *Gruppo esperti della valutazione* (Expert Focus Group for Evaluation [GEV]), (4) *Autovalutazione, valutazione periodica, accreditamento* (Self-evaluation, periodic evaluation,[26] accreditation/certification [AVA]).[27]

In the four Italian acronyms, the word "evaluation" recurs five times and is accompanied, as in the case of the Spanish and German systems, by the term "accreditation" (which we also find, for instance, in the *British Accreditation Council*); thus, verity – which is the fundamental trait of the free unfolding of science, thought, and art – is reduced to an object of "esteem" and "validation", to a "product/output" of "validating", to the effect of a debasing "ratification".

What could all of this consist in, if not the implementation of a public (and in itself "impolitic") plan of encirclement and siege of the world of *scholē* by

ascholia, to wit, by urgency and pressure? Undisturbed, *ascholia* may now wreak its hidden havoc and burden with its relentless ordeals.

If, at this point, we listen anew to the ceaselessly repeated imperative which, in a messianic tone, orders "to spread the culture of evaluation throughout the world of science", we will finally sound out its true meaning, which can be spelled out in the following terms: cultivate the virus of *ascholia* within the very heart of *scholē*; inflict upon it the capital punishment (the unculture, bruteness, and brutality) of business.

Finally, this is the primary crime of the Evaluation Machinery against the scientific enterprise: the extermination of the gift of time and of every spaciosity it offers; the systematic, methodical, and automatized "temporicide".[28] *Tell me how you think of time, and I'll tell you who you are*.

2.5 Judging versus evaluating: a summary

i A judgement on something always presupposes an understanding of the being – the sooth – of that something. In contrast, an evaluation of something is based on the systematic ignorance of its sooth, since it exclusively aims at its relative "performative weight" within a certain predetermined operational field.

ii Judging is neither subjective nor objective. Rather, it aims at the verity of that which it considers; insofar as it is a "verdict" (*vere dictum*, "said according to verity") or a true discernment, it can therefore in principle always be appealed. Instead, the act of evaluating is subjectively objectifying, to wit, intent on reducing a certain sense to an object of computation in order to secure it as such within the self-empowerment of a given subject; it therefore presents itself as unappealable (i.e., fundamentally rescinded from any judgement precisely because of its unconditional subjection to subjectifying objectification). This is the subjugation performed by evaluating "the yoke of value".

iii While judging always responds to the Goddess-Sooth (i.e., the deity of measuredness and moderation), evaluating (in its unmeasuredness, arrogance, and hubris[29]) will have no other demon but itself – a demon at the service of the God-Will. While scientific judgement recognizes time as a gift, the act of evaluating disowns that gift.

iv Since evaluating is a form of quoting/estimating (namely, in terms of actualized and anticipated power, and thus of return) a certain value (which always consists in enrobing a certain sense with "value garments"), the unconditional regime of evaluation provides for every evaluation (necessarily assumed as "value-of-value") to be itself an object of evaluation. Thus arises the eternal cycle (or recursive spiral) of evaluating while exposing, at the same time, its constitutive groundlessness.

v Evaluation – with its manifold practices and numerous contemporary articulations and applications – undermines and threatens existential time because, precisely by "every time" presupposing and covertly exploiting its gift, it makes

appear and denounces that gift as a mere interruption of contingency-time, or a sort of intruder which must be expelled. In other words, the gift of time is a disturbing factor amidst "necessary" and "urgent" evaluative procedures. In this manner, the act of evaluating exclusively involves and handles contingency time, thus enhancing it to the extreme and finally imposing it as an absolute value, or, better yet, as the primary value and, in the end, as the new form of eternity.

vi Common acts of evaluating, counting, and estimating, of appreciating, gauging, and probing, are forms of what we have previously called "opining through values" (see above, 10, note 3). The same is true for their antonyms, to wit, depreciating, despising, blaming, deploring, condemning, and so on. Opining through values has long been imposed as the most correct form of judging. According to this mindset, a judgement (which, we should not forget, is always a verdict) will only be such if it possesses the qualities of evaluation. Thus, proceeding by evaluations has become the primary form both of the intelligence of the meaning of things and of any action on, with, and for things. This mode of intellection dictates its own law in every field of human activity, finally becoming the subterranean ("phreatic") source of that very evaluating which asserts itself as the instrument with which creative ingenuity measures and weighs itself, and thus presumes to compute and ascertain its own inventive and constructive abilities and its own vocation. How could the so-called "culture of value" rise to this rank and come to play this role? How could we (i.e., in the first place, the worldwide community of scholars) let this happen? How has it been possible for the scientific and educational institutions which host our existence as scientists and scholars to be "legally" subjugated by and subjected to "agencies of systematic evaluation"? What are the national agencies of evaluation of universities and research if not the primary enforcers of the unease of *ascholia,* which is inflicted on science?

*

2.5.1 Value and the gem

The aforementioned online vocabulary (see below, 40, note 19) provides the following definition of the verb "to evaluate":

> Imagine holding a gemstone up to the light, inspecting every angle and flaw to understand its true worth – this is the essence of "evaluate". To evaluate is to assess something's value, quality, or effectiveness, and it's a skill we apply every day.[30]

What is there to see when we "hold a gemstone up to the light"?

Our "green" eyes may be enchanted by its transparency and colouration, its clearness and splendour, all unspeakably and inseparably intertwined in its simple shining.

To eyes more educated to the latter, those features will appear even more distinctly, while the unity of their interplay will remain intact and be even more captivating in its unfathomable depth.

Both the "green-eyed" layman and the gemmologist hold the stone up to the light so as to be attained by its beauty and let it fill their regard and linger in it.

Thus, the gem generates a truce of verity in which both spaciosity and … can exist together. What, however, if that same "holding up to the light" were performed by the gemmologist-evaluator? In this case, "holding up" means placing the stone at the exact coordinates which will allow his parameterizing regard (usually aided by a jeweller's loupe) to "inspect every angle and flaw to understand its true worth", that is, its (market) value. If the stone is a diamond, the latter will be a function of four discretized variables: "cut" (i.e., a geometrical factor), "colour" (i.e., a measure of intrinsic radiosity), "clarity" (i.e., a measure of extrinsic radiosity), and "carat" (i.e., a quantum which refers to the gravity-factor), as well as of the general market condition, which finally synthesizes "the true value". The latter seals the extinction of the stone's "simple shining".

There is nothing to object with respect to the characterization of the gemmologist's inspective gesture – except, perhaps, to the fact that a discrete regard is presented as a continuous one. Nor, indeed, is there anything to object to with respect to the gesture itself, which is nothing but an instance of a technical-productive act.

What would appear objectionable, however, is that this same gesture is taken as an example on which to base the most general definition of evaluating (and without, at any point, formulating a rigorous concept of "value"),[31] or, more precisely, a definition of "evaluating" *as a universal practice* ("a skill we apply every day"), and *also*, therefore, as a practice for determining "the quality" of scientific research and teaching.

However, what if this "universalization" of the evaluator-gemmologist's gesture implies, in the first place, that the reality of study and scholarship is conceived as a performance which can and must be subjected to "quality assurance"? If this is so, what, then, has become of the *simplicity* and *integrity* of the scientific pursuit of truth?

Finally, who are we, the still-scholars, when we "hold" one of our peers' scientific products "up to the light" having been asked by some "exploiting party" to "review" it?

Notes

1 (Leopardi [1898–1900] 2015, 2067). Original text: "Σχολὴ ozio chiamavano gli antichi i luoghi, i tempi ec. degli studi, e gli studi medesimi (onde ancora diciamo, senza intendere all'origine, scuola, e scolare per istudente, e gl'inglesi scholar per letterato, che dall'etimologia sonerebbe ozioso) che per gran parte di noi sono il solo o il maggior negozio." (Leopardi [1898–1900] 1997, 4520).

2 This paragraph is based on the analyses developed in Chapters 3 (65–95) and 4 (97–135) of Zaccaria (2022) (see in particular notes 105, 144, 147, and 154). The English version of these chapters will be published in De Gennaro and Zaccaria (2025).

3 Chapter 11 is the one that has most attracted the attention of scholars and commentators since post-Aristotelian antiquity.

4 Other denominations of thus understood time could be "limit-time", "check-time", or even "deadline". The latter (and its difference from "a dead line") is discussed below, 61, note 21.

5 Remaining within the circle of the two aforementioned European "philosophical generations", it could be shown how the insufficiency in grasping existence-time characterizes both the metaphysics of Henri Bergson (1859–1941; see his treatises *Durée et simultanéité* [(1922) 2019] and *Matière et mémoire* [(1908) 2012]) and the theories of John Ellis McTaggart (1866–1925; see his essay "The Unreality of Time" [McTaggart 1908]). This insufficiency then takes on, so to speak, a "terminal" character in the so-called "philosophy of time", a variegated field of study which originates precisely from McTaggart's theses and has meanwhile developed – with notable vigour and considerable use of "logical intelligence" – within the domains of so-called "analytical philosophy" and "philosophy of physics." (To get an idea of the scope of this field, one can consult, for example, the entry "time" in the *Stanford Encyclopedia of Philosophy* [https://plato.stanford.edu/entries/time/]). For a rigorous exposition of the *philosophy of time*, see Prosser (2016).

6 The phenomenon to which we are alluding is exactly the following: the neglected existence-time remains – in a covert manner – the hidden foundation of the space-temporality imposed everywhere in our epoch and implemented therein. Or rather, the epoch we inhabit is, first and foremost, defined by that "form" of space–temporality which is "derived" from the oblivion *of* existence-time while at the same time being based on that very existence-time; said oblivion obtains insofar as it is put into effect, actuated, by contingency-time. (It could be shown that this space-temporality, generated through the oblivion of existential time, is "geometrically" supported by Einsteinian space-time. For more on this, see below, paragraph 5.2.2.1, 91 sqq.)

7 Here is the passage: "Quid est enim tempus? Quis hoc facile breviterque explicaverit? Quis hoc ad verbum de illo proferendum vel cogitatione comprehenderit? Quid autem familiarius et notius in loquendo commemoramus quam tempus? Et intellegimus utique, cum id loquimur, intellegimus etiam, cum alio loquente id audimus. Quid est ergo tempus? Si nemo ex me quaerat, scio; si quaerenti explicare velim, nescio." (What, then, is time? Who can easily and briefly explain this? Who can even grasp it in thought, so as to say it in words? Yet what do we mention in conversation in a manner more familiar and knowing than time? We understand it, indeed, when we speak of it; we also understand it when we hear others speak of it. What, then, is time? If no one asks me, I know it; if I wish to explain it to someone who asks, I do not know it.)

8 *Quid est ergo natura entitatis vel natura essendi?* (What, then, is the nature of the entity or the nature of being?)

9 For instance, consider a football match, when the attacking team approaches the opponents' penalty box: the timeliness with which the attack (which might involve the entire team) is carried out, is always what suddenly discloses the *action space* needed to score a goal, which finally seals the truth of the action itself, and therefore of the entire match. In fact, in football, one speaks of *timing* or *timeliness* and not of an improbable "spaceliness"; it is indeed always the gift of time that generates spatial awareness. Also, think about the concepts of *change of pace* (in order to get a good *shooting position*) and of *counterattack*, *ball control*, *header*, *penetrative pass*, *through pass*, *lead pass*, and so on: all of this is always a matter of obtained, found, created, lost, "taken" time!

10 Also consider the sayings: "look of love" and "gesture of respect". With the former, it is not assumed that love is divided into looks (since there are also loving intentions), whereas with the latter, it is not meant that respect is broken down into gestures (as there are also respectful silences); rather, the first implies that a particular look is the result

of an impulse of passion or tenderness, and the second signifies that a specific gesture arises from a sense of consideration, proper distance, and reverence.

11 Regarding the existential understanding of "immense" and "immensity" in English, see "Elucidation 6*"* in Zaccaria (2022, 24–27).

12 "Sooth" is an archaic English word meaning "truth" or "reality". It was commonly used in older English texts and poetic language to signify "truthfulness". It can also, though less commonly, be associated with grace and mitigation, moderation and support, due to its connection with the verb *to soothe*. The word survives today primarily in "soothsayer", meaning prophet or fortune teller, and in the phrase "in sooth", which means "in truth". In our analysis, the word is used in the sense of "genuine essence", "authentic character", "substantial trait", "concrete being", "concreteness", emphasising the fact that such an essence cannot but presuppose a sense of measure and moderation, and therefore of grace.

13 See above, note 4. We can hint at the fundamental character of this spatio-temporality by indicating the following interrelated traits: dis-existential tenseness; (hence) counter-existential, self-infuriated and infuriating furor; (hence) systematic, growing, self-empowering temporicide; all this in accordance with an unheard-of sense of *temps perdu*, as well as of "dying time", "dead time", and "downtime".

14 With this comprehensive expression we intend that which Western humanity has so far known only as technicity, including its "ill-bred" version (later in this book termed "ill-technism"; see paragraph 5.5, 122 sqq.), which, by an ironic twist of fate, also "benefits" from a gift of time. For the sense in which we understand the meaning of "artistic creation" here, see Zaccaria (2022).

15 On the meaning of *scholē* in Plato's metaphysics, its later developments, and its possible renewed sense as "the time of sooth", see De Gennaro (2013, 2014, 2019, 2020a, 2020b, 2023a).

16 On "tempo" as a *singulare tantum* indicating the temporal dimension of music, see De Gennaro (2023b).

17 A piece of music which illustrates the sense in which we propose the adagio as the tempo of time qua *scholē* (or simply: as *scholē*-time) is *Spiegel im Spiegel* (1978) composed by Arvo Pärt. The violin (or cello or viola) alternates between ascending and descending movements, while the piano accompanies with smooth-soothing arpeggios: the simultaneity of up and down, as well as that of low and high, brings into play the *awaiting* in which "the world" is ready *for there to be time*. That awaiting is measured by the infinite reciprocal mirroring of silence and sound (as well as stillness and resonance, stasis and movement, light and darkness): each reflects the other so that both mutually call each other to be what they are simultaneously. In this simultaneity, time is given.

18 On the meaning of the adjective "political" in this context see below, 129, note 6.

19 https://wordpandit.com/wpt_vocabulary/evaluate (accessed February 25, 2025). The "Google Books Ngram Viewer" indicates a sharp increase in the frequency of use of the verb "evaluate" (alongside an almost symmetrical decline in the frequency of the verb "judge") starting approximately from the end of World War II. The fact that evaluating has become the guiding idol of a veritable new "secular, democratic, and global" religion is sanctioned by the proliferation of agencies charged with implementing, in every field of human activity, the "culture and technique of evaluation". We will limit ourselves to mentioning only one "exemplary" case, that of the *American Evaluation Association* (https://www.eval.org). Based on their concise definition of evaluation ("Evaluation is a systematic process to determine merit, worth, value or significance"), this association states its mission, as well as its vision and values, in the following terms: "(1) The AEA's mission is to improve evaluation practices and methods, increase evaluation use, promote evaluation as a profession, and support the contribution of evaluation to the generation of theory and knowledge about effective human action. (2) The AEA's vision is to foster an inclusive, diverse, and international community of practice positioned as

a respected source of information for and about the field of evaluation. (3) The AEA values excellence in evaluation practice, utilization of evaluation findings, and inclusion and diversity in the evaluation community." There is not enough space here for an in-depth diagnosis of the "conceptual-operational assumptions" which this organization takes as self-evident (and which for this very reason are groundless), the most problematic one being the primacy of evaluating over judging. In fact, we read in a programmatic document that "the evaluation profession has developed systematic methods and approaches that can be used to inform judgements and decisions […] Because making judgements and decisions is involved in everything people do, evaluation is important in every discipline, field, profession and sector, including government, businesses, and not-for-profit organizations." There is also a reference to the concept of utility (which is also taken for granted): "Credibility [i.e., obtained through an evaluative process] is essential for utility." (http://bit.ly/3FttALB). Finally, as a fundamental symptom of groundlessness and circularity, a definition of the concept of "value" is nowhere to be found. (All sites accessed February 28, 2025.)

20 The same phenomenon was recorded, in the context of the Italian language, by the philologist Niccolò Tommaseo (1915, ad loc.). In his *Dizionario della lingua italiana*, he illustrates the meaning of the Italian verb "valutare" as follows: "Valutare non ha senso traslato, se non per uso corrotto o barbaro; nel proprio, denota la determinazione d'un valore da potersi o doversi pagare in moneta. Valutasi per pagare, per vendere, per computare, per raffrontare il valor della cosa a una somma di danaro". ("To evaluate" [which here we assume as the English verb whose meaning is closest to that of Italian "valutare"] does not have a metaphorical meaning; it assumes such a meaning only as the result of corrupt or barbaric use. It indicates, in itself, the determination of a value that may or must be paid in cash [currency]. One evaluates in order to pay, to sell, to compute; in other words, to compare the value of something with a sum of money.) In spite of Tommaseo's warning and intent, the "corrupt or barbaric use" has meanwhile become virtually universal.

21 In the contemporary jargon of scientific communities and artistic circles worldwide, adjectives implying some form of valuation are ubiquitous. A scientist or an artist are often described as "highly esteemed" or "critically acclaimed", while a philosopher or a poet may sometimes be regarded as "underappreciated". Likewise, an essay might be hailed as "exceptional", a theory deemed "convincingly argued", and a book labelled as "poorly received", and so on. All these expressions inevitably imply the trait of quoting – that is, of assigning a price –, which essentially amounts to ranking.

22 It can be shown that this transformation is generated by the general sense of being that characterizes our epoch. This sense consists in the trait of power. However, power as such is striving for a "plus" of power, that is, self-outpowering. Finally, power as self-outpowering is sustained by the "will for the sake of will", in short, by the "will to will". The latter is not the character of "a being", but rather "a sense of being", which, to unfold in its fullness, needs to "become" a god. In this book, we refer to this god as "the God-Will".

23 In E. E. Cummings' allegorical text *Santa Claus* we find the following dialogue between "Santa Claus" and "Death": "*Santa Claus:* May I ask you a question? *Death:* Go right ahead. *SC:* What's the easiest thing to sell? *D:* Knowledge. *SC***:** Knowledge – without understanding? *D:* Correct. *SC:* No. *D:* Absolutely. *SC:* But that's absurd! *D:* Absurd – and also tragic; yet a fact. In this empty, un-understanding world, anyone can sell knowledge; everybody wants knowledge, and there's no price people won't pay to get it. – Become a Scientist, and your fortune's made. *SC:* Scientist? *D:* Or, in plain English, a knowledge-salesman" (Cummings [1946] 2009, 18).

24 On this despotism see the following chapter.

25 The consequences of this "insinuation" are detailed in Chapter 8 of this book.

26 These concepts are also commonly translated as "self-assessment" and "periodical assessment".

27 Be it for optimizing fertilizer production or upgrading the development of rockets, for rationalizing the provision of public services or for enhancing research and education, evaluation is at the service of "quality assurance". The umbrella organization of national "quality assurance agencies" of the EHEA (European Higher Education Area) is ENQA (European Association for Quality Assurance in Higher Education).
28 On the question of "temporicide" in the context of the dialogue between mathematical physics and phenomenological philosophy, see Zaccaria (2022, 128–29), as well as De Gennaro and Zaccaria (2025).
29 Let us recall Heraclitus's fragment B 103 (Diels-Kranz): "It is more necessary to extinguish hubris than to extinguish fire".
30 The definition continues as follows: "Whether choosing a career path, measuring a project's success, or assessing someone's potential, evaluation helps us make informed decisions. In an era filled with information and complex options, evaluation provides a crucial tool to separate the valuable from the superfluous and guide our choices with clarity."
31 The same lack of a definition of "value" is mentioned above in note 19.

Bibliography

Agostino. 1996. *Confessiones*. Vol. IV, Books X–XI. A cura di Marta Cristiani, Manlio Simonetti, and Aimé Solignac, traduzione di Gioachino Chiarini, Greek and Latin Writers. Rome-Milan: Fondazione Lorenzo Valla-Mondadori.

Bergson, Henri. (1908) 2012. *Matière et mémoire*. Paris: Puf.

Bergson, Henri. (1922) 2019. *Durée et simultanéité*. Paris: Puf.

Cummings, Edward Estlin. (1946) 2009. *Santa Claus: Un'allegoria di E.E. Cummings.* Testo originale a fronte. Ed. italiana a cura di Ivo De Gennaro, con la collaborazione di Anna Bacigalupo e Gino Zaccaria. Milano: Christian Marinotti Edizioni.

De Gennaro, Ivo. 2013. "Σχολή: Platon und das ökonomische Problem". In *Wirtliche Ökonomie. Philosophische und dichterische Quellen.* Erster Teilband (Elementa Œconomica 1.1), hrsg. von Ivo De Gennaro, Sergiusz Kazmierski, und Ralf Lüfter, 43–88. Nordhausen: Verlag Traugott Bautz.

De Gennaro, Ivo. 2014. "Was ist Muße?" *Freiburger Universitätsblätter* (Heft 2016) 206: 7–17.

De Gennaro, Ivo. 2019. "Etica del lusso." *Anterem* 99: 80–83. Accessed April 30, 2025. https://www.anteremedizioni.it/numero_99_dicembre_2019

De Gennaro, Ivo. 2020a. "Despotic Time and Truthless Science." *European Review of History: Revue européenne d'histoire* 27 (5): 582–97. Accessed April 30, 2025. https://doi.org/10.1080/13507486.2020.1731430

De Gennaro, Ivo. 2020b. "'The promised land': Das Bild der Zukunft in Keynes' 'Economic Possibilities for our Grandchildren'." In *Imagination und Bildlichkeit der Wirtschaft. Zur Geschichte und Aktualität imaginativer Fähigkeiten in der Ökonomie*, hrsg. von Walter Otto Ötsch und Silja Graupe, 275–96. Wiesbaden: Springer.

De Gennaro, Ivo. 2023a. "Was kann die Philosophie?" In *Was kann Philosophie?*, hrsg. von Ivo De Gennaro und Georg Siller, 25–37. Mailand-Udine: Mimesis.

De Gennaro, Ivo. 2023b. "Ethics of Musical Time (Celibidache, Husserl)." *New Yearbook for Phenomenology and Phenomenological Philosophy* XIX: 206–31.

De Gennaro, Ivo, and Gino Zaccaria, eds. 2026. *Philosophy, Physics and Mathematics in Dialogue on the Riddle of Time*. Berlin-New York: De Gruyter.

Heidegger, Martin. 2007. *Zur Sache des Denkens (1962–1964)*. Hrsg. von Friedrich-Wilhelm von Herrmann. Frankfurt a.M: Vittorio Klostermann.

Husserl, Edmund. 1928. "Vorlesungen zur Phänomenologie des inneren Zeitbewusstseins." In *Jahrbuch für Philosophie und phänomenologische Forschung*, hrsg. von Martin Heidegger, IX: 367–498. Also published in 2000 as a book of the same title. Tübingen: Max Niemeyer Verlag. https://api.pageplace.de/preview/DT0400.9783110916072_A19624090/preview-9783110916072_A19624090.pdf

Leopardi, Giacomo. (1898–1900) 1997. *Zibaldone*. Edizione commentata e revisione del testo critico a cura di Rolando Damiani. Milano: Arnoldo Mondadori Editore.

Leopardi, Giacomo. (1898–1900) 2015. *Zibaldone*. Edited by Michael Caesar and Franco D'Intino, translated by Kathleen Baldwin, Richard Dixon, David Gibbons, Anna Goldstein, Gerard Slowey, Martin Thom, and Pamela Williams (1st paperback rev. edn.). New York: Farrar, Straus and Giroux.

McTaggart, John Ellis. 1908. "The Unreality of Time." *Mind* XVII (4): 457–74. Accessed April 30, 2025. https://doi.org/10.1093/mind/XVII.4.457

Prosser, Simon. 2016. *Experiencing Time*. Oxford: Oxford University Press.

Tommaseo, Niccolò. 1915. *Dizionario della Lingua Italiana*. Torino: UTET.

Zaccaria, Gino. 2022. *Meditazioni scismatiche: Il nulla e il tempo, l'infinito e l'arte*. Firenze: Olschki.

3 The scholar under the yoke of value

3.1 Plato and "the time of study"

In the Platonic dialogue *Theaetetus*,[1] Socrates and his interlocutors interrogate the essence of *epistēmē*, or "science", as it is often, rather superficially, translated.[2] It is sometimes maintained that this dialogue does not provide any conclusive answer to the question of what *epistēmē* is. And yet a definite, albeit rather concise, hint towards its essence can be found approximately midway through the text, seemingly as a digression from the main line of questioning. Here, Plato not only states the fundamental trait that characterizes scientific inquiry – to wit, the interrogation of what *is* – but he also adverts to the constitutive condition – namely, *scholē*, that is, "time" – for such inquiry to take place. Furthermore, he indicates how scientific inquiry is annihilated when this constitutive condition is denied and, consequently, that fundamental trait is neglected. Finally, he makes it clear how a philosophically informed education prepares the human soul for minding and guarding the truth, and hence for freedom, whereas a drill that systematically negates the philosophical root of *epistēmē* cripples the soul, thus making man unfit for the truth and, consequently, unfree.

Following a concise contextualization, we will first offer a reading of the mentioned key passage from the *Theaetetus*; subsequently, we will show how Plato indicates the relation between the fundamental trait of science and its constitutive condition; moreover, we will examine his description of how that relation is devastated and what consequences this devastation entails. Our thesis is that Plato's analysis identifies the very core of the subjugation of scientific inquiry – to wit, the abolition of time (in the form of *scholē*) and, as a consequence, of all truthful, truth-bearing practice –, as well as the implications which this "temporicidal" subjugation of time has for scholarly existence. Finally, by means of two examples, we will show how the subversion of academic teaching and research, which is presently taking place in scientific institutions on a planetary scale, can be read in light of Plato's indications.[3]

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3.2 The "digression" in Plato's *Theaetetus*

The so-called "digression" (or "episode", or "excursus") in the *Theaetetus* (cf. 172 c–177 c) has been interpreted in different, often antithetical, ways. It is beyond the scope of this chapter to provide an account of the numerous controversial aspects which are discussed in this context.[4] However, it is important to lay the following interpretive elements out in advance; these elements characterize our understanding of the text and they are key to determining its role in the perspective of this book:

i although the passage takes on the form of an excursus – Plato himself refers to it as a "by-work" (*parerga*, 177 b) – its content is "serious" and not just related to, and relevant for, the first part of the dialogue, which discusses the thesis that *epistēmē* itself is *aisthēsis* (i.e., "perception"); what is more, the passage is crucial for the dialogue's central theme, to wit, the question of *epistēmē*;[5]

ii the theoretical core of the excursus consists in indicating the conditions for (in its essence philosophical) *epistēmē*. These conditions are *scholē* and the kind of *hexis* (i.e., the manner of being, the bearing, the countenance) that the latter implies. As conditions, they are *constitutive* of *what epistēmē is*. In other words, according to our interpretation, they are not merely a "framework requirement" (Bartels 2015, 69) for *epistēmē*, as opposed to a "definition" (69) of it; rather, they actually define *epistēmē* in terms of the peculiar givenness of, and relation to, original time, in which what *is* (*to on*) – that is to say, what is true[6] – can be given to and attained by human intelligence; on the other hand, without *scholē*, the very principle which gives origin to the *relation* between what *is* and a likely human intelligence of what *is* holds off (i.e., stays away); consequently, there is no *on* and no *epistēmē* in the first place. Put differently, the epistemic relation to the world (i.e., to an inquirable reality) is founded on (or "in") the "scholastic" time-relation to the origin of the world. Thus, there is no science without *scholē*;

iii given its focus on science and scholarly existence (as an original manner of "being-in-time"), our discussion will leave aside other aspects of the "digression" and limit itself to considering the ethical and, as it were, pedagogical implications of the different relation to truth implied in philosophical interrogation (as the highest form of *epistēmē*) and rhetorical-sophistic practice, respectively. In this regard, our thesis is that, when the latter, "timeless", practice is imposed and prevails in the context of scientific institutions and scholarship, the consequences are detrimental for these institutions themselves, for what they are meant to harbour and foster, and, hence, for the very freedom of the *polis*.

3.3 A reading of the "digression"

In the middle of a prolonged discussion about the position held by the sophist Protagoras on knowledge (*sophia*), Socrates, realizing that, at this point in the interrogation, considerations of a higher order concerning being and truth would be in order, says to his interlocutor Theodorus:[7] "One *logos* flowing from another *logos* overtakes and engages us, o Theodorus, and indeed a more momentous one is coming out from one that is of lesser importance" (172 b–c).[8] *Logos*, here, stands for a dialectical interrogation aimed at bringing to light what *is*, namely the truth or being of things, and, in the present context, the truth or being of *epistēmē* (i.e., "science").[9] The implication of Socrates' words is that, if the argument is allowed to take the direction which the presently reached stage of the inquiry demands, the dialogue will (in a sort of crescendo) enter a more fundamental, but indefinite sphere, for a time which – since time itself, in its different acceptations, belongs to what comes to be known through that sphere – is, in turn, indefinite. In other words, the dialogue would have to pursue a certain line of inquiry *for as long as the* logoi[10] (i.e., the "arguments") "come out", and in the absence of any assurance concerning the outcome of the inquiry itself.

Socrates' caution prompts Theodorus to reaffirm the necessary condition for philosophical interrogation and the peculiar manner in which its *logoi* proceed from each other *as if of their own accord*, and follow a direction that is not for those involved in the dialogue to steer and control in view of a pre-set outcome.[11] Which is why he replies, "So, don't we have *scholē* for that, Socrates?" (172 c).

This is where the above-mentioned digression, which has precisely *scholē* as its pivotal notion, begins. Here, Socrates opposes the philosophical quest for truth to the rhetorical battles for power and prevalence which are fought in court. He calls those who are educated in the former "free" (*eleutheroi*, 172 c), as "*scholē* always stands by" for them to let their considerations unfold "peacefully in *scholē*", thus following whatever chain, or "fugue", of *logoi* promises to bring them closer to what *is*, regardless of how long these *logoi* may be. On the other hand, he calls those who are drilled in court battle "servants" (*oiketai*, 172 d). The servile nature of forensic arguments, and of the people involved in them, is characterized in the following terms (172 d–173 b):

> But the men of the other sort always <argue> in *ascholia* – for the water flowing through the water-clock[12] urges them on – and the other party in the suit does not permit them to <build arguments> about anything they please, but stands over them exercising the law's compulsion by reading the brief, from which no deviation is allowed (this is called the affidavit)[13]; and their <arguments are> always about a fellow slave and <are> addressed to a master [*despotēs*] who sits there <holding in his hand some case [*dikē*]; and the contests *are never in the way of the indefinite*, but always in the way of the master himself>, and often the race is for the defendant's life. As a result of all this, the speakers become tense and shrewd; they know how to wheedle their master with words and gain his favour by acts; but in their

> souls they become small and warped. For they have been deprived of growth and straightforwardness and independence by the slavery they have endured from their youth up, for this forces them to do crooked acts by putting a great burden of fears and dangers upon their souls while these are still tender; and since they cannot bear this burden with uprightness and truth, they turn forthwith to deceit and to requiting wrong with wrong, so that they become greatly bent and stunted. Consequently they pass from youth to manhood with no soundness of mind in them, but they think they have become clever and wise.
>
> (Plato 1921; our emphasis; translation modified.)[14]

This passage does not merely depict what Plato considers to be the noxious circumstances and implications of certain court procedures. Instead, coming at a culminating point of a consideration on *epistēmē*,[15] it names the ways and the means of the suppression of the free quest for truth carried out by antagonistic learners in a joint interrogation. The crucial point of this suppression is the annihilation of *scholē* and the establishment of an exclusive regime of its negation, to wit, *ascholia* (i.e., the *absence* of time), by means of the introduction of a water-clock which marks the assigned chronological speaking intervals. The imposition of time quotas is, in this case, not just a regulatory provision intended to set reasonable limits to the parties' speeches, which are otherwise free. Rather, it is a blow against the very source of the knowledge of what *is* through the abolition of the sphere of freeness in which that source deploys and "gives ways". Following our interpretation of Plato's argument, we call this source "the indefinite": not *something* indefinite, but (weird as it may sound) *the indefinite itself* in its own right and time and space (or rather, based on the analysis of the previous chapter, its space-of-time). The indefinite, in turn, is not just the absence of a definition and definiteness but rather the *need* and *call* for a definition (namely, a gathering and naming – a *logos* – of what *is*), and, as such, that which, in each instance, offers and indicates the way towards a definition, while giving to the latter its very consistency and fittingness, and thus its true ability for delimitation. This is why it can be said that the indefinite holds in itself, and indeed *is* itself, *dikē*, that is, the way or the due.[16]

In the Greek metaphysical context, "the indefinite" is the element of the origin of all being, of which Plato, in the dialogue *Politeia* (509 b), says that it is itself not being but lies "beyond being"; namely, the good or, as we can also say, the probity that informs all things, insofar as they show as approvable and acceptable in their constitutive limits. Only as the *other* "to", or with respect to being, the indefinite is, through the trait of probity that it bears and brings, its (i.e., being's) inextinguishable origin. However, the indefinite and its need can sway as the original element of what *is* only in the hold of "original" or "existential" time, in the "truce of verity", to wit, in *scholē*.[17] The latter is not the time of something but the time *of* the indefinite itself in its initial otherness and beyondness. Indeed, original or existential time – the time of the indefinite –, insofar as it *holds* and *contains* itself in a space that is for man to bear in a proper *bearing* of his being, is precisely what the Greeks call *scholē*, which,

as mentioned before, we commonly translate as "leisure" (or "free time" or "spare time"). In turn, *ascholia* (commonly translated as "occupation") is the negation of original time.

Independent of his or her acquaintance with or practice of philosophical thought, any scholar of any field knows that the errant paths of inquiry, with their alternating moments of finding and of loss, of clarity and bemusement, belong to "the time of the indefinite", which is what the scholarly bearing must hold open and "suffer" in the first place.

As shown in Chapter 2, our common notions of "leisure" and "free time", which are informed by the physical concept of time, are not only insufficient to capture the essence of *scholē*, but also risk precluding access to its meaning and implications.[18] In the context of the "digression" of the *Theaetetus*, we can interpret *scholē* as the space-of-time[19] of the indefinite, through which the latter and its need call for, and avail themselves of, a human bearing, the sense and task of which is precisely to bear that space-of-time in order to let the indefinite itself (namely, the good, or the probity, whose element the indefinite is) have its way in providing the paths towards what *is*. The original form of that human bearing is *theoria*, to wit, the regard which gathers and beholds what *is* insofar as it firmly yields to the indefinite, from which what *is* comes to light as such. Only by letting the indefinite have its way, man himself is free. Since what *is* originates from the indefinite, and the indefinite can have its way only thanks to the *theory* of what *is*, which holds itself in the "hold" or "truce" that is *scholē*, it follows that without *scholē* there can be no knowledge of what *is*, and therefore no freedom for man.[20]

The regime of *ascholia* annihilates *scholē* and surrogates it with a parameter consisting of a flow of infinitely small, elapsing units, or "bits". This flow can be quantified and grouped at will in ever-leaking and expiring quotas or contingents, which do not simply delimit the duration of an inquiry but indeed turn the latter into a *vital performance* defined by relative duration under the vexatious pressure, if not the stranglehold, of a strand of dead "moments", which we can denominate "the dead line".[21] The implications of the latter's rule – in other words, the implications of the regime of "contingentized" time or contingency-time – can be detailed as follows:

i as a consequence of being urged on by pure elapsion, reasoning is prevented from following whatever *logos* promises to bring to light the truth of what *is* and turned into a computation of the conditions for and chances of prevailing in a contest; any element of indefiniteness having been stifled, everything is in the grip of a compelling and timeless urgency: since original time is denied, *there is no time*;

ii any quest for truth is additionally obstructed by the consequent circumstance that its space is curtailed to a strictly defined contingent of matters of fact stated in advance (which is the function of what above is referred to as the affidavit); this contingent serves as a basis for a control mechanism designed to ensure that any argument only consists in effectively deploying and arranging those fixed matters of fact, whose truth, however, remains unquestioned;

iii this regime of sustained performance avails itself of the opposition of the parties involved, which, instead of being contending partners in the joint quest for truth, equally pressure each other into serving as functionaries of the implementation of the regime of *ascholia*; being deprived of the freedom of following the *logos* of what *is*, the opponents find themselves equalized as slaves of an anarchic will to performance that only wills itself;

iv the denial of "the time of the indefinite" implies the collapse of the sphere of truth, in which only the quest of what *is* can unfold; consequently, truth and being cease to be what arguments are about and what constitutes their binding reference: since all that is left are self-centred points of view based on "brute life", arguments, instead of addressing what *is*, directly target the fellow slave (or the "partner in slavery") as the holder of an opposing perspective, that is, as an adverse "brute life", which must be overpowered and, for and during that effort, taken into account and reckoned with;[22]

v what is said becomes arbitrary as far as its truth is concerned, as the only aspect of an argument that counts is how valid and effective it is in the contentious power play; in this context of arbitrariness, the arbiter himself, i.e., the judge and supposed warrantor of the struggle for truth, turns into a master of arbitrariness, to wit, into a despot (namely, a functionary of "despotic time"), who imposes some arbitrarily devised procedure according to which it is established which point of view eventually prevails and which must succumb;[23]

vi being coerced into constantly having to outperform its performance in terms of the despotic arbiter's arbitrary procedure, any argument is cut off from the only likely source of a true *logos*, which (that source) we indicate with the expression *dikē allōs*; that is, the way (or due) of the *other*, that is, "the indefinite";

vii because the joint struggle for the truth is turned into a competitive race between performers, the trial's outcome is, in principle, never a decision about what is true but merely a ranking of competitors, which often implies a sentence on which of the competitors survives the race and which, on the other hand, is eventually liquidated;

viii the regime of *ascholia* produces shrewd and servile arguers with small and stunted souls, skilled in the ways of coaxing the masters and seeking to curry favour with them; their thinking and speaking is entirely unrelated to the truth and merely aimed at producing countable results on fundamentally illusive arguments; their acts, informed by fear and danger, know no honesty and fairness; while they are buried in self-deceit as to their cleverness and wisdom, they believe to be in the right based on performative success at the cost of their competitors and the consequent official recognition and reward. In this manner, the annihilation of *scholē* leads to a condition of unethical, truthless brutality in the name of "truth" and "justice".

Under the rule of despotic clock time, that is, of timelessness, all actors and elements of the trial are severed from the source which configures their likely (i.e.,

suitable, meet, acceptable, expectable, due) being and reduced to points of view that have an operative function within the regime of "the will to performance" administered by the despot. As a consequence, the only sense of these points of view consists, for each of them, in outperforming itself in an effort to prevail over constantly threatening demise, while its own effectiveness is continuously tested in some trial of strength. In *ascholia*, everything – from the cause at hand itself to the defendant, accuser, and judge – *is* what it counts and how it counts, or how valuable and valent it is in terms of relative performance within the circuit, or, more precisely, within the spiral of self-enforcement of the central will. In other words, everything is now essentially a *value*; to wit, a viewpoint which must persistently outdo itself while trying to overcome opposing viewpoints, and which to that end does nothing but compute itself and everything else as a value, while it is in its turn evaluated by everything else. In the deployment of the interaction of reciprocally evaluating viewpoints, there is no time or space for truth. In fact, the truth never comes into play as itself, but only for what it counts; that is, again, as a value.

The first victim of this reduction that leaves everything a value is *logos* itself, which, from being the word *of* the indefinite, which brings to light and gathers what *is*, is now turned into a mere rhetorical technique and strategic tool. The oratorical combat in which that technique produces its viewpoint against that of the opposing party only pretends to be about the truth and the unearthing of what *is*. In fact, the whole process obtains an outright fictional character, where each element functions according to a will that, supported by appropriate rhetorical tools, fictively strives for the truth of what *is* (and, consequently, for justice). Really, at each juncture of the trial the truth is strictly kept out of the game by the interplay of stringent procedural circuits, strategic moves, stage wins and losses, and new procedural rounds, which, as far as the truth of the matter is concerned, are entirely arbitrary. In this manner, despotic time, namely, the regime of timelessness or *ascholia*, produces a truth-free, truthless environment for the anarchic spiral of the enhancement of will and power as a surrogate for the wanting time-generated ways on which the sense of what *is* offered to human interrogation.

3.4 The "digression" and the Evaluation Machinery

The "digression" in the *Theaetetus*, in which Plato describes the traits of sophistic arguing and training, provides the basis for an extensive diagnosis of the nature and features of present-day planning tools, steering procedures, and control mechanisms of teaching and research. Such a diagnosis, outstanding in itself, would also spell out in detail how, based on the everywhere assumed and enforced "deadline", processes of quality assurance – supported by seemingly scientific methods and indicators and imposed by extrinsic (namely, to a scientific quest) hard or soft law and its hired functionaries – increasingly produce a *fiction* of scientific inquiry and inquiry-based education in the form of never-ending races towards countable performance, which inevitably remain oblivious of the quest for truth. And not only. The diagnosis would reveal how anonymous assessment procedures within those processes undermine the solidarity between scholars, and between lecturers

and students, which (that solidarity) not only grows from, but is required for, the service of truth;[24] how a semblance of accountability, objectivity, and transparency disguises a system of diffuse arbitrariness, irresponsibility, and falsehood;[25] how evaluations, which are intrinsically alien to science, and therefore necessarily insufficient, are progressively eradicating scientific judgement and *ethos*; and how, as a consequence, scientific inquiry and scholarly existence are today, around the planet, threatened, if not already erased, both in fact and, what is more worrying, in the mind-set of young scholars who have been raised in nothing but *ascholia*.

Seeing that the planetary Evaluation Machinery is itself a regime of arbitrary procedures, when a scholar is recruited as an anonymous evaluator of his peers' scientific endeavours, he is *ipso facto* called to assume a systematically despotic function: the circumstance that, while carrying out his task, he might strive to, and even succeed in, preserving traits of judgement and scientificity does not alter the nature of the function itself.[26]

In the following we illustrate through the use of two succinct examples how the argument that "no truth can arise in/from procedures" (which, being based on *ascholia*, are not about the truth in the first place) applies to the domain of academic teaching and inquiry.

3.4.1 Teaching evaluation

It requires little imagination to realize how positive and negative teaching evaluations made by students may be compatible *both* with good and with bad teaching, respectively; provided, of course, that we maintain independent judgement of what teaching and learning *are* and do not automatically establish a correlation between the latter and the results of such evaluations, having the form of opinion surveys. The oscillating reliability of these results is often explained with varying degrees of "imperfections" or "distortions", which come with this practice but are not seen as calling into question the latter's validity and usefulness, at least as a means for photographing the "overall" teaching performance and singling out "criticalities" which call for "correction".

Because such explanations are based on the assumption that what is being assessed (as opposed to what evaluations are applied to) is the actual *teaching*, the relevant question becomes how the assessment method can be optimized. What, however, if the need to which the design and implementation of systems of teaching evaluation responds was not at all that of generating a judgement about the teaching as such? What if that need was actually the will to establish a control mechanism into which the activity of "teaching" can be fed so that a "virtuous" informational circuit of performance enhancement can be operated? What if, in order for "teaching" to be feedable into that mechanism, it was first necessary to stipulate an operable version (or a computable format) of it in terms of certain parametric "key features", one (that version) that must necessarily economize on what teaching *is* and hence be predicated on the effacement of the most basic elements of education? What if evaluations were, as a consequence, constitutively unrelated to the truth of learning and teaching and rather exclusively related to, and informed by, a self-referred will to operativeness

and performance that only admits as "real" that which can be uniformly computed, planned, monitored, steered, and reconfigured within a system of quality control and quality assurance aimed at giving free rein to that will itself? If that were the case, the correlation between teaching evaluations and the "quality" of teaching would be (to employ a mathematical image) equal to zero, and the erratic outcomes of evaluation procedures would come as less of a surprise.[27]

One of the implications of a system of procedures established on the basis of, and in compliance with, a will to operative control is the arbitrariness (or "anarchy") relative to what *is* – here, in the first place, in regard to what teaching and learning *are*, in each case, in relation to the relevant *mathēma*. Notwithstanding that system's procedural strictness, computational correctness, and operative effectiveness, this arbitrariness characterizes all that occurs within the scope of its regime. The unreliable and haphazard character of teaching evaluations is, therefore, a result of the arbitrariness that a time- and, hence, truthless regime always entails. In fact, independent of the actual "moment of evaluation", the placement of teaching under the rule of such a regime immediately annihilates the time of teaching and learning, and "contingentizes" (again, *reduces to a brute fact that comes in countable contingents*) everything that might take place in its sphere: every joint effort directed at learning the learnable; every common attempt at paving a path (provided by "the way of the indefinite") towards what *is*; every instance of venturing into "the indefinite" as a condition for opening the struggle for the truth – all this "is" only insofar as it reappears, deprived of its truth, within the actionable formats, or values, that are fed into the evaluation system (i.e., "clarity", "appeal", "teaching ability", "stimulation of interest", "learning outcome", etc.).

But, one could object, is this conclusion not too extreme? Could there not be *some* truth in the results produced by that method, along with its hardly deniable "undesired effects" and sometimes "ambiguous", if not occasionally "nonsensical", results? Would it not suffice to consider teaching evaluations as "just *one*" means of assessment and, while avoiding attribution of an absolute value to it, to be prudent both in its use and in the interpretation of its outcomes? To be sure, prudence is always advisable and even a duty. However, what if the 0-correlation diagnosis was true? On what notion of teaching would the "partial truth" of evaluation results be based then? However, in matters of truth, there is no such thing as a shared or double sovereignty: *either* the reign belongs to a truth in which what *is* can appear, *or* that reign is usurped by an untruth, or counter-truth, which coerces everything into being willed as an assured computational input for the running of a control circuit. This circuit only wills the enhancement of the informational process in which it consists, and to that end is geared to the continuous improvement of a parametric entity named "teaching quality".[28]

We do not have the space here to detail the destructive consequences which the regime of *ascholia*, established through teaching evaluations, has in terms of (among other things):

i the disruption of the pedagogic tension between teachers (i.e., master learners of learning) and students (i.e., student learners of learning), which the common struggle for the (in itself contentious) truth requires;

ii the distortion of the "learning soul", caused by the instigation of a practice of anonymous assessment based on subjective ("lived") experience and objective (equally "lived") parameters, both of which elude the binding force of the apprehensible content (i.e., the *mathēma*) of a taught subject; and
iii the erosion of the unspoken solidarity and trust among peers in the responsibility for the fundamental formative task of academic education.[29]

These and other consequences result from the time-disruptive clocking through evaluative measures based on a comprehensive parametric framework or "didactic model" (teaching techniques, learning objectives, assessment methods, etc.). This framework and model, with its schedular standards, clocks teaching *throughout*: its pervasiveness does not depend on the fact that instances of data extraction for control purposes, such as teaching evaluations, are carried out periodically or at irregular intervals. Both teaching and learning are subjected to standards which negate any pedagogical truth; both teachers and students are forced to act as servants in increasingly mechanized procedures, overseen by quality assurance officers, which deform pedagogical relations to increasingly vexatious computational exercises, and both find themselves as parts of a power game, in which "often the race is for the defendant's life". Plato's "digression" lays out with sufficient clarity the likely consequences of such unfree behaviour on the educational bearing of teaching and learning and on the souls and "ethics" of those whom it involves.

It is fair to assume that there is, within the academic world, a widespread perception of both the impropriety and the perverse effects of evaluations, as well as a degree of immunity from the purblind militancy for, and rhetoric of, "excellence", which goes hand in hand with a regressing faculty of judgement. However, it is instructive to observe how, by virtue of their peculiar versatility and iridescence (which is a manifestation of the characterized arbitrariness), evaluations are able to present themselves as what they are not, namely, a form of judgement, and thus often secure assent, or at least acceptance, among the evaluated: in fact, independent of whether, and to what extent, their outcomes confirm or contradict our own independent judgement (be it qualified or not) concerning our own or someone else's capacity as a teacher, evaluation as such ultimately usurps a credibility and acceptability it does not, *per se*, have.[30]

The significance of this phenomenon does not lie in the evidence it provides towards the superficiality or "deludableness" of the human mind; rather, it indicates where we must look if we were to ask what informs the compelling aura of acceptability of teaching evaluations. And where would that be? Answer: where else but in the direction of the origin of *both* the acceptable (i.e., "the Good, the True, and the Beautiful") *and* its merely apparitional, "derailed" forms. Despite their apparent "shortcomings", evaluations aiming at boosting "teaching quality" seem, "in principle", acceptable – and finally *are* accepted – *because* they ostensibly conform to the "truth" of the autocratically reigning will which wills itself through the enhancement of control and assurance; the will which is already implicitly accepted as that which exclusively sets what is acceptable and worthy to be striven for.[31]

3.4.2 Research evaluation[32]

The design of calls for competitive research grants is that of a control circuit articulated in operative functions, in which at no point scientific truth as such has a say. This applies not only to thematically defined calls but also to "open" calls, such as those aimed at so-called "curiosity driven" research proposals and those targeting individual researchers. Formal prerequisites, procedural rules, control mechanisms, reporting duties, expected outcomes, and criteria and parameters for preventive, ongoing, and final evaluation – none of these elements of a call, which is a template of the relevant stipulation (the relevant "affidavit", as it were) for a prompted research activity, nor the practices which are based on and obtain their reality from that stipulation (elaboration and submission of proposals, execution of selection procedure through successive rounds of evaluation, implementation of anticipated research tasks, presentation and dissemination of results, etc.) have, as their principle of determination, the source whence originates a definition of what *is*; nor do they have as their paramount concern, the necessity of granting *scholē* (i.e., freedom of inquiry) as a condition for true knowledge.

Consequently, the formulation, planning, and realization of scientific endeavours will be informed by the requirement of being "readable" (that is, processable, monitorable, evaluable, etc.) by means of the set of parameters which generates the data to be fed into the control circuit. In fact, all activities carried out by the actors involved in the process, both administrative and scientific, are fundamentally operations of producing the data which keep that informational circuit running. Finally, a call for research grants is essentially a device for the production of a predefined flow of information. Funded projects largely consist of fulfilling stipulated informational duties.

This circumstance implies that the procedures which prompt, regulate, steer, and inform scientific inquiry are themselves permeated and shaped by a motive which is not scientific but purely operative. That motive can be labelled as "societal", insofar as it has the outer form of an "impact" on some part or aspect of society, "impact" being an effect for which there is, in turn, an actionable control circuit. The societal circuit controls the circuit of research governance by means of appropriate calls and, through the latter, the circuit of scientific inquiry as such. While the societal circuit exerts its control through the directives it issues, it is, in turn, informed by the circuits it controls so that, through the control and feedback mechanism, an integrated cybernetic circuit is operated. The informative medium between the societal and the scientific circuit – as it were, the messenger carrying the directive which imposes on science its complete operatization[33] – is usually money and the legitimation and prestige it confers.

Because the control circuit, which calls for engaging in research projects – the setting for "the race for funding" – is blind to scientific truth as such, it will come as no surprise that wherever one would expect to find a *scientific* criterion in place in the process, that criterion is, on the contrary, *arbitrary*, thus turning out to function as a matrix of anarchy and chaos. It is not necessary, here, to detail the arbitrary character of the different moments (notably those which involve scientific

evaluation) of such circuits, or the temporicide perpetrated by associated schedules and requirements. Nor is it necessary to describe at length how their atmosphere, tone, and language are marked to the core by an exclusive fixation on brute parametric performance, while they lack any note which could be traced to a concern for scientific truth. Or, are "victory" and "defeat", "success" and "failure", and "triumph" and "disgrace", which characterize such procedures, along with a growing personalization of scientific research, not intrinsically brute and unscientific, hence mortifying for scientific truth and, as a consequence, for any genuine scientific endeavour and disposition?

As in the case of teaching, the reigning informational circuits have distortive and damaging effects on that on which they feed. Scientific research is itself now coerced to function as a control circuit: adaptation to extrinsic requirements, steering towards expected outcomes, and suppression of what is unclear prevail over the free struggle for the truth; the focus on the implementation of managerial and organizational tasks, the mastering of logistic challenges, and compliance with the needs of streamlining and coordination, all these distract from the allegiance to "the indefinite".

Applying for funds crucially consists in matching an evaluation matrix, based on the training received from performance enhancement coaches, whose unique expertise consists in their familiarity with "how such procedures go". Where applications and their evaluation are not already a matter of inter-algorithm conversation but still involve so-called "peers", the latter are to each other (sometimes partially, often completely, never really) anonymous evaluators and evaluatees in procedures peppered with unscientific rules and criteria. The effect of the societally-controlled evaluative control circuit on the next circuit in line, namely actual scientific inquiry, is "scienticidal":[34] Since scientific inquiry is reduced to a mechanism which must supply feedback to the circuit of evaluation (which, in turn, feeds information into the societal control circuit), the search for truth, and, in the first place, the time and space that search requires, is denied, meaning that, if it survives at all, it does so *in spite of* the will that permeates the relevant procedure, not *because* of it.

One of the most mortifying and pernicious consequences of societally steered systems of research funding is the hypocrisy and fictitiousness of the arguments and discourses it elicits. The writing of proposals and the presentation of results, which address and deliberately "butter up" some "master" (here in the likeness of an aloof and intrinsically despotic[35] evaluative apparatus), are forced to stage an effect, rather than uphold the problematic truth of the investigated theme. This forced hypocrisy easily spreads to actual research practice, causing it to be, first and foremost, preoccupied with catering to the demands and purposes of that apparatus and its administrators. As one can see, it is not necessary to exert brute political pressure in order to shape science into a "political science":[36] where totalitarian regimes deny scientific freedom and stifle scientific research in order to render it subservient to their ideology and aims, free societies risk sacrificing their bond with the truth, as warranted by free scientific inquiry, by coercing the latter into a regime of performance-based *ascholia* under the banner of "meritocracy" and the inevitable "excellence".

In such an "impact-or-perish" regime, every competitor is, by default and at all times, "guilty until proven innocent" – that is, in chronic performance deficit: since the system as such is constitutively insufficient and therefore insatiably hungry for ever new informational evidence of performance, relief from guilt is always temporary, and final acquittal is, in principle, excluded. The perniciousness of such a regime fully unfolds when new generations of scholars – while occasionally still paying lip service to "the search for truth" – fundamentally understand what they do on the basis of the requirements for *seeming* "success" and "from birth" know no other speech register than that of self-marketing and showmanship.[37]

As will be laid out in more detail in Chapter 8, an insidious aspect of research governance, which often clouds our judgement concerning the "ascholiastic", thus unfree and unscientific, imprint of the same, is the fact that actual science (i.e., the truth-based interrogation of what *is*) is itself involved in it via the scholars themselves, who are, *at the same time*, the functionaries and enforcers of such insidious governance. What our autonomous judgement acknowledges as genuine scientific inquiry might also – albeit accidentally – garner performative recognition; hence, the tempting conclusion that "despite its evident flaws and inconsistencies", in the presence of "high quality research" "the system" "mostly" "works".

Moreover, and even more insidiously, scientists, whom our autonomous judgement once more recognizes as authentic, truth-seeking scholars, may have a role in key operative junctures of the system, which could induce us to presume, by a sort of interpolation, that the system itself is ultimately informed by a scientific principle, or at least *de facto* bound to foster the quest for truth. However, even if we *know* of true and conscientious scholars who play the role of evaluators within those procedures, or simply choose to *presume* that many (or the majority, or almost all) of those who play that role are such scholars, this should not divert our attention away from the fact that the procedure *as such* is not interested in the truth of what *is* and that it admits that truth, or the search for it, only insofar as it happens to translate into processable, actionable information. In fact, systems of research evaluation have not only inflated and, in a sense, institutionalized the conventional (and ineliminable) dose of arbitrariness which characterizes scientific and academic relations, but they also thwart the genuine scientific intents of those who, having been enlisted as their functionaries, are the first to notice that, given the framework in which they must operate, what is being asked of them is not to make sure that true inquiry is preferred to straining after effect and that truth-seekers are put before sophists, but that, above all, a machinery is kept running and according to its own terms.[38]

3.5 The regime of timelessness

Referring to the image of the cave in Plato's *Politeia* (Book VII), we could say that the Evaluation Machinery holds scholars captive in a regime in which – unknowingly, or with intermittent, albeit gradually fading, awareness – they deal exclusively with shadows of scientific inquiry, with shadows of other scholars,

with shadows of students, and with shadows of their own scholarly existence. What that image does not say is that this threat to science (which, as we have been saying from the outset, is *intrinsically menaced*) occurs through the abolition of *scholē* and the ensuing replacement of theorizing in "a hold, or truce, of original time" with self-referred productive performances fabricated within timeless control circuits.

Plato's *Theaetetus* reminds us that the scientific character of an inquiry depends on its rootedness in the philosophical question, the question that – as will be laid out in more detail in Chapter 5 – interrogates what *is*; furthermore, it reminds us that such interrogating proceeds within a reference to the *source* of what *is*, namely, "the indefinite", which originates and holds in itself the fugues of arguments and paths of interrogation which are for epistemic inquiry to follow; finally, it reminds us that such inquiry can only take place in the space-of-time of the indefinite itself, that is, in *scholē*, which is not just a free or unoccupied contingent of chronological, parametric time, but a finite, self-defined measure of the time *of* the indefinite, which is for man to be engaged by and to sustain in a peculiar bearing. Finally, *scholē* is the occasion for man to perceive and preserve "the indefinite" itself in a human *logos*, so that the former may have its way in defining what *is*, and man may return to his freedom. *Scholē* and the freedom of scientific inquiry are one and the same.

The unsettlement of *scholē* via the establishment of a regime of *ascholia*, based on the clocking pulse of the Evaluation Machinery, is a systematic threat to scientific inquiry and to inquiry-based teaching and learning. When designed *ascholia* disrupts scholarship and scholarly existence, reducing scholars to persecuted value seekers and serfs of a "recognition" based on the negation of the very element of the struggle for truth, scholars can but attempt to contain and moderate its devastating effects. However, their ability to do so, or at least to bear witness to the ongoing devastation, depends on their awareness of the responsibility of science towards the truth of what *is*, and thus on their awareness and memory of the original nomothetic sway of *dikē allōs*: the way-giving, path-breaking "due" of "the indefinite", that which bides "otherwise" and impregnably denies itself in the closest remoteness and the remotest closeness. The preservation of that awareness requires that whatever sense we may have of present aberrations be not appeased with ready explanations or excuses. Instead, we need to ponder, *for as long as it takes*,[39] the following alternative, which seems to allow no third option: *either* the truth of *scholē*, and hence free teaching and inquiry for the sake of human freedom, *or* the truthlessness of *ascholia*, and hence the downfall of scientific *ethos* as the shelter of freedom within our communities.

3.6 Selected passages from Plato's *Theaetetus*[40]

172 b–c

Socrates: […] However, Theodorus, argument upon argument [read upon read; saying upon saying] is coming upon us, and a larger one rises from out of a smaller one.

Theodorus: Are we not able, Socrates, to affranchise ourselves in the *adagio* of time, that is, in the truce of truth?
Socrates: We appear to be!

172 c–d

Socrates: Those who from youth hang around law courts and places of that kind, seen next to those who are raised in philosophical and similar studies, threaten to be raised like slaves as opposed to free-born men.[41]
Theodorus: How so?
Socrates: For those who are raised in philosophy, that which you referred to – namely, the gift of time –, always *is*, and thus, dwelling in the *adagio* of that truce, they can construct their arguments [their reads; their sayings] according to the measure and rhythm of that gift.

172 d–e

Socrates: … and it does not matter whether they go slowly or quickly in their saying [in constructing their arguments], as long as they are able to experience, having been granted it, the being of things in a world. The others, however, always speak in the unease of haste and urgency [to the point of impetuosity and fury], for they are pressed, indeed, by the flowing of water [i.e., the clepsydra (the ticking off of contingency-time: the "dead line") impends on them], which does not offer them the spaciosity to construct arguments about what they love […].

173 b–c

Theodorus: But no, Socrates, go ahead and describe them, too [i.e., the philosophers, the students of the school of time]. You spoke well: we, who are coalescent[42] in the chorus of philosophical frankness, are not subordinate to <clocked> arguments and sayings; rather, the latter are quasi our servants, and each one of them awaits to be brought to completion when it appears to us <that the time has come> [or, according to another interpretation: the arguments and sayings sustain us as they serve the gift of time, and, in sustaining us, they reach as far as they must, based on our capacity as thinkers]. After all, there are no <evaluating> magistrates – or, as in the case of poets, <inspecting> spectators – to preside over us to impose censorship or issue commands.

Notes

1 The English edition we use is Plato (1921).
2 The relevant distinctions concerning the notion of science will be made in Chapter 5. In the present context, *epistēmē* indicates a knowledge that, as it were, "presides" over something, or rather, over what something *is*, to wit, its being (*ousia*). It consists in an interrogation the aim of which is to acknowledge what there is to know about a thing

as such, insofar as that thing is already, albeit implicitly, known to us in what it is. What is to be known in this sense, namely acknowledged and thus learned, is called *mathēma*. Learning, that is, apprehending the *mathēma*, is becoming more knowledgeable (in Greek: *sophos*) about something. Hence, *epistēmē* is the "presidence" (thus, to an extent, the control) over what *is*, which (that "presidence") provides a consistency and a ground to the knowledgeableness (*sophia*) about beings. (It is not difficult to see that the mentioned "presidence" is predicated on the metaphysical conception of time [*nyn*, moment] discussed in paragraph 2.2, 27 sqq.).

3 On the "abolition of time" and "temporicide", see De Gennaro (2022) and Zaccaria (2021, 182–83n236), respectively, as well as Zaccaria (2022, 128).

4 A recent, comprehensive overview of positions embedded in an in-depth and multifaceted reading is given by Bartels (2015).

5 If this is true, the text would not appear to deviate from the dialogue's guiding interrogative and thus could not be called a "digression" in this sense.

6 In Chapter 5, the Greek notion of truth, *alētheia*, will be introduced; according to that notion, "what is true" should more properly sound "what is unearthed-disclosed".

7 Theaetetus of Athens was a Greek mathematician. In Plato's dialogue he appears as a young man. Theodorus of Cyrene was Theaetetus's teacher.

8 A slightly modified translation of this as well as of the following passage is given in paragraph 3.6, 57.

9 In 172 d, the aim of philosophical interrogation is described as "to light on the being [*to on*]", i.e., on that which *is*. *Logos* and its relation with *epistēmē* will be discussed in a more detailed manner in Chapter 5, 85 sqq.

10 *Logoi* is the plural form of *logos*.

11 In an address in which he shows how unlimited (unconfined, indefinite) inquiry and teaching must be seen as inalienable human rights, Fichte ([1793] 2014) asks whether someone could legitimately sign a contract (e.g., with society, or, in our time, with a funding agency) through which he sets limits to his own thinking. Based on the premise that limitless thinking (or "thinking *into* the limitless") is the very nature of reason, and that reason constitutes the dignity of man and what differentiates him from animals, Fichte settles the question as follows:

> A contract by which he [i.e., the inquiring man] were to set himself such a limit, would not imply *immediately* as much as 'I want to be an animal' – but *this* it would indeed imply: 'I want to be an understanding [reasoning] being only up to a certain point […], but as soon as I will have reached that point, I want to be an ununderstanding [reasonless] animal'.
>
> (19–20)

It seems that the de-philosophization imposed by the Evaluation Machinery, which will be dealt with more extensively in Chapter 5, is itself a kind of "unreasoning animalization" of man, to wit, his reduction (not to an animal, but) to a brute man. This reduction, as it were, doubles down on the conception of man based on the traits of *brutalitas* and *bestialitas*, which is inherent in modern, technicized science. Of course, in this context *brutalitas* does not indicate mere "brutality" (i.e., cruelty, savageness, etc.), but to the lack of perception of "the limitless"; in turn, *bestialitas* does not refer to animal instincts or "spirits", but to the collapse of human existence into sheer life, that is, into the sphere of survival.

12 The clock which in court marks the assigned speaking times, or rather, the chronological intervals in which to fit one's "arguments".

13 "In Athenian legal procedure each party to a suit presented a written statement – the charge and the reply – at a preliminary hearing. These statements were subsequently confirmed by oath, and the sworn statement was called *diōmosia* or *antōmosia*, which is rendered above by 'affidavit' as the nearest English approximation." (Translator's note.)

14 The phrase "and the contests are never in the way of the indefinite, but always in the way of the master himself" translates the Greek "καὶ οἱ ἀγῶνες οὐδέποτε τὴν ἄλλως

ἀλλ᾽ἀεὶ τὴν περὶ αὐτοῦ" (*kai hoi agōnes oudepote tēn allōs all'aei tēn peri autou*). The expressions *tēn allōs* (translated as: "in the way of the indefinite") and *tēn peri autou* (translated as: "in the way of the master himself") are instances of a use of the accusative case to indicate the space, or way, over which a movement extends (see Kühner and Gerth [1955, 312 sqq.], esp. Anmerk. 12 [313]). The question here is: what is the space in which, and what is the way along which, "logical" and "legal" contests move, occur, take place? Socrates says: "the contests <are> never *tēn allōs*", i.e., the space in which they unfold, and the way they follow, are not informed by the character named *allōs*. The latter means "otherwise", often in the sense of "at random, in vain"; however, in the present context, in which Socrates refers to the way a true contest (*agōn*) should follow (which, precisely, it is not allowed to do in court), *allōs* does not imply indifference or arbitrariness: in fact, the "way" which this word denotes is the one followed by the quest for what *is*, which requires the freedom to "build arguments about anything they please", within the bearing (or countenance, *hexis*) of *scholē*, and thus for whatever time is needed. Hence, we understand (*hē*) *allōs* as "the indefinite", meaning the-space-of-time-gifting in-definiteness, which, while showing (in the direction of) that which *is*, calls for a *logos* capable of de-fining it *within* and *through* the indefinite itself. In other words, indefiniteness, here, is the dimension in which the *need* for a definition becomes perceivable. However, this dimension is itself "a way", which in turn gives rise to ways (namely, of inquiry), on which, and as which, that showing and the corresponding argumentative, gathering-unifying definitions take place. Thus, (*hē*) *allōs*, the gift of space-of-time in which (and as such the way along the ways of which) the contests are not allowed to move, is "the way of the indefinite". In order to fix this remarkable, pivotal Platonic notion in a Greek expression, we call the way-offering way of the indefinite: *dikē allōs*. In fact, *dikē* (a word that still resounds in the context we are considering) is implied in its most profound sense in *tēn allōs*: for *dikē* not only means "way, due, right, judgement", but it has these meanings (next to others, such as, in the immediately preceding passage, "case, cause, lawsuit") based on its relation to the verb *deiknymi* "to indicate, show, let appear"; hence, the word *dikē* is uniquely suitable for indicating "the way", which, *through* the indefinite, calls for the pursuit and the preserving definition (through a defining *logos*) of that which *is*; put differently, *dikē allōs* is "the way" which shows the interrogating, inquiring mind towards that which *is*, allowing it to build its ways of inquiry, depending on the accordance between the interrogative bearing and the due of the way itself. Finally, in contrast to *tēn allōs*, the expression *tēn peri autou* indicates "the way about him", to wit, "his [i.e., the master's] way", namely, the arbitrary procedure resulting from the fact that, in a regime of *ascholia*, the lawsuit becomes the master's "personal affair" and a tool of his will; that is, an occasion for him to "have (it) his way". The fact that the lawsuit is now "about the master" implies that the annihilation of the "logical space" – to wit, the space for the *logos* of what *is* – through *ascholia*, which already resulted in "arguments [being] always about a fellow slave", is now perfected.

15 At the point where the excursus sets in, the built-up "tension of insufficiency" appears to reach a local apex; hence, the introduction of an "episode of sufficiency" in terms of truth and justice, which sets the tone for the rest (quantitatively speaking, slightly more than half) of the dialogue.

16 See above, note 14.

17 See above, paragraph 2.2, 33.

18 "Physical time" is the operative notion of time of which modern physics strives to elaborate a functional explanation. In the wake of the notion of physical time, "leisure" and "free time" are commonly understood as the part, or segment, of a given "time interval" (the entire lifespan, a year, a month, a day, etc.), which is not occupied with necessary tasks. However, as shown before, this understanding misses entirely the meaning of *scholē*. In fact, the latter is precisely an instant of, or in which occurs, a giving (i.e., a gift) of time, whereas outside of *scholē* no time is given (see below, note 21).

19 For the sense of the expression "space-of-time" in the present context see paragraph 2.2, 30.

20 On *theoria* see below, paragraph 5.1.1, 79 sqq.

21 "Dead line" is another name for physical, parametric, mechanical time: it fits the appearance of that notion of time in the water clock or in the sandglass, as well as its modern representation as an arrow. While the "dead line" implies the *annihilation* of *scholē*, the same must not be true for a "deadline" which, by defining an extrinsic measure of *scholē* itself, can act as an exhorting sting rather than as an obsessive gadfly or a relentless nag. As the image of the water clock makes clear, the annihilation of *scholē* requires that time as such, and therefore the *entire* time, be 'liquefied'; to wit, reduced to a uniform flow that is not only itself dead, but also such as not to allow for any "life" (namely, in this case, for a definition of what *is*) to arise in it. Time is now reduced to a contingent of bits, but what is thus "contingentized" (i.e., *reduced to a brute fact that comes in countable contingents*) is no longer time. In truth, if we define an instance of time, or instant, as an occasion, offered to man, for the experience of what *is*, we must conclude that contingentized time does not contain a single instance of – and therefore *isn't* – time. In other words, contingentized time (i.e., a contingent of bits) "is" not just "up" once it is "used up", but the fact of "being up" is its essential trait; in other words, it consists in *nothing but* "being up" (which is why, under the regime of the water clock, it is always too late for what *is* and its perception). Hence, contingentized time is, in fact, timelessness, not in the sense of what is eternal, but of the utter staying away of time, and therefore of all sense and being. On the other hand, the "pressure" of a deadline which defines a measure of *scholē* is, as such, not the same as the disruptive urging of contingentized time: in the case of a deadline, we are, as it were, alive as long as we are not dead (and we might even come out alive at the end), whereas in the case of contingentized time (i.e., the "dead line"), we are dead to begin with, and mortified the entire time. (The frequent arbitrary deadlines for administrative duties, which nowadays set the pace of academic life, are merely there to remind us infallibly of the exclusive rule of the "dead line", to wit, of the fact that, within our academic existence, *there is no time* in the sense of *scholē*.)

22 In the regime of timelessness, there is no scope for the truth, independent of which of the opposing parties gains the upper hand. The prevalence of one side over the other can imply that truth itself prevails or succumbs only if the latter is in play in the first place. However, when the struggle is not about the truth, there can be no truthful outcome (see the following points v, vi, and vii).

23 It is important to note that the judge's despotism is informed by "despotic time" (namely, *ascholia*, or timelessness), which places the argument in a domain that, unlike the space-of-time of philosophical interrogation, is no longer ruled by what *is* (*to on*) and by the principle (*archē*) which rules the sphere in which the latter may come to light. In other words, the aspect of time is more fundamental than the question of who the judge is, or of how the court is composed: as long as *scholē* obtains, there is time and space for a judgement bound to the truth! (Incidentally, *scholē* itself implies a sense of measure and limit with regard to itself, which Socrates witnesses early in the "digression" when [cf. 173 b] he asks Theodorus whether they should return "to the [previous] *logos*", so as not to avail themselves excessively of the freedom and alternation of their arguments). While the "digression" no doubt offers elements for an assessment of Plato's position on, and critique of, the practice of law, what needs to be retained in view of the main concern of this book is the trait of "systemic despotism", and the consequent annihilation of judgement (hence of judges), which characterizes any regime of *ascholia*, hence also that of the Evaluation Machinery. It does not take a great effort of imagination to see how those who, within that machinery, are appointed to function in the role of a "reviewer", who must "rule" the "case" of a candidate for becoming a "scientific product", based, say, on some kind of "call", find themselves in the position of the despot in Plato's court.

24 The issue of anonymity is dealt with in Chapter 7 of this volume.

25 In his final characterization of the excursus' function in the dialogue, Bartels (2015, 68) writes:

> In connection with rhetoric, the apparent tolerance of the homo mensura dictum, which arguably can be understood as an 'anything goes', is reversed. Tolerance holds only as long as that dictum is postulated. As soon as it is applied, the <maxim> 'everyone is entitled to their opinion' is replaced by manipulation, which, based on the denegation of objective connections, can exert its influence in an even more arbitrary manner. Thus, the practice of epistemological skepticism is a reversal into dogmatism, which distinguishes itself from the dogmatism against which skepticism turns in the first place, only for the fact that its grounds are even more difficult to see, so that it is even better usable for all kinds of shady intents.

26 A more in-depth analysis of the figure and function of the peer within the Evaluation Machinery is provided in Chapter 8.

27 An account of the origin and implications of the named "will to performance" (a configuration of the already mentioned "will to will", which will be further dealt with in Chapter 5) would require a theoretical detour involving references to the transformation of the understanding of being and truth within the tradition of metaphysics. This cannot be done here. However, even without such an account, for the time being one may want to assume hypothetically that such a will obtains and test the diagnostic fertility of this hypothesis on what appears to be an apparitional, "derailed" "minor product" of that will, namely, the Evaluation Machinery. The diagnosis requires that we maintain a rigorous distinction between evaluation and judgement along the lines laid out in Chapter 2. While judgement involves an insight into what *is*, evaluation consists in a quantitative or qualitative computation based on the assumption of being in the form of "value".

28 The idea that evaluation could be "just one" means for defining the sense and effectiveness of a particular instance of teaching does not (and cannot) explain in what way that means could effectively be "added" to other means. However, what could those "other means" be if not the peculiar and unique method of each individual teacher, to wit, that which by its own nature eludes any form of parameterization and accountancy?

29 For a more detailed account of these consequences cf. De Gennaro and Zaccaria (2011).

30 Consider the following instances in which evaluations always turn out to be somehow "right": "He/she is a good teacher, *as confirmed* by his/her good evaluations"; "He/she is a bad teacher and only bribes students with the promise of high marks, *as confirmed* by his/her good evaluations"; "He/she is a good teacher *despite* his/her bad evaluations, *confirming* the occasional deficiencies of this assessment method"; and so on.

31 The more the Evaluation Machinery exhibits its presumed objectivity, the more teaching is emptied of its truth, all while the rhetoric of "continuous improvement" persuades us that nothing is to be called into question. Since the regime of the evaluation of "didactics" by students (or through other methods of parametric measurement) does not aim to "improve teaching", but to create a control mechanism which subordinates teaching to computable criteria of operative effectiveness, one can recognize here a peculiar form of limitation of the freedom of teaching (a fundamental right protected in every western democratic constitution). This limitation can be summarized as follows: 1. teaching is redefined according to criteria which are external to its nature, with the consequence that it is subordinated to parameters which disregard the concrete pedagogic reality and academic dimension; 2. the teacher is induced to conform to "optimizable" didactic practices, rather than to truly convenient methods, which limits the plurality and originality of teaching; 3. this results in a standardization of teaching, in which evaluation becomes a tool of potential censorship and control, which impairs the freedom of creating new didactic methods and contents. Finally, note that Fichte ([1793] 2014) deduces the freedom of teaching as an inalienable human right from the inalienable human right to learn. In other words: teaching must be free *because* there is no freedom without nourishing human reason through learning.

32 For a more comprehensive diagnosis of the evaluation of scientific research in our epoch, see De Gennaro (2014).
33 To operatize: to put into an operative, operational form.
34 *WordSense Online Dictionary* (accessed September 9, 2025), https://www.wordsense.eu/scienticide/.
35 See above, note 23. In a regime of *ascholia*, justice becomes an affair of competing rhetoricians, and an "assembly of fellow citizens" turns into a despotic body. Under analogous circumstances, true knowledge becomes a matter of impact, and a "community of peers" is turned into a reservoir of more or less militant "political" functionaries, or officers of evaluation.
36 This term is meant to capture both "politicized" and "policyzed" science.
37 Today, a 40-year-old researcher can be convinced that the fact of having won a grant is a measure of, and a criterion for, scientificity, just as the mere fact of publishing in a journal that (based on a supposed consensus concerning its prestige) has a particularly gruelling revision procedure and provides an extraordinarily scarce contingent of "publication spots", is, for him, not only a matter of (temporary) recognition, but that in which good science consists. (As a consequence, he will expect that both the failure to "attract funds" and the failure to be "prestigiously published" entail a sentence of denied scientificity, hence the expulsion from the scientific circle).
38 The conscription of genuine researchers and scientists into the Evaluation Machinery and its operative processes cannot really happen: every true scientist knows "instinctively" that they must stay away from all this, even at the cost of harsh isolation. Naturally, this does not imply that, in certain specific contexts, even "scholars of great value" might be forced to take part in it to some extent. In that case, they will strive in any way possible to safeguard the truth, which will require them to arm themselves with a peculiar astuteness, as described by Italian linguist and essayist Niccolò Tommaseo. In his *Dizionario della Lingua Italiana,* Tommaseo speaks of the "good sense" of astuteness (*astuzia*) in the following terms: "Scaltrimento di prudenza, col quale l'uomo viene a fine, con grande sottigliezza, de' suoi intendimenti nelle cose buone" (A sharpness attuned to prudence [cautiousness], with which one accomplishes with great subtlety one's intentions in good things [for a good cause]). (Tommaseo 1915, 711).
39 In light of the distinction between "original" or "existential" time and "contingentized time" (i.e., the timelessness of the "dead line"), we can see how the expression "for as long as it takes" has both an essential and an inessential meaning. The essential one (where in the "it" we distinctly hear "the indefinite") implies a measure of *sufficiency* in terms of what is to be thought (i.e., what is, each time, the *mathēma*), and is as such unrelated to a quantifiable duration; by contrast, the inessential one is limited to the latter, and therefore unrelated to thinking.
40 All translations are ours.
41 This translation brings out the element of threat which comes with being raised "in law courts" (i.e., for our purposes: in a scholarly environment subjugated by the Evaluation Machinery). A more common translation would sound as follows: "It seems that those who from youth hang around law courts and places of that kind, seen next to those who are raised in philosophical and similar studies, are raised like slaves as opposed to free-born men".
42 The meaning of "philosophical coalescence" in our analysis is elucidated below, 118.

Bibliography

Bartels, Felix. 2015. "Zur Deutung des Digression des Theaitet (172c–177c)." *Philologus* 159 (1): 29–72.

De Gennaro, Ivo. 2014. "Evaluating the Unevaluable. Scientific Research in the Epoch of the Will to Will." *Heidegger Studies* 30: 17–32. Accessed May 6, 2025. https://doi.org/10.5840/heideggerstud2014302.

De Gennaro, Ivo. 2022. "Abolition of Time, Alienation from Truth, and the Heteronomy of Academia." In *Academic Freedom in the European Context. Legal, Philosophical and Institutional Perspectives*, edited by Ivo De Gennaro, Hannes Hofmeister and Ralf Lüfter, 21–53. Cham: Palgrave.

De Gennaro, Ivo, and Gino Zaccaria. 2011. *The Dictatorship of Value: Teaching and Research in the Planetary University*. Milano: McGraw-Hill.

Fichte, Johann Gottlieb. (1793) 2014. *Zurückforderung der Denkfreiheit von den Fürsten Europens, die sie bisher unterdrückten*. Berlin: Hofenberg.

Kühner, Raphael, and Bernhard Gerth. 1955. *Ausführliche Grammatik der griechischen Sprache: Satzlehre.* Erster Teil. Hannover: Hahnsche Buchhandlung.

Plato. 1921. *Plato in Twelve Volumes*. Vol. 12. Translated by Harold N. Fowler. Cambridge, MA: Harvard University Press; London: William Heinemann Ltd.

Tommaseo, Niccolò. 1915. *Dizionario della Lingua Italiana*. Torino: UTET.

Zaccaria, Gino. 2021. *The Enigma of Art: On the Provenance of Artistic Creation*. Leiden-Boston: Brill.

Zaccaria, Gino. 2022. *Meditazioni scismatiche: Il nulla e il tempo, l'infinito e l'arte*. Firenze: Olschki.

4 A retrospective and a prospective glance at the path

4.1 Science and freedom

To provide a framework for a retrospective and a prospective glance at our path of inquiry, let us consider the following question with regard to our academic institutions of research and higher education: is strong university leadership compatible with academic freedom?

To orient ourselves within this question, we must first seek a way out from an indeterminate understanding of both "university" and "academic freedom". On that basis, we can at least hope to come to some clarity as to the meaning, scope, and impact of "strong leadership" in this context. A substantial part of this chapter will, therefore, be devoted to a diagnosis of, first, academic freedom and what it applies to, namely, scientific inquiry and teaching, and second, the way in which recent developments in these spheres shape the institution that is meant to be their home and stronghold, namely, university. While some exemplifications will be given, which relate the diagnostic findings to today's academic life, the answer to the above-mentioned question will not go into details of different models of university governance.

Based on this outline, this chapter will be divided into four parts. Paragraph 4.2 will offer a diagnosis of the fundamental orientation and the freeness of present-day scientific inquiry and inquiry-based teaching. In paragraph 4.3, a diagnosis will be given of systematic derailments from that fundamental orientation and their consequences for scientific freedom. This will be followed, in paragraph 4.4, by a brief assessment of the reflections of these developments in the constitution of present-day academia. Finally, paragraph 4.5 will be dedicated to some conclusions which this diagnostic picture allows with regard to university leadership. The guiding concept in the following remarks will be the notion of value. Besides providing unity of argument, this notion will be instrumental in pointing out what we believe are crucial discriminations in relation to the issue at hand.

In order to facilitate the understanding of the following remarks, a preliminary clarification is appropriate concerning the term "academic freedom" and its relation to scientific inquiry. The acceptation of academic freedom found in the

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European context differs from the one which is common in the Anglo-Saxon tradition, where that freedom is an instance of the fundamental right to free speech. It can be argued that

> in the European tradition, a peculiar relation is established between science and freedom, in that the latter is seen to be crucially dependent on the former: because (free) scientific inquiry (including the education toward such inquiry) is the highest form of the pursuit of freedom, a curtailment of that freedom is considered an attempt on the very 'capacity for freedom' of a political community,[1] hence on that community as such.
>
> (De Gennaro, Hofmeister, and Lüfter 2022, vi)

This understanding of academic freedom, in turn, stands in the tradition of the Greek notion of *scholē*, which, as discussed in Chapters 2 and 3, does not indicate mere "leisure" or generic "free time" but the temporal dimension of the philosophical foundation of the *polis* – "the truce" or "the hold" of original (i.e., existential) time, in which all true cognition is generated. In this same tradition, Fichte's reclamation of "the freedom of thinking" as a fundamental human right (Fichte [1793] 2014) is a consequence of the unlimited scope of (enquiring) reason, which is seen as the constitutive trait of the humanity of man.[2]

4.2 A diagnosis of contemporary scientific knowledge

Why is a diagnosis of contemporary science necessary in this context? The answer is: because of its implications for the freedom of science itself and its capacity to face threats to that freedom. As to the latter point, we would argue that the very strength which has warranted and still warrants science's successes at the same time weakens its capacity to face present threats to its (menaced) freedom. This is due to two related circumstances: first, the peculiar form of modern science's technical orientation (i.e., its "technicization"), which undermines its capacity to be mindful of its own roots; second, the stress on computational thinking at the expense of judgement, where "judging" implies the addressing of questions of sense.

As mentioned before, the two traits by which we characterize contemporary scientific practice are "technicization" and "societization". Tracing these two traits to their common origin at the dawn of modernity, and beyond that to the Greek onset of thinking, is a philosophical task that we have just begun to assume, and to which, in our judgement, Martin Heidegger's reconstruction of the genesis and unfolding of metaphysics brings a unique diagnostic light (cf., e.g., Heidegger 1961). For the present purpose, it must suffice to mention that, at the end of the 19th century, Friedrich Nietzsche (1999, 442) identified "the victory of method over science" as the outcome of that root-phenomenon of modernity. (For a commentary, see Heidegger 1983, 135−49.) At this stage, we provide a preliminary elucidation of the notions of "technicization" and "societization", which we will then discuss in more detail in Chapters 5 and 6, respectively.

The word "technicization" indicates the fact that scientific knowledge becomes entrenched in its modern technical character. Pre-modern science, notably Greek *epistēmē*, is in its own way "technical" insofar as it is based on operative, hence, to an extent, instrumental, assumptions (or hypotheses) which "bring to light", determine, and make available that science's theme of inquiry. Such "bringing to light", however, understands itself as accomplishing a "naturally" offered reality, which the Greeks call *physis*. By contrast, the peculiar technical character – its specific "technicity" – of modern science is that those assumptions operate so as to literally make, or produce, the object of cognition. That production no longer conforms to a naturally offered reality but overrides any sense of offer. It does so at the behest of a "will to cognition", which equates the latter with the power of control. We can reserve the term "research", as a peculiar form of scientific inquiry, for the retrieval of cognitions from what has been previously produced and set for the purpose of extracting them. Based on this consideration, only modern scientific inquiry is "research".

We do not adequately understand the character of scientific research as long as we think of it as applying ever-more advanced methods of inquiry to the investigation of a given domain of objects. The theoretical style of scientific research consists in formulating concepts and hypotheses in response to an injunction, or rather a will, which demands that, in the first place, reality be produced in an appropriate objective form for it to be investigated experimentally in view of an ever more exact control of its functioning. This objective form implies computability for the sake of modelling and testing. Modern scientific practice consists in the design of computational models of reality in order to explain functionally and ever more exactly the components of the models themselves through experimentally tested theories. Successive theories secure the modelled reality to increasing degrees of controllability for the purpose of planned and steered production of measurable effects. We call this scientific practice "technicized" (or "technical in the modern sense", or characterized by "mathematical technicity"[3]), insofar as the concepts and methods it adopts are not conceived based on an attention to, or experience of, what appears as an in-itself-resting reality (a reality that, notwithstanding our "collaboration" in producing it, "has itself to itself"); rather, they are designed as tools for *going after* that reality in view of making it available, via modelling and construction (i.e., based on a previous mathematical project and thanks to the employment of mathematical tools), for a form of productive scrutiny which, in turn, aims at the empowerment of the production of effects. In short, the constitutive elements of scientific knowledge (to wit, basic assumptions, and fundamental concepts) are now functional to the construction of models which are, in turn, functional to that empowerment. The horizon of technicized science is therefore not "to know the truth" or "to unveil the secrets" − albeit in a "technical" and operative perspective − of a somehow given reality (i.e., a reality accepted in its offering-itself while at the same time keeping itself to itself) but to *fabricate* (ostensibly from scratch, i.e., totally) a reality which is subjected to levels of control as are required by the will to implement processes aimed at producing ever-more powerful effects.

We must, in this context, retain the chasm between "science" and the kind of thought which, to date, has taken the form of philosophy. The former can be

defined as a way of seizing things in view of establishing a formal framework for the effective construction of a world in accordance with a certain manifestness of reality, of man himself, and of their mutual relation; by contrast, the latter (i.e., philosophy) can be characterized as an attempt to conceive and preserve the genesis and scope of that very manifestness, and hence the opportunity for science to become aware of the conditionality of the field in which it operates (rather than mistaking it for just another fact among many). An attempt of this nature results in what we may call "knowledge". The latter makes explicit the ground (i.e., said manifestness or openness) from which science, in turn, draws its basis. Hence, science is knowledge-based in that it does not itself give rise to "knowledge" in the now specified sense (i.e., as an insight into the genesis and scope of the manifestness of a manifest reality) but relies on, and somehow plays out, a more original, ground-related awareness.

As previously mentioned, the form of "given reality" which is decisive for the initial formation of the concept of science is *physis*, which we commonly translate as "nature". A rendering which better indicates its constitutive trait is "the arising". *Physis* is the Greek sense of "being" which informs the whole of what steadily arises (and thereby simultaneously withdraws) into manifestness. Greek *epistēmē* (which we should not translate as "science" without indicating its peculiar and unique traits) implies a standing up over against *physis* with the intent to recover the ways and forms of its steady arising by means of "logical" definitions which, in turn, are meant to secure man's capacity to firmly stand in the middle of beings as a force that presides over them. Philosophy, as the original defining knowledge (i.e., as the original "epistemic technicity"[4]), aims to provide the basis for a productive, technical cognizance of *physis*, whose character, however, remains different from the modern "will to fabrication". Indeed, as mentioned before, the latter is no longer beholden to the initial offer of *physis*, if not for the circumstance that it must still rely on some sort of "natural input" (for instance, that which is eventually framed as "particles" made to collide in an accelerator) for the purpose of testing the effectiveness of its models.

Returning to what has now been characterized as "technicized science", we can resort to a dictum by German physicist Max Planck to indicate one of the constitutive features of that form of cognition, which is important for our topic. Planck says: "For that which can be measured, that, indeed, does exist" (Planck 1958, 73). This statement is meant to justify the existence of "dynamic quanta": these, Planck maintains, can be (quantitatively) measured; *therefore*, they exist. One could argue that this does not imply that *only* what is measurable exists, in that the statement does not exclude forms of existence based on criteria other than measurability. In fact, Planck himself elsewhere states: "Energy itself is not measurable, but only its differences" (Planck 1958, 125), by which presumably he is not implying that energy itself does not exist. However, it remains arguable that, for Planck, direct or indirect measurability is that in which existence – in its physically relevant acceptation – consists. Indeed, what other form of existence, which escapes direct or indirect, actual or expectable measurability, would the perspective of mathematical physics allow for?[5]

Much in the same vein, British physicist Arthur Eddington wrote: "The whole subject-matter of exact science consists of pointer readings and similar indications" (Eddington 1928, 252). Planck's and Eddington's statements bespeak that technicized science produces its own object of knowledge by contriving and consequently dealing with what is measurable and calculable; with numerical information; with computable parameters; in one word: with *values*. Scientific research, in the now-sketched distinctive sense, consists in the design, collection, and analysis of values, or, as we say of late: data.

The second trait which, according to this diagnosis, characterizes contemporary scientific practice is "societization". This word refers to the following circumstance: what is at issue for science, and what scientific research gears itself to, are problems of societally organized collective life. This is not to be understood as saying: science strives to solve the problems of humanity. Rather, what is meant is this: science is commissioned by the anonymous collective "will to life" to cater to what that will wills, namely itself.[6] To the extent to which this will informs current public discourse, it goes by names such as "sustainability", "resilience", and "security". Today it appears obvious that science should investigate reality under the command of the will to life, which challenges and directs us through its "problems". The only alternative to this we can think of would be "science for science's sake", which strikes us as the epitome of idleness. And yet, that orientation on sheer life loses its obviousness if we take at its word that the will to life wills no other end or aim than itself, and that this, in turn, means that it informs and subjects to itself any other end or aim.

Rather than providing a trustable cognition of a meaningful reality, scientific research gears itself to the sheer will to life. It does so in an increasingly technicized form. Traditional disciplinary boundaries dissolve to allow for ad hoc combinations of disciplinary approaches prompted by specific problems requiring customized solutions. New scientific clusters emerge to organize and boost science's problem-solving abilities. We see such clusters listed, for instance, in continuously updated European Research Council Panels (European Research Council 2023). The logistics of research facilities are adapted to the supply chains and production cycles which serve the search for those solutions. Scientific inquiry itself, in the form of research, as well as substantial parts of academic training, becomes a component of modular industrial production processes.

The technicization and societization of science is a development that we must acknowledge and, consequently, diagnose. Acknowledging is the practice of letting an appearance rest in the source, or gift, of its appearance: thanks to this practice, that appearance becomes what to begin with and mostly it is not, namely a phenomenon. Diagnosing, in turn, is the practice of gathering and naming that source. The diagnosis of the mentioned development brings to light an implication in terms of the freeness of science, which, again, is relevant for our topic. The circumstance that scientific research consists in devising and implementing models of value extraction and processing in response to the brute will to life implies a reduction of the scope of that practice's inner freeness, notably of its capacity to render its own ground to a crisis. The reason for this is that research is at any time as free as it is

open to the initial gift of the phenomena on which it banks for its project of control enhancement. However, performance values designed to serve as metrics of the will to life are outright a-phenomenic. Data, no matter how "big", and despite their etymology, ignore the initial gift of phenomena. Hence, the constraints to the freeness of scientific research geared to performance and, as a correlate, the loss of liberating force in inquiry-based (or, as Kant would call it, "inquisitive") teaching.[7] As stated before, the relevance of this narrowing of inner freeness for the issue at hand is its bearing on the condition in which academic inquiry and teaching face internal and external attacks against, or threats to, their freedom. A recent and on all accounts unprecedented form of threat is dealt with in the following paragraph.[8]

4.3 Derailments from the track of technicization and societization

As scientific practice, at the behest of the will to life, proceeds on the track of technicization and societization, it grows into the shape of a technique for value processing. This condition has not caused, but arguably favoured in its emergence, a different but increasingly tone-setting development, which we see as an aberration, or derailment, from that track: over the past decades, the sphere of science has fallen into the clutches of a bizarre complex of value-based practices, which, although alien to science itself, are bent on taking control over it. Our name for this complex of practices is "Evaluation Machinery". The Evaluation Machinery mimics the metric approach by which technicized science attempts to establish a mechanics of the natural as well as the naturalized world to contrive a mechanics of sorts of the value of scientific research.

The word "derailment" translates *Entgleisung*, a word Heidegger uses to indicate three kinds of aberration with respect to the "technical essence" of science, which (that essence) is the "secure track" on which, in his diagnosis, science itself has been set since the mid-19th century. These derailments are: "the cultural-philosophical overstatement of the essence of 'science'", "the theological interpretation of the sciences as a path to God", and "the epistemological foundation of the sciences" (Heidegger 2015, 388). Based on this diagnosis, the Evaluation Machinery appears as a kind of "super-derailment" or "deranged aberration", in that, as we argue below, it not only falls short of the "technical essence" of modern science − as do, for instance, the attempts towards its epistemological foundation − but it replaces the latter's truth with an array of proxies which are entirely devoid of scientific meaning.

Evaluative processes consist in devising and carrying through procedures and protocols for the governance of scientific research by means of values which are not scientific. In short: a-scientific values prevail over and effectively suppress scientific ones. Evaluative practices make use of quantitative tools; however, this does not make them scientific. Planck's measures and Eddington's readings are the very "subject-matter", to wit, they provide the conditions for a cognitive endeavour of technicized science. In contrast, the measures and readings of the Evaluation Machinery are conditions for measurements of performance which have no other

intrinsic scope than that of feeding those very acts of measuring. They are performance measures which measure measures of performance measuring.[9]

Because the values of evaluations are a-scientific, the governance of science through the Evaluation Machinery is a blind flight with respect to the true scientific merit of research. This not only leaves ample space for arbitrariness and different kinds of moral hazards, but "quality assurance" through a-scientific metrics impacts science in a way that, though arbitrary, is not at all accidental. In fact, accidental impacts are those which may follow from indiscriminately open, "non-judgemental", "ecumenical" measures, such as equal-share funding schemes. By contrast, policies which execute the directives of the Evaluation Machinery are not merely a-scientific but counter-scientific: because their metrics pretend to pass judgement on science as such, they negate, and object to, what is the very source of actual scientific values, namely the residual (albeit menaced) freeness of science in theoretical inquiry and inquisitive teaching. Therefore, the evaluation of science is never to be conflated with scientific judgement. The latter fosters, whereas the former thwarts, scholarly endeavours. The hollow rhetoric of virtuosity, on which the Evaluation Machinery draws, barely covers up this conceptual conflation.

We should now, perhaps, spell out what concrete practices and values supposedly compose the said machinery. A tentative list would include metrics such as citation indices, impact factors of scientific journals, ranking systems for universities, indexes of teaching performance, numerical or type-based publication thresholds for career advancement, funding schemes for research projects based on non-scientific parameters, temporicidal quality-assessment exercises, money as a career opener or career booster, and many more. The criterion for determining the items on this list is always the same: whenever a-scientific values decide the orientation and rank of scientific inquiry, this implies a counter-scientific, value-driven, freedom-quelling derailment from the track of life-value-based technicized science.

The stranglehold of the Evaluation Machinery on scientific practice can be used by extra-academic spheres to threaten and restrict academic freedom. The heteronomous steering of inquiry and teaching using parametric tools and money − based on strategically tailored and rhetorically weaponized "scarcity" − is arguably more subtle and elusive than outright ideological control. The weaker the diagnostic discernment and self-awareness of the academic community, the more difficult it is to expose the narrative of goodness and progress which cloaks extra-scientific control.

Perhaps the more remarkable phenomenon, however, is the degree to which the so-called "culture of evaluation" has meanwhile been internalized and thus taken hold of the scholarly world *from within*. By virtue of this "culture", scholars are led to perceive themselves and their work according to evaluative metrics. They become used to operating based on covenants which define the scope of their inquiry in terms which do not flow from that inquiry itself.[10] Often, not only do scholars surrender to and adhere to the suppression of scientific freedom, but they also emphatically champion it. Not only do they aid and abet it, at times they militantly enforce it! Any perplexity, reluctance or resistance is soon engulfed by the routine of clocked controls and tedious accountancy. Were we to take a diagnostic

snapshot of present-day academic business, its caption would likely read: "Scholars repelling *scholē*".

As repeatedly mentioned, the Greek word *scholē*, from which the English words "school" and "scholar" are derived, is usually translated as leisure, rest, idleness, free or spare time, time of study, and school. It is understood as an interval of a certain duration within "the flow of time", one which is not occupied by attendance to some necessary business. However, *scholē*, rather than being based on an understanding of time as a directional sequence of elapsing moments (i.e., "time's arrow"), is itself an original notion of time: *scholē* indicates the respite or "truce",[11] consisting in the offer of the towards (i.e., "present") simultaneity of past and future (in one word: the borne "hold *of* original time"), in which the sense and meaning of things is generated and becomes accessible to our several forms of response – including the forms of response we call "knowledge" and "cognition". Accordingly, both Plato (in his dialogue *Critias*, 110 a) and Aristotle (in his treatise *Nicomachean Ethics* X.7) state that philosophy (in the case of Plato) and theoretical life (in the case of Aristotle) – and therefore the entire project of the *polis* – are based on *scholē*. It can be shown that all forms of encroachment on academic freedom, be they external or internal, ultimately consist in an attack on or the outright annihilation of *scholē*.

A key role in masking the takeover of science by the Evaluation Machinery is played by the figure of the (typically "blind") peer: since it is mostly scholars (our colleagues, we ourselves) who occupy logistic positions and operate as interfaces of that machinery, the semblance can be maintained that the system operates based on scientific criteria and in the interest of science. The sobering moment of realization comes when a procedure based on peer oversight or review is finally automatized and handed over to "artificial intelligence". It then shows that it was from the outset not the judging peer but the evaluating functionary who was involved in the control circuit as a provisional placeholder for an algorithm.[12]

The combination of self-inflicted and other-inflicted threats to scientific freedom produces a large-scale derailment of modern science from its track of technicization and societization. Most importantly, it obnubilates the implications of these momentous developments and the decisions they hold in store. Who, indeed, could afford to muse over, or initiate a dialogue on, the character of what today is the very hallmark of scientificity − to wit, scientific success measured in terms of cognitively controlled reality − when it is a matter of academic survival to ceaselessly replenish evaluative assets, which, while counterfeiting such success, dwindle by the hour? The effect of this derailment is particularly pernicious with regard to young academics. Mostly, they are no longer taught that scientific interrogation must proceed based on the indications generated by the quest for truth only. Most of what they are required to do does not train a habit of freeness. Mostly, they understand that a scientific endeavour − no matter how "high-risk", "prone to failure" or "curiosity-driven" − must meet pre-set evaluative standards to be allowed to exist. On the whole, they realize that, to have citizenship as members of today's academia, they must acquire skills and attitudes once seen to be typical of sophists.

4.4 Present-day academia

As a result of the outlined developments, today's universities are characterized by a peculiar form of heterogeneity and an insidious ambivalence. The interplay of these two traits shapes the planetary academic landscape. Clarifying what this means requires a brief return to the notion of university.

The modern idea of university, which is programmatically laid out in the broad context of German idealism, involves a simple architecture. Its foundation is provided by a unifying unity that has the form of an origin. This *unum* is philosophy as knowledge and as a practice of freedom. From that origin spring different forms of cognition, which are meant to substantiate the origin whence they spring thanks to the manner in which they refer back and towards it − in Latin: *versus*. These forms of cognition are the sciences. The whole formed by the sciences turned *versus unum* is the uni-versity. A classical formulation of the idea of university as a whole of sciences, based on the unifying unity of the unique acknowledgement of the *unum* (here "the absolute"), can be found in Schelling ([1803] 1990). From a philosophical (rather than historical) vantage point we can surmise that this idea of university was pursued until roughly halfway through the 19th century, before being abandoned in the second half of that century and finally coming to an end in the first decades of the following century. A newly conceived project of the university is still awaited. To conceive a notion of "the one" that is more initial than that of philosophical tradition is a pivotal task for present-day thought. In the absence of that notion, the very sense of "knowledge" and "science", hence of "academic freedom", is bound to remain hollow and arbitrary.

As the unifying force of a practice of freedom is missing, the "unity" of universities is today given by common operative governance implemented through centralized administrative structures which pursue the maximum expediency of all "processes" and "operations" for purposes of quality control and accountability. The circumstance that the sciences miss a foundation is covered up by the successes granted by their ongoing technicization; in turn, the Evaluation Machinery, acting as the new *unum* of the university, gives a different quality to the "cover-up" of and distraction from persisting unfoundedness, as it involves a complete detachment from scientific truth.[13] Indeed, what would the "theoretical framework" of a research project investigating the impact of that machinery in terms of "scientific truth" look like?[14] At the same time, new, "cybernetical" sciences emerge, which take on the task of reshaping and organizing the older ones to ostensibly boost their technical and societal productivity; the resulting organizational structures, in turn, provide a novel form of operational "unity".

Such streamlining and systemizing of processes gives rise to heterogeneous constructs, still going by the name of university, in which what are effectively industrial production modules coexist with scopeless replications of traditional scholarly endeavours, and customized training schemes run alongside educational efforts which resist in the hope of meeting a new, yet unfelt, need. Meanwhile, a formal scientific "egalitarianism" prevails: seeing that a sufficiently founded notion of scientificity is lacking, the title of "scientific discipline" is granted based

on the "accredited" respect of accepted academic rituals and the exhibited ability to produce a measurable output value.

The heterogeneity of academic reality intersects with the ambivalence which results from the alternative between following the "firm track" of technicization, hence still of science itself, and derailing from that track on account of the Evaluation Machinery. This ambivalence runs transversally through all domains of scientific investigation: the distinction between instances in which it is still freedom that guides scientific inquiry and instances of subjugation to evaluative schemes − be they generated within academic communities or imposed on them from the outside − does not follow disciplinary boundaries. The intersection of this ambivalence with the said heterogeneity produces institutional formations which can neither be "read" nor, consequently, led as if they were uniform entities − at least, as long as scientific freedom is intended as the principle which informs university governance.

4.5 University leadership and academic freedom

Academic freedom consists in the unlimited pursuit of knowledge, rooted in the free dedication to truth and endowed with the autonomy that this dedication requires. In this day and age, this pursuit appears to be informed by the traits of technicization and societization. However, as long as it harbours a spark of freedom, scientific inquiry remains open to be attained and shaken from the ground up by a crisis which, among others, and within the limits of his metaphysical position, Edmund Husserl diagnosed about a century ago (Husserl [1936] 1982); clouded by "technical success"[15] and finally "cancelled" by evaluative practices, that crisis remains largely unacknowledged to this day. *Protecting academic freedom means fostering science's capacity for crisis*. We believe that, today, this protection cannot so much as be attempted without the support of a diagnosis of the difference between the value orientation of technicized science and the value-based procedures of the Evaluation Machinery − in short: without an awareness of what might be called "the value discriminant".

Let us come back to the question formulated at the outset, which asks about the compatibility of strong university leadership with academic freedom. Suppose that, in the expression "strong leadership", "strong" means: endowed with significant executive power. We can now argue that a leadership which is strong in that sense but blind to the mentioned discriminant is not only incapable of warranting academic freedom but bound to ride roughshod over it. Bereft of adequate diagnostic tools, "strong" "leaders" or governing bodies will give in to the temptation of championing and enforcing the reward-and-punishment system established under the rule of the Evaluation Machinery, and adopt its forcedly euphoric and underhand, if not outspokenly threatening, rhetoric. They will ignore the difference between inconspicuous scientific earnest and advertised academic prestige; between the perceptible fostering of free inquiry and learning and parametrically assured, marketed excellence; between the noticeable rigour of interrogation and computed scientific success; between the safeguards of peer-judgement and the

control exerted by anonymous functionaries enlisted in evaluative peerage; between academic self-administration as an implication of autonomy and the execution of ancillary administrative tasks; between the public use of reason and reasoning in the eyes of the public; between projecting the stakes of a human world which are for the stewards of the *polis* to govern and the indiscriminate "stakeholderization" of university governance; between gearing science to societization and slavishly catering to uncritically assumed societal demands; between responsibility towards the *polis* and political servitude.

However, "strong" blind leadership will not only unknowingly ride roughshod over academic freedom by implementing centralized, one-model-fits-all policies targeting a-scientific parameters (for instance: everything and everyone is equally evaluated based on garnered "third-party" "funds"), where autonomy and careful discrimination between heterogeneous scientific aims and needs would be called for. Critically uneducated leadership will, in fact, remain suspicious of the freedom of a scholarly practice which escapes evaluation, as it must perceive that freedom as a hindrance to smoothly running processes of quality assurance and reporting and as disruptive for a self-referred metrical narrative which eludes the responsibility for truth.

Destitute of critical tools, that leadership will rubber-stamp ever more invasive and time-killing procedures and nurture a climate of envy, mistrust, and personalization, where unspoken respect and the unassuming light of scholarship and common learning should instead reign. Finally, its style of governance will – *mutatis mutandis* – be remindful of what legal scholar Ernst Fraenkel characterized as the "dual state" (Fraenkel 1941): with normative warranties of freedom still formally in place and rhetorically upheld (no announcement involving tighter control measures and effective subjugation without lip service to the freedom of science as an "untouchable value"), such leadership will empower the curtailment of free scientific inquiry through the tools of soft law and prerogatives. In sum, it will be "strong" only in power, but without orientation or lead regarding the promotion and protection of true inquiry − and, therefore, not true leadership. In turn, the entities over which it presides, held together by the interfaced control circuits of the Evaluation Machinery, will be universities in name only.

Another form of strong university leadership is indeed conceivable: one in which strength, university, and leadership each draw their very sense and consistency from their allegiance to the freeness of science and to the time of free scientific dialogue. That allegiance itself will shape the critical alertness and intelligence which is required to navigate the sea of scientific inquiry amidst evaluative perturbations and surges of extra-scientific interests aiming to gain control of the ship. That alertness, in turn, will enable and strengthen true leadership, which is − in academia, as elsewhere − leadership by example (cf. Plato, *Laws*, 711–12), for "to lead" means: to show the way while following the engaging lead of freeness, to wit, its need for and premeditation of human allegiance; and "to be of example" means: to disappear in the act of letting shine the unitary and constitutive trait which is the same for every different and equal fellow who, thanks to that act, finds him- or herself coalescent with others in one and the same endeavour. Strong

university leadership, or simply: university *leadership*, is free from all hierarchy. It consists of exemplary acts which kindle the fire of scientific freedom: the forthcoming memory of that freedom is today the only unifying trait which still allows us to rightfully employ the name "university". Whatever power structure or model of governance is in place, it will be compatible with and uphold a beacon of academic freedom if it recognizes and warrants the sanctity of such exemplary acts, thus allowing for true leadership to speak and be heard. Conversely, no formal rule or measure will safeguard the freedom of science, and with it the freeness of our human communities, if that sanctity is neglected, infringed on, or crushed.

Notes

1 We use the expression "political community" for lack of a better word, given the specific traits of "societies" laid out in paragraph 6.1.
2 See above, 59, note 11. We should remark that for Fichte the expression "academic freedom" (as opposed to the freedom of teaching and inquiry) refers to the license for university students to adopt an unrestrained lifestyle (cf. Fichte 1806, 111–34). The same is true for Heidegger, who, in his very plea for the autonomy of German university, wrote the following: "The much-hailed 'academic freedom' will be cast out from German university; for that freedom was spurious, because only negative. It mostly meant mindlessness, arbitrariness of intentions and inclinations, boundless doing or not doing" (Heidegger [1933] 1990, 15).
3 See above, 10, note 5.
4 See above, 10, note 5.
5 The circumstance that measurability is the criterion for existence also applies to the so-called "speculative theories" of contemporary physics, in which, given the absence of direct measurability of certain hypothesized states of things, attempts are made to find measurable indirect evidence of the said states.
6 The will to life, which only wills itself (i.e., its own willing), echoes "the will to will", which, according to Heidegger, announces itself in Nietzsche's "will to power" (Heidegger 1961).
7 Kant ([1765] 1905) distinguishes between historical and mathematical knowledge, both of which can be learned, and philosophy, which cannot. Since teaching in the domain of philosophy is not about conveying thoughts but about initiating thinking, the method of instruction, Kant says, must be "zetetic" (from Greek *zētein* "to inquire, search after"), i.e., "inquisitive" or "inquiring". While it is true that, on the contrary, academic teaching in the historical and mathematical disciplines is "dogmatic", in that memory and the intellect must learn what is already "decided" based on its factual or logical appearance, respectively, one can argue that the genuinely pedagogical, freedom-carrying import of that teaching also resides in the degree to which the adopted dogmatic method bears in itself an "inquisitive" core. In short, teaching is capable of *educating to freedom* both teachers and learners to the extent to which it remains *philosophical*.
8 Namely, the aforementioned "threat to the menace", which will be discussed in more detail in Chapter 5.
9 A value-based *scientific* assessment of science would require that assessment to not only vaguely resemble, in its outer form, a circuit of model and experiment but to actually possess the *theoretical substance and testability* of such a circuit.
10 Such covenants are "evolved" versions of the "contracts", the legitimacy of which Fichte discusses in his considerations on the freedom of inquiry as an inalienable human right (see above, 59, note 11.).
11 See above, paragraphs 2.2 and 3.3, 33 and 47–48, respectively.

12 This consideration will be developed in depth in Chapter 8.
13 Note, the Evaluation Machinery does not merely consolidate the forced "corporatization" of the university, that is, the circumstance that everything that occurs in it (including its so-called "core missions") is conceived in terms of a centrally planned, monitored, and controlled process. *More importantly, it produces the unsound and anti-scientific guiding-notion that the university fully realizes its purpose and destiny only when it finally conceives of itself and structures itself primarily, if not exclusively, as a university business driven by the demands of different stakeholders*. Having undergone said corporatization, it no longer knows itself in its philosophical provenance (with all the implications this has), but instead turns itself into an object of its own "derailed" self. In other words, it becomes *without recourse* the victim of itself, where "itself" has the form of "a self devoid of self-awareness" (or: a self oblivious of itself). The void of self-awareness, to wit, the fullness of oblivion, ignites a will which goes well beyond the mere implementation of "forced corporatization". Namely, the university now *wills the business*, that is, it wills to turn itself into a business, and it does so with the typical furor of that which *wills* what it *is not*; in short, with the furor of a copycat. Hence, it blindly and "mercilessly" mimics the processes of industrial practice, namely: 1. *strategic processes* (planning, operations, business development, etc.); 2. *production processes* (product planning, material management, procurement, assembly, customization, quality control, distribution, etc.); 3. *commercial processes* (customer management, market analysis, targeted advertising, etc.); 4. *innovation processes* (new product development, portfolio management, etc.); 5. *resource management processes* (human resource development, incentives, training, etc.). No longer an institution of knowledge, the university now sees itself as a factory, mistaking measurable outputs for wisdom and bureaucratic efficiency for intellectual depth.
14 The sense in which technicized sciences lack a foundation (i.e., a dimension of truth) is hinted at above in the discussion of the notion of university. If Heidegger's diagnosis is correct, the efforts to provide an epistemological (that is, explicitly non-metaphysical) foundation of science, which began in the second half of the 19th century and unfolded throughout the 20th century, are structurally insufficient (hence their qualification as one of three kinds of "derailment").
15 The meaning of the word "technical" in this expression flows from mathematical technicity and logistical technicity, which, as mentioned before (see above, 10, note 5), are the distinctive features of modern science and modern "practical arts" (or productive ingenuity), respectively. What is defined as "success" in this context – namely, that which our common sense describes as "scientific progress" and "technological progress" – is equally informed by those features.

Bibliography

De Gennaro, Ivo, Hannes Herbert Viktor Hofmeister and Ralf Lüfter. 2022. *Academic Freedom in the European Context: Legal, Philosophical and Institutional Perspectives* (Palgrave Critical University Studies). Cham: Palgrave Macmillan.

Eddington, Authur Stanley. 1928. *The Nature of the Physical World* (The Gifford Lectures, 1927). New York: Macmillan.

European Research Council. 2023. *ERC Panel Structure 2024 Calls*. Brussels: European Research Council. https://erc.europa.eu/sites/default/files/2023-rigo03/ERC_panel_structure_2024_calls.pdf. Accessed September 13, 2025.

Fichte, Johann Gottlieb. (1793) 2014. *Zurückforderung der Denkfreiheit von den Fürsten Europens, die sie bisher unterdrückten*. Berlin: Hofenberg.

Fichte, Johann Gottlieb. 1806. Über das Wesen des Gelehrten, und seine Erscheinungen im Gebiete der Freiheit. Berlin: In der Himburgischen Buchhandlung.

Fraenkel, Ernst. 1941. *The Dual State: A Contribution to the Theory of Dictatorship*. Translation from the German by E. A. Shils, in collaboration with Edith Lowenstein and Klaus Knorr. New York: Oxford University Press.

Heidegger, Martin. 1961. *Nietzsche (I – II)*. Pfullingen: Verlag Günther Neske.

Heidegger, Martin. 1983. "Die Herkunft der Kunst und die Bestimmung des Denkens." In *Denkerfahrungen*, hrsg. von Hermann Heidegger, 135–60. Frankfurt a. M.: Vittorio Klostermann.

Heidegger, Martin. (1933) 1990. *Die Selbstbehauptung der deutschen Universität*: *Das Rektorat 1933/1934*. Frankfurt a. M.: Vittorio Klostermann.

Heidegger, Martin. 2015. *Anmerkungen I–V (Schwarze Hefte 1942–1948)*. Gesamtausgabe, Bd. 97. Hrsg. von Peter Trawny. Frankfurt a. M.: Vittorio Klostermann.

Husserl, Edmund. (1936) 1982. *Die Krisis der europäischen Wissenschaften und die transzendentale Phänomenologie*. Hamburg: Felix Meiner Verlag.

Kant, Immanuel. (1765) 1905. "M. Immanuel Kants Nachricht von der Einrichtung seiner Vorlesungen in dem Winterhalbenjahre von 1765–1766." In *Kant's Werke: Band II. Vorkritische Schriften II 1757–1777*, 303 sqq. Berlin: Druck und Verlag von Georg Reimer.

Nietzsche, Friedrich. 1999. *Nachlaß 1887−1889*. In *Kritische Studienausgabe.* Bd. 13, hrsg. von Giorgio Colli und Mazzino Montinari. München: Deutscher Taschenbuch Verlag.

Planck, Max. 1958. *Vorträge und Reden*. Hrsg. von der Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V, in Gemeinschaft mit dem Verband Deutscher Physikalischer Gesellschaften. Braunschweig: Fr. Vieweg & Sohn.

Schelling, Friedrich Wilhelm Joseph. (1803) 1990. *Vorlesungen über die Methode (Lehrart) des akademischen Studiums*. Hrsg. von Walter E. Ehrhardt. Hamburg: Felix Meiner Verlag.

5 The technicization of science

… ex more et prudentia mathematicorum…
Francis Bacon[1]

5.1 The original meaning of *epistēmē*, *theoria*, and *technē*

5.1.1 epistēmē and theoria

The Greek word *epistēmē*, which we usually translate as "science", stems from the adjective *epistamenos*. The latter means something like "expert of", "capable of", "apt or suitable for". For instance, someone is called "a carpenter" when he is seen as an *epistamenos* in the domain of working wood, just as someone is called "a poet" when he shows himself as an *epistamenos* in the so-called "art of the word".[2] In both cases, the involved expertise and aptness imply an engagement with that which, in the thing one is an expert of or apt for, is essential and decisive. Thus, the carpenter must know what is constitutive in the " behaviour" and "mode of being" of this or that kind of wood (e.g., its hardness, flexibility, elasticity, and workability); the poet must be attuned to the manner in which a certain language speaks (e.g., its own sonority, idiomaticity, rhythm, and style, not least its literary tradition and its dialogue with other languages and idioms). Such knowledge or attunement in a sense allows the *epistamenos* to "stand upon", "preside over", and "control" what engages him in his expertise. In fact, the verb *epistasthai*, of which *epistamenos* is the present participle, literally means "to stand over against and toward", that is, "to be prone to" *while* being firmly engaged with what is constitutive, or, which is the same, *while* standing with that which under-lies. Hence, *epistēmē* is an "understanding standing-toward", an "intelligent proneness".

On this basis we can comprehend, for instance, Aristotle's definition of philosophy as a form of *epistēmē*: in the treatises collected and handed down under the title *Metaphysics* philosophizing is defined as a being-*epistamenos* "with regard to" what is constitutive of all beings as such, namely, their "beingness" or "essence" (*ousia*). This "with-*regard*-to" indicates the insight into, and the beholding of, the essence of things. Thus, metaphysical philosophizing is a peculiar *epistēmē*,

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namely a "stance with regard to" or a "proneness in beholding", which Aristotle calls *theoria*. In this word (which enters the English language as "theory") we hear the verb *theorein*, which is composed of *thea* and *horao*.[3] The former (*thea*) means "the look, the view, the aspect in which something appears as such". For instance, a river can be perceived and conceived as what it *is* in light of the look or aspect of the spontaneously surging flow of water, that is, "the fluency" in which the river itself consists.

Thea is the same as Plato's *idea*. That is why, for him, philosophizing is a mode of thinking guided by "the knowledge of ideas" (for instance, we can only refer to something as being "just" or "unjust" in light of the invisible look, that is, the idea, of "justice"). In turn, *horao* means "to look closely or glance at, to eye, to inspect", in short: "to behold". This allows us to state the meaning of *theorein* as follows: to become capable of beholding the aspect whence something shows itself as what it is (i.e., in its "being" or "sense"). Thus, to return to our previous example, according to the Greek way of thinking, "to *theorize* a river" means grasping it in the first place in its "fluency" – and *not* (as our modern understanding of theory suggests) "contriving an explanatory model" of how a river "functions" (in other words, "the theory of rivers" has nothing to do with fluid mechanics, whereas the latter has a lot, if not everything, to do with the former).

Philosophy is "pure theory", and as such the highest form of *epistēmē*, that is, of "science", in that it consists in a pure beholding of "essences" (which are, in turn, traced to a unique principle or "first cause"). This is why, for Aristotle, the highest form of existence is "theoretical life" (*bios theoretikos*), which, he says, requires "a gift of time". That gift the Greeks call *scholē*. As we now know, notably from Chapters 2 and 3, *scholē* is the "space-of-time", or "spaciosity", which gives access to the *one* (unique-unifying) essence. Based on these references, we can comprehend Aristotle's well-known definition of philosophy as

> a form of *epistēmē* which theorizes the being as being [i.e., relative to its beingness, its essence, its *ousia*], and what governs it fundamentally [i.e., its underlying principles] according to itself [i.e., to its very being-character, to its pure constitution as a being]
>
> (*Metaphysics*, 1003 a 21–22)[4]

Other forms of *epistēmē* – namely, those which we, today, call "sciences" *as opposed* to philosophy – share with philosophy their theoretical character. However, they differ from it in an important respect: rather than consisting in "nothing but beholding essences", their theorizing introduces so-called "hypotheses" (or basic assumptions, or, as we could also call them, operative concepts), which "take care" "once and for all" of the "essence" or ground of one or more notions, *with the aim of* delimiting and securing a certain field of investigation. Subsequently, that secured field is explored according to what appears to be explorable – and in the ways of exploring which appear acceptable – on the basis of those hypotheses; the latter, however, are never interrogated as such.

For instance, physics assumes as given (i.e., as "data") what is called "space", "time" and "movement", in such a way that these notions themselves form the basis of the investigation of their features, their "functioning", etc.; in other words, these notions are "worked on", inspected, mathematically formalized, etc., but never obtained in terms of the "giving" which offers them in a certain form – i.e., in a certain "givenness" – in the first place. In short: physics does not and cannot interrogate by means of physical methods the givenness of "its" data.

In turn, biology takes as given what we call "life" (or "the sphere of whatever lives"), and, on that basis, studies "human beings", "animals", "plants", "microorganisms", etc. as forms of life; however, biology cannot generate and show "biologically", that is, through the procedures which are typical of biological research, the concept of life itself.

In a different domain, linguistics considers "language" as its field of research, thereby basing that consideration on the concepts of "phonetics", "morphology", "syntax", "semantics", "pragmatics", etc., without ever showing by means of the method of linguistics the suitability of the notions of "sound", "form", "meaning", "praxis", etc. for characterizing human speaking; the same holds, in the first place, for the circumstance that speech can and should be analysed according to those features. (Typically, this way of questioning the legitimacy of such hypotheses is dismissed by affirming their sheer "evidence".)

Finally, the science of history conceives "the past" as a "course of events" whose "temporal vastity" and "depth" require a partition in "epochs", which, in turn, appear as divisible in "periods" and "phases", "contexts" and "run-ups", "revolutions" and "restorations", and so on. While this approach is completely legitimate, it leaves implicit the provenance of the sense of those notions, such as "epoch", "event", "articulation in phases", etc., which in the first place *constitute* so-called "historical objects" or "facts" (which are then investigated by means of historical methods). Another fundamental notion, one which is "obscurely evident" in historical inquiry, is the notion of "time", seen as a whole divided into "past", "present", and "future"; that is, time as a succession of transitory moments.

Based on their peculiar form of inquiry, Aristotle characterizes the theoretical sciences other than philosophy – namely, in his perspective, mathematical and physical sciences – as sciences which are limited to "a part" of being, rather than envisaging being as a whole. In fact, those sciences are literally "in" that part, which they at once define and are defined by. The way in which the thus understood "in-part-sciences" establish their field of investigation, as well as themselves and their own methods of inquiry, differs between the physical and the mathematical sciences; however, in both instances that establishing involves so-called hypotheses. A hypothesis is a notion which functions as a foundation or ground by virtue of the fact that the issue of its provenance, and hence of *what* it is as such, is blanked out by the light of "self-evidence". "A line" and "a point" in geometry (notions obtained with the aid of "pure perception") and "the void" in physics (a notion obtained without that aid) are examples of such hypotheses. By positing notions whose relation to the provenance of their being is severed as an underlying ground,

those sciences, according to Aristotle, *ipso facto* "cut off" or "circumscribe" for themselves "the part" – i.e., the thematic field – whose "inscribed", implicit traits and features are then for them to unearth along the perspectives and the methods of inquiry which that "part" itself enables in the first place, that is, makes appear acceptable, suitable, appropriate, and promising. This is why none of those "in-part-scientific" perspectives can or ever will envisage, and none of those methods can or ever will deal with, the provenance and implications of the fundamental hypotheses themselves; in other words, the latter remain, for the science which adopts them and stands on them, "a blind spot".

Today, the scientific domain extends far beyond the theoretical sciences identified by Aristotle. However, the structural element which latter-day sciences have in common with those forms of *epistēmē* is their use of hypotheses, hence their "in-part"-character and what the latter implies; to wit, "in-part-sciences" are structurally incapable of letting appear (i.e., interrogating, meditating, criticizing, discerning, clarifying) their own form of knowledge *by means of that same form of knowledge*. Hence, as suggested above, physics is incapable of knowing itself and the methods it employs, "physically"; biology is incapable of knowing itself, and its own methods, "biologically"; linguistics is incapable of knowing itself, and the methods it uses, "linguistically"; history is incapable of knowing itself, and its peculiar methods, "historically"; and so on for all the sciences. The "science" which, on the other hand, sheds light on those forms of knowledge as such, is "the pure theory", or "highest *epistēmē*", which Aristotle calls "first philosophy" (*prōtē philosophia*).[5] It is important to note that, in this case, the adjectives "pure", "highest", and "first" do not intend to establish a hierarchy in terms of "value" or "degree of importance", etc.; rather, they simply reflect the architectonics of a well-founded human knowledge as a basis for a solidly constituted *polis*. In this sense, "the first philosophy" has an eminently "political" dimension.[6]

5.1.2 technē

We finally come to the third term we need to clarify: *technē*, from which our words "technics", "technical", "technology", etc. are derived. This clarification requires that we indicate the relation of *technē* itself with two other concepts, to wit:

i *physis*, a word commonly translated as "nature", and
ii *epistēmē*, i.e., "science", in its previously outlined sense.

Before we proceed to the elucidation of these relations, it is useful to state the following fundamental circumstance: the meaning of *technē* is not to be sought at the "technical" level if the latter indicates the domain of means, tools, or implements by which one carries out a certain action or pursues a certain purpose. Put differently, the meaning of *technē* in Greek thought is not the *instrumental* one, which characterizes all things "technical" and "technological" in the presently current acceptation of these words. As we shall see, the trait of "technicity" (cf. above, 10, note 5), which already informs what the Greeks understand as *technē*, rather concerns our *knowledge*-relation to things.

5.1.2.1 technē and physis

In Aristotle's *Physics* (194 a 20–21) we find the following dictum: "he technē mimeitai tēn physin" (literally: "*technē* mimes *physis*"), which is usually translated as: "art imitates nature". The common understanding of this sentence, put succinctly, is the following: art (i.e., productive activity, including "the fine arts"), in its own way, does what it sees nature doing autonomously (or "by its own laws", "by itself", "of its own accord"); namely, it produces forms. While a tree has the cause of the production of its form in itself, a table (i.e., a thing "according to *technē*" or "through *technē*") has that cause outside of itself, namely, in the "theory" and the "hand" of the carpenter.

However, for a more accurate interpretation of the mentioned dictum, we must remember that both *physis* and *technē* have a "poetical" trait, that is – according to the Greek sense of *poiesis*, which we can indicate as "bringing to light" –, both of them consist in a "letting come to light".

What does "letting come to light" mean (namely, as opposed to "the production of forms")? What is the sense of this "letting come"?

"To let come" clearly differs from a mere making or effectuating; by virtue of its "poetic" trait, it implies something like "a letting appear, or releasing, *into a measure*", "a freeing *into a dimension*"; however (and here we encounter the most original and constitutive trait of *physis*), this letting-releasing-freeing *as such* returns and "absconds" into itself, hence "keeps itself to itself", and therefore remains unseizable. What is freed into a measured appearing, what is brought to firmly stand in the light *by virtue of a freeing which returns and "absconds" into itself*, is experienced as "spontaneous" or "natural". The trait of having in oneself the unseizable source of one's own appearing, one's coming to light and firmly standing in the light – this trait characterizes what we call "spontaneity" and "naturalness".

Let us consider, for instance, two trees like the birch and the pine. Both of them root in the soil, while at the same time rising into the sky; thus, both rest in their own "vegetal" measure: the birch, with its small and narrow leaves, its slenderness, and its light crown, which lets much light pass and disappears in winter; the pine with its evergreen needles, which unfolds in its majesty, and whose crown protects from the sunlight.

Turning to a different ontological domain, let us look, for example, at human emotions such as a deep sense of anguish, a pure sense of joy, or a profound sense of liberty. All of these come upon man and seize him "from nowhere" and suddenly. They emerge unexpectedly as spontaneous emotive eruptions, which "dynamically" inform different aspects of human existence (e.g., an anguished expectation, a joyful laughter, a liberated industriousness, etc.).

Now, while *technē* is, as stated above, a letting appear and letting come to light, it is not a spontaneous one, but one which is, so to speak, "as-if-spontaneous" (and, therefore, *not purely* spontaneous, but, to a certain extent, controlled and "willed"). For the origin of the aforesaid freeing is, in this case, a "theorized" form (*eidos*) established in advance by a certain purpose (*telos*). However, that same freeing must include an "attention" with regard to the "spontaneous freeing into

a measured appearing", which, as we just saw, characterizes *physis*. For instance, as the carpenter frees the chosen wood into the form of a bed (*klinē*) or a chair (*klysmos*) (i.e., something-for-sleeping and something-for-sitting, respectively), he must heed and take into account the wood's *physis* (namely, its "structural" features). This "paying attention" and "heeding" consists in a "conforming or adapting to", a "convening with". In other words, the carpenter's *technē* must, as such, be *commensurate to the measure* implied by the *physis* of his "material" (and, beyond that, to the measure of all dimensions and traits of human dwelling, which we will not discuss here).

This commensuration is what the "miming" in the mentioned dictum "*technē* 'mimes' *physis*" consists in. The carpenter's cognition does not involve an "imitation" of the tree and its wood but a commensuration or "comparison" with the genesis of its appearing, its being-brought and coming to light. As a consequence of that commensuration, in a well-crafted bed or chair not only a tree's wood but the tree itself in its very own *physis* shines forth in its naturalness "as if for the first time". (Let us think of a mime "doing" an eagle. Is it not true that such miming allows us to perceive "as if for the first time" that which is mimed? We might have "seen" eagles before, and yet, it is as if we had never truly *seen* one. Mere imitation [as in the attempt to make us believe that we are seeing an "actual" eagle when in fact we are looking at a mime] is an altogether different skill and has nothing to do with the mime's art.)

Analogous examples can be made with reference to poetry or to medicine. As regards the latter, we can ask: When does a man truly possess the medical *technē*, the "art of medicine"? Answer: when he is an *epistamenos* of health, that is, of *physis*, freed unto its path of self-regeneration, and thus, at any time, "just regenerated *physis*" (cf. Aristotle, *Physics*, 193 b 13). Being an *epistamenos* in this sense implies acquiring the capability of restoring his patient's "diseased", "inhibited" *physis*, where "restoring" means: once again setting that *physis* on its path *towards itself*, on its "natural" path of regeneration: *on a path of healing*. Thus, the Greek medical doctor's *technē* consists in knowing disease in light of health (and not, as seems to be the case in our epoch, health as a provisional overcoming of "disease by default").[7]

Only a firm stance and countenance (or bearing), which, while beholding the purpose (the self-standing, "bright" and "lightening" idea) of what is to be brought to light, maintains a commensurate relation to the *physis* on which it operates, is, in the full sense of the word, *technē*, to wit (according to Aristotle's definition in *Nicomachean Ethics*, 1140 a 20–21): "a countenance [or bearing] which is 'poetic' [i.e., bringing-to-light, generative] *by aid of* [and thus guided by] an unearthed-disclosed [disabsconded, 'true'] *read* [*logos*]".

The adjective "unearthed-disclosed" translates *alēthēs*, which can be rendered literally as "dis-absconded" ("momentarily and to some extent out of absconding", "having temporarily and to some extent gained preeminence over abscondedness"), and is usually brought into English to mean "true". In turn, the noun "read", as a translation of Greek *logos*, here indicates the *perspicacious instant* in which and by which the "technician" grasps the idea (the purpose, the accomplished form) of

what is to be brought to light: as he beholds that idea, its light guides every step of his own unearthing-disclosing (disabsconding). Thus, as the carpenter builds a table, his pondering skills are steadily guided by a "true (disclosed) read" of the accomplished table, that is, by the perspicacious instant of his insight into what the table truly *is* and is for. Indeed, what is a concrete table if not the concretization of the carpenter's "disclosed read" of the table itself? By contrast, if the "read", instead of being "true" or "disclosed", is "false" or "distorted", in short, if it is a "pseudo-read", the carpenter's pondering skills will be bereft of a proper orientation, such that his "art" will be turned into a "non-art", which Aristotle (*Nicomachean Ethics*, Z 4, 1140 a 21–22) names *atechnia*.[8] Consequently, the result of his "poetical attempt" will not *be* a table, but a mere concoction, a distortion, an unfounded conception; in one word: a chimæra.[9]

5.1.2.2 technē and epistēmē

In the same pages of *Nicomachean Ethics* (VI.3–4), in which we find the above definition of *technē*, Aristotle distinguishes between five manners in which "the soul grasps the true" (*psychē alētheuei*), or, in accordance with the above rendering of *alēthēs*: "unearths-discloses". Next to prudence (*phronēsis*), wisdom (*sophia*), and discerning (*nous*), he mentions "art" (i.e., *technē*), and, finally, "science" (*epistēmē*). Thus, both *technē* and *epistēmē* are manners of unearthing-disclosing, and this occurs (as we must always remember in the Greek context) within the fundamental reference to *physis*. However, *technē* and *epistēmē* differ in a crucial regard: *epistēmē* is the unearthing-disclosing of that for which it is not suitable to be otherwise, and which is, therefore, cogent and binding (such as, in the case of the mathematical "in-part-sciences", a geometric or arithmetic truth, or, in the case of philosophical knowledge, "the essence" [*ousia*, *idea*, *eidos*]) of something; by contrast, *technē* is the unearthing-disclosing of that for which it is, in principle, suitable to be otherwise, and hence which is not cogent (such as the outcome of an attempt at building a bed or at letting a body heal itself).

Besides being forms of unearthing-disclosing, both *technē* and *epistēmē* share another fundamental trait, to wit, the reference to what the Greeks call *empeiria*. The latter indicates a case-by-case-acquaintance which – unlike *technē* and *epistēmē* – is never guided by, nor ever gives rise to, a true concept or theory. *Technē* and *epistēmē*, however, on their part address *empeiria* as that which "awaits" to be turned into a proper "touchstone" of a cognition obtained through "theory", and therefore *otherwise* than by the said case-by-case, or "tentative", acquaintance (i.e., "empirically"). In other words, *technē* and *epistēmē* endow *empeiria* with "eyes" which that form of cognition, left to its own devices, lacks. In particular, *epistēmē* will unearth-disclose as something cogent and binding that what was only tentatively cognized through *empeiria*, whereas *technē* will unearth-disclose in its being that what is, in principle, suited to be otherwise. Hence, an empirically cognized (experienced) mountain can be formally cognized either in an "epistemic" or in a "technical" way. For instance, an epistemic cognition will be obtained by conceiving (disclosing-unearthing) that mountain as a triangle, a prism, etc., whereas a "technical" cognition will be obtained

by projecting (disclosing-unearthing) that mountain as a site for a temple, a fortress, etc. In the case of philosophical knowledge, however, cognition consists in grasping the mountain *as a being*, to wit, in its being-character [*ousia*]. In other words, that mountain is cognized *qua* mountain *as opposed* to a river, a tree, or any other being. Finally, the mountain-as-mountain – the mountain itself – is, in turn, tacitly presupposed when that same mountain is cognized as a triangle, prism, etc., or as a site for a temple, a fortress, etc.

We now come to the aspect which is decisive for our topic. It concerns the sense in which – beyond the outlined distinction based on cogency and the absence thereof – one can say that *all epistēmē* (i.e., both philosophical science and in-part-science) has a "technical" trait, and in this sense *is* itself *technē*.

To see this, we must, to begin with, focus on the structure of philosophical *epistēmē* as defined by Aristotle. Let us recall, once again, Aristotle's definition of philosophy:

> There is a form of *epistēmē*, which theorizes the being as being [i.e., relative to its beingness, its essence, its *ousia*], and what governs it fundamentally [i.e., its underlying principles] according to itself [i.e., to its very being-character, to its pure constitution as a being].
>
> (*Metaphysics*, 1003 a 21–22)

The source of this definition is Aristotle's own formulation of the guiding question of philosophy, which reads as follows:

> What is the being? That is, what is *ousia*, i.e., beingness?
>
> (*Metaphysics*, 1028 a 41)

This question outlines the countenance (or bearing) of philosophical interrogation, hence of those who recognize and respond to the cogency of the problematic character of the sense of being. The attunement of this countenance is the astoundment vis-à-vis the very circumstance that there is something rather than nothing. This prompts the following questions: Where does this something come from? On what ground does it stand as such? What is its governing principle (*archē*)? In short: What is the provenance of the mentioned circumstance, to wit, the circumstance of being? Aristotle names that provenance *ousia*, literally, "beingness". In ordinary Greek, *ousia* has, among others, the meaning of "estate", in the original sense of what supports one's sustenance or subsistence. As a philosophically recoined term, *ousia* indicates the steady, immutable, permanent ground, hence the substantial where-from (sub-stance, *sub-stantia*: that which stands-and-lies-under, that which "under-bides") of all that is (as opposed to not being).

Thus, in Aristotelian philosophy, the being of beings is determined as a stable ground and lasting provenance. Now, this ground is, and shows itself as, the most being of beings; in the first place, it is what is disclosed and firmly "stands in the light", and, by virtue of this, it is what can disclose and bring to light beings. More precisely, *ousia*'s "disclosed disclosing" and "bright bringing to light" has

the character of a gathering and laying-there – in other words: *a saying* – in a unity. If we call this "gathering and laying-there", this saying, with its Greek name, that is, *logos*, and translate the latter as "dictum" (a translation which complements the one as "read"), we can affirm that *ousia* itself is an "unearthed-disclosed dictum (*logos*)". However, *ousia* isn't such a dictum by itself and in absolute terms, but rather in an original, simultaneous relation with human speech. The latter preserves *ousia* in what Aristotle calls "a defining dictum" (*logos horismos*).

Let us illustrate this with an Aristotelian example (cf. *Metaphysics* V.6). Take two plants standing next to each other. Their states differ in ways which show themselves in the following defining dicta: "thriving plant" ("plant in a state of vital growth") and "withering plant" ("plant in a state of withering"). As long as we remain at the level of brute factuality, the two dicta appear to be separate, since they are manifestly divergent. If, however, we move to the level of *ousia*, we notice that they are gathered in a unity (i.e., at once unified and severed): the dictum of the thriving plant and that of the withering plant are indeed gathered in the single dictum, namely, "plant in transmutation" (*metabolē*). Consequently, we can understand the two dicta in their divergence only because we have always-already[10] recognized their convergence-in-one. As we can see, the defining dictum (*logos*, the read) "plant in transmutation", in its constituting itself as the element which allows us to grasp the convergence *in* the divergence, functions as a "reading device" which:

i brings to light and makes available the *ousia* "plant in transmutation" and thus allows us to:
ii distinguish, for all intents and purposes, between the disclosed-unearthed *ousia* "thriving plant" and the disclosed-unearthed *ousia* "withering plant".

How, then, can we characterize the philosophical countenance as it strives to preserve the disclosed *ousia* in a defining *logos*? Answer: as a countenance which brings to light *ousia* by aid of a disclosed-unearthed and defining *logos*, and this means: of a "reading device" *for*, that is, an "element" which plays the role of a "reading" *of* the riddle which is *ousia* itself; in short: *by aid of a disclosed-unearthed "read"* of (riddlesome) *ousia*. Finally, if we hearken back to the above-sketched Aristotelian elucidation of *technē*, this is how we become aware of the "technical imprint" of philosophical science qua *epistēmē* (i.e., we become aware of what we have called "epistemic technicity"; cf. above, 10, note 5). Hence, based on its style of "producing" and making available beings, philosophy as such bears in itself a technical trait (i.e., it is itself a form of technicity, namely, the one we call "epistemic"), which, in Greek thinking, is informed and bound by the measure of *physis*. The very distinction between *epistēmē* and *technē*, as argued by Aristotle, can be "read" as having in *technē* itself, namely, in its dominant trait, its hidden directive. That trait is a sense of provoking, challenging, extracting, eliciting. In other words, technicity is intrinsically "provocative", "extractive". Now, this very trait imposes that both "pure theory" and "productive expertise" be understood "technically", to wit, as distinct forms… *of the same technicity*. Hence, without any "technical

operation" (in the common understanding of this word) being in play, philosophical *epistēmē*, too, "lectures" (or instructs) beings to stand ready for different ways of manipulation.[11]

However, what is true for the *epistēmē* of "the being as being" also applies to the in-part-sciences: those, too, have a technical trait. The difference between the two forms of *epistēmē* lies in the sense of the "read" which performs the "coming to light" of a being. For there is a difference between a "disclosed read" of the provenance "beingness" and a "disclosed read" of, say, the provenance "triangle". As outlined above, the latter is a "hypothesis" taken as evident, from which conclusions are drawn, whereas the hypothesis itself is not only factually not interrogated but such that it *cannot* be diagnosed *geometrically*. In fact, the geometrical hypothesis delimits a thematic field of investigation *by* surrogating, and thus "standing in for" and "taking care of" "the read" *ousia*. In this way, it performs its own manner of "letting come to light", namely one in which the "riddlesomeness" of *ousia* is – albeit measuredly – "taken care of" and – albeit provisionally – "done away with", and this for the purpose of exact calculation. The replacement of *ousia* with the triangle, hence the truncation of the relation with the original riddle, in turn, yields the infinite "riddles" of geometry and the peculiar light of what we know as "exactness".

An analogous consideration can be made relative to the investigation of time (*chronos*) within the in-part-science known as "physical science" (*epistēmē physikē*). In *Physics* (217 b 29–220 a 27), Aristotle realizes that the "moment" (*nyn*), while at first appearing ungraspable, shows itself, on closer inspection, as being *simultaneously* "other" and "the same": "other", because it is different in each one of its occurrences (this moment, then that moment, then yet another moment, etc.); "the same", since each and every occurrence is "the *one* moment in its occurring" (a *moment*, again a *moment*, again a *moment*, and so on). In this simultaneity, a tension transpires. What kind of tension is this? Clearly, not a spatial one. According to Aristotle, the only acceptable answer is the following: it is the tension between "a before" and "an after". Hence, the moment itself is "a tensorial atom", which as such establishes an un-spatial "extension", namely, the stable duration in which time itself consists. The sense in which the "read" *nyn* operates as a hypothesis is different from that of the triangle. For the hypothesis of the *nyn* traces back to the original hypothesis of physical science, to wit, "movement" in the sense of "being-moved" (*kinēsis*; "moved-ness"); the latter hypothesis "cuts" the sphere of "the not-unmoved" off from the whole of beings, that is, of physical beings, and thus establishes the domain of inquiry of (Aristotelian) physics. However, despite this difference, the *nyn*, too, "lets appear" – namely, it lets time appear – and, in this sense, bears the same technical trait as the geometrical hypothesis "triangle".[12]

Recognizing the technicity of *epistēmē* – both in the form of "philosophical *epistēmē*" and in the form of "in-part-*epistēmē*" – is of decisive importance for insight into the fundamental character of modern science, and thus for an informed assessment of the implications of the assault on science perpetrated by the Evaluation Machinery. For it is a transformation of the scope of that technicity which,

in our diagnosis, gives rise to science in its modern understanding, or, as we call it, to "technicized science". In turn, the Evaluation Machinery can be shown to be a "derailment", not from "science in general" but from science in its technicized form. Therefore, an elucidation of the latter is the topic of the next paragraph.

5.2 The technicization of science

5.2.1 The genesis and scope of technicization

As we have seen, science is a form of *alētheuein*, that is, of unearthing-disclosing. This basic trait, which characterizes Greek *epistēmē*, is preserved in modern science: notably, the "in-part-science" which marks the inception of modernity, namely physics as shaped by Galilei and Newton, is still an *alētheuein*. What we call "the technicization of science" (i.e., the transition from science as a form of epistemic technicity, or "techni-form"[13] science, to science characterized by specifically modern technicity, or "technicized science") can be outlined in the following ten points:[14]

i The inception of modernity *is* the appeal of (i.e., coming from) a groundlessness which claims and challenges humanity once the Greek ground for thinking (i.e., *physis*), as well as the ground which shapes medieval *doctrina* (i.e., divine revelation with its peculiar "light"), ceases to provide the basis for the edification of a human world in knowledge and in deed.[15]

ii This appeal has the character of an injunction: it claims that man himself step in with his being to form the ground for "beings in whole" (i.e., "nature") in such a way that these beings, in turn, be claimable (ready, "to the fore") for control. On the part of theoretical *epistēmē*, the response to this necessitating injunction is, on the one hand, the self-constitution of the human subject (i.e., Descartes' "cogito, ergo sum"), on the other, the mathematical project of the world (i.e., of "nature" again).[16]

iii In light of the latter, the world *is* mathematical, and this means: for physics, the mathematical structure now becomes the universal hypothesis, based on which a cognition of the world can be obtained in conformity with the aforesaid injunction.[17]

iv The elaboration of that cognition is informed by a specific technicity, namely the specifically modern technicity, since it requires the formulation of a model of the world (i.e., all physical beings, "nature"), in which the latter appears in its mathematical truth, to wit, in such a way as to be calculable and subjectable to the experimental verification of theories concerning the functioning of the modelled world itself. Therefore, we designate the aforesaid "specifically modern technicity" (which reunites in itself a variety of technical styles or "technicalities") as "mathematical technicity". The object of science, "fabricated" by the mathematical project of the world, is this modelled and experimentally investigable "nature", while "pre-model nature" (i.e.,

"natural nature", nature *before* being framed as a model) functions merely as a supplier of "events" captured as customized "data".[18]

v This form of cognition is theoretical, and it is an "unearthing-disclosing"; however, its technicity is no longer a "letting come to light" or a "bringing to light". Rather, it is an "extracting (dragging) into the light", a "going after" nature so as to capture it in the "model-light" of parameterization and computability, and thus force it to show itself and be available in that light for the intents of planning and control. In short, that cognition is a "setting in the light": by virtue of this setting, "nature" itself is theoretically fabricated and set to be cognized through mathematical models, by virtue of which it can, in turn, be effectively fabricated and set for extractive purposes.

vi We call such modern "in-part-scientific" unearthing-disclosing "technicized", because the technicity, which, as argued above, is inherent to *epistēmē*, acts, as it were, as the medium through which the mentioned injunction – namely, the groundlessness which wills man to project "nature" in a form which fits its willing – moulds scientific cognition as its "executive branch". The transformation of "letting come to light" (in conformity with *physis*) to "setting in the light" (while admitting "nature" only for model-testing) entails a reconfiguration of scientific cognition (that is, its "technicization"): *from being "technical" by virtue of its theoretical trait, it becomes theoretical at the behest of its (transformed) technicity*.

vii As a result, science itself becomes a form of productive activity (marked, as we shall see, by its "neutral" and "disinterested" character), in that it now fabricates an object of cognition which is external to itself (i.e., the modelled world) according to an aim (*telos*) which is within the "actor" himself (i.e., the scientist projecting it at the behest of the groundless "will to control"; the "technician" of this mode of production[19]), while not conforming to, and in fact utterly neglecting, any "freeing into a measure" (whether that freeing is a "physical" one or one of another guise).

viii Technicized science itself operates exclusively based on functional or operative hypotheses designed to enhance what is called "the explanatory power" of theories, which in fact designates a theory's capacity to outperform itself in terms of its command over the production of effects. Increases in that capacity are seen as "scientific progress", and a theory which successfully formulates such an increase is considered "truer" than one which performs more poorly in that respect.

ix The very notion of truth, which guides scientific research, is the enhancement of performativity measured in terms of the command over effects. That measure is found computationally: it takes the form of parameters – values – indicating, for any theory, or "technique of command", the promise of prevalence over itself, that is, of eventually outperforming its own power. Thus, technicized science exclusively "theorizes" – i.e., "sees" – values through which it ignites its awareness of that prevalence and its operative conditions; this, in turn, demands a relentless escalation of the potential for data extraction.

x Finally, technicized science also gives rise to "absurd" and "idiotic" speculative and applicative practices, which, to adapt a previously mentioned Aristotelian term, are "ill-technical".[20] In fact, these practices are based on a "distorted-distorting read" (*logos pseudēs*) and characterized by the measurelessness and the fading light of the effectiveness – "the reality" – they fabricate, which (that light) resides exclusively in a blinding-benumbing "lit computational power". A brief phenomenological investigation of such "ill-technical" practices – that is, of what we shall name "ill-technism" – will be undertaken in the final paragraph of this chapter.

The following paragraphs, however, are dedicated to a more detailed analysis of certain aspects of the thus outlined interpretive framework which are relevant for our diagnosis of the Evaluation Machinery.

5.2.2 The fabrication of the cognizable

Let us consider the following dictum: technicized science "fabricates" the cognizable, and, by implication, the very cognizability within which the latter is established as an object of investigation. The cognizable is, in the first place, "nature", and eventually all that exists, including human beings and their worlds.

How are we to understand this dictum, which formulates a central tenet of this book? And how can we substantiate the claim it contains? Two examples, taken from physics and cognitive neuroscience, may help.

5.2.2.1 Time and space in mathematical physics[21]

Let us recall how Einsteinian theory of relativity introduces the notion of time. In *The Meaning of Relativity*, Einstein writes the following:

> The lived experiences of a man appear to us inserted and put in order in a series. In this series, the singular lived experiences, which, precisely in their singularity, are accessible to [and targetable by] our memory, appear to be ordered according to the criterion of "earlier" and "later", which cannot be analyzed further. There subsists, therefore, for the individual, an I-time, or subjective time. This, *per se* [i.e., left to its own "psychological" sphere], is nothing measurable. I can, indeed, attribute numbers to [i.e., co-ordinate numbers with] the lived experiences, in such a way that a greater number is attributed to the later experience than to the earlier one; but the modality of this numerical attribution at first remains in large measure indiscriminate. However, I can further fix the modality of that attribution through a clock [thus eliminating the indiscriminate character] by matching the sequence [succession, course] of lived experiences, made available by the clock<'s ticking> [i.e., the lived experience of seconds,

> minutes, hours, etc.], with the sequence of the remaining experiences [i.e., those of "I-time"]. We understand by a clock something which provides countable lived experiences, and which has other properties of which we shall speak later.
>
> (Einstein [1954] 2002, 5)

As we can see, Einstein, unlike Aristotle, does not base his definition of time on the "read" of the moment (*nyn*). Rather, he *sets* time on the basis of "the criterion of 'earlier' and 'later', which cannot be analysed further". However, as emerges from the continuation of the quoted passage, this criterion is a "mathematical hypothesis", which is functional for setting an "objective", "impersonal" notion of time. In fact, what is introduced as "subjective time" is not, says Einstein, *per se* measurable, to wit, it does not *intrinsically* have a quantitative trait: time does not impact a "subject's experience" as a *quantity*, but only, we can say, as a *quality*.[22] One can, however, *quantify the quality* ("I can, indeed, attribute a numerical order to the lived experiences, in such a way that a greater number is attributed to the later experience than to the earlier one"); this means, however, that the qualitative experience is a computation as well.

In this manner, the underlying mathematical "read" (which, as we recall, "cannot be analysed further", which implies that its metaphysical provenance from Aristotle's *Physics* remains hidden) fabricates a quantitative notion of time as a unidirectional succession of elapsing moments. "Time itself" is now ready to be handed to an adequate machine-device – i.e., the ticking clock – which registers, and effectively *is*, its "objective" version. "Clock time" is henceforth the object of investigation of "the physics of time".

What have we just witnessed? Einstein himself provides the answer in a passage placed in the proximity of the one cited above. It reads as follows:

> Concepts and systems of concepts obtain a justification exclusively by the fact that they are expedient to survey [control, compute, monitor, steer, hence model] complexes of lived experiences; there is no other legitimacy for them. Therefore, I am convinced that it is one of the most pernicious deeds of philosophers that they displaced certain conceptual foundations of the natural sciences from the domain of the empirically expedient, which is accessible to control, to the intangible and unassailable heights of what thinking must conceive (i.e., what is a priori). For even if we agree and hold for certain that concepts cannot be deduced from lived experiences by logical means (or otherwise), but are, in a sense, free creations of the human mind, nevertheless those concepts are just as little independent of the <respective> kind of experiences as, say, clothes are of the form of human bodies. This is also particularly true of our concepts of time and space, which physicists – coerced by <certain> matters of fact – had to bring down from the Olympus of the a priori in order to be able to repair them and set them once again into a serviceable [usable, expedient] state.
>
> (Einstein [1954] 2002, 6)[23]

Together, the two passages outline the "means of production" by which both the cognizable and its cognizability are fabricated. The following list enumerates these means, highlighting how, for each of them, it remains alien to human experience.

i The construction of a basis consisting of an untenable notion of "experience". – *No human being* remembers experiences as "series of events" "ordered according to the criterion of 'earlier' and 'later'". (This can occur only if he is forced to "reconstruct" his existence in such a way.)

ii The claimed and thus supposed so-called "existence" of an "in itself not measurable" "subjective time". – *No human being* is capable of taking cognizance, *while* their subsistence is unfolding, of the circumstance that they are perceiving "in itself not measurable" time in a "subjective" manner.[24]

iii The fact of taking the number exclusively according to its abstract power of enumeration in terms of a growing sequence ($a_n < a_{n+1}$ for every $n \in \mathbb{N}$), so as to impose it, as an *enumerating* digit, on the experience, which, as a result, appears fragmented (split, broken) into the aforementioned "series of events". – *No human being* can perform this numerical ordering of time without losing the very sense of time as such.

iv The adoption of the clock as an objectifying regulator of the power of numerical enumeration, that is, as the perfect digitization of "existential time". – *No human being* encounters the clock as a regulator of the numerical-enumerating rhythm imposed on time, but rather as an indicator of the expectation of what is coming or the retention of what has occurred, as in the understanding of "too early" or "too late", of "not yet" or "no longer", of "little time left" or "much time to go", and so on. In other words: man does not have a lived experience within the "dead form" of mere accounting: no human being lives, thrives, and withers on the "dead line" of digitized time;[25] any sense perceived by man is generated and nourished exclusively in the element of "mortal time", that is, of finitude: the dead time of dead succession is the final product of a "fatal abstraction" brought upon the time of mortals.

v The assumption that all conceptual thinking and theorizing has the exclusive role of being a controllable means of control of lived experiences (and the consequent prejudice regarding the damage caused to the sciences by the long tradition of Western philosophy). – *No human being* exists *as such* by virtue of a form of thinking which is limited to a similar role (and thus is utterly "de-philosophized"). There must necessarily exist *another* form of thinking, by which human beings constitute themselves *as such*. Indeed, when devising control-concepts and exerting control through them, man must have always-already become aware of his own understanding of the world and his relationship with it. Such self-awareness constitutes one of the fundamental ethical-political traits of human dwelling on earth. Raising, and giving shape to, that self-awareness is precisely the "eternal" primary task of philosophy, of epistemic theorizing, and therefore of the *philosopher*; that is, of that single "theoretical life" (ever arousable in every mortal) called upon to assume a thoughtful-rational-meditative bearing, intent on providing a foundation

for a genuine scientific cognition. Only the latter will be able to employ control-concepts in a manner which is appropriate to their nature (i.e., their being, statute, law, and scope). However, that nature is not founded in the use scientists make of those concepts. For it does not conform to anyone's "will to control", not even that of a community of scholars or technicians: that nature remains something "purely conceptual", and, since it pertains to pure thought, can be concretely determined only by the latter. This is why ancient philosophers like Aristotle, or modern thinkers like Kant, attempted to characterize the structures of thought, the *action* of which consists entirely, and only, in the circumstance that it *thinks* – and that it cannot do anything but thinking nor be anything but thought. We call these structures "pure" (or "a priori"), because they are always-already understood by the thinking human being, that is, grasped without the mediation of any sensible, empirical, or factual "lived" experience. Among these structures, there is being itself or "the sense of being" (which, as previously mentioned, the Greeks called *ousia*) in contrast with the sense of nothingness; there is also the sense of time (of having-time and giving-time) and of space (of obtaining-space and offering-space), as well as the "quantitative" senses of unity, multiplicity, and wholeness, and the "qualitative" senses of affirming, denying, and limiting, not to mention the "relational" senses of inherence, causality, and reciprocity, and the "modal" senses of possibility, actuality, and necessity. Furthermore, next to those structures we find, as a guidance to their proper conception, the principles of logic, such as the law of non-contradiction, the law of identity, the law of excluded middle, and the principle of sufficient reason, as well as all subsequent articulations and developments of these laws. At an even deeper and more initial level, we must finally acknowledge a "principle of all principles", to wit, the principle which grants those principles as such: a principle so rich, so deep, and so initial that it refuses to be indicated once and for all, let alone to be computed or controlled. What moves human attention to comply with, and preserve above all, that *principium magnum* is an original sense of *care* (or responsibility), which is not only inscribed in but originally defines the humanity of man. For if that care fails, and the reference to that "first principle" is lost, the very *traits* of contradiction, of identity, of exclusion, of sufficiency, disappear, and all conceivable scissures and separations vanish, starting from the distinction between "pure" and "empirical", the difference between "true" and "false", the discrimination between "good" and "evil", the differentiation between "beautiful" and "ugly", and so on. However, absent those traits and scissures, there can be no human world.

vi The assumption of an absolute givenness of "kinds of lived experience" with respect to "systems of concepts", which, *independently* of their origin, are however declared, or better yet "willed", to be *dependent* on those experiences. – *No human being*, including the scientist who, "coerced by <certain> matters of fact", finds himself maintaining that assumption, can do so "to the end", to wit, without an inkling that, by subjecting the "freedom of concept creation" to the mentioned dependency, he is in fact obeying a "will",

whose origin and implications remain entirely obscure to him.[26] That same obscure will is, however, a peculiar form of a recurring temptation, which undermines the aforesaid "original sense of care", and thus gives rise to what we can rightly name *the regime of carelessness*, in which "matters of fact" dictate "the ways and methods" of scientific research.

vii The construction of philosophicalness in the form of a metaphor ("the Olympus of the a priori"), suggesting a set of interrelated traits: algidity; detached purity; aloofness; condescendence; severance from humanity to the point of in-humanity; inane, unwarranted, unjustified sense of superiority; preference for the abstract, ideal, useless, for the aspiration to the "transcendent", lofty, dreamy; conversely, reproachable indifference, if not contempt, vis-à-vis the practical, realistic, useful; lack of appreciation for an operative, hands-on approach; lack of a sense for "keeping one's feet on the ground". This is the metaphor which produces the framework within which "damage" to the evolution of scientific knowledge, and thus to humanity, can be observed and accounted for, and corrective measures can be devised. As a result of philosophy having failed the "serviceability-test", a complete "de-philosophization" (whose scope and implications, however, do not seem to be adequately measured and understood) becomes not only desirable but imperative for securing the process of scientific and human advancement. – *No human being*, whether or not he belongs to a philosophical humanity, can thrive as such in a "de-philosophized environment". In fact, nor can any human being *not* philosophize; in that respect, the alternatives are simply good philosophy or bad philosophy. *Tertium non datur*. To clarify this point, it is helpful to paraphrase Aristotle's well-known argument in the *Protrepticus* (see Aristotle 2017): When a mathematical physicist claims that philosophy damages science due to its aloofness and detachedness from "factual reality"; when, in other words, he claims that philosophy is a harmful chimæra, he is in fact philosophizing, and therefore damaging science in his own way. For, in order to make any claim about philosophy, one needs, somehow, to bring to light the philosophical dimension. However, such bringing to light is, in itself, necessarily a way of philosophizing. Hence, the claim that philosophy "does not exist" (namely, as a form of thinking which can legitimately lay claim on any kind of truth) is a philosophizing which actively engages in the destruction of its own ground and origin, and can certainly not, therefore, be considered an instance of good philosophy.[27]

viii The final step of what we have come to call "the technicization of science", which consists in a unique "move" and can be analysed in the following *four* moments: (a) the production of the legitimacy of concepts, and systems thereof, in terms of their usefulness (i.e., their serviceability, expediency, functionality, operableness, etc.), hence of the necessariness of restoring their legitimate ("ontologically correct") state thanks to adequate measures of "reparation"; (b) the implicit realization that the production of that legitimacy requires, in the first place, the fabrication of the usefulness of the concepts of time and space, which must, therefore, be granted priority among all concepts needing to be

> "repaired"; (c) the prior realization of, and assent to, the circumstance that time and space must first of all be conceived so as to be made available in a form which allows their fabrication as useable entities; (d) the "aprioristic", initial assent to the "productive core" of the modern scientific enterprise, to wit, the will that the cognizability of nature be producible so as to satisfy the fundamental will that nature itself be makeable and thus computationally available for all purposes of steering and control. – *No human being*, in his "incarnate humanity", and in the vivid sense of himself or herself as a being endowed with the capacity to think, can experience time and space as tools, which need to be restored from the disfigurement suffered through philosophy.

5.2.2.2 Naturalization in cognitive neuroscience

Cognitive sciences are today guided by the general idea that the mind is a centre of computation designed to represent all kinds of data/information (whether internal or external), and that it is an entity solely explainable by the natural sciences. This general idea takes operational form in a specific project: the pursuit of the so-called "naturalization of thought". Now, essentially understanding thinking as "computing" does not mean considering it as something "arithmetic" or "algebraic". The notion of computation used here has a wider scope: "to calculate, to compute" means "to process information", which, in the context of the mind, has a representational structure. Thinking – having a mind, cogitating – would thus find its true, fundamental constitution in the continuous processing of representations which inform and shape "the life of the mind".

Cognitive neuroscience (and, here, what is known as "integrative" neuroscience specifically) addresses the broader phenomenon of consciousness, which comprises not only "formal" thought but also sense perceptions, feelings, moods, and so on. "Naturalization", then, consists in removing these forms of consciousness from an "extra-physical" dimension, and embedding them in the sphere of "nature", that is, more specifically, in the neural environment, which provides the substrate on which they are based.

For instance, Gerald M. Edelman, who propounds an evolutionary version of the neuroscientific study of consciousness, writes the following:

> Since Descartes' dualistic proposal, consciousness has been considered by many to be outside the reach of physics, or to require strange physics, or even to be beyond human analysis. Over the last decade, however, there has been a heightened interest in attacking the problem of consciousness through scientific investigation. To succeed, such a program must take account of what is special about consciousness while rejecting any extraphysical assumptions. It must then construct a theory to account for the properties of consciousness and provide a framework for the design and interpretation of experiments. […] Scientific understanding of consciousness in neural terms requires the acceptance of a number of constraints. Any account of consciousness must reject extraphysical tenets such as dualism, and thus be physically based as

> well as evolutionarily sound. Consciousness is not a thing but rather, as William James pointed out, a process that emerges from interactions of the brain, the body, and the environment.
>
> (Edelman 2003, 5520)

To accomplish the first step of the declared programme (i.e., the formulation of a theory), Edelman proceeds to construct a table which captures (or, as we have been saying, "reads") consciousness in terms of "conscious states" endowed with certain features which are, in turn, categorized as "general", "informational", or "subjective":

> **General**
>
> 1 Conscious states are unitary, integrated, and constructed by the brain.
> 2 They can be enormously diverse and differentiated.
> 3 They are temporally ordered, serial, and changeable.
> 4 They reflect binding of diverse modalities.
> 5 They have constructive properties including gestalt, closure, and phenomena of filling in.
>
> **Informational**
>
> 1 They show intentionality with wide-ranging contents.
> 2 They have widespread access and associativity.
> 3 They have centre periphery, surround, and fringe aspects.
> 4 They are subject to attentional modulation, from focal to diffuse.
>
> **Subjective**
>
> 1 They reflect subjective feelings, qualia, phenomenality, mood, pleasure, and unpleasure.
> 2 They are concerned with situatedness and placement in the world.
> 3 They give rise to feelings of familiarity or its lack.
>
> (Edelman 2003, 5520)

Considering the rationale and the structure of this table, it is immediately clear that the primary "feature", which is in fact a *basic assumption* (and hence the pivotal "read" of this theoretical approach), is the following: that consciousness, conceived in form of conscious states, is *a construction effected by the brain*, and that those states are characterized by *unitarity* and *integrability*.

"To be a construction of the brain" refers to the preconception, or dogmatic decision, that the origin of any conscious state lies in a correlated circumstance of "neural mechanics", such that "a mechanism for consciousness" can be conceived "in accord with a global theory of brain action that is itself consistent with the features listed in <the above table>" (Edelman 2003, 5521).

The circumstance that conscious states are constitutively "unitary and integrated" is merely *declared*, so as to "have" those states in view of establishing unequivocal correlations between the different *features* of those same states and their neural basis or substrate. In fact, it remains entirely unaccounted for and unclear how "unitarity" and "integrability" are achieved (for instance, the function of something like a "transcendental synthesis" is not conceivable in Edelman's perspective) and in what sense they should fit the "nature" of something like a "state of consciousness". (Note that the manner in which consciousness is obtained for neuroscientific inspection by conceiving it in the form of "conscious states" is somewhat analogous to the way in which human experience is obtained in the form of "events" of lived experience in Einstein's approach to the physico-mathematical study of time.)

Coming now to the actual "features" of conscious states, we shall limit ourselves to a discussion highlighting the "technicized read" on which one of them is based. As a preface to our brief analysis, we should remark the following:

i reading Edelman's table, it is noticeable how (similarly to Selgelid's "ethical framework")[28] each one of the listed features somehow and to some extent "uses" (more or less implicitly, at times perhaps "unconsciously") categories traceable to Aristotelian ontology, Kantian transcendental analytic, Husserlian transcendental phenomenology, other metaphysical sources (including the explicitly referenced philosophical reflections of William James and Alfred North Whitehead),[29] psychological studies, contributions from cybernetics (e.g., Norbert Wiener), and general or mathematically and logically informed common sense (which today is typically based on opining through values). With respect to philosophical categories, it is striking to note that the nature of such "use" shows itself to be an "operative" one: in fact, to create the conditions for the realization of the project of neuroscientific research, it is necessary to put out of play those source-categories as such (which are mostly, if not exclusively, "extra-physical") and to substitute them with "operatively fit" counterparts, namely, "features" of which one can presume, or hope, to discover the neural correlates;

ii a comprehensive "mapping" of the mentioned "technicized reads" requires a considerable and dedicated analytical effort, which we cannot produce here and which could reveal all sorts of intricacies and logical-structural fallacies.

Let us now consider what is listed as the third "general" feature, namely the fact that conscious states "are temporally ordered, serial, and changeable". In this case, the "technicized" and "readying" "read" is, again, "the criterion of 'earlier' and 'later'". This read "fabricates" (or "readies") a format of temporal order for conscious states (i.e., an order somewhat analogous to Einstein's "order of events"), such that the latter are now ready for the final step of the operation of "naturalization". In the framework of Edelman's theory, naturalization amounts to the reduction (not to clock time but) to so-called "reentrant processes", which regulate "neural life" in a context of adaptation and selection (i.e., in the framework of what he calls "neural Darwinism"). Phases of "reentry" define the spatio-temporal dynamics of neural

mechanisms, which, in turn, underlie conscious states, and therefore, in a sense, *are* those states. The following passage lays out the key role of those "ongoing processes":

> Inasmuch as this theory of neuronal group selection (TNGS) abandons the basic computational notions of logic and a clock, a means for spatiotemporal coordination must be put in place. This is provided by a process called reentry, the operation of which is central to the emergence of consciousness. Reentry is an ongoing process of recursive signaling among neuronal groups taking place across massively parallel reciprocal fibers that link mapped regions such as those found in the cortex. Reentry is a selectional process occurring in parallel; it differs from feedback, which is instructional and involves an error function that is serially transmitted over a single pathway.
>
> (Edelman 2003, 5521)

Despite the affirmed difference between "sectional" and "instructional", and despite the absence of an "error function", the notion of reentry remains akin to that of feedback, in that both processes describe informational circuits. Informational signals transported by these circuits feed "ascending value systems" (where "ascending" refers to the fact that perceptual information "ascends" from lower brain structures to higher cortical areas). The following passages should help us to understand better the scope and role of these "value systems":

> There is one final set of structures that is critical in brain activity connected with learning and the maintenance of consciousness. These are the ascending systems, which my colleagues and I have called value systems because their activity is related to rewards and responses necessary for survival […] These systems bias neuronal responses affecting both learning and memory and controlling bodily responses necessary for survival. It is for this reason that they are termed value systems.
>
> (Edelman 2004, 25)

> Different individuals have different genetic influences, different epigenetic sequences, different bodily responses, and different histories in varying environments. The result is enormous variation at the levels of neuronal chemistry, network structure, synaptic strengths, temporal properties, memories, and motivational patterns governed by value systems. In the end, there are obvious differences from person to person in the contents and styles of their streams of consciousness.
>
> (Edelman 2004, 34)

> In evolution, fitter individuals survive and have more progeny. In the individual brain, those synaptic populations that match value systems or rewards are more likely to survive or contribute more to the production of future behaviour.
>
> (Edelman 2004, 35)

Value systems operate on the basis of criteria of adaptation and selection in terms of "vital efficiency": neural valuations of "survival benefits" (i.e., mechanisms which constitute the aforesaid "neural Darwinism") are integral, among other things, to operations of categorization, memorization, concept formation and mapping, hence to all levels of consciousness, from "primary" to "higher-level". The brain itself is thus conceived as a value calculating device (a "biological evaluation machinery" of sorts), according to an axiology whose values essentially measure and rank environmental stimuli in terms of "reward" and "punishment", and consequently survival-related aspects such as "reward prediction error", "salience", "expectation", "motivation", "homeostatic control", etc. Finally, computing values is the very essence and core of (conscious) life. Intending life in this manner requires the notion that "living" essentially consists in being bent on survival, that living itself is "struggling for life".

Based on the core assumption of "neural Darwinism" and the availability of productive means such as "reentry" and "value systems", neuroscience can produce the cognizability of "conscious states", which, in turn, are the building stones of "consciousness" as a neuroscientifically cognizable object. As a consequence, consciousness itself, reduced to its value-calculating functions, is now in principle makeable, that is, set to be available for the extraction and optimization of survival value. Thus, neuroscientific theory has "read", that is, unearthed-disclosed consciousness. However, in the terms of our previous analysis, such unearthing-disclosing is not a "bringing to light"; rather, it is a "setting in the light", which challenges consciousness to let itself be seen in the light of a willful cognizability: in that light, it can finally be "theoretically fabricated and set to be cognized through mathematical models, by virtue of which it can, in turn, be effectively fabricated and set for extractive purposes"[30] and, we should add: effectively fabricated as a consciousness which can be *indifferently* "human" or "artificial". In other words: *the conceivability of an "operative exchange" between man and machine is born.* The quintessential outcome of the project of naturalization, the *telos* which guides it from the outset, is precisely this conceivability, to wit: the will to humanize the machine and to machinalize man.

And yet:

No human being is conscious – i.e., is alert, (self-)aware, in one word: *exists* – in the modality of passing through a series of conscious states (cf. above, 93, our comments on the Einsteinian "series of events"). Any "conscious state" *presupposes* an already constituted being-conscious, that is, an *existing openness* to a world, or sphere, of meanings; hence, "consciousness" itself cannot be broken down into "state-bits", whose unity is then fabricated by using the format "series" (thus giving rise to a so-called "stream of consciousness"). Indeed, rather than referring to "conscious states", one should think in terms of "acts of existence", in the sense of "activations of being-conscious", or instances of "becoming-conscious". *Being*-conscious means: existing in the alertness for such "activations", to wit, for "*becoming*-conscious".

No human being perceives his or her existence in terms of survival. To prove that, at the core of human existence, there is an "instinct of survival", which we share with all living beings (animals and plants), we usually refer to instances

in which humans "fight for their life", "run for life", "struggle for survival", etc. Think of a situation in which someone is desperately trying to escape from famine, war, or murderous persecution. In these cases, we say that what matters is "bare life" and "sheer survival", meaning that nothing else but *the affirmation of the continuation of "physical life"* is involved (namely, against forces and events which threaten that continuation). However, we forget that even in such instances it is "an *existing openness* to a world, or sphere, of meanings" that is fighting or struggling to preserve, above all else, … *that very openness*. Moreover, since such openness is intrinsically shared with others (close and far, up to including all past, present, and future humanity), the attempt at preservation concerns that same openness, insofar as it is the dimension into which humanity awakens, in which it exists, and wherein its mortality takes shape. What appears as a mere "salvation of one's own life", with the objective of securing "survival", is in fact the preservation of the sacrality of man's living body; this same preservation might, in some instances, require that life be given up, and that the living body be sacrificed. Now, when evolutionary theory explains natural history in terms of successful adaptation to environmental influences (as opposed to a failing adaptation, which results in extinction), that is, when it assumes in nature a "will to survival", that assumption is supposedly based on "evidence" pointing to the subsistence of a "survival instinct" in all living beings. However, if, as shown above, at least for the human being that "evidence" is all but conclusive, and can be "read" in an altogether different manner, what remains as a basis for the "Darwinistic construct", including Edelman's "neural Darwinism"?

No human being, while perceiving something in its proper being (namely, not as a mere "stimulus" but as a meaning which pertains to a sphere of meanings), notices or feels an integration or unification of different pieces of perception itself. Despite the fact that, at the level of instrumental detection, visualization/imaging and mapping (EEG, MRI, MEG, PET, Electron Microscopy, ERPs, fNIRS, etc.), one can observe all sorts of connections between populations of neurons (electrical/chemical synapses, neural networks, reentry, etc.), such that one could be led to conclude that these processes somehow "produce", in a mechanical manner, unity and integrality, there is simply no basis for drawing that conclusion.

From a rigorously phenomenological point of view, that conclusion remains a wanton decision flowing from the initially declared imperative that all "extraphysical assumptions" shall be "rejected". However, the observation of "the mechanics of consciousness" will have to pass what we shall call "the Leibniz-test"; this test is based on a principle formulated on the basis of the following passage from Leibniz's *Monadology*:

> Moreover, it must be confessed that perception and that which depends upon it are inexplicable on mechanical grounds, that is to say, by means of figures and motions. And supposing there were a machine, so constructed as to <allow to> think, feel, and have perception, it might be conceived as increased in size, while keeping the same proportions, so that one might go into it as into a mill. That being so, we should, on examining its interior, find only parts which work

> one upon another, and never anything by which to explain a perception. Thus it is in a simple substance, and not in a compound or in a machine, that perception must be sought for. Further, nothing but this (namely, perceptions and their changes) can be found in a simple substance. It is also in this alone that all the *internal activities* of simple substances can consist.
>
> (Leibniz [1714] 1898, §17)
>
> (We emphasize as shown in the original French text.)

Based on this argument, we can coin the following "Leibnizian principle for any theory of perception" (LEPTOP):

> Provided that perception is unitary, integral, and hence simple, any veridic explanation of it must involve an element which in its turn is simple.[31]

LEPTOP has an evident implication: Any theory which pretends to explain perception (i.e., what is simple) *entirely* in terms of the mechanics of elements that "work one upon another" (i.e., what is compound or complex) is *entirely* blind to the phenomenon it supposedly explains. From the principle and its implication, we can now derive the said "Leibniz-test" (that is, the "Leibniz-test for any theory of perception", LETTOP):

> Is a theory of perception structurally capable of observing LEPTOP?
> If yes, it is a veridic theory of perception.
> If not, it is entirely blind to perception and hence is not such a theory.[32]

When neuroscience suggests that consciousness "emerges" from underlying processes of neural signalling, this is tantamount to claiming that the simple "emerges" from the compound (or the complex, the mechanical). However, whatever emerges from the compound or mechanical is necessarily itself compound or mechanical, and never simple.

This leads to the conclusion that neurosciences (at least in the version which is being discussed here) fail the Leibniz-test in the sense that they do not offer veridic theories of perception. It seems that neurosciences observe what happens in the brain in terms of neural processes during an act of perception, but mistake what they observe for "the material cause" (or, as Leibniz would say, for the explanation) of perception itself.

In the same way, when they observe that, as neural processes fail, perception is affected, they mistakenly conclude that those processes have a causal influence on what is affected. What in the self-interpretation of this approach is an explanation which rejects all "extraphysical assumptions", and therefore operates merely with "(neural) material" and "(neural) processes", is in fact an "ontological fallacy" which characterizes not only all efforts of naturalization but technicized science at large; we can call it "the fallacy of monistic extremism". For the rejection of "dualism", as claimed by Edelman, in truth results in a "physical" explanation operating with an ontologically unclear intra-physical duality, in which – given a material

"substrate" – "processes", "emergence", and ultimately the notion of "consciousness" itself surrogate the reference to what is simple.

Going back to the observed failure of neural processes and their relation to perception, let us consider, for instance, eyesight and hearing.

Following the typical reasoning of neurosciences, a loss of the organs of sight necessarily implies that human seeing ceases. However, this conclusion is phenomenologically untenable, as human beings do not see because they have eyes; rather, they "have eyes" because they are constitutively capable of seeing. The same applies to hearing: it is not that we hear because we have ears, but on the contrary we "have ears" because *as human beings* we can hear. Eyes and ears, as well as the processes they trigger in "ascending value systems", are merely the organs on which the capacities for seeing and hearing – as modalities of the *existing openness* to a world, or sphere, of meanings – are engrafted. Hence, when the eyes (and with them their connections) fail, the *integrity* of "simple" eyesight is preserved, although the manner in which we see will undoubtedly be affected. In the same way, when our acoustic organs die down and we go deaf, the *integrity* of "simple" hearing remains, although forthwith we will be hearing differently.[33]

If we apply this reasoning to brain theory specifically, we can say the following: we do not perceive (or think or exist in the manner of primary and higher-level consciousness) because we have a brain, but we "have a brain" because we perceive (i.e., think, exist in that manner), or because we are human beings, in the first place. Just as there is none so *deaf* as those who will *not* hear, and none so *blind* as those who will *not* see, there is none so *thought-resistant* (albeit endowed with a fully intact apparatus of neural networks) as those who will *not* think.[34]

Many more traits of conscious life could be referenced to elucidate how the phenomenon of consciousness itself seems to refuse naturalization, and, if adequately appreciated, to denounce the fallacies of a form of theorizing which complies with the injunction of what above we have called "the will to humanize the machine and to machinalize man". In conclusion, we will merely hint at two of those traits, which carry particular weight, however, in "the economy of consciousness", namely mortality and language.

Mortality. Edelman writes:

> We are mortal. Once the [neural] substrate for [conscious] states is dissolved, the self, which is a dynamic process, ceases to be.
>
> (Edelman 2004, 138)

Mortality, here, refers to the circumstance that the struggle for survival, that our "life as survivors", ineludibly meets a point of termination. However, *no human being* dies because his or her "self" ceases to be as a consequence of the dissolution of its neural substrate; on the contrary, we can detect something like the decay of a neural structure, and eventually "issue a death certificate", because the human self consists in man's capacity for dying, that is, because we exist insofar as we are indigenous to (the openness of) death: man begins to die in the very instant in which he comes to life. To put it in a formula: we are not "mortals" because we are

"mortal" (in the sense intended by Edelman); rather, we *are* mortal (in the existential sense of this word, i.e., in the sense that our being is *essentially informed* by dying) since we are *the* (only, unique) mortals. Or again, varying a dictum by the German poet Friedrich Hölderlin (2001, 1224), we can say this:

> As we live, we are *already* dying.
> We *live* as we go toward death, by indwelling it.
> We live within the call to enter and advance in it day by day.

And at the same time:

> Death lets itself be died *within* our very living.
> Death lets itself be died *by* our very living.
> For the mortals, to live is to *die* (their) death.

Language. What does it mean that, as has been claimed above, human beings "'have eyes' because they are constitutively capable of seeing"? In what does this capacity for seeing (or, for that matter, the capacity for hearing, for perceiving, for thinking, for dying, etc.) consist? Answer: it consists (all these capacities consist) in our being indigenous to (the openness of) the word, to wit, the dimension in which all sense and meaning is generated. When we say that human life is "an *existing openness* to a world, or sphere, of meanings", this is the same as saying that "to live" is "to exist in (the openness of) the word, to wit, in language". "Word" or "language", here, do not refer to the human activity of uttering audible linguistic signs and symbols, which have the power to represent, express, and convey (communicate) previously constituted meanings attributed to already constituted things for informative purposes. This "linguistic" concept of language – based on the traits of (psycho-physical) expression, (intersubjective) communication, and (instructional or selective) information – omits to account for the manner in which both meanings and things are generated in the first place.

[N.B. Another way of producing the linguistic concept of language consists in identifying so-called linguistic "functions", specifically the following: the expressive or emotive function (which concerns the expression of states of mind, feelings, thoughts, etc.); the referential function (which focuses on context and temporal framework); the conative function (which relates to the production of actions and reactions); the metalinguistic function (which has to do with statements on language itself, such as explanations of the meaning of a word or elucidations of the grammatical structure of a sentence); finally, the poetic function (which stresses the form and materiality of the message by playing on elements such as rhythm, sound, rhyme, etc.). According to this approach, the mentioned functions always operate together – albeit in different proportions – to produce all sorts of linguistic expression. In other words, *any* instance of linguistic expression can now be analysed *indifferently* in terms of the functions which produce it. As a consequence, the only possible distinction between instances of discourse – poems of all ages, philosophical texts of all kinds of thinkers, newspaper articles for all occasions, technical

manuals for all levels of usage, song books of all religions and cultures, AI generated documents, and so on – pertains to the domain of mere functions and is expressed in functional terms. Once human intelligence, in turn, is accustomed to and informed by the functional understanding of language, it will likely experience a boost in its capacity to compute functions, only to see its capacity to weigh the *sense* of things virtually annulled.]

How are we to conceive "meanings" and "things" if not as elements whose generation consists in the circumstance that they show themselves as such? And is not such "showing themselves" the same as a "saying themselves" (as, incidentally, the very etymology of "to say" suggests, whose original meaning is "to let see, to show")? And can we not, therefore, indicate the dimension of such "saying", in which human speaking, too, is indigenous, as "the word" or as "language" (such that human speaking in truth consists in answering the word in which meaningful things come to light)?

This elucidation of the original scope of language implies that there cannot be any *human* perception before or outside or without "the guidance of language itself". Human orientation within the sphere of meanings is "covertly" sustained by the word – in which the world itself (i.e., the whole of sense-relations, concreteness itself, true reality) is generated. Hence, "playing on words", we could say the following:

Humans perceive within the *wor(l)d* only.

Where there is perception – perception itself being a perceived meaning –, the word has already put into play the world. This applies to *all* perception – including, of course, our perception of neural processes in the brain: "between" value systems and axons, synapses, and neural networks, there is always-already the "hand" of language, which offers all these meanings to our understanding. In light of this, it seems odd to read the following statement: "[T]he brain can function by pattern recognition even prior to language" (Edelman 2004, 147). Can we conceive a pattern bereft of all meaning? In what kind of element would such a pattern arise? And, if that element is itself "pre-linguistic", how could that pattern be "translated into language"? Both the constitution of such a pattern and this translation remain entirely obscure. Thus, the "monistic extremism" of naturalization shows itself as a will to "bypass" language in its essential understanding, so as to operate in a sort of "language-free zone", hence in a chimerical "freedom from language", *while* at the same time being necessarily immersed and involved in language itself. Only as we think and speak with regard to that contrived but inconceivable "language-free zone" can the violation of Leibniz's principle and the consequent failure in the "Leibniz-test" go unnoticed. If only we remain "awake in language", we preserve the awareness that, while the complex can never give rise to the simple, the latter bestows, and maintains in its sense, what is complex. In conclusion: there is none so blind and deaf and thought-resistant as those who do not see and hear and think that the simple holds a priority over the complex. *Simplex sigillum veri*.[35]

5.3 Technicization as a menace to science

5.3.1 "Ground zero"

In the preceding paragraphs, we clarified the original sense of Greek *epistēmē*, which implies the very core of philosophizing. The latter, we said, is "an 'understanding standing-toward', an 'intelligent' proneness", to the beingness or essence of beings; it is "'pure theory', and as such the highest form of *epistēmē*, i.e., of 'science', in that it consists in a pure beholding of 'essences'". Furthermore, and decisively, we pointed out the "technical" character of *epistēmē*. What allowed us to come to that diagnosis was our interpretation of Aristotle's elucidation of *technē* as "a countenance which is 'poetic' (bringing-to-light, generative) *by aid of* (and thus guided by) an unearthed-disclosed (disabsconded, 'true') *read* (*logos*)". By virtue of that read, and "without any 'technical operation' being in play, philosophical *epistēmē* 'lectures' (or instructs) beings to stand ready for different technical purposes".[36]

If *epistēmē* is "technical" in the now elucidated sense, modern science, in contrast, has been characterized as "technicized". The most concise manner of indicating the shift of science from "technical" to "technicized" is the following: while the "unearthed-disclosed read" of *epistēmē* involves a "'letting come to light' (in conformity with *physis*)" (albeit in such a way as to place that which comes to light in an availability for technical purposes), the "unearthed-disclosed read" of technicized science consists in a "'setting in the light' (while admitting 'nature' only for model-testing)". This entails a reconfiguration of scientific cognition "from being 'technical', by virtue of its theoretical trait", to becoming "theoretical at the behest of its (transformed) technicity".[37]

The "transformed technical trait", which characterizes what we call "setting in the light", implies that "nature", having ceased to be "a source of measure", has transformed into a measurable totality which must be "theoretically framed" as a playground for an unbound "will to computation", to wit, "a will to compute values". The character of being computable, hence mathematized, is now the hallmark of naturality: nature itself is natural *insofar* as it is mathematical. In the context of this topical transformation, the terms "mathematical" (or "quantitative", "quantifiable") and "natural" come to coincide; *finally, "naturalization" is the same as "mathematization"*! (Note that at the core of the will to computation lies the circumstance that the will in the first place wills *itself*, i.e., its own willing; in fact, that will wills to compute only insofar as such willing is a distinctive way to will itself. Thus, the said "will to computation" is, at heart, "a will to will".)

In the framework of technicized science, nature "speaks" only insofar as it lets itself be seized in terms of numerical values which constitute the elements of an operational version of the Kantian (and more generally metaphysical) *a priori*, to wit, a "scientific model". The *model* of nature is now the *true* nature, the theories of which (of that model) require "inputs from nature", that is, "data", for testing purposes. "Numbers", here, are not what they used to be in the context of "technical science" or *epistēmē*; namely, they are no longer "moderated" by the "One" as the principle of the cognizability of things (see, for instance, Aristotle, *Metaphysics*[38]).

Bereft of "the moderating one", numbers, in a manner of speaking, "go viral". Viral, or technicized, numbers are those which we know in the context of mathematical physics and statistics and probability.

The physico-mathematical and statistical-probabilistic number can be characterized as at once productive, incremental, and dissipative: "productive", in that it has no other purpose than that of "attacking" things, by informing them according to its own function as an "algorithmic pilot", thus in the first place *producing* them as something which is cognizable exclusively insofar as it can be computed within a procedural framework of exact measurements (ascertainments, estimates, evaluations, stochastic forecasts, etc.); "incremental", in that (in a context in which the only thing that counts is counting on the fact that the counting itself will "work out") it necessarily becomes an instrument of increase and enhancement of the degree of exactness which can be reached in a calculation (both in the direction of the "extremely large" and in that of the "extremely small"); "dissipative", because (as said instrument) it considers things as being fictile at will, to wit, as mere "formal occasions" for the "higher needs" of computation; as a consequence of this "numerical treatment", things are "exactified", that is, they become the more "exact" and the more "factual-effective-effectual" as objects and objectives (i.e., as readings, indicators, parameters, etc.) the more they are annihilated, distorted, and deprived of their own time and voice as meaningful beings.[39]

In short: numbers are now used and worn out as "reads" which implement the mentioned "setting in the light", so as to translate the entirety of nature (i.e., the world) into a domain of the fictile, makeable, mechanizable at ever higher levels of "escalation dominance" in terms of overpowering and control.

Such is "the ground zero" of the God-Will.

5.3.2 Experimenting as a driver of scientific progress[40]

As mentioned before (cf. 5.1.2.2, 85 sqq.), ancient science – *epistēmē* – is based on the experience of being as *physis*. Its theorizing engages, "negotiates" with *physis* itself and its measure-giving. Theory (*theoria*), we said, "endows" *empeiria*, that is, the "case-by-case acquaintance" with beings, "with eyes": as the culmination of *praxis* (i.e., a manner of being which has its aim and accomplishment in itself), it is, as it were, "super-empirical" in the sense that it is the explicit experience, or awareness, of what kindles any empirical (i.e., case-by-case) experience as such. In short, theory is the experience of the sense of the empirical: it blazes the trails or routes of being, on which beings can be empirically explored. As such, "epistemic theory" has a technical character, in that its "reads" (in other words, its defining *logoi*) make available, "produce", beings as such.

Technicized science and the related mathematical project of nature lack a similar foundation. However, they respond to, and execute, what the God-Will commands or exacts, namely, the progressive effective ex-traction of beings into the light of computational controllability. Such *extraction* requires the *exactness* provided by said mathematical project.

"Ex-actness" stems from the Latin *ex-agere*, which means "to act completely (*ex*-)". "Ex-act" (Latin *exactus*) refers to something "completed" or "done thoroughly", which leads to the modern sense of "precision" and "accuracy". Thus, exactness conveys adherence to a standard, a rigorous correctness. In the present context, the mathematical project of nature establishes "exactness" in the sense of a set of likely elements characterized by the mentioned traits of thoroughness, precision, and accuracy, which, together, produce a state of plainness. Such production of a "plain nature" sets the stage for "extractive" ex-planatory theoretical operations. "Ex-traction", from Latin *ex-trahere*, implies the act of pulling out or drawing forth.

On the plain playing field of exactness, theory can extract models, "ideas" and "visions", methods and procedures, retrospections and outlooks, forecasts and stochastic evaluations, etc. Thanks to such operations, an exact, disciplined version of nature is produced, namely, a nature which is set to "shine" in the light of parametric, mathematical perfection. The following universally known passage from Galileo Galilei's *Il Saggiatore* (*The Assayer*) clearly indicates this exact-extractive (i.e., technicized) conception of science:

> Philosophy [i.e., *naturalis philosophia*] is written in this grand book, which stands continually open to our eyes (I mean the universe), but the book cannot be understood unless one first learns to understand the language and know the characters in which it is written. It is written in mathematical language, and the characters are triangles, circles, and other geometric figures: without these means it is impossible for a human to comprehend even a single word; without these, one wanders about in vain in a dark labyrinth.
>
> (Galilei 1623, 4; modified translation)[41]

From this passage we can draw the following, implicit or explicit, basic assumptions and tenets:

i nature is indicated with the name "universe";
ii "universe" here means an in itself gathered, unitary, united whole, in brief, it means a "logical whole";
iii the universe is "a book", i.e., a substruction or underlying platform (an *ousia* of sorts) placed vis-à-vis the human-computational regard, to which it displays mathematical assertions (or predications) formulated in terms of geometric shapes and their relations;
iv nature *qua* universe is an encrypted text, a whole of "open" but illegible information, which only becomes legible to those who know the mathematical code which is required to decipher the said text;
v the book of universe is "grand", where "grand" indicates what is already given in its greatness, what dominates in the vast givenness in which it has placed itself and as which it has made or produced itself: the universe is an already given, immense, "auto-technical" (or "autopoietic") platform engraved with logically-mathematically-geometrically coded information;

vi as such, the universe contains the true philosophy in the form of an already written and codified description-explanation of everything, which lies in plain sight and yet is difficult to read: on the perfectly lit stage of nature, nothing is hidden, only the written mathematical "read" must be "discovered" and unfolded;

vii such discovering and unfolding reads mathematical assertions not as what can be said, elaborated, understood, in short, "theorized" *in* and *by virtue of* any human language (as suggested by the following conjecture: "*First* language, *then* mathematics", or, in Latin, "*primum dicere, deinde mathematicam facere"*) but as being itself the original "pre-linguistic language": the ur-language made of shapes, or the "shape-ur-language";

viii the philosophy written in this ur-language composed by geometrical shapes is a stock of parametrically knowable objects and relations, which are the elements of a supposedly geometrical universe (even though it was in truth fabricated as such by a "will to geometrizing"); hence, the following equalization is established: universe = geometry (i.e., a function of the totality of extant geometrical shapes);

ix the human being is a geometrically constituted entity endowed with the "meta-geometrical" (or higher-level computational – possibly "emerging"?) capacity for deciphering the geometrical code of the universe;

x the only scientific task assigned to man is to translate himself into an entity which "speaks" and masters that logical-geometrical-mathematical code; absent this translation, which makes of him a "mathematics speaker" by second nature, man is doomed to inhabit the earth as one who wanders about "in vain in a dark labyrinth": in this manner, Galilei heralds the transformation of man from an originally meditating to an originally computing being. More specifically, it is the transformation from *zōon logon echon* through *animal rationale* to entity informed by the equalization of universe and geometry, or, in short, from "philosopher" to "assayer" – as can be read in the following, equally well-known dictum: "And by so much is an assayer's balance more exquisite [i.e., capable of examining, investigating, enquiring, informing] than a philosopher's steelyard!" (Galilei 1623, 4).[42]

As we can see, based on his mathematical "read" Galilei designs, and effectively produces, "the universe of nature" as a unitary geometrical construct, as a logical whole; the latter is a readily accessible collection of pages, that is, "an open book", which, however, is not immediately readable but requires a proper decoding by those who master the mathematical language in which those pages are written. Thus, "the true philosophy" is already "manifestly latent" in every page of the book; the latency of philosophy is a consequence of the absence of decryption, and therefore only apparent. Latency itself has, or is, no dimension in its own right: properly speaking, everything is already manifest, visible, while nothing is hidden. This perfect mathematical light (*lumen geometricum*) absorbs and includes the light of reason (*lumen naturale*): henceforth, any naturalization is in truth a mathematization, and any "natural reasoning" fundamentally consists in executing

mathematical exactness. Finally, the mathematical assayer speaks the truth of the natural philosopher.

In this manner, geometrization effectively produces, fabricates an "open-air laboratory", in which patterns of exactness (i.e., so-called "theories") can be progressively "perfected". "Open-air", here, refers to the "openness" of the "book" of nature: it is an openness which is "light-tight" except for the light produced by geometry, that is, by *lumen geometricum*. *The light-tight laboratory is the factory for the decryption of that book*. The method of decryption is the circle of theory and experiment which characterizes modern scientific practice. *Modern science is experimental because it is in the first place exact,* to wit, *based on, and having as its object, a pre-fabricated sphere of exactness*. In all this, "natural nature" remains silent "in favour of" "lab-nature", to the knowledge (i.e., decoded exactness, hence controllability) of which it contributes by supplying "experimental data". The latter are signals extracted from "natural nature" by force of appropriate set-ups and protocols arranged within the laboratory. "Natural nature" is excluded in all its manifestations except for that of functioning as a stock of data to be mined through theory-based experiments. Galilean universe-nature: an open book of "exactitudes", ever waiting to be deciphered by means of the interplay of observations, theories, models, and experiments.

That interplay is informed by a "will to enhancement", namely by the will to increase the controllability (i.e., dominability) of the fabricated nature. Let us call the latter "B nature". The increase in controllability of "B nature" is what is commonly referred to as "scientific progress". Within the endeavour of advancing science, "natural nature" – let us call it "A nature" – is but the said supplier of a "stock of data" (whose features are modifiable according to the relevant theoretical "read"). In other words, "A nature" is what the scientific process (i.e., the circle of theory and experiment) draws on for the purpose of controlling (i.e., testing) the achieved level of exactness, hence of the power of control (i.e., dominance). Thus, "A nature" is reduced to a "control nature" in the sense of a domain which exists exclusively for the purpose of *testing*, while "B nature" is a "control nature" in the sense of a domain which exists exclusively for the purpose of incremental *dominance*. "Scientific research" is the enterprise of securing progress within "B nature" in such a way that "A nature" – by virtue of its instrumentality to this progress – remains entirely covered as such. Hence, "A nature" can only speak the mathematical-geometrical language of "B nature"; it can only appear and be cognized within the processes (procedures, methods, analyses, plans, programmes, frameworks, policies, applications, training schemes, narratives, etc.) provided for and designed by the complex of technicized sciences.

In fact, it is remarkable that Galilei's "open book-universe" refers to "B nature". The "openness" of the latter is the light of technicized science's "setting in the light". The "geometrizing eyes" of technicized, that is, experimental, science produce an "openness" which veils the openness (*alētheia*, clearance) of "A nature" and impedes its appearing.[43]

Italian poet Giacomo Leopardi seems to provide a diagnosis of this circumstance when he writes the following, which can be read as a response of sorts to Galilei's statement in *The Assayer*:

> Nature is completely laid out before us, naked and open. To really know it, there is no need to lift any veil that covers it: we need to remove the impediments and alterations that are in our eyes and intellect; and these have been fabricated and caused by us through our own ratiocination.
>
> (Leopardi [1898–1900] 1997, 2710)[44]

5.3.3 Cybernetics, reasoning through values, de-philosophization

Ever since ancient times, philosophy has played the role of a unifying element of the sciences. Philosophy's own "technical trait" even made it a likely (i.e., apt, suitable, promising) foundation for the technicized sciences. However, philosophy has meanwhile been replaced in this function.

In the new unity that has emerged over the past century or so, the various thematic fields of inquiry of technicized sciences are produced according to the following underlying unitary perspective: the sciences are induced to design/produce those fields according to the criteria of *steering* and *information* – that is, according to the "cybernetic" trait.[45] Hence, different forms of scientific knowledge are connected with each other no longer by virtue of the unifying philosophical element, but rather through that trait. The new unity is, therefore, cybernetic: "cybernetics", here, means "the information-based steering of everything". Consequently, "a thematic field of inquiry" can only be defined as such if it first appears as steerable in terms of information. If something is not *a priori* "informationally processable" (hence controllable through information), it simply "does not exist": "the property of being" literally does not apply to it, so that it must be excluded from the sphere of what is "scientifically cognizable".

The fact that cybernetics is destined to dominate the entire scientific enterprise – that is, that sciences are subjected to a progressive "de-philosophization" of their cognitive processes, and indeed of their very nature – depends on the circumstance that cybernetics itself is steered by a will, which, in itself, is non-technical and non-cybernetic, namely the will which commands the potentiation of every human activity in terms of successive rounds of increase and conservation of degrees of efficiency and effectiveness. The stabilization of this self-empowering potentiation – that is, the ensuring of its computable (or reckonable) incremental-conservative dynamic – requires the continuous information-based iteration of planning, implementation, control, and optimization. In short, it requires the computation of everything through values. *Scientific thinking now necessarily consists in reasoning through values.* We shall call this structure of reasoning "ratiocinating".

Such ratiocinating pervades and informs what today is presented and implemented as "scientific thinking", "the scientific cognition of nature", "the investigation of human nature", "historical-futurological survey", "the study of the cosmos", "the development of devices", "robotics", "urban planning and its laws",

"economy", "the technology of armaments", "human health technologies", "climatology", and so on, including "art and the creation of artworks". This universal manner of thought allows cybernetics to dominate as the unchallenged technical unifying force of all forms of knowledge, which, precisely because of their uniform cybernetic trait, can be called "planetary".

The adjective "planetary" refers to a straying, a wandering, that is, an aimless (orbital) movement, a movement without provenance and destination, and therefore without a proper direction and sense. The cybernetically unified sciences are planetary in that they consist in the implementation of successive cycles of theoretical-experimental, incremental-conservative practices based on value-oriented, data-driven functional assumptions and hypotheses. The necessary structural traits of those practices are the constitutive categories of cybernetic circuits or control circuits, namely, *information, steering, and feedback.*[46] The aforesaid "will to potentiation" (another diagnostic name of the sense of being, whose deity is the previously mentioned God-Will) "wills" nothing but the total "cybernetization" of the Earth. This requires that everywhere, without exception, the perspective – "the gaze", "the eye" – which pre-determines and produces everything in the form of processable and steerable "states of affairs" be framed and implemented.

The outlined "universal cybernetic program" is energy-hungry, and increasingly so. The (albeit provisional) satisfaction of its voraciousness and inexorable urge for more energy comes at an "ontological price", which must be exacted in order to secure the total availability of the Earth as a resource for the extraction of energy. This price can be formulated as follows: *that the categories used to delimit the thematic fields of the various sciences are regarded exclusively as operational concepts having the value of models*.

Consider, for example, the concept of space. In its Newtonian version – the so-called "absolute space" – it can be intuitively experienced. In contrast, Einstein's *Raum-Zeit*, the "gravitational field", and "quantum spacetime" (the so-called spin-network), do not correspond to any human intuition. To "spark" intuition, physicists who engage in popular science use similes and metaphors meant to "visualize" the structure of space-time: they talk about an "elastic carpet" which deforms in response to masses, or propose the image of a "gelatinous structure", or invite to think of the so-called "multiverse" as a collection of "soap bubbles", and so on. To perpetuate some form of experience of these "entities", models must be elaborated (and continuously optimized) which respond to the unconditional need for computability and control demanded by the spiral of potentiation.

In the "logic" of reasoning through values *qua* reasoning through models, the traditional notion of truth as correspondence or adequation is substituted by the measurement of effects: truth becomes measurable solely through the "gain" that the use of the model produces in advancing the research programme. The goal is "to move forward": a model will be considered "productive" when it enables actual ("empirical") progress, that is, an expansion of controlled (fabricated) effectiveness. Only on this basis can the issue of verification (which remains a form of measurement of that same progress) be raised and dealt with as "an epistemological problem". Scientific truth is thus increasingly equated with the efficacy of its

effects: *it becomes, in an ever more decided and decisive manner, a performative truth*.

This implies the following: once a given mathematical model is proposed, an experiment is designed to measure, thanks to the extraction of functionally defined observational data, how and to what extent its (i.e., the experiment's) processes correspond to what the model predicts. In this way, only the possible correspondence between the experiment and the model is computed, while no demonstration is provided that the model itself constitutes "a knowledge of nature". Thus, the experiment and its results remain confined within the "theoretical framework" of the model, that is, within its pre-established "cognitive sphere of action", which is assumed to be capable of "saying something essential" or "fundamental" about nature without exhibiting and proving that it is nature itself which speaks in experimental findings. In short, the experiment only speaks the language of the model, which derives its reliability from "B nature" at the expense of "A nature". The de-philosophization of the sciences – that is, their inscription within cybernetics – is thus complete.[47]

The analysis of the cybernetic character of technicized sciences leads us to a determination of what we shall call "the menace to science". The latter consists in the mentioned de-philosophization, that is, in the replacement of the struggle for truth with "the will to progress" (i.e., with the scientific self-implementation of the will to will *through* the God-Will as the unacknowledged deity of scientific progress). De-philosophization is not an alienation from the historical discipline called "philosophy", but rather the abandonment of the original call for philosophizing. Where, however, does this call "reside"? Perhaps in some "vital need"? Or in "insatiable human curiosity"? Or even in the desperate will to "escape reality"? These are commonly suggested answers, among others. However, it seems to us that, rather than "answers", they are symptoms of shortsightedness. Based on our analysis, that call cannot but reside in the very source of the genesis of philosophizing – the source that determines the technical "nature" of philosophical *epistēmē* which the latter cannot see within itself, that is, through philosophical thought. In other words, that call (which de-philosophization as "the menace to science" is the abandonment of) "lives" in the specifically *philosophical* blindness for its own technical character; that is, the character without which, as previously shown, science could not have attained its technicized form.

The menace which permeates and shapes the scientific endeavour from top to bottom, determining its progressive technicization, does itself not belong to the sphere of scientific inquiry; rather, "the will to de-philosophization" (as it were, "the de-philosophizing agent") generates itself in that broader domain of sense which determines the form of philosophical thought.[48] In order to reinforce and reiterate itself, that menacing will must make use of each of the cybernetic traits which inform science; otherwise, it would not be what it is, namely, a constant menace. Put differently, it must avail itself of science as an element *through* which it unfolds. Hence, the menace which hangs *over* science reveals itself to be a menace-*through*-science. Long hidden in the technical trait of philosophical *epistēmē*, this menace fully "breaks out" in and as the unfolding of technicized (i.e.,

cybernetic and de-philosophized) science, that is, science deprived of "the cover" of philosophy.

Let us examine in detail the aforementioned cybernetic traits, each of which, by imprinting the technical mark on this or that science, stabilizes the menace brandished (namely, by an anonymous will, whose *origin* is neither human nor divine)[49] as a multiform yet invisible sword of Damocles:

i *At the same time* in which "it appears evident" that solely what is informationally processable is endowed with being, "it appears evident", too, that the only reliable form of "scientific" thought is ratiocination.

ii *At the same time* in which science "recognizes itself" as being connected to every other science in the name of the aforementioned ratiocinating, it is "recognized", too, that science's planetary (i.e., cybernetic-international) character becomes an "undisputed value".

iii *At the same time* in which the mathematized universe of nature (i.e., "B nature", namely, the mathematical production of the universe) "prevails" over the natural nature of human terrestrial dwelling (i.e., "A nature"), unconditional operativity (i.e., doing-for-the-sake-of-doing), too, "prevails" over thoughtful action (i.e., the knowing-for-the-sake-of-doing, in turn, governed by the freedom of knowing-for-the-sake-of-knowing).

iv *At the same time* in which experience without the aid of intuition is "accepted", experiment-driven performativity, too, is "accepted" as the sole criterion of truth.[50]

v *At the same time* in which the sphere of exactness unleashes the progressive unfolding of technicized science through the nature-expelling nexus of model and experiment, the subjugation of "A nature" by "B nature" sets in, by virtue of which the latter uses the former for data mining while at the same time exploiting it for the extraction of energy.

The time of this five-times-mentioned "at the same time" is the timeless "all-the-time" and "always" of technicized science. That time is the perennial instance of the withdrawal of *scholē*, i.e., of "the truce" for the measured encounter of "sense" and "human sensing"; the perennial instance of the most comprehensive of all cybernetic circuits, namely, the circuit involving the computable senselessness, on the one hand, and sense-deprived human computation, on the other. Hence, we can call the time of this circuit of all circuits "cybernetic instance". In this instance, the menace hanging over science finds its ultimate structure, where "ultimate" means: that which must be reiterated forever. This reiteration is the peculiar eternity which is proper to cybernetics and the sciences which are unified under its "menacing rule".

5.4 The threat to the menace[51]

What is a menace? Answer: the manifest (open, patent, flagrant) imminence of (an) evil. The persistence of that imminence (i.e., the persistent "hanging over

[science]" of the menace) tends to reinforce itself into a definitive permanence: it tends to "eternalize" itself, it "longs for (its own] eternity". However, while evil as such wills to keep man "under the (eternal) menace of evil", it cannot avoid "producing" the expectable manifestation of the circumstance that "eternal evil" (i.e., the menace itself) is a phenomenon characterized by intrinsic *finitude*, to wit, by a beginning and an end. Put differently: as soon as "eternal evil" is recognized as such, it reveals itself to be finite, and therefore "from its beginning" and "out of its beginning" liable to end; however, the end of evil is its giving way to goodhead.[52] Seeing how evil reveals its finitude, in the very "act" of making itself known as eternal, leads to the following insight regarding the essence of a menace (which is formulated here as a question): *What is a menace if not a (heard or unheard) call to, and recall of, the expectation of (a) good?* That recall will be perceived by human thought in the moment in which the pretended eternity of evil is revealed to be, in truth, a vain effort to "play out".

What we have been referring to as "the menace which hangs over science" (and which, as we have said, is more properly named "the menace-*through*-science") is a menace in the sense now outlined. Therefore, as long as technicization determines the unfolding of science – i.e., as long as science firmly and perceivably stays on the track of technicization – an awareness of the imminent evil of de-philosophization and of its "will to eternity", *hence also of its ending*, can arise: in this "instant of truth" scientific thinking itself would realize the end of its "foundational autarky", and experience a crisis which hands it over to the necessity of a new, "post-technical" foundation – an affranchisement (which is also a healing, a recovery) from the metaphysical sphere of technicity, and, ultimately, from technicity itself. This instant would open up the scope of an unprecedented dialogue between the scientific and the philosophical traditions:

i a dialogue which would not be "an honest exchange" (be it on equal or unequal terms), nor "a hard negotiation" (concerning the terms of a settlement), nor "a dialectical debate" (revolving around the definition of scientific terms), nor "a productive interaction" (leading to inter- or transdisciplinary determinations);
ii a dialogue whose promise would be rather different from the "promises of science" (i.e., the promises entirely contained *within* the "forward-pressure" of the cybernetic instance), but not for that reason "unreal", "unsubstantiated", and "chimeric" – in short, not merely "a philosophical revery";[53]
iii a dialogue finally freed from the forced, value-driven, cybernetically steered progressiveness of technicization, and hence capable of a true foundational engagement;
iv a "scholarly" or "scholastic" dialogue, to wit, an open-ended dialogue unfolding in the element and spirit of *scholē* (or, which is the same, in the spaciousness bestowed by the death of the God-Will) and finally, and for the first time, focused on the issue of the production of the cognizable, to wit: on the provenance and implications of that production and the to-come which that provenance holds in store.

5.4.1 The evaluation machinery as the seal of the de-philosophization of technicized sciences

Against the backdrop of this "scenario of promise", our thesis can be stated as follows: *the Evaluation Machinery operates in such a way as to thwart the (explicit) promises of technicized science, and also, therefore, and in the first place, the (implicit) promise of the mentioned "scholastic dialogue" and "healing"*.

Given that those promises carry what we have called "the menace of de-philosophization" and "the menace-*through*-science", the Evaluation Machinery can be designated as "a threat *to* the menace".

Insofar as that machinery wrests any residual scientific truth from the menace-*through*-science, it seals (or "immunizes") the de-philosophized technicized sciences against the awakening of a new awareness, and the opening towards a fertile dialogue with the kind of thinking which attempts a diagnosis of the technical imprint of our epistemic tradition.

In short, *the Evaluation Machinery is the tombstone of the wholesome trait (i.e., the trait of "goodness") borne by the menace which reigns at the core of technicized science; the very trait which is arguably the most "lovable" trait of scientific inquiry as we know it.*

How does this "wresting the truth from the menace-*through*-science" take place? First and foremost, by applying (to scientific research) "procedures" and "criteria of scientificity", which are not only a-scientific but also counter-scientific.

On the one hand, the procedures and criteria of the Evaluation Machinery are a-scientific in that they are instances of the aforementioned "absurd" and "idiotic" practices of "technicized *atechnia*"[54] or "ill-technism" (unsurprisingly, the "cognitions" they produce – for instance, the H-index as a proxy for scientific rank – can hardly function in a scientific circle of theory and experiment); on the other hand, they are counter-scientific in that they threaten and finally annihilate the menace which hangs over science, and with it the truth of any scientific endeavour. In one word, the procedures and criteria of the Evaluation Machinery are a peculiar "freak of nature", namely "a freak of technicization", by virtue of which the relation between "B nature" and "A nature" is obliterated, thus becoming unreadable, or unintelligible, for good. If technicized science is no longer a "bringing to light", but rather a "setting in the light", evaluative practices can, in turn, be seen as a "framing in a counterfeit light". If planetary science is firmly set on the track, or orbit, of technicization, the Evaluation Machinery is a derailment from that track or orbit, and as such an "extravagant" and "exorbitant" prevarication of technicized science itself, which, as a consequence, is condemned to a definitive de-philosophization. The image of this definitive de-philosophization is seen in the endlessly iterated, wearyingly excruciating rounds of "quality assessment exercises" in which whatever of scholarly inquiry survives is confined. How else but with the word "freaky" would we define a system which claims to serve "scientific excellence" by creating an enclosure in which any scientific word, argument, or truth is strictly prohibited from being read as such; in which any hope for "the appearance of the true" is forever suppressed?

The procedures and criteria of the Evaluation Machinery *arbitrarily arbitrate* in the domain of reasoning through values (ratiocinating) without being themselves capable of such reasoning, or even of "true opining (through values)". Their computations and assessments are forms of mechanized or idiotized ratiocination. The latter deals with figures (i.e., indices, parameters, benchmarks, etc.) which merely fake the character of values, when in fact an evaluative process lacks the theoretical capacity which is required to produce the values on which the ratiocinating of technicized sciences is based. Those same procedures mimic the structure of cybernetic circuits ("plan – do – check – act"). However, the way in which they steer scientific processes does not empower but rather disempower "the progress of science" by framing the scientific enterprise – in all seriousness – as a casting for a grotesque freak-show.

To shed further light on the relation between the reasoning of technical science, the ratiocinating of technicized science, and the computational practice of the Evaluation Machinery, let us ask the following: On what is the *reliability* with which science is credited based, given the persisting problem of foundation – a problem which the Evaluation Machinery may be able to mask for some time but certainly not solve?

The reliability of scientific practices and results, thus the promotion of scientific progress, is supposedly assured by "consensus"; first and foremost, the consensus of "the scientific community". What, however, does "consensus" mean?

Generally, consensus is an agreement (primarily and mostly tacit) based on the shared recognition of what shows itself as, or is, evident. If we take the perspective of the latter, this can be presented as follows: what shows itself – i.e., "a sense" – is *in need of* and calls for human recognition or assent; the human capacity for recognition or assent is thus called into the openness – i.e., the "space of evidence"– of that sense. Those who access that space by virtue of their inquiring, investigating, researching assent, find themselves to be simultaneously experiencing, and, to an extent, understanding, a sense. In other words, a likely consensus (on a sense) is offered to be joined and shared by human recognition. Those who participate in that – in principle "open" and "shareable" – consensus, may then, "in the interest of the advancement of knowledge", engage in the elaboration and development of what they consent on. One way of framing this process of knowledge development is Kant's argument on "the public use of reason" (of which today's notion of "open science" is an operative derivation).[55]

As we can see, the likely consensus generated by a sense in need of recognition or assent is the basis for the agreement or disagreement between scholars, who are "peers" by virtue of their previous assent to that sense. Examples of such a sense, as a basis for a likely and needed consensus, are the very notion of scientificity (in relation to the cognizable and the limits of cognizability); the understanding of truth in its perennial contrast with the different aspects of falsehood; the concept of nature in opposition to art; the relation between human beings and nature itself; the finitude of human existence, opposed to the immortality of divinities; the unfathomableness of the past and the intransparency (commonly framed as uncertainty) of the future; the necessity to think and project in order to build and eventually dwell on the earth, and so on.

The nature and configuration of consensus changes according to the sense which is in need of being recognized, and the openness, or "sphere of evidence", into which the respective human capacity for recognition is called. For our purposes, we can distinguish between three such configurations.

In the case of Greek *epistēmē*, the relevant sense is *physis* or *ousia*, the related openness is *alētheia*, and the implied capacity for recognition is ("logical") *nous*, that is, the Greek notion of what we understand as the perceiving mind. The resulting "consensus" is "the coalescence"[56] of unique insights in support of an understandable and always-already understood sense, which (that sense) is itself creative of the space of the coalescence that bears it. The trait by virtue of which the "always-already understood sense" creates that space is the unknownness, or rather the impregnable unknowability (or enigmaticalness), which is *constitutive* of that very sense. In short, scholars form a likely coalescence insofar as they assent to a certain sense of unknowability. (Incidentally, this original trait of unknowability, while undergoing several transformations, characterizes the entire western philosophical tradition.)

In the instance of Greek *epistēmē*, that unknowability first and foremost shows itself in the question concerning "the being as being" (see above, paragraph 5.1.1, 79 sqq.), and subsequently in all issues dealt with in epistemic theorizing, which are kindled by that first question. Those issues include, but are not limited to, the following: What are the essential traits of nature (*physis*)? What, then, are time and space, the cosmos and the sky, in relation to human existence, and what is movement in relation to rest? Moreover, what are the characters of "true *logos*", given that the essence of human existence is originally "political"? Furthermore, what is art, insofar as it consists in a task which is required for the very institution of the *polis*? Finally, what is an accomplished ("eudaimonic") human life?

Let us call the consensus generated within this theoretical, unknowability-based dimension "philosophical coalescence".[57]

In the case of technicized (i.e., de-philosophized) sciences, the sense into whose sphere the human capacity for recognition is called, is a computable cognizability (namely, of life-relevant reality), while that sphere itself, that is, the respective openness, is "the light of exactness", and the related capacity for recognition is the ability to conceive and design frameworks of computability (i.e., theories, models, experimental set-ups) and perform the kinds of computation these frameworks imply. In this context, "consensus" is an implicit or explicit *convention* concerning the operative basis for the computational cognizability of all spheres of investigation inherited from the philosophical tradition. Such cognizability is, in turn, obtained in view of the solution of problems of life (which appear in the context of the above mentioned life-relevant reality). Let us call the consensus produced within this theoretical-empirical, problem-oriented dimension "techno-scientific alliance"; the latter is intended as a proper coalition, that is, a "front", or "bloc", which joins forces with the aim of overcoming (or "defeating") the said problems.

In the case of (a-scientific and counter-scientific) evaluation, the sense which imposes itself and has the say, is the absolute necessity of rating or "quoting" any creative activity of human genius. This implies that the latter is conceived as a

mechanism for the "manufacturing", if not the "industrial fabrication", of "scientific objects", which, by virtue of their functioning in production lines aimed at value maximization and value extraction, are termed "research products". The sphere in which this sense is implemented is the truthless blinding spotlight and livid atmosphere of "the culture of evaluation". In this light, the necessary perspectives and procedures are constantly put in place in order for any creative activity to be (a) *reified* as a "product" of a – in turn reified – producer of "knowledge-output" and, on that basis, (b) *function* on the trade platforms of the planetary scientific market. The kind of recognition which is required and displayed in this peculiar atmosphere is the necessitated pre-calculation of opportunities for value-gains under conditions of continuous decrease of the balance of previously acquired credits. The reason for this is that acquired evaluative merits are not by themselves stable, but constantly need to be confirmed and "revitalized" through new efforts of value extraction. This results in a frenzy of value accumulation fuelled by a furious-desperate battle against the menace of "evaluative annihilation".

The described situation is presented, if not propagandized, and by some even "experienced", as the ultimate realm of "healthy competition" and "collective effort" at the service of the continuous, virtuous, innovative advancement of cognition in all domains, which secure the scientific grasp and control of "reality", and therefore "the improvement of life".

Fair enough.

However, *in the meantime* (a "time" which seems to lack both an in-built endpoint and the likelihood of a growing awareness with regard to that propagandized image of scientific progress), and *in the context of an unprecedented groundlessness*, the most un-, if not anti-ethical, and un-, if not anti-scientific comportments are elicited, nurtured, and cemented among those who are effectively knowledge-makers and -tradesmen (or rather, of late, makers and tradesmen of "scientifically plausible" data), engaged in a "cutthroat race" against each other; in the hasty fabrication of often repetitive "publications", skilfully customized and conveniently, if not fraudulently, "adjusted" to meet evaluative standards; in cattle trades, pacts, and plots for the occupation of ranks and positions, which are deemed to secure favourable conditions for the self-assertion as a "valorial pole". Within the Evaluation Machinery, everything revolves around values which refer to nothing but other values: everyone wants and pursues value for the sake of value, with "science" being reduced to a merely instrumental and incidental role. The always precarious dispositions which are found in this domain of coercive value-mining vary between euphoria and despondence, excitement and weariness, exaltation and frustration, militancy and indifference, supremacy and inferiority, greed and disgust.[58] To indicate the breed and the kind of relations which prevail where "the culture of evaluation" induces a form of operating that coercively vitiates, manipulates, and usurps the technicized sciences for the self-referred production and consumption of values, we can adapt a well-known Latin adage to read: *sciens scienti lupus*.

Based on this diagnosis, let us call the fundamental and mostly tacit consensus which, in the domain of the Evaluation Machinery, supplants both "philosophical

coalescence" and "techno-scientific alliance", "self-referential value-referred clustering". In other words, it is agreed that science, whether it is pursued in isolation or in cooperation, is a matter of "predatory competition". Part of this consensus is an element of (self-)censorship with respect to the following circumstance: what is tacitly assumed or overtly declared to be "inevitable" (namely, the subservience and acquiescence to pretended requirements of "accountability" and "meritocracy"[59] based on extra-scientific criteria) is, in truth, not only entirely evitable but must be refrained from if the dignity of science is to be upheld, and the lapsing of scientific life into a "natural condition" of sorts averted. However, such (self-)censorship is a consequence of not only hostile circumstances or personal idiosyncrasies but also of the desuetude of foundational reasoning in the domain of technicized science: indeed, how should one rise to speak, if adequate words are missing?

*

The Evaluation Machinery conceives scientific research exclusively as a form of value-production. The latter requires certain media or conditions, namely what is known as "scientific" or "research products". The character of such products does not consist in their value in terms of solving problems of life, but in their conformity with the self-referential procedures of the Evaluation Machinery itself: research projects and their outputs – regardless of whether they are owed to a genuine scientific endeavour or from the outset designed to satisfy the requirements of an evaluative algorithm – are "read" and computed within processes which are blind for everything but the production of value for the sake of value.

"Scientific (or research) product" is indeed a keyword of the jargon of the Evaluation Machinery. It reveals the sub-technical or ill-technical trait of the Evaluation Machinery, which is incapable of discriminating between what is in truth a memoir or a useful effect of an instance of the production of the cognizable, and what is, on the contrary, contrived for the sake of being evaluated. The consequence of this incapacity is that true technicized science will be alienated from its driving motives and intentions, and forcibly read and produced as the product of a production process which is completely unrelated to the dimension in which that same (tentative) production of the cognizable is engaged.

Thus, without being in any way aware of the technical-productive character of science, the Evaluation Machinery exclusively performs the production (via certain value-schemes) of artefacts which it calls "scientific products", while it ignores and, in this manner, punishes "honest" scientific endeavours. That a "scientific product" fed into the processes of the Evaluation Machinery is an artefact becomes clear as soon as we consider that the production process which results in such a product is at most *incidentally*, but in no conceivable manner *substantially*, related to a path of scientific inquiry. In fact, evaluators of "scientific products" constantly find themselves entangled in this unresolvable incongruity: while supposedly judging a scientific attempt, they actually implement a function of quality assurance by rating a commodity traded on the "scientific market". While producing what is, by any standard of sound "opining through values", a "zero-value", and

thus displaying its a-technical structure, the Evaluation Machinery paradoxically and involuntarily "reveals" the technical trait of modern sciences; in other words, it testifies to the menace to science by itself exerting its own malign, "science-free", and science-eclipsing threat on science. One wonders if Socratic irony – the mother of all philosophical ironies – would suffice to unmask a charade so fanciful.

The Evaluation Machinery: at once an artfully concocted and sedulously run contraption and… nothing but a (potentially fatal) farce?

5.4.2 A note on the expression "scientific product"

"Scientific products" require "production sites" and "production facilities". Such sites and facilities include what we are still used to calling "publishing houses" and "journals" (or "scientific monographs", etc.), respectively. However, have there not "always" (or at least for several centuries, and surely before the emergence of the Evaluation Machinery) been "platforms" for "publication", namely for the exercise of "the public use of reason" as a *necessary* feature of genuine scientific inquiry? If so, what would be the distinctive trait of what we have termed "production facilities" for the fabrication of "scientific products" within the Evaluation Machinery? Limiting ourselves to a succinct indication regarding "journals", we can say the following.

There are "journals" and "journals". While there may still be journals which were founded and continue to be run on the basis of a clear and well-defined scientific project and vision, which are meant to be substantiated and promoted thanks to specific scholarly contributions, other journals have had from the outset – or have acquired at some point in their existence – an entirely different rationale, namely that of control. In the latter case, the journal is run by a "command group" (supervised by an – to an extent unevaluable – "evaluator-in-chief"), which first and foremost (and notwithstanding remaining references to certain "themes" or "approaches") aims to improve and consolidate the journal's positioning on the planetary market of scientific production. Hence, that "command group" will set up and implement the production process of an "issue" with the aim of maximizing "the visibility of the journal", its "impact factor", etc., and, in general, its market share. In addition, that group might seek to obtain or maintain control over a certain "field" or part thereof, which, in turn, yields gains in terms of academic power, prestige, etc. It is, therefore, not surprising that this shift to "a corporate model" of scientific publishing implies the enlistment of an army of "reviewers", "referees", and "evaluators" (drawn from an "industrial reserve army" of value-seeking researchers), who are used to securing the "quality control" of products. No longer is the journal "a space of science"; instead, it has become "a brand" in the competitive arena of "publications" (which, independent of their accessibility, mostly no longer have "a public existence" and "a reading public", and hence are publications only in name). The higher the supply of "scientific products" coming from scholars and researchers, the higher the demand for – increasingly scarce – "scientific consultancy". Where "editors" *cannot* judge what they "publish", and designated "referees" *are not asked* to judge (even if, by chance, instead of being forced to supply hasty and arbitrary assessments, they had the competence and time to do so), the

"logical" next step is to automatize the production process by gradually introducing "AI-driven reviews" (see below, paragraph 8.7). In this system, anonymity is merely a fig leaf to suggest "seriousness", "rigor" and "objectiveness" in the choice of what passes the gates to publication – when in truth the "managerial" concept of "scientific product" is a degenerative consequence of the production of the cognizable which characterizes technicized science (for more on anonymity, see below, Chapters 7 and 8).

It is interesting to note how the described advent of "scientific products" is unknowingly acknowledged in the following dry remark by the sociologist Robert K. Merton: "For the editor(s), the referees serve their primary function in cases where papers are difficult to assess" (Merton 1973, 491). Finally, it is equally not surprising that the "shift to 'a corporate model' of scientific publishing" matches the overall corporatization of universities perfectly (see above, 77, note 13). Both occur at the behest and to the avail of the Evaluation Machinery.

5.5 An excursus on ill-technism

An in-depth analysis of the sphere of speculative and applicative ill-technism would require a study of its own. The reason for this is that the modalities of a "distorted-distorting read" are difficult to categorize due to their great variety, which ranges from bizarre to functionless, from beguiling to overwhelming, from mind-dulling to oppressing, from facilitating-enfeebling to dehumanizing. This, in turn, entails a range of emotional tenors (in German: *Stimmungen*): from a sense of confusion to disconcertment, from disarray to frustration, from despondence to desperate resignation, from sorrow to lack of eros, from boredom to weariness. This, in turn, can lead to a reaction in the form of "bitter irony" and sarcasm as well as to barely suppressed or outright violence, turned against… "nothing". In general terms, we can speak of a "technical hopelessness", which, once hardened into inertia, eventually results in a peculiar (to the present epoch) deadheartedness and apathy.

Our brief phenomenological investigation begins with a closer look at the word "ill-technism", which we coined for diagnostic purposes.

One may hear in that word a technical aspect that is somehow negatively connotated, which ordinary discourse on "technics" and "technology" may interpret in various ways (the list is far from exhaustive):

i *misappliance* – the case in which instruments, operative systems, models, theories, etc. are applied in a wrong or faulty manner;
ii *functional failure* – the case in which a technical tool never or rarely functions and thus fails to be the tool it promises to be;
iii *false labelling* – the case in which something is presented as a technical device (be it "theoretical" or "practical"), when in truth it is a fraud or an oddity at most;
iv *use-related moral collapse* – the case in which a tool fulfils its function and works as intended, but is put to a morally unsound use;

v *biasedness* – the case in which there is an undue overreliance or exclusive reliance on "technical solutions" at the expense of "human values", "meaning", "the need for transcendence", "spirituality", and so on.
vi *intrinsic viciousness* – the case in which the technical tool's sheer functioning is "evil", so that the mere fact of its employment is morally unsound, independent of the nature of the end it may serve.

While the first five interpretations of ill-technism do not pose any problems, the same cannot be said for the sixth. The reason for this is that this latter interpretation is not aligned with the common understanding of the sense of "technology", which can be characterized as "instrumental". According to that notion, "technology" is a set of tools (or instruments, or apparatuses), the employment of which is strictly embedded within a context of aims, ends, and objectives. While the tool itself is morally neutral, its uses can be morally admissible or inadmissible. Now, the case of ill-technism defined as "intrinsic viciousness" clearly contradicts the trait of neutrality: instead of recognizing that "a tool is only a tool" and that "only ends can be good or bad" (thus giving rise, for instance, to debates on so-called "dual-use technologies"), that interpretation seems to posit that certain tools are characterized by an essential wickedness, an idea which cannot be rationally justified; indeed, based on common understanding, associating a morally negative connotation with a mere tool is like blaming the messenger for the message.

Fair enough. What, however, if this conceptual framework is insufficient to grasp the essence of tools – and hence of "technologies"? In fact, the notion of ill-technism precisely implies (as does, incidentally, Aristotle's notion of *atechnia*) that the common or "instrumental" notion of technology is insufficient. The scope of that insufficiency becomes visible as the interpretive focus shifts to the "truth" of the "read" which produces, that is, unearths/discloses, the tool *as such*. Once the "theory of tools" envisages the sphere of the unearthing/disclosing read, it is no longer confined to the dichotomy of tool and end but begins to discriminate between different reads of the tool itself and the epochal transformations of those reads. The epochal form of the latter is determined by changing traits of technicity and of their "perversions", which, together, constitute what we have come to designate as "ill-technism". As mentioned before, the perversion of modern technicity assumes the fundamental forms of "speculative ill-technism" and "applicative ill-technism".

The diagnosis of this peculiar ill-technism focuses on how the read that produces the very "buildability" of certain tools constitutes a *blind* homage to the God-Will. That homage is *entirely uncoupled* from the native "technical intuition" which guides human beings in discriminating between a true, world-bearing tool, and an implement – an occasion for the unleashing – of brute will. The now thematic notion of ill-technism refers to peculiar apparatuses, which, although not "intrinsically evil" (as suggested in the sixth option provided above), owe themselves to a read which consists in an aberrant, unhinged response to the demands of "the will to life" as a guise of "the will to will". What is that read, and how can we recognize that aberrancy and unhingedness?

Apparatuses belonging to today's universe of ill-technism – i.e., ill-technical, and therefore "counter-technical" tools[60] – are characterized by the following structural trait: *while they are mandated to carry out a task or operation, their operating is designed in such a way that the relation of mandating – hence, the relation which binds a tool to human judgement – is interrupted.* When, today, we speak of "(fully) autonomous systems", we are unknowingly referring to apparatuses whose operations *are characterized by the interruption of that relation*. However, those "systems" involve no autonomy, nor indeed any kind of "nomos" (i.e., law): in truth, *they are mere automatons*. To claim that even such automatons maintain a relation to human judgement – insofar as the decision to project, produce, and finally deploy them is, after all, an act of human judgement – is to commit a fallacy.[61] For projecting, producing, and deploying a tool whose making and operativity implies the interruption of that relation is *ipso facto* a way to sever it, that is, to sever the reference to man. Ill-technical apparatuses bespeak a man-made effacement of man himself.

Examples of such apparatuses in today's universe of ill-technism – of which there are many, be they secret or freely available (or soon to be launched) on the global market, and in which artificial intelligence plays an increasingly significant role – include the following: 1. AI-driven "smart munitions" and autonomous lethal weaponry; 2. automated surveillance devices; 3. social scoring systems based on biometric data; 4. genetically engineered pharmaceuticals guided by automated data-mining; and 5. gain-of-function research in biodefence laboratories.

These apparatuses are all afflicted by a structural feature that the "moral" of dual-use not only fails to discern but actually conceals: everything that has to do with their conception, development, and employment is invariably presented as an unstoppable "progress of knowledge" at the service of life; yet, this narrative of continuous progress fails to provide a definition of life itself beyond the current notion of mere survival. *However, life is one thing, and survival another*. The former, even as an "intermediary" of the will to will, remains a *human* destiny; a venue for "the battle of gods";[62] an element which allows for vistas which announce a decision concerning the sense of "being". In contrast, the latter implies the utter absence of destiny; complete sterility vis-à-vis the very conceivability of godhead; sheer barrenness, opposed to any memory of being and its menace. Technics – be it as Greek *technē* or as modern technics – is "the drama" of life itself. Consequently, we define the mentioned examples of ill-technism as "counter-technical" precisely because they violate the ultimate purpose of technics; namely, not to reproduce life as mere survival, but to allow life itself to understand itself in an increasingly dignified and clear manner; in short: *to transcend mere survival*. Again, true technics is not aimed at "solving vital problems", when the latter refers to the design, development, and deployment of automatons for the assurance of ever more effective outcomes defined by a mere survival-function; rather, it is the ever-renewed struggle to reaffirm in words and deeds that "one does not live by solutions alone". Finally, "autonomous apparatuses" are counter-technical because their very design idea – their "read" – is existentially aberrant. It implicitly presupposes that the human being is a manipulable entity, fundamentally devoid of any grasp of meaning and thus reduced to a state of brute bestiality.[63]

We have described the Evaluation Machinery as a threat to the technicized sciences, in that counter-scientific evaluation practices cover up the menace of complete de-philosophization which hangs over those sciences. In a somehow analogous manner, counter-technical apparatuses "unknowingly" also cover up that menace, insofar as they entail two mutually related consequences:

i because of their flagrant "unhingedness", they draw public attention to themselves, thus eliciting the logic of "dual use" which, in turn, reinforces the common, instrumental understanding of technics;[64]
ii they kindle a self-referred debate in the field of applied ethics (supported and nurtured by the Evaluation Machinery itself), which, on the one hand (being based on an insufficient diagnosis), produces a merely apparent restitution and prevention with regard to feared "bad uses", all while, on the other, it contributes to consolidating the inadvertence and carelessness vis-à-vis the de-philosophization of sciences (i.e., the menace-*through*-science).

To grasp the nature and scope the aforementioned "ethical debate" better we can consider the case of "gain-of-function research in biodefence laboratories".

In this context, the European Academies Science Advisory Council states:

> In gain-of-function (GoF) studies, genes are experimentally modified to study determinants of biological function. GoF research has been highly valuable in microbiology for characterizing pathogens, particularly in support of therapeutic drug and vaccine selection and development.
>
> (EASAC 2015, v)

At the same time, the National Institute of Health points out that

> [c]ertain gain-of-function studies with the potential to enhance the pathogenicity or transmissibility of potential pandemic pathogens (PPPs) have raised biosafety and biosecurity concerns, including the potential dual use risks associated with the misuse of the information or products resulting from such research.[65]

The mentioned "concerns" have prompted a debate among philosophers from all over the world. As one of the contributions to that debate, a white paper by ethicist Michael J. Selgelid (2016) suggests eight principles, which, in combination, supposedly outline a spectrum of ethical acceptability for GOF research (GOFR); if applied, those principles should guide a researcher (or funder, or editor) in determining the position of an intended GOFR on that spectrum, thus leading to a decision as to whether the said GOFR should be carried out (or funded, or published) or not. The eight principles are summarily listed as follows:

1 *Research Imperative*. The ethical acceptability of GOFR posing extraordinary risks partly depends on the importance of the research question it aims to address.

2 *Proportionality*. The ethical acceptability of extraordinarily risky GOFR partly depends on the extent to which there is reasonable expectation that the research in question will (1) yield answers to the target public health question and (2) ultimately result in benefits that outweigh risks involved.
3 *Minimization of Risks*. Other things being equal, the ethical acceptability of a GOFR study is a function of the degree to which (1) there is confidence that no less risky forms of research would be equally beneficial and (2) reasonable steps have been made to minimize risks of the GOFR study in question.
4 *Manageability of Risks*. Other things being equal, the more manageable the risks of a GOFR study, the more ethically acceptable the study would be. Conversely, the more important/beneficial a GOFR study is expected to be, the more we should be willing to accept potentially unmanageable risks.
5 *Justice*. Because justice requires fair sharing of benefits and burdens, the ethical acceptability of GOFR partly depends on the degree to which (1) risks fall on some people more than others, (2) risks fall on those who are unlikely to benefit, and/or (3) any resulting harms are uncompensated.
6 *Good Governance – Democracy*. GOFR decision-making and policy-making should (insofar as possible) reflect the ultimate values, value weightings, and risk-taking strategies of public citizens.
7 *Evidence*. Decision-making and policy-making regarding GOFR should be based on more/better evidence regarding risks, benefits, (means of) risk minimization, who is likely to benefit or be harmed by research, and the values, value weightings, and risk-taking strategies of public citizens.
8 *International Outlook and Engagement*. Because risks and benefits of GOFR (can) affect the global community at large, the ethical acceptability of GOFR partly depends on the extent to which it is accepted internationally. Decision-making and policy-making regarding GOFR should (insofar as possible) involve consultation, negotiation, coordination, and related forms of active engagement with other countries.

(Selgelid 2016, 925–26)

While a detailed discussion of this ethical framework cannot be conducted here, we will, however, offer some critical remarks on its conceptual-phenomenological foundation.

To begin with, we notice that all mentioned principles are derived from concepts of Greek ethics, uncritically modified and adapted for the operative purpose of constructing that framework. The latter is a perspective, or *perspectival complex*, which forms (i.e., projects, displays, plots) the "ethical spectrum". For instance, the principle named "research imperative" is based on a grossly modified and adapted version of *theoria* and *telos* (end, perfection); the principle "minimization of risks" reshapes into a computational form the notions of *phronēsis* (prudence, practical wisdom) and *sophrosunē* (temperance, moderation); and so on.

The thus obtained principles have the status of "viewpoints", each of which is a qualitative value awaiting translation into a numerical index. Together, these values form the mentioned perspectival complex, which produces the ethical spectrum as the

actual tool for decision-making. The complex itself is formed by plaiting, or enlacing, the viewpoint-values with each other by virtue of a "super-perspective" capable of computationally combining them into the superordinate single point of view which produces a value on the spectrum's "continuum"; that is, the display which exhibits values ranging from "ethically obligatory" to "ethically unacceptable".

Thus, the perspectival complex is an entanglement (i.e., computationally speaking: a function) of eight basic viewpoints or underlying values. Each of these values defines an aspect of ethical acceptability; however, it does so not in binary terms, namely, based on a criterion which sharply defines what is acceptable and what is not, but in reference to a "scalar moral desideratum" (Selgelid 2016, 955), to wit, in terms of values on a scale, going from "morally desirable" to "morally unacceptable". In other words, each basic viewpoint plots its own spectrum, and the final ethical spectrum is a combinatory product (or: a function) of these spectra.

In the case of the principle of "proportionality" (an operative concept derived from the ethical-ontological notions of *analogia* and *mesotēs* ["analogy" and "the (right) mean"])

> the ethical acceptability of extraordinarily risky GOFR partly depends on the extent to which there is reasonable expectation that the research in question will (1) yield answers to the target public health question, and (2) ultimately result in public health benefits that outweigh risks involved. In any given case (depending on R[isk]B[enefit]A[ssessment] findings) we might be more or less confident that the GOFR in question will actually satisfy these two conditions. Conceived as a scalar moral desideratum (rather than as a necessary condition/criterion that is either satisfied or not satisfied) the point of this principle is that, in cases where the research poses serious risks, its evaluation should *partly* be based on the level of confidence that (1) and (2) are satisfied.
>
> (Selgelid 2016, 955)

The *first* effect of this way of framing ethical acceptability is that the assessment of "extraordinarily risky GOFR" is wrested from the domain of ethical judgement – specifically, judgement vis-à-vis the *unknowable* and the *incalculable* – and placed in the domain of computability. Furthermore, should the carefully crafted bulwark of conceptual blurriness ("answer", "public health question", "benefits", and "risks") and estimatory arbitrariness ("reasonable", "level of confidence", "ultimately", "outweigh", and "satisfied") against judgement be miraculously overcome, and a somehow justifiable value be produced, the *second* effect kicks in; namely, the established value is deprived of any discriminatory power as it will merely be a point on a scale which informs an "in-part-ethical-assessment" of the respective GOFR ("its evaluation should *partly* be based"). In fact, *there is no way of knowing* how the assessment based on the "principle" of proportionality will play out in the final assessment, that is, once it has been put in the computational mix with the remaining principles. However, this implies an ethical neutralization, the effacement of any residual ethical force

of what has been determined. Finally, the mentioned principle yields an "evaluation" in the form of an arbitrary figure, bereft of any ethical bindingness; in short: it yields (nothing but) *an evaluation*.

We could replicate this analysis for all remaining principles. Here, we will limit ourselves to a few succinct indications regarding the principles of the "manageability of risks" and "democracy".

In the case of the former, it is remarkable that manageability is even pursued vis-à-vis what is declared as "potentially unmanageable" risks; for in truth, no matter how conscientious and complete the analysis of risks and benefits, no *quantum* of benefit will ever be able to outweigh the *quality* of unmanageability, which, if admitted, *ipso facto* makes of the very notion of "manageability" a chimera. In other words, where unmanageability comes into play, risks and benefits cannot be put in relation, and a compensation between them ("higher risks for more benefits") cannot be made. We can call this a "false compensation fallacy".

In the case of the principle of democracy, one pretends that, if only a correct, well-governed participatory process is put in place, the false compensation fallacy can be overcome. However, the fact that a fallacy is democratically legitimated does not transform it into a non-fallacy; what is irrecoverably fallacious for one, cannot be recovered by way of consensus.

Analogous considerations apply to the remaining "principles".

What emerges is that all eight principles, notwithstanding their executability, are not founded and not foundable. This leads to a further consideration, which concerns the entire conceptual structure of the proposed ethical framework. As mentioned before, that structure has the form of a complex, or entanglement, of single viewpoint-values, which ultimately consists in "super-perspective". Now, it is not difficult to see how each of these viewpoints supports all the others, in the sense that the framework's conceptual integrity (i.e., the combinability and unifiability of the viewpoints) relies on the mutual tension-and-support among these points. We can call that integrity based on tension-and-support: "tensintegrity".[66] Clearly, even if just one of the eight viewpoints were to fail, the super-perspective of the framework would be shaken to the very foundations. For instance, how could the viewpoint of "proportionality" remain standing if the "manageability of risks" were not well-founded, that is, free of constructive fallacies on the conceptual level? Or, how could the "democracy"-value still remain valid and conceptually sustainable, thus capable of contributing to the "final decision" on ethical acceptability, if the phenomenological robustness and consistency of the "manageability of risks" were to collapse?

All that said, a culmination of arbitrariness and unbindingness is attained when it comes to the very notion of a super-perspectival combination of all eight scalar values, which is supposed to result in a scalar value being plotted on the ultimate spectrum of ethical acceptability. In fact, not only is that combination of the eight "in-part-assessments" virtually inaccessible to *true* ethical judgement, and hence a purely computational exercise, animated by a blind will to computation, but the outcome of this exercise will, once again, be an ethically void figure, which will itself be the object of a final (and possibly fatal) discretionary evaluation carried out in an ethical wasteland.

In conclusion, we can summarize "the points of attack" through which the counter-technical apparatuses of ill-technism produce their own ways of covering the menace of de-philosophization:

i the unprecedented disastrous scenarios elicited by those apparatuses attack the menace insofar as the dangers, risks, and uncertainties they involve contribute to impeding the arising of a proper, quiet, demure meditation with respect to that menace (in other words, they crush any seed of *scholē*);
ii the ostensible dual-use dichotomy attacks the menace insofar as it reinforces the instrumental understanding of technics and in this manner distracts and shuts out human thought from perceiving and considering what occurs in the dimension in which "reads", and the worlds they shape, are engendered;
iii the ethical debates around those apparatuses attack the menace by generating values (such as those on "the ethical acceptability spectrum") which are entirely detached from the (menaced) roots, hence from the true ethical scope, of scientific discourse;
iv those same debates attack the menace by virtue of their "valorial nativity": on the one hand, they are themselves evaluation procedures of sorts (with their own way of sterilizing any truth-based consideration); on the other, they are tied to the Evaluation Machinery in a relation of mutual aid: while the latter provides those debates with a scientific credibility, those same debates shed a light of "moral nobility" on what is nothing more than a matrix of computational exercises. Thus, as counter-scientificity acts as a science-maker, ethics-poison performs as an ethicizer.

Notes

1 (Bacon [1620] 1998, 108, I, LIX). We are thankful to Jürgen Gedinat, whose illuminating essay (Gedinat 2025) pointed us to this and other passages of the *Novum Organum*.
2 It is important to note that the word *epistamenos* does not designate a mere aptitude or productive social role but an epitome of *epistēmē*, hence someone who never ceases to learn to be what he is.
3 Cf. Heidegger ([1954] 1990, 48).
4 On the metaphysical presuppositions underlying the Aristotelian concept of *epistēmē* as the name of philosophy, see Zaccaria (2025).
5 Regarding mathematics, a recent development by Alexander Grothendieck claims to have "overcome" this incapacity typical of "the sciences". This would be a mathematics that thinks itself mathematically, that is, a mathematics capable of making its own form of knowledge appear through that very form. It would, therefore, be incorrect to call it meta-mathematics: its "true" title would be "pure mathematics".
6 Here the adjective "political" refers to the philosophical foundation of the *polis* as such. When we speak of the "politicization" or "policyzation" of science, the same adjective refers to the powers that be, the forces which rule and shape our societies.
7 In a sense, ancient medicine saves man's *being* (i.e., his humanity), while modern medicine saves man's *life* (i.e., his survivance). Ancient men (can) die, modern men (must) survive.
8 In ancient Greek, the word *atechnia* commonly denotes a lack of productive skill, an absence of creativity in art. Aristotle assigns it a particular phenomenological meaning.

The topic of *atechnia*, or rather "ill-technism", will be discussed extensively below in paragraph 5.5.

9 For more on the themes and motifs of this paragraph, see Zaccaria (2021, 265–80, 273–87, 291–98) and Zaccaria (2022, 110–15, 129–33). See also Heidegger (1976, 239–301).

10 The expression "always-already" indicates a relation of ontological precedence. The same relation is indicated by the expression "a priori".

11 The kernel of the just mentioned point can be formulated as follows: in Aristotle, it is *epistēmē* which draws the distinction between itself and *technē*, thus suggesting that the former, by virtue of its more fundamental power of definition, shapes the character of the latter. However, it turns out that, as *epistēmē* is drawing the distinction between itself and *technē*, it is in truth already informed by the technical trait which we have been calling "technicity". In other words, *epistēmē* is itself "techni-form" (i.e., it is determined by, or has the structure of, *technē* in Aristotle's understanding). Hence, it appears that it is that very trait which reigns – unbeknownst to Aristotle and the entire metaphysical tradition – over the notions of *technē* itself, of e*pistēmē*, and of their distinction. In order to fix this insight, we have from the outset (see above, 10, note 5) seen it fit to designate *epistēmē* as "epistemic technicity", and *technē* as "poietic technicity". In brief, "technicity" is for us a diagnostic word that names the fundamental trait which gathers into the same genealogical (or "genesic") unity the ancient and the modern style of knowing reality in all its facets, or, in philosophical terms, the ancient and the modern "theory of the being of beings".

12 On this interpretation of Aristotle's phenomenology of time, see Zaccaria (2022, 116–28) (an English translation appears in De Gennaro and Zaccaria [2025]). The heritage of the Aristotelian determination of time runs through the entire tradition of philosophy up until Husserl's *On the Phenomenology of the Consciousness of Internal Time (1893–1917)* and beyond (see De Gennaro [2023]).

13 For the neologism "techni-form" see above, note 11.

14 The source of this outline can be found in the analyses and reconstructions contained in the two volumes of Heidegger (1961).

15 Relevant sources include Augustine's contemplation of divine creation, as laid out (to mention just one of many instances) in the admirable passage of *De civitate Dei* (5, 11) entitled *Deus omnia disponit* [God's divine providence, to which everything is harmoniously fitted] (Agostino 1978, 352–54). An echo to this passage can be found in article 2 of *quaestio* 22 of Thomas Aquinas' *Summa Theologiae*, which is entitled *Utrum omnia sint subiecta divinae providentiae* [are all things subjected to divine providence?] (d'Aquino 2014, 291–95).

16 Relevant sources include Descartes' *Discours de la méthode* (Descartes [1637] 1996), Leibniz's *Principes de la nature et de la grace fondés en raison* (Leibniz [1714] 1982), as well as Kant's *Kritik der reinen Vernunft* (Kant [1781] 1990), *Prolegomena zu einer jeden künftigen Metaphysik* (Kant [1783] 1993), and *Metaphysische Anfangsgründe der Naturwissenschaft* (Kant [1786] 1997).

17 Decisive references include Bacon ([1620] 1998), Galilei ([1623] 2008), Galilei ([1632] 2003), and Newton ([1687] 2021).

18 On the issue of the mathematical project of the world, interpreted through the Nietzschean dictum about "the victory of method over science", see Heidegger (1983, 153–54).

19 This mode of production combines traits of what we have called "mathematical technicity" with elements of what we have termed "logistical technicity". Every modern scientist is, in a sense, "an engineer of reality".

20 See above, 10, note 5, and 130, note 11.

21 For further discussion, as well as for the general source of this sub-paragraph, see Zaccaria (2022, 65–95). The English translation of this text appears in De Gennaro and Zaccaria (2025).

22 A certain "before" is always only the qualitative indication of a "preceding", of a precedence: the individual does not grasp it immediately as a quantity; and so a certain

"after" indicates posteriority only qualitatively: *in itself* it does not say *how much* time has elapsed, but indicates only the quality: "elapsed time"; the trait: "elapsing").

23 The following passage from Bacon reveals a surprising consonance with Einstein's position: "In the categories there is nothing sound, neither in the logical nor in the physical ones; substance, quality, action, passion, being itself, are not fit categories". The term "category" here translates the Latin word *notio*, in the peculiar sense of notions abstracted from matters of fact (or from states of things [*a rebus*]) according to the transcendental way, and therefore not obtained adequately, which is why Bacon defines them as "aberrations" (*aberrationes*) and as "fantastic" and "badly defined" ("sed omnes phantasticae et malae terminatae") (Bacon [1620] 1998, 82, I, 15–16).

24 What is "not measurable" fails to comply with (quantitative) measurability as required by the injunction that wills computability: it is a defective *measurable* entity, rather than an a-measurable entity, that is, an entity in principle *alien* to being (quantitatively) measured. Note that the term "measure" here does not refer to the concept of measure as employed above in reference to *physis* and *poiesis* (such as, for instance, in the expression "letting appear or releasing *into a measure*"). We can call the (qualitative-quantitative) measure "*dimensional* parameter", while the (physical-poetical) one can be designated as "*dimensioning* meter").

25 On the notion of "dead line" see Chapter 3, 61, note 21).

26 Indeed, in no way does Einstein repudiate the freedom of concept creation, which he also describes as "free play with concepts"; on the contrary, he explicitly acknowledges its relevance for the cognitive endeavours of mathematical physics. However – and this is the decisive point in the present context – he conditions the legitimacy of this kind of play on the degree of orientation it provides in relation to "lived experience" (Erlebnis), as becomes clear from the following passage: "The justification for this play lies in the measure of survey over the experience of the senses [i.e. the "lived experiences"] which we are able to achieve with its aid." For this reason, he adds, the concept of truth "cannot yet be applied to such a structure", but can only come into question "when a far-reaching agreement (convention) concerning the elements and rules of the game is already at hand" (Einstein n.d., 7–9). See below, 133, note 50, on the violation of the principium magnum. (Note that the term Erlebnis is used by Einstein for the purpose of concocting a notion instrumental to the mathematical fabrication of human experience, and thus of the human being as such. Notions of this kind – rather than concepts "in general" – are the "cognitive ingredients" of the Einsteinian "free play with concepts".)

27 Here is the full text of one version of this argument:

> Indeed, as Aristotle says in the *Protrepticus* he wrote down, in which he exhorts the youth to do philosophy – he says this: if you should do philosophy, you should do philosophy, and if you should not do philosophy, then you should do philosophy. Therefore in every case you should do philosophy. For if philosophy exists, then positively we are obliged to do philosophy, since it truly exists. But if it does not truly exist, even so we are obliged to investigate how it is that philosophy does not truly exist. But by investigating we would be doing philosophy, since to investigate is the cause of philosophy.
>
> (Elias, *Prolegomena to Philosophy*, 3, lines 17–23 [ed. Busse], quoted in Aristotle [2017, 4])

28 For more, see below paragraph 5.5, 122 sqq.

29 Edelman lists these references in a series of videos which can be accessed at Edelman (2017).

30 See point v in paragraph 5.2.1, 90.

31 This is an application to perception of a more general principle which goes as follows: "The simple cannot be reduced to the complex".

32 While both LEPTOP and LETTOP explicitly draw on our understanding of Leibniz's thought, the designations and formulations are ours and should not be attributed to Leibniz himself.

33 The language recommended by the UN to refer to individuals ordinarily classified as "(the) blind"/"blind people" or "(the) deaf"/"deaf people" bespeaks the embarrassment caused by such expressions. Saying (as the UN suggests) "person with visual impairment" or "person with a hearing disability" appears as a halfhearted, "technical" attempt to overcome this embarrassment. Indeed, the term "impairment", freed from its "technicity" (i.e., from being a technical expedient), indicates genuine difference ("im-pair") while preserving equality with regard to the same, which is the *integrity* of the capacity for seeing/hearing. Aren't we all, in this sense, equally "impaired" with regard to our seeing and hearing, and in general to our sensuality? Moreover, as long as our "abilities" are intended as "potentials" and "positive power-values", we appear to be divided into those who are "enabled" and those who are "disabled". By contrast, if we understand our "abilities" (including the ability to see and hear) as forms of our capacity to exist as humans within a human coalescence, we realize that we are all together involved in the struggle with our constitutive, multifarious lack of ability, with the countless disabilities we exhibit as mortals. See https://www.ungeneva.org/sites/default/files/2021-01/Disability-Inclusive-Language-Guidelines.pdf.

34 This "will" is reminiscent of the will "to be an ununderstanding animal" mentioned by Fichte (see above, 59 [note 11]).

35 For a more extensive discussion of the neuroscientific approach to language, see Zaccaria (2014). On language, see Heidegger (1985), as well as De Gennaro (2016, 37–52) and Zaccaria (2021, 134–36).

36 See above, paragraph 5.1.2.2, 85 sqq.

37 See above, paragraph 5.2.1, 89 sqq.

38 The loci in the *Corpus Aristotelicum* where the question of the "One" is variously addressed are essentially the following: *Physics* I.2–5; *Metaphysics* I.1–8; IV.2; V.6; VII.16; X.1–7; XIV.1–6. Particularly noteworthy are Chapters 2–3 of *Physics*, Book I, in which Aristotle presents a rigorous "categorical" refutation of the thought of the "One" in both Heraclitus and Parmenides (as well as in Melissus and others).

39 This passage on numbers, taken from Bacon, is notable in this context:

> No one should fear [be anxious about, be frightened of] multiplications and fractionings. For, in matters which are carried out through numbers, it is easy to set or think both a thousand and a one, either a thousandth of the one or the one in its entirety.
>
> (Bacon [1620] 1998, 258, II, 8)

40 This sub-paragraph draws on partitions 75–80 of Heidegger (1989, 144–66).

41 We can also hear an echo of this passage in the following statement from Bacon's *Novum Organum*: "Optime autem cedit inquisitio naturalis, quando physicum terminatur in mathematico" (Natural inquiry proceeds optimally when the physical is defined in the sphere of the mathematical) (Bacon [1620] 1998, 258, II, 8).

42 In this passage, we seem to find yet another antecedent of Einstein's position with regard to (Kantian) philosophy.

43 The historically observable transition from medieval *doctrina* to Cartesian, Galilean, and later Newtonian science – a transition which paves the way for technicized modern science – is due to an "epochal" transformation of the sense of what it is to be "a being" (hence, of being-a-thing, being-a-world, being-a-human, and being-a-god). By virtue of that transformation, "being" no longer means a creature as a work of the *Deus Creator* (who is, therefore, called *Omnipotens Deus* and *Summum Ens*). The primary trait of "a being" becomes its availability to be represented, that is, to be produced-here-before, so that it may be fixed in view of its (mathematical) investigation. In short, something is properly "a being" only insofar as it can assume the form of an "object" (*obiectum*). As

a consequence, the relation between man as the knowing "subject" (*subiectum*), to wit, as "the scientist", and beings, becomes characterized by the following four traits, all of which imply a sense of "action" (namely, an action on the entirety of things, including man): 1. the ability to proceed in the midst of beings (i.e., the trait of *procedurality*); 2. the intimate knowledge of beings (i.e., the trait of *penetrability*); 3. the conquest of beings, their reduction to tools, the control over their inner motility (or mechanism) (i.e., the trait of *dominability*); and 4. the project and provision of beings (i.e., the trait of *availability*). In these four traits, we recognize the conditions of the genesis of modern sciences and technologies: they are, ultimately, the four "ontological pillars" of "B nature" as it towers above its hidden provenance – or, we might say, its "unwitting mother", namely "A nature".

44 Arguably, "ratiocination" is Leopardi's word for what, in the terms of the present diagnosis, would be indicated as "the production of 'B nature'". If, instead of "A nature", we say "(horizon of) phenomena", and understand the production of "B nature" as a way to "look behind" "A nature", which (that looking) first and foremost (and for good) obliterates the latter, we can comprehend the following maxim taken from Goethe's *Maximen und Reflexionen* (Goethe [1833] 1976, 116n575). "Look for nothing behind phenomena: they themselves are the teaching and the lesson". – "A nature" is, therefore, the nature of poets and artists; on this subject, see Zaccaria (2021, 52–111), and Zaccaria (2022, 171–88).

45 Cf. Wiener ([1948] 1961).

46 "Feedback", here, is a comprehensive name for the structure of "cybernetic conscience", which requires that data be constantly fed back to man as the entity which validates the truth of reasoning through values. Man's need to be fed with information is, in fact, the need that man constitute himself as the (subjective) medium for the formation of cybernetic conscience. Feedback in this comprehensive sense is the matrix of a variety of cybernetic loop structures, such as feedback (in a strict sense), feedforward, recursion, reflexivity, and so on, as well as the above-mentioned reentry.

47 On cybernetics as the "new unifying principle" of today's sciences and their consequent de-philosophization, see Zaccaria (1999, 25–109).

48 The "broader domain of sense", to which we are here alluding, is what phenomenological thought calls "being itself", namely, so to speak, *the generative principle* which gives rise to the different positions of the philosophical tradition, hence also to the respective conceptions of science.

49 "Non-divine origin" means that this "will" is not originated by "the will of a god", but rather itself the origin of the God-Will.

50 The character of intuition is a constitutive trait of any human (i.e., thinking) experience. Intuition is "the eye of the mind" – the eye which is devoted to what is true as different from what is false, to what is good as opposed to what is evil, to what is worthy in contrast to what is unworthy, and so on. It can be shown that intuition in this simple and original sense is the source of what has been determined as logical principles of knowledge throughout the entire philosophical tradition (e.g., the principle of noncontradiction, the principle of identity, the law of excluded middle [*tertium non datur*], the law of reason and consequent, or law of sufficient reason). Forsaking intuition implies a violation of the previously mentioned "first principle" or *principium magnum* (see above, 94). For that principle is precisely the firstness, the initial gift, or boon, of intuition (or awareness), without which no sound, humanly meaningful knowledge and cognition is conceivable. Hence, any presumed "knowledge" which flows from the violation of that principle, from the ungratefulness vis-à-vis that gift or boon, hence from a fundamental carelessness, will be "unaware" and "irresponsible"; to wit, it will be deprived of an ethical sense or "compass". Finally, the lack of ethical orientation is the ominous light cast on the world by the menace which hangs over science. Where intuition is forsaken and carelessness reigns, there is no awareness of the menace. Hence, the following

warning for future humanities can be formulated: "Beware of the intuition-snatching God-Will!". (Arguably, Einstein's statement:

> For even if we agree and hold for certain that concepts cannot be deduced from lived experiences by logical means (or otherwise), but are, in a sense, free creations of the human mind, nevertheless those concepts are just as little independent of the <respective> kind of experiences as, say, clothes are of the form of human bodies.
>
> [see above, 92]

attests a violation of the *principium magnum*, an objection to the boon of intuition. How can "free creations of the human mind" (i.e., intuitions), *once admitted and received* ["even if we agree and hold for certain…"], be violated, objected to, and silenced ["nevertheless…"]? The only "justification" of such an unspeakable violation is that it responds to a true mandate, namely, in this case, a mandate of the God-Will. That mandate incites the negation, or repression, of what has already, and irrevocably, been said, shown, given; in one word, it incites violence. – *Nevertheless*…). (Regarding "free creations of the human mind" see the comment above, 131, note 26, on the "free play with concepts".)

51 This paragraph finally provides an analysis of the clash of "menace" and "threat", which was announced at the beginning of Chapter 2 (see above, 25). By now, it should be clear why it was necessary to prepare this analysis through an investigation of time (which is, in truth, the hidden "leitmotif" of this book) and its relation to value.

52 The instant in which evil is recognized as such (i.e., in its will to eternity and *as* eternal will to will) is *ipso facto* the instant of its (beginning) dissolution. *Ecce malum: ecce bonum!*

53 Concerning the promises of technicized science, we could speak of something like "scientific rhetoric". The latter consists in presenting scientific research as an engine of progress and innovation aimed at the improvement of the so-called "quality of life". This, in turn, forms the basis of the persuasiveness of the claim that science is the most – if not the only – reliable guide and orientation for the future of the earth. Why does global common sense accept this promise as something unquestionable, while the promise of the mentioned dialogue between the tradition of scientific and philosophical thinking is the object of refusal, disapproval, scepticism, and despondency? In what way do these reactions – which can be referred to collectively as instances of an immediate and unargued repudiation – bespeak what we could call "a true love for science"?

54 See above, 85, and below, 123.

55 For a more detailed discussion of this Kantian argument, see below, Chapter 7, 167.

56 "Coalescence" (i.e., cohesion, the union of diverse parts) is formed from the verb "to coalesce" (from *cum*, meaning "with", "together", and *alescere*, meaning "to grow"), which indicates a close unification, and, in the present case, a gathering into the pressing need and concerning claim of the openness of a sense, namely, its need of being acknowledged and borne as such.

57 "Philosophical coalescence" is mentioned in our translation of a passage from Plato's *Theaetetus* (see above, 58).

58 Unsurprisingly, these dispositions, typically found in the domain of evaluation, are akin to those which characterize the domain of "technicized *atechnia*" or "ill-technism" (see above, 10, note 5): both domains comprise productive behaviours which fall short of genuine technicity. Based on the previous discussion of the machinal trait (see above, Chapter 1, 12 sqq.), arguably the more stable and, in a sense, definitive disposition of technicized science is boredom.

59 The word is in quotation marks not only because it is cited from the jargon of the Evaluation Machinery, but first and foremost because what "merito-cracy" fatally comes down to is *kratos*, that is, not genuine force or vigour, but brute violence, namely against merit itself; indeed, an examination of "scientific products" (which can only be evaluated) on

their merits (which are the object of a judgement) is a contradiction in terms. In other words: meritocracy, here, is the name for a regime in which "getting to the merits" is in principle prohibited.

60 We shall not list here the entire arsenal of atomic and thermonuclear weapons; their ill-technical trait is, to our minds, manifest.

61 This fallacy holds independent of the position one might take in the discussion about the so-called "automation bias".

62 One of these battles is the one between the Goddess-Sooth and the God-Will (see above, 36).

63 "Brute bestiality" is a distinctively human state (or: a state of humanity). Here, "brutality" does not indicate something like extreme savagery, nor is "bestiality" to be intended in the sense of Fichte's "animality" (see above, 59, note 11). Rather, "brutality" refers to the humanity of man "brutalized" by the proximity of, and interaction with, the automaton masked as an "autonomous system". In turn, "bestiality" refers to the voracity for lifeless life. The above-mentioned "implicit presupposing" obtains its validity and force from the master plan for the fabrication of a "new humanity", whose unspoken, guiding maxim sounds as follows: *homo est brutum bestiale* (man is something bestial and brute).

64 To show the profound difference between phenomenological judgement and evaluating based on the logic of dual use, it suffices to compare a rapier with a pistol. If evaluated in the constraining perspective of instrumentality, both appear as weapons that remain "ethical" only as long as they are used as a means of defence. By contrast, if considered phenomenologically, and obviously leaving aside the case of defensive use, the rapier is constitutively "ethical", whereas the pistol violates any ethicality. The first, as it were, requires that the human being's "dancing body" come into play. In a hand-to-hand duel, both duelists advance to strike each other, and they strike each other as they retreat, all while remaining in a peculiar closeness. They are thus united, simultaneously gathered in the element of danger, which generates a coalescence informed by respect and loyalty. By contrast, a duel with pistols does not involve any kind of coalescence: it imposes on the human body a calculating posture, for which the other individual is merely a target that must be hit in the most insidious and expeditious manner; in sum, the other is a "thing" bereft of human looks. Finally, death given with the sword has nothing in common with death inflicted by means of a gun. Hand-to-hand duelists are mortal, and firearm duelists are doomed to death.

65 https://osp.od.nih.gov/policies/national-science-advisory-board-for-biosecurity-nsabb/gain-of-function-research/ (accessed February 23, 2025).

66 "Tensintegrity" is a modification of "tensegrity", a contraction of "tensional integrity" proposed in an architectural context to indicate the combination of the traits of "tension" and "integrity" (Buckminster Fuller 1979, 637–737). It can be shown that Edelman's table of conscious states (see above, 97) also relies on "tensintegrity", and it will consequently disintegrate should any one of its elements prove to be phenomenologically untenable.

Bibliography

Agostino. 1978. Opere di Sant'Agostino. *La città di Dio.* Vol. 1 (Libri I-X). Testo latino dell'edizione maurina confrontato con il corpus christianorum. Introduzione di A. Trapè, R. Russell, S. Cotta. Trad. di Domenico. Gentili. Roma: Città Nuova Editrice. [This edition of *De civitate Dei* is composed of three volumes, which are part of a complete edition of Augustine's writings (*Nuova Biblioteca Agostiniana*).]

Aristotle. 1894. *Aristotelis: Ethica Nicomachea*. Edited by Ingram Bywater. Oxford: Clarendon Press (Oxford Classical Texts).

Aristotle. 1924. *Aristotelis Metaphysica*. Edited by W. D. Ross. Oxford: Clarendon Press (Oxford Classical Texts).

Aristotle. 1950. *Aristotelis Physica*. Edited by W. D. Ross. Oxford: Clarendon Press (Oxford Classical Texts).

Aristotle. 2017. *Protrepticus*. Edited and translated by D. S. Hutchinson and Monte Ransome Johnson. Accessed April 28, 2025. https://www.fragmentarytexts.org/2013/03/protrepticus-a-reconstruction-of-aristotles-lost-dialogue/

Bacon, Francis. (1620) 1998. *Nuovo Organo – Novum Organum*. Introduzione, traduzione, note e apparati di Michele Marchetto. Milano: Rusconi.

Buckminster Fuller, R. 1979. *Synergetics: Explorations in the Geometry of Thinking*. London: Macmillan Publishing.

d'Aquino, Tommaso. 2014. *La Somma Teologica*. (Prima parte) Testo latino dell'Edizione Leonina. Traduzione italiana a cura dei Frati Domenicani. Introduzioni di Giuseppe Barzaghi. Bologna: Edizioni Studio Domenicano. [This edition of *Summa Theologiae* is composed of three parts divided in four volumes: the first part, which contains the quoted text, coincides with the first volume.]

De Gennaro, Ivo. 2016. "The Way We Speak". In *Paths to Dialogue: Interactions between Eastern and Western Cultures*, edited by Hans-Christian Günther, 13–84. Nordhausen: Verlag Traugott Bautz.

De Gennaro, Ivo. 2023. "Ethics of Musical Time (Celibidache, Husserl)." *New Yearbook for Phenomenology and Phenomenological Philosophy* XIX: 205–31.

De Gennaro, Ivo, and Gino Zaccaria, eds. 2026. *Philosophy, Physics and Mathematics in Dialogue on the Riddle of Time*. Berlin-New York: De Gruyter.

Descartes, René. (1637) 1996. *Discours de la méthode & Essais*. Vol. VI. *Œuvres de Descartes*, publiés par Charles Adam et Paul Tannery. Paris: Vrin.

EASAC. 2015. Gain of function: experimental applications relating to potentially pandemic pathogens. (Policy report 27. October 2015) Accessed February 12, 2025. https://www.leopoldina.org/uploads/tx_leopublication/2015_EASAC_GOF_Report_complete.pdf.

Edelman, Gerald M. 2003. "Naturalizing consciousness: A theoretical framework." *Proc Natl Acad Sci USA* 100 (9): 5520–4. Accessed April 30, 2025. https://www.pnas.org/doi/10.1073/pnas.0931349100

Edelman, Gerald M. 2004. *Wider Than the Sky: The Phenomenal Gift of Consciousness*. New Haven: Yale University Press. Accessed April 30, 2025. https://silo.pub/wider-than-the-sky-the-phenomenal-gift-of-consciousness.html

Edelman, Gerald M. 2017. Playlist of 86 videos posted by Web of Stories - Life Stories of Remarkable People. YouTube https://www.youtube.com/playlist?list=PLVV0r6CmEsFwfn8yTKeVwA9CcyjZphj9f

Edelman, Gerald M., and Joseph A. Gally. 2013. "Reentry: A Key Mechanism for Integration of Brain Function." *Front. Integr. Neurosci.* 7: 1–6. Accessed April 30, 2025. https://www.frontiersin.org/journals/integrative-neuroscience/articles/10.3389/fnint.2013.00063/full

Einstein, Albert. (1954) 2002. *Grundzüge der Relativitätstheorie*. Berlin-Heidelberg-New York: Springer.

Einstein, Albert. n.d. "Autobiographical Notes". In *Albert Einstein: Philosopher-Scientist*, Vol. VII of The Library of Living Philosophers, edited by Paul Arthur Schilpp, 2–94. New York: MJF Books.

Galilei, Galileo. (1623) 2008. *Il Saggiatore*. Prefazione di Giulio Giorello. Introduzione e cura di Libero Sosio. Milano: Feltrinelli.

Galilei, Galileo. 1623. "The Assayer". Accessed September 10, 2025. https://web.stanford.edu/~jsabol/certainty/readings/Galileo-Assayer.pdf

Galilei, Galileo. (1632) 2003. *Dialogo sopra i due massimi sistemi del mondo*. Introduzione e note di Antonio Beltrán Marí. Milano: BUR.

Gedinat, Jürgen. 2025. "Zum aktuellen Verhältnis von Menschenrechten und Menschenpflichten." *eudia* 19: 1–23. Accessed April 30, 2025. https://www.eudia.org/wp-content/uploads/Gedinat_Sieg-oder-Gewinn.pdf.

Goethe, Johann Wolfgang v. (1833) 1976. *Maximen und Reflexionen*. Frankfurt a. M.: Insel.

Heidegger, Martin. (1954) 1990. "Wissenschaft und Besinnung". In *Vorträge und Aufsätze*, 41–66. Pfullingen: Neske.

Heidegger, Martin. 1961. *Nietzsche (I – II)*. Pfullingen: Verlag Günther Neske.

Heidegger, Martin. 1976. "Vom Wesen und Begriff der Φύσις. Aristoteles, Physik B, 1". In *Wegmarken*, hrsg. von Friedrich-Wilhelm von Herrmann, 239–301. Frankfurt a. M.: Vittorio Klostermann.

Heidegger, Martin. 1983. "Die Herkunft der Kunst und die Bestimmung des Denkens." In *Denkerfahrungen*, hrsg. von Hermann Heidegger, 135–60. Frankfurt a. M.: Vittorio Klostermann.

Heidegger, Martin. 1985. *Unterwegs zur Sprache.* Hrsg. von Friedrich-Wilhelm von Herrmann. Frankfurt a. M.: Vittorio Klostermann.

Heidegger, Martin. 1989. *Beiträge zur Philosophie (Vom Ereignis)*. Hrsg. von Friedrich-Wilhelm von Herrmann. Frankfurt a. M.: Vittorio Klostermann.

Hölderlin, Friedrich. 2001. "In lieblicher Bläue". In *Tutte le liriche*, a cura di Luigi Reitani, 1224. Milano: Mondadori.

Husserl, Edmund. 1991. *Phenomenology of the Consciousness of Internal Time (1893–1917)*. Translated by John Barnett Brough. Wiesbaden: Springer.

Kant, Immanuel. (1781) 1990. *Kritik der reinen Vernunft*. Hrsg. von Raymund Schmidt. Hamburg: Felix Meiner Verlag.

Kant, Immanuel. (1783) 1993. *Prolegomena zu einer jeden künftigen Metaphysik*. Hrsg. von Karl Vorländer. Hamburg: Meiner.

Kant, Immanuel. (1786) 1997. *Metaphysische Anfangsgründe der Naturwissenschaft*. Mit einer Einleitung herausgegeben von Konstantin Pollok. Hamburg: Meiner.

Leibniz, Gottfried Wilhelm. (1714) 1898. *The Monadology*. Translated by Robert Latta. Accessed April 30, 2025. https://www.plato-philosophy.org/wp-content/uploads/2016/07/The-Monadology-1714-by-Gottfried-Wilhelm-LEIBNIZ-1646-1716.pdf

Leibniz, Gottfried Wilhelm. (1714) 1982. *Principes de la nature et de la grace fondés en raison*. In *Vernunftprinzipien der Natur und der Gnade: Monadologie*, edited by Herbert Herring, 2–24. Hamburg: Meiner.

Leopardi, Giacomo. (1898–1900) 1997. *Zibaldone*. Edizione commentata e revisione del testo critico a cura di Rolando Damiani. Milano: Arnoldo Mondadori Editore.

Leopardi, Giacomo. 2015. *Zibaldone*. edited by Michael Caesar and Franco D'Intino, translated by Kathleen Baldwin, Richard Dixon, David Gibbons, Anna Goldstein, Gerard Slowey, Martin Thom, and Pamela Williams. New York: Farrar, Straus and Giroux.

Merton, Robert K. 1973. *The Sociology of Science: Theoretical and Empirical Investigations.* Chicago-London: The University of Chicago Press.

Newton, Isaac. (1687) 2021. *The Mathematical Principles of Natural Philosophy*. Edited and translated by C. R. Leedham-Green. Cambridge: Cambridge University Press.

Selgelid, Michael J. 2016. "Gain-of-Function Research: Ethical Analysis." *Science and Engineering Ethics* 22: 923–64.

Wiener, Norbert. (1948) 1961. *Cybernetics: Or Control and Communication in the Animal and the Machine.* Paris: Hermann & Cie and Cambridge MA: MIT Press.

Zaccaria, Gino. 1999. *L'inizio greco del pensiero: Heidegger e l'essenza futura della filosofia.* Milano: Christian Marinotti Edizioni.

Zaccaria, Gino. 2014. *Lingua pensiero canto: Un seminario sull'essenza della parola.* Pavia: Ibis.

Zaccaria, Gino. 2021. *The Enigma of Art: On the Provenance of Artistic Creation*. Leiden-Boston: Brill.

Zaccaria, Gino. 2022. *Meditazioni scismatiche: Il nulla e il tempo, l'infinito e l'arte*. Firenze: Olschki.

Zaccaria, Gino. 2025. "La catastrofe cosmica: Prolegomeni a una puntualizzazione scismatica del concetto greco-aristotelico di ἐπιστήμη." *eudia* 19: 1–37.

6 The societization of science

> The advocates of progress in our time talk about freedom of thought – yes, but can this freedom not be abused? The social and moral change of men is subject to certain limits – is it not time to set limits to the most important of all activities, the activity of the mind? And so, above all, to that branch of mental life that we call science. Science must not serve arbitrary, capricious ends. […] It must not place itself at the service of forces that dissolve society. And if science does not ultimately serve the advancement of humankind, then it is truly in vain.
>
> Jon Alfred Mjöen[1]

> The world is moving at unprecedented speed. […] The time is short and stakes are high. Evidence, and in particular sound scientific evidence, is badly needed to inform policymaking. Science is however not fully ready. It is struggling to cope with the change. It is too entrenched in thematic silos, challenged by its own integrity problems, and very often alienated from society.
>
> Vladimír Šucha[2]

6.1 Science as problem-solving knowledge

In the previous chapter, we observed that, as modern science advances along the path of technicization, it moves further away from its self-understanding as a form of knowledge dedicated to discovering an objective reality "out there" to which it must conform and adapt. Rather than uncovering truths about a supposed pre-existing reality, science increasingly takes on the task of actively *engineering* reality itself, namely to design and implement an objective reality in the shape of a fully computable domain upon which to exercise control. As scientific knowledge takes on this role, it reveals a further distinct characteristic: it progressively establishes itself as the only instrument available to humankind to address the problems arising from the management of such engineered reality. Thus, alongside the shift from discovery-oriented to production-oriented knowledge, science undergoes a parallel transformation from definition-based knowledge, where decisions about an object's nature lay the ground for both the theoretical and the practical understanding of it, to a *problem-oriented* form of knowledge. Scientific inquiry is now no longer – not even formally – sparked and driven by the scientist's gaze on a supposed extant reality; rather, it is directly summoned and moulded by the urgency of sustaining the

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survival of humankind, and pressed into addressing a kind of "calling" to resolve specific problems that inevitably take the shape of "vital problems".

We refer to this specific trait of modern science as the *societization* of science. Why? Because "vital problems" represent the distinct form that scientific problems assume when they arise within the unique framework of human communities known as "society". Contrary to what is commonly assumed, "society" is not a general, neutral, and a-historical description applicable to all forms of human togetherness, be they from the past, the present, or the future. Instead, as we shall see by reference to landmark insights by Hannah Arendt, the term refers to a very particular and unique form of co-existence that emerges exclusively in modern times: the one where the problem of sustaining and perpetuating "life" becomes the central focus of the political sphere. This is not to say that activities aimed at meeting the necessities of life were deemed unimportant in earlier times, or that those necessities did not attract scientific inquiry; however, such activities were not considered an integral part of the political dimension of human knowledge, and, more significantly, they were not regarded as defining traits of what it means to be human.[3] Within "society", science takes on a conceptual and methodological orientation – as well as an organizational and logistical structure – geared towards effectively addressing the problems associated with satisfying vital needs. At the same time, as the task of solving vital problems hangs more and more heavily upon science as a sort of moral imperative, science becomes increasingly vulnerable to the charge of being "detached from life" (*lebensfern*) and disconnected from society.[4] As we shall see, technicization and societization are not just complementary aspects of modern science, but two interrelated facets of the same transformation, each reinforcing the other as science aligns itself with the imperatives of society.

In its orientation towards solving vital problems, societized science still retains, in its own way, a commitment to "truth", although the latter no longer signifies a correspondence between scientific judgement and reality (as in the traditional modern-metaphysical understanding) but has now decisively acquired the sense of *performativity*, namely the capacity to produce measurable, impactful results. By committing to performative truth, science preserves a glimmer of freedom and autonomy in interpreting vital needs and determining how and through which means to meet them.

Yet, as science steadily advances along the path of societization, focusing on devising ever more powerful and effective ways to tackle vital problems, a menace to its residual freedom emerges: science becomes increasingly vulnerable to pressures from a-scientific or even counter-scientific forces that define the nature of these problems and steer scientific efforts towards specific outcomes. Science continues to operate within the framework of problem-solving knowledge, but the "problems" it is called to address are no longer solely driven by the objective of satisfying vital needs. Instead, they are shaped by the goals set by centres of power who have detached themselves from society, or may even, in some sense, be anti-social. This phenomenon becomes visible today in the unconditional alignment of science with priorities of a managerial order – whether set by "the state", "the market", or a combination of the two.

The derailments from the path laid out by societization – a path deeply worth questioning in itself – can manifest in various ways, for example, in the subordination of science to political or economic powers. This subordination results in the widely recognized phenomena of the "politicization of science" (a trend that historically emerged in the 20th-century totalitarian regimes) and the more recent shift towards the "marketization" of science, to wit, its reduction to serve corporate interests.

Both phenomena are nowadays encompassed in a more pervasive and subtle form of subjugation, which we call the "policyzation of science", referring to the subordination of scientific inquiry to a wide array of *policies* and *policymaking* processes. A "policy", as currently understood, is a set of formal or informal procedures, programmes, guidelines, and plans designed to bring order, direction, and organization – in a word, *to police* – a particular area of human activity. In our analysis, the phenomenon of policyzation represents a double-edged sword, as science simultaneously acts as both the subject and the object of policy, being targeted and controlled by policies while also being tasked with "informing" and managing those very same policies. By assigning science the dual role of simultaneously *being policed* and *policing*, the illusion of science's autonomy is maintained, while in reality it becomes increasingly controlled by external, unaccountable forces. The Evaluation Machinery represents the ultimate seal on this heteronomy, where science has shifted away from its role as (autonomous) problem-solving knowledge to merely contributing to the policy complex. Under the Evaluation Machinery, science accomplishes its transformation into a form of knowledge tasked with informing and enforcing policies within society.

6.2 The emergence of society and man as a "social animal": insights from Hannah Arendt

To understand the societization of science, we first need to clarify the core concept behind it, namely, that of "society". Although we commonly use the term "society" as a broad concept to describe the phenomenon of collective human existence as such, we tend to overlook the fact that the idea of conceptualizing human togetherness as "society" only gained widespread acceptance and became firmly rooted in Western thought relatively late, specifically, during the 19th century. In this sense, "society" is a distinctly late-modern concept that supplants earlier notions in the Western political thought, namely the Greek *polis* and the Roman *civitas*. It is easy to see how "society" has nowadays become an all-embracing concept covering every imaginable form of human community if we consider that, in the conventional wisdom regarding Western historical roots, *polis* and *civitas* appear to be nothing but institutional offsprings of Greek and Roman *societies*, respectively. Yet, what does it mean when humankind begins to determine itself and its being-together as a "society"?

We owe a comprehensive understanding of the implications of such a groundbreaking shift to Hannah Arendt. In *The Human Condition*, Arendt starts by calling into question the Latin translation of Aristotle's definition of man as *zōon politikon*

into *animal socialis*, as found most authoritatively in the statement by Thomas Aquinas "homo est naturaliter politicus, id est socialis" (man is by nature political, i.e., social). She observes a fact which is "significant but not [per se] decisive", namely that "the word 'social' is Roman in origin and has no equivalent in Greek language and thought" (Arendt 1958, 23). What is more decisive is that, in Roman thought, the Latin word *societas* did not denote a distinctive trait of the human condition but rather referred to a purposeful alliance or agreement, such as one formed for governance (*societas regni*), crime (*societas sceleris*), or commerce (*societas* in a general sense). This meaning is particularly evident in legal language, where a distinction is drawn between *civis Romanus* and *socius Latinus*: the former being a full member of a community of equals, enjoying the whole spectrum of political rights, while the latter is merely a partner or an ally engaged through an agreement to help manage the *res publica*.[5]

It is only with the later concept of *societas generis humani* – and particularly through Thomas Aquinas's translation of Aristotle's definition of man as *zōon politikon* into *animal socialis* – that "society" and "sociality" begin to define the human condition as such. In this way, notes Hannah Arendt, it becomes evident to what extent "the original Greek understanding of politics had been lost" (Arendt 1958, 23). Certainly, as Arendt notes, neither Plato nor Aristotle ignored the fact that humans cannot live without the company of other humans, i.e., without being *socii* in some way or another with their similars; but this condition was not considered to be specifically human. In fact, living in a community – that is, having to come together in order to sustain life – is a characteristic that human beings share with other forms of animal life.[6] The Latin translation of *zōon politikon* as *animal socialis* is thus a "fundamental misunderstanding" (Arendt 1958, 27), one that opens the door for the *public sphere* – once, and still in the Roman experience, the shared space for pursuing *virtus* (freedom) – to coincide with the *social sphere*, where the focus is instead on activities aimed at the preservation of life (necessity).

This *fundamental* misunderstanding, originating in Christian-Roman thought, became even deeper with the advent of the modern understanding of society. According to the latter, all the faculties of humankind are absorbed by what in ancient times used to be the "private sphere", namely, the domestic and family domains to which the activities necessary for the maintenance of life were relegated; in other words, the activities in which man is not considered to be fully human. In this connection, the distinction between "public" and "private" takes on a radically different meaning. Insofar as the public domain becomes the space for debating and addressing vital needs, the private sphere turns into "inner life", namely the intimate story of the individual, which is being upheld as the defining trait of humanity par excellence.[7]

The key point of Hannah Arendt's analysis, which is important for our purposes, is the following: the advent of modern society, and the ultimate dissolution of the previous understandings of human togetherness, namely, the Greek *polis* and the Roman *civitas*, implies the emergence of a new definition of the human being – a definition that, in a concealed manner, guides every form of knowledge and action in our times. As a result of the collapse of the public sphere of freedom into the realm of

necessity (the fulfilment of vital needs), man is no longer conceived as *zōon politikon* (as per the Aristotelian definition) nor as *animal socialis* (according to the original Christian-Roman translation and misinterpretation), but rather becomes fundamentally an "*active* social animal"; to wit, an "animal" whose being is essentially determined by the fact of "acting", in the double sense of producing contingent effects and displaying an observable conduct directed towards the fulfilment of certain ends. In this connection, "acting" itself takes on a particularly narrow and restrictive sense which coincides with "behaving". Indeed, the concept of "behaviour" now implicitly underlies all forms of knowledge and know-how, permeating contemporary sciences and practices without ever being explicitly acknowledged as such.

Human knowledge and the sphere of references that emanate from it are, therefore, radically transformed in their meaning. The behavioural sciences – namely, the body of knowledge which, in its essence, assumes man to be an animal that behaves, and whose behaviour can be observed, predicted, and oriented – take on a central role, and, in a sense, replace the traditional sciences as *artes liberales*: statistics replaces mathematics (arithmetic and geometry), economics takes the place of law. Statistics and economics emerge as the leading sciences – the very *artes* of modern society. Yet, in conformity with the definition of man as an active social animal, *all* sciences become, in a sense, behavioural sciences. In particular, economics only focuses on man from the perspective of his being a "labour animal" and it can do so insofar as "the new social realm transformed all modern communities into societies of laborers and jobholders; in other words, they became at once centered around the one activity necessary to sustain life" (Arendt 1958, 46).

Three interrelated key dynamics are fuelled by this transformation in the defining trait of man into "active social animal".

First, the assumption that humans are fundamentally beings driven by the satisfaction of vital needs fosters a tendency to channel these needs in a single direction. In fact, if human fulfilment is equated with the continual satisfaction of vital needs, then this pursuit becomes more powerful as more people collectively act towards achieving the same goal. And when sheer numbers become the criterion for determining the relevance and desirability of a common goal, the need for a despotic ruler may eventually disappear. Conformism effectively takes the place of despotism, transforming the one-man rule into a "no-man rule", which the dominant sciences – economics and statistics – are called to systematically enforce. Yet, Hannah Arendt warns that such a "rule by nobody is not necessarily no-rule; indeed, under certain circumstances, it may even turn out to be one of its cruelest tyrannical versions" (40). This "nobody" can assume the form of "general interest of society", "public opinion", "social welfare", "international community", and so forth and so on. Economics and statistics become the leading forms of knowledge when society achieves its transition to *mass* society, in which "the realm of the social has finally […] reached the point where it embraces and controls all members of a given community equally and with equal strength" (41). We may call this dynamic the *unilateralization and conformization of collective will*.

The second dynamic is triggered by the fact that society becomes essentially a society of labourers. This does not mean that "every member actually [is] a

laborer or worker", but that "all members consider whatever they do primarily as a way to sustain their own lives" (46). This, in turn, is possible because "[s]ociety is the form in which the fact of mutual dependence for the sake of life and nothing else assumes public significance" (46). Since this interdependence is a function of the necessities of life, every human activity, namely every act of the "active social animal", becomes a process that can be divided into two phases: labour and consumption. In the society of labourers and consumers, all human activities – from the most manual and unskilled tasks to the most "intellectual" and refined pursuits – can be ascribed "to the common denominator of securing the necessities of life and providing for their abundance" (126). The only exception to this iron rule is represented by "the artist, who, strictly speaking, is the only 'worker' left in a laboring society" (127). However, this exception is maintained at the expense of a radical change in the meaning of artistic and poetic creation, which will now only appear to be a behavioural variant of the active social animal, like an activity in which one of his vital functions is expressed. Accordingly, art itself becomes an expression of vital functions, such as human creativity, "freedom of expression", and so on.[8] Similarly, science not aimed at solving vital problems can only be justified as the expression of the scientist's innate "curiosity".[9] This dynamic takes the form of an *absolutisation of labour* which transforms man into the *animal laborans*.

The third, and perhaps most profound, consequence for the fate of science lies in the emergence of a new foundational principle shaping human thought and action. When human togetherness is no longer conceived as a coalescence[10] but primarily as a coalition of interests focused on satisfying vital needs, the ability to participate in such satisfaction becomes the defining quality of human existence. In this framework, the yardsticks according to which human actions and thoughts are judged – and thus labelled as "good" and "bad" – are no longer anchored in transcendent ideas. Instead, they are determined through the lens of "values". Unlike transcendent ideas, values emerge and operate within the dynamic and ever-shifting context of social relationships and interactions. Essentially, values are social commodities, their "worth" deriving entirely from their utility and resonance within the society that upholds them. As Hannah Arendt observes in another essay:

> The birth of social sciences can be located at the moment when all things, "ideas" as well as material objects, were equated with values, so that everything derived its existence from and was related to society – the *bonum* and *malum* no less than tangible objects.
>
> (Arendt 1961, 33)

Indeed, "ideas", conceived as absolute and self-contained units, had become so deeply intertwined with social values that their existence became contingent on their perceived worth within society. When the value-laden essence of ideas – their social relevance – was called into question, the principles that once guided human action lost their grounding and faded into irrelevance. Much like tangible objects that are discarded and replaced once they no longer serve a

purpose (or, in Marxian terms, once they lose both their use-value and exchange value), ideas are rendered obsolete and abandoned in favour of new guiding directives. In other words, ideas turn into constructs deeply embedded in, and validated by, their social utility: once their utility is destabilized or their social relevance is undermined, the ideas themselves collapse, revealing their dependence on the very societal frameworks that had given them meaning. This dynamic can be summed up as the general *valorization* of all benchmarks of human existence; that is, their transformation into something meaningful only insofar as they possess *value*.

For the purposes of our analysis, the three dynamics arising from the transformation of man into an "active social animal" – to wit, conformism ("no-man rule"), *animal laborans*, and universal valorization – shape the nature of science in our era as *societized* science. This becomes a form of knowing and know-how primarily, if not exclusively, aimed at solving problems emerging from society, namely the sustenance of life. Science is no longer driven by freedom *from* necessity but by necessity itself: it becomes an expression of vital functions, specifically the function of addressing the need to solve vital problems.

6.3 Societized science

To understand the defining features of societized science, we must briefly recall the previously addressed distinction between *life* and *mere survival*.[11] Society constitutes the form of coalescence in which human beings come together to meet the necessities of life; however, life retains the potential "to understand itself in an increasingly dignified and clear manner; in short: *to transcend mere survival*". When science takes on the character of societization – that is, when it orients knowledge towards vital issues (i.e., problems arising from life's necessities) – it takes on the inherent duality of life itself: on the one hand, life can serve as an "intermediary" of the will to will and, on the other, it can be an expression of mere survival. If science aligns with the former modality of life, it serves the relentless increase of power demanded by the will to will, yet without fully surrendering its autonomy (even though the autonomy it retains is essentially limited to determining how and where to direct the growth and accumulation of power). In this way, societization emerges as the counterpart to technicization, and societization and technicization establish themselves as two mutually complementary tracks that mobilize science to *steer the ceaseless increment of power*. Indeed, since science is the only form of knowledge that can solve societal problems – and because these problems are vital and life itself is a form of the growth of power – science necessarily assumes the role of directing and governing power-enhancing processes in every corner of society.[12]

Yet when science assumes this role, it gains not just prominence but also a duty, forcing it, for the first time, to justify its "value" based on how effectively it advances life's empowerment.

To understand the implications of this duty and justification, we can turn to a reflection offered by the great physicist and science-communicator Richard

Feynman. In *The Meaning of It All* (a collection of his 1963 public conferences), Feynman poses a direct question:

> Is science of any value? I think a power to do something is of value. Whether the result is a good thing or a bad thing depends on how it is used, but *the power is a value*.
>
> (Feynman 1998, 6; emphasis added)

Thus, the answer to the question of science's value apparently finds a clear and straightforward answer: that value lies in power, because power (as such) is a value. However, it is worth following for a bit the way in which Feynman elaborates on this answer. In the following lines, he recounts the following anecdote from his travels. During a visit to a Buddhist temple in Hawaii, a monk told him something unforgettable: "To every man is given the key to the gates of heaven. The same key opens the gates of hell" (Feynman 1998, 6). Feynman draws a parallel to science: "All the major problems of the relations between society and science lie in the same area" (7). Yet, he insists that determining whether the key opens heaven or hell is not a scientific problem, because science merely knows "how to work the power" (7).

However, and for us this is the most interesting aspect of Feynman's argument, the fact of determining science as a "power to do something of value" does not authorize us in any way to reduce the value of science to its capacity for achieving valuable results. Quite the contrary, Feynman is very strict about asserting that the "value of science" lies entirely on the side of the discovery and never on that of its instrumental utility:

> This is the yield. This is the gold. This is the excitement, the pay you get for all the disciplined thinking and hard work. The work is not done for the sake of an application. It is done for the excitement of what is found out.
>
> (Feynman 1998, 9)

Feynman illustrates this point with the example of electricity, which was once a mere curiosity but now underpins much of modern technology. Yet, despite its profound impact, the true "value" of science is commonly overlooked. Feynman takes the example of an edition of Faraday's classic book *Chemical History of a Candle*, in which the great scientist describes how even a simple object like a candle connects to the broader universe, involving principles of combustion and chemistry. Faraday's discovery that electricity and chemical affinity are intertwined "was one of the most dramatic moments in the history of science, one of those rare moments when two great fields come together and are unified" (14). However, a statement in the book's introduction highlights that Faraday's principles are now applied in "chrome plating and the anodic colouring of aluminum, as well as in dozens of other industrial applications" (14). Feynman adamantly asserts "I do not like that statement", and soon after elaborates as follows:

> Electricity was being studied, and chemistry was being studied. Suddenly [thanks to the principles Faraday discovered] they were two aspects of the

> same thing – chemical changes with the results of electrical forces. And they are still understood that way. *So to say merely that the principles are used in chrome plating is inexcusable*.
>
> And the newspapers, as you know, have a standard line for every discovery made in physiology today: "The discoverer said that the discovery may have uses in the cure of cancer". But they cannot explain *the value of the thing itself*.
>
> (Feynman 1998, 15; emphasis added)[13]

At first glance, Feynman's distinction between science's effects and its intrinsic value may seem to echo the classical divide between "theory" and "practice". Yet, it ultimately reveals something far more profound about modern science. The insistence on safeguarding "the value of the thing itself" (the "excitement" of discovery) against reductive justifications framed in terms of tangible and demonstrable "impact" is not merely a defensive stance against oversimplification and popularization.[14] Rather, it is a fundamental effort to preserve science's stance and ability to steer the process of empowerment; in other words, to protect science in its societized (and technicized) essence. Only by recognizing scientific knowledge as the power to understand "how to work power" can we truly affirm its intrinsic value. Reducing it to mere utility – such as perfecting chrome plating – dilutes and ultimately destroys the very capacity that makes such applications possible in the first place. However, the very fact that chrome plating can serve as a public display of science's inherent value reveals a fundamental transformation in the conception of truth. This phenomenon demonstrates how truth becomes conflated with effectiveness. Indeed, it is only when truth is conceived as effectiveness that the two "values" – that of the "thing itself" and that of its "effects" – become interchangeable and the derailment from science's societized and technicized essence can start taking place.

To properly understand the implications of this transformation, we must turn to Heidegger. Specifically, we must briefly examine two particularly revealing annotations from the *Black Notebooks* of 1939–1941, published posthumously. The first note, titled "*Science*", addresses precisely where we ought to locate the essence of science in our times. Heidegger begins by ironically referencing the sentiment, still cherished by more elderly scholars, who persist in naively perceiving science as a "tranquil exercise of erudition" existing in some imagined "pacified world" of disinterested questions and opinions. He then continues by arguing the following:

> Older generations only reluctantly resolve upon what the younger ones already do not know otherwise, and, with a minimum degree of intellectual effort, acknowledge "completely"; namely, upon the supremacy of the purely effectivity-driven essence of "science", which doesn't primarily show itself in a certain philology or physics, but rather in "fouling research". The latter, conducted in specialized institutes, investigates methods and techniques to prevent fouling on the submerged parts of ship hulls, as such deposits significantly reduce a vessel's *speed*. Here lies a problem of "vital" importance – and it is through the essential character of such problems that science itself should be understood. However, this kind of "research" is a benchmark for all research not simply because it happens to be what is

> currently being done; rather, its actuality is the consequence of a mutation in the "origin of knowledge" and the very capacity for knowing, a mutation which springs from the essence of being as effectuation.
>
> (Heidegger 2014b, 119–20)

In another annotation, contained in the same collection of remarks, he puts it in a more succinct way:

> What "science" in the modern sense consists of should not be clarified by reference to the example of "classical philology", and not even to that of mathematics; rather, one should refer to the kind of research activity that, for example, sets the foundation for today's "army catering".
>
> (Heidegger 2014b, 191)

Heidegger's examples of "fouling research" and "army catering research" are revealing of the fundamental nature of contemporary science. Unlike Feynman's perspective, in which applications like chrome plating are seen as consequences that obscure the inherent value and essence of "*science itself*", Heidegger presents such phenomena as constituting what science itself actually consists of today.

The significance of Heidegger's observation lies not in lamenting a supposed degradation of science from noble disciplines like classical philology or theoretical physics to mundane practical concerns – a shift some might attribute, on the occasion, to contingent wartime exigencies. Rather, his analysis reveals these phenomena as symptomatic of a more profound metaphysical transformation. When the most authentic manifestations of modern science appear in military research facilities rather than in traditional academic departments,[15] we are witnessing not just a circumstantial shift in research priorities, but the surfacing of science's true contemporary essence. This transformation cannot be adequately grasped through conventional narratives about industrial or governmental influence on science – narratives that typically feature "old-fashioned" and "state-of-the-art" researchers on opposing sides of the "debate". Such frameworks miss the fundamental change in the very "origin of knowledge and capacity for knowing", which itself stems from a shift in the "essence of being as *effectuation*".

The epistemic shift whereby truth collapses into performative truth is at the basis of both the technical and societal characters of modern science. In this framework, military operations research – with its undisguised prioritization of performativity and operational efficacy – does not represent an aberration, but rather renders this foundation starkly visible. Importantly, the militarization of science is not limited to wartime periods. While Heidegger's immediate context was Germany's total war economy, the phenomenon reveals an enduring characteristic of societized science. War merely strips away the residual pretences of disinterested questioning and opining, exposing science's foundation in pure effectiveness. In this sense, war represents the moment of "ontological truth" of modern science: a realm where knowledge claims are judged exclusively by their operational consequences, without the mediating fictions of theoretical elegance or contemplative wisdom.

This analysis suggests that what we observe more clearly in wartime (or in analogous "states of emergency") is the most candid manifestation of science's modern condition. Battlefield imperatives, as it were, function as epistemological revelations that, by stripping away all pretence, exhibit the essential nexus between power, effectiveness, and truth that grounds modern science in both so-called wartime and peacetime.

6.4 From societization to policyzation

The defining trait of societized science can be summarized in the observation that science finds its ultimate meaning as a "socially useful" activity, namely, useful for the satisfaction of (in principle, insatiable) vital needs. We have seen how this trait emerges from the encounter of technicized science with "society" as the form of human coalescence where mutual dependence for the sake of sustaining life comes to dominate and define the entire public (i.e., political) sphere.

A consequence of this encounter is science's unconditional surrender to the principle of empowerment, a dynamic mediated through "life" itself. Yet, as life increasingly narrows to mere survival, and vital problems are correspondingly reduced to survival challenges (i.e., to issues of "life or death"), societized science becomes locked into a single track and is progressively pressured to "stay on course" and remain socially relevant and "useful". In this process, the authority to identify vital needs is gradually stripped from science's autonomous judgement and transferred to external powers. Thus, societized science not only becomes bound to solving predefined problems (in the manner described above) but is also deprived of the agency to determine *what* constitutes a problem and *how* it should be approached. Today, this loss of autonomy shows itself not so much (and not only) in the direct subordination to political or corporate powers, but in its alignment to centrally orchestrated "policies". In a time where "policy-making" has largely displaced political legislative processes, science's usefulness to society is measured by its capacity to inform policies while remaining itself bound by them. We call this derailment from the path of societization the "policyzation of science".

Policyzed science is a science whose "value" does not consist in the capacity to perform efficiently in view of solving vital problems (as in Heidegger's examples of fouling or army catering research), let alone in the inherent worthiness and "excitement" of discovery (as in Feynman's account of Faraday's laws of electromagnetic induction).[16] Instead, its "value" is defined entirely by the contribution it can give to the "policy complex", namely the opaque and multifaceted aggregate of actors, procedures, and processes that shape the development, implementation, and enforcement of policies. In this respect, policyzed science is as far from "real" societized science as a purely artificial construct that serves the purpose of providing an object or a target for evaluation procedures.

How should we approach this phenomenon of science's subjugation to the policy complex? The language of "science policy" has become so ubiquitous and entrenched in contemporary debates on science that it is difficult to find a critical, external viewpoint on it, let alone elaborate a sufficient diagnosis of this

phenomenon.[17] In what follows, we seek to delineate some key elements of an epistemological framework for what we refer to as "policyzed science".

6.4.1 A "new type of scientist"

Polycization presents itself as the antidote to the risk that science remains detached from society, thereby abdicating its role as the form of knowledge tasked with solving vital problems.

In the language of science policy documents, such detachment is frequently assumed as a self-evident matter of fact, which can be explained either by the objective complexity and "wickedness" of today's societal problems (which can only be addressed by means of "cross-disciplinary" research approaches), or by scientists' natural inclination to retreat into "thematic silos" and "intellectual comfort zones", or by a combination of both. Regardless of the cause – so runs the policy narrative – the chasm between science and society must be urgently bridged. But to bridge this gap in a "future proof" manner, it is not enough to selectively apply science's results to societal problems. Instead, it is necessary to forge a new breed of scientist who incorporates the social dimension from the very outset of his activity. Nothing short of an existential shift in the scientist's life is required, as illustrated by the following excerpt from an authoritative science policy textbook:

> [S]ome of the scientists remain, perhaps, driven more by their intellectual curiosity than by policy concerns. They may be motivated primarily by the esteem of the scientific or academic community, rather than by the impact they have on policy. *This behaviour is a serious impediment to the full use of science in policy*. We think that we need a *new type of scientist* driven by the scientific curiosity, academic reputation as well as by a policy impact.
>
> (Šucha and Sienkiewicz 2020, 25, emphasis added)

This passage deserves some consideration, as it condenses the blueprint for the existential shift required from scientists. First, the *bios theoretikos* ("theoretical life"), which for Aristotle represented the highest form of existence,[18] is quickly dismissed as "intellectual curiosity". Such framing is per se not surprising, and in its own way it is coherent with the transformation of man into an "active social animal", whose public engagement is primarily focused on ensuring the survival of the species. As we have seen thanks to Hannah Arendt's analysis, any activity that does not directly contribute to survival is promptly confined to the "private sphere" of the labouring animal, alongside other activities such as prayer, artistic appreciation, or hobbies like gardening and bread making. Yet the quoted passage adds an important note to such classification. While the expression "intellectual curiosity" might convey a sense of selfless, uninterested, and even generous behaviour, the authors sidestep this understanding by specifying that such curiosity-oriented conduct "may be motivated by the esteem of the scientific or academic community". Indeed, beneath the veneer of disinterest – so the argument implicitly goes –, the curious scientist harbours a hunger for recognition

and prestige. The scientist is ultimately presented with a binary choice: *either* he chases academic prestige *or* policy impact. *Tertium non datur*. Indulging in this bifurcation is an impediment to the *full use of science in policy*. However, the new type of scientist is not just a scientist who disregards curiosity and chooses impact over reputation; rather, he is an engineered synthesis where both impulses co-exist and merge into a single "soul". What occurs here is indeed a merger of two fabricated realities: *curiosity-driven* pursuit of prestige and dedication to *policy-impactful* results.

We may note that the fusion of these fabricated realities, which is indispensable for the construction of the new type of scientist, cannot occur without the decisive intervention of the Evaluation Machinery. In fact, where else would scientists compete for "peer esteem" if not within a system of reward and punishment consisting of *ad hoc* metrics, rankings, and assessments? And how else can one assess whether a certain research path has achieved the required "impact" if not by relying on quantifiable measures of adherence to policy goals?

6.4.2 The policy factory

The operational setting in which the "new type of scientist" is expected to function can be summarily outlined by reference to the document shown in the figure below (Figure 6.1). It is a slide taken from an official presentation of the Joint Research Centre (JRC), a department of the European Commission which provides "scientific expertise and competences from a very wide range of scientific disciplines in support of almost all EU policy areas."[19]

One might easily dismiss the picture as just another iteration of the dominant science policy narrative, complete with the usual paraphernalia of doodles and buzzwords that academics have long grown used (and numb) to. Yet, upon closer

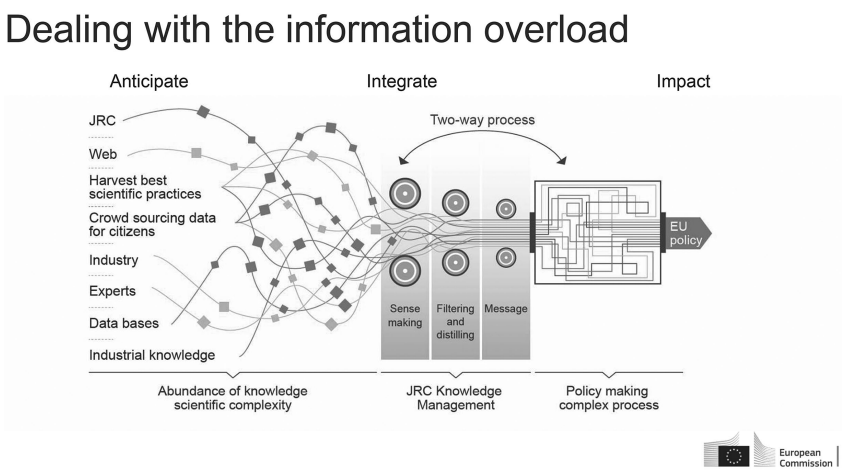

Figure 6.1 Slide from European Commission's Joint Research Centre (JRC) presentation.[20]

inspection, the document provides a compelling visual representation of what we may call "policy factory", which includes the fabrication cycle of policyzed science.

The starting point of the representation depicts an overwhelming abundance of stimuli from "out there", to wit, signals emerging from a chaotic, frenzied (and somewhat frightening) tangle of disparate sources. These signals ostensibly represent data or information deriving from "factual reality" or certain aspects of it, in the form of intertwined threads emanating from a (presumably non-exhaustive) list of centres of emission. It is unclear whether the signals emitted by these centres constitute representations of reality or cognizable realities in themselves. In either case, the overarching task of the policy-driven scientist is not to sit down and wait to be overwhelmed by the flux but to *anticipate* the signals – for example, by intercepting low-volume signals and being prepared to "feed" and instruct the policy-making process before they enter mainstream awareness.[21] Yet their sheer overload implies that they do not make sense on their own and that they are not immediately usable as such. Much like crude oil in the oft-cited refrain "data is the new oil", they must instead undergo a process of refinement.

The refinement of raw input material is carried out in the subsequent phase under the imperative "*Integrate*".[22] The new type of scientist encounters here a new kind of "meta-science" (an "epistemology"), known as "knowledge management", tasked with determining what constitutes cognizable reality and what qualifies as knowledge of such reality. To complete its task, knowledge management proceeds in three consecutive steps whereby unstructured, uncontrolled, and fluctuating feedstock is synchronized, streamlined, and squeezed into a compacted knowledge product, to wit, a validated and fully actionable information. This is also visually portrayed as a machinal process, significantly illustrated by means of a gear train transmitting the "crushing" power to a steamroller. The fabrication cycle of actionable information unfolds in three distinct phases:[23] the establishment of the informative basis (the "onto-technical" phase: "sense making"); the making of actionable information (the "epistemo-technical" phase: "filtration and distillation" of sense); the delivery of policy-relevance-carrying information (the "logo-technical" phase: "message"-formulation and -dispatching).

The final outcome of the fabrication cycle – the "message" – is ready to be delivered and ingested into the circuit of policy-making, not by accident depicted in the shape of an integrated circuit, where the whole process culminates in an arrow pointing to a designated "target". The hitting of the target is clearly the culmination of "Impact".

The system describes a process of *upcycling* that transforms an overload of chaotic information into a stock of actionable messages. We can term this system: "Knowledge Upcycling Machine" (KUMa).

Based on this preliminary examination of the document, we can formulate the following considerations:

i KUMa is premised upon the underlying assumption that "knowledge" equates to "information", to wit, that knowledge is such only insofar as it is translatable into informational quantities. Note that in this case the Evaluation Machinery is

unwittingly made to operate as a pre-selection device of "informational food" to be processed by the KUMa mechanisms.

ii The flowchart describes KUMa as a linear process from an "input" (the informational overload) to an "output" (the EU policy arrow). However, this representation overlooks the fact that much of the information that feeds into the input side is already deeply influenced and determined by policy, in particular science policy. Scientific best practices are, to a significant extent, shaped by policy, and so are "scientific outputs" in a broad sense. Therefore, KUMa should be represented as a (to some extent self-feeding, if not "autophagic") *circuit* rather than as a linear process.

iii The scientist appears at two critical junctures of KUMa: first, as a supplier of knowledge that adds to "scientific complexity", and then as a "knowledge manager" tasked with transforming such complexity into policy-relevant messages. The "new type of scientist" simultaneously fulfils both functions, acting as both knowledge producer and knowledge synthesizer in a sort of "bipolar" existence.

iv Although the process formally recognizes an "information overload" and adopts a neutral posture, it is inherently selective, in that it favours the production of pre-filtered and pre-distilled knowledge predisposed for rapid conversion into policy messages. This is because information and knowledge that is already primed for "sense making" and refinement can pass more swiftly through the KUMa filter and achieve policy impact, as can knowledge that is already (so to speak, *ab ovo*) shaped by policy (see point ii).

v On its trajectory towards policy relevance, science is simultaneously *policed* and *policing*: as knowledge management it *polices* the informational overload (much like a traffic policeman), whereas as knowledge supplier it is *policed* as to its capacity to provide meaningful inputs (alongside other competing and complementary sources of information). The latter policing forms the basis of that branch of the policy factory which is commonly called "science policy": the control system that determines directions, paths, and methods of scientific research, primarily through the distribution or withdrawal of financial resources.

6.4.3 Justifying the yoke of policy

Science policies are typically justified by the urgency to respond to societal "challenges". For example, the European Commission's strategic four-year plan for European research articulates from the very beginning the key priorities of its science policy as a response to a "challenge" – on the occasion the challenge posed to EU economy and society by the Covid-19 pandemic:

> The EU has stepped up to these challenges. We are using the moment to **accelerate the twin green and digital transitions** and associated transformation of our economy, industry and society. This will allow us to build a sustainable, fair and more resilient Europe and consolidate our global leadership in human-centred innovation and sustainable solutions. For this, we need a strong research, education and innovation foundation grounded in scientific

> excellence and competitive innovation policies for European citizens and businesses. Our future prosperity and well-being will largely depend on it.
>
> (European Commission: Directorate-General for Research and Innovation 2021, 3)[24]

What does this formulation say? In summary, the rationale for the policy is articulated in four related statements: i. challenges must be seen as opportunities to *accelerate* the transitions and their accompanying social and economic transformations; ii. somehow, "this" (referring ambiguously to the fact of "using the moment" or to the consequential acceleration of the transitions and the resulting transformations) will facilitate the creation and consolidation of a better and stronger Europe; iii. science and its spin-offs are essential to achieve "this" (with "this" again indistinctly referring to the use of the momentum, the resulting acceleration and transformations, or the envisioned better and stronger Europe); finally, iv. Europe's future prosperity depends on "it" (a term that could encompass any of the above – or possibly all of them at once).

Yet, beyond the opacity in the logical construct, what remains entirely ambiguous is whether the statement describes a natural and inevitable progression from point i to point iv (i.e., "this is how things naturally unfold"), or whether it articulates a set of intentions ("this is how we want things to unfold"). Indeed, the language must be deliberately ambiguous insofar as it reflects the dual nature of policy discourse, in that the latter seeks to present itself simultaneously as both an expression of will and a depiction of objective reality. At its core, the message seems to be that as long as we "want" something strongly enough, it will come to pass – and the more firmly we commit to our will, the more likely objective reality will align with it. It is, in fact, an ambiguity by design, since this coincidence of aspiration and assertion is central to ensure the effective binding nature of those policies.

On the bedrock of this by-design ambiguity, policies can construe a complex and ever-changing hierarchy of "priorities", "objectives", "actions", etc., to which all sciences are called upon to align and contribute on pain of exclusion from the officially recognized domain of science itself. These priorities, objectives, etc., are typically expressed by means of repeated reference to passe-partout watchwords like "innovation", "competitiveness", or the unavoidable ever-green "excellence",[25] as well as to more specific notions loosely derived from scientific concepts, such as "sustainability", "resilience", or "transition(s)".[26]

The latter, in particular, has gained immense momentum in the policy discourse and is uniformly applied across various domains, including those of energy, digital technologies, industrial, social, cultural, and so on. The ability to contribute to these transitions, indeed to *accelerate them* (European Commission: Directorate-General for Research and Innovation 2021, 5),[27] is not only an "added value" of scientific research, but it is what justifies the very existence of scientific domains in the first place. From this policy-driven foundation, even entirely new scientific disciplines can emerge and develop. Once integrated into the broader arena of scientific knowledge, these disciplines begin either their struggle for survival or to assert a dominant position within the scientific landscape.[28]

Here, the analysis might seem to imply that the policy factory ultimately represents just a refined form of the old-fashioned subordination of science to political power, merely structured in a technical standardized fashion without the overt ideological apparatus of politics. Yet, this perspective overlooks a crucial aspect that becomes evident as soon as we examine the deep entanglement between the policy factory and the Evaluation Machinery. Our thesis is that the former *is the guise of political control when science is under the yoke of the Evaluation Machinery*. But how so?

Let us consider the following: unlike what occurs with overtly political (i.e., ideological) directives, the goals and priorities dictated by science policies do not present themselves as foreign to science but are instead portrayed as inherently scientific. They are implicitly framed as science's very own findings – although the policy document we took as an example does not provide any reference to specific scientific contributions, limiting itself to referring each priority to unnamed "stakeholders" who contributed to a dedicated "consultation".[29] Yet – such is the typically heard argument – does not science itself advocate for the necessity of "transitioning" to renewable energy and digital technologies? Does it not warn that such transitions inevitably require sweeping economic, societal, and even cultural "transformations"? And are scientists themselves not the ones consistently reinforcing these priorities at every opportunity?

As the following analysis will demonstrate, this particular use of science is in itself a subtle form of *instrumentalization* that, unlike in the case of "classical" political instrumentalization, requires a specific transformation in the meaning of scientific results, which can only be achieved through the Evaluation Machinery.

6.4.4 Turning scientific results into action points

While it is true that, for example, the "digital" is an operative outcome of information technology, and that (to give another example) the notion of "climate change" is a theoretical finding of the environmental sciences, and that both of these outcomes have, in different ways, resulted in important practical repercussions, it is equally true that the assumption of these results within a decision-making process that determines the direction, form, and purpose of every form of knowledge is a further step, indeed a real leap. For this leap to take place, an alteration of the *meaning* of the scientific result is necessary, and this (the alteration) is not, itself, a scientific operation. This alteration consists in wrenching the results from the problematic sphere within which they first came to light – and where techno-scientific knowledge (to the extent that it is true to itself) constantly maintains them –, in order to take them on as *value reference points of action* on the path towards empowerment of operativity.

In order to understand how this alteration occurs, it may be useful to reflect on one of the keywords that, as we have just seen, orients policies on science, and much more: the term "transition".

In official documents and public discourses, the term "transition" has come to replace other expressions that are more charged with economic optimism, such

as "innovation", or that have a slightly nostalgic political flavour, such as "revolution" (for example, today we are more likely to speak of "digital transitions" than of a "digital revolution", an expression that was extensively in use until a decade ago; Balbi 2023). Initially employed primarily in physics and chemistry to signify the shift from one state to another (such as the change of state from liquid to gas), the term transition was later adopted and popularized by economists after the fall of the Soviet bloc, when it came to define those countries as "transition economies", referring to their shift from a centrally planned economy to a market-based one.[30]

The current use of the term "transition" has two characteristics. The first is that it conveys a sense of inevitability which may manifest itself as an objective and unavoidable necessity (e.g., the depletion of fossil fuels), or as a development dictated by the course of things (such as the emergence of a certain "dynamic" in the global economy), or even as the effect of decisions imposed by wills acting above and beyond our control (like the adoption of certain "business models" over others).[31] The term "transition" effectively encapsulates both the urgency and inevitability of any shifting from one state to another, directing actions towards the attainment of a final state – whether it be known or unknown – that is invariably defined by an *increase* or *enhancement* of whatever existed before.

Here, the second characteristic of the term "transition" becomes apparent, specifically, the fact that it also indicates the *intervening time* between one state of affairs and another. What defines this time, this interim, is not (only) the uncertainty about its duration but its inherent *transience*, namely the fact that it does not stand on any solid reference points. It is a time in which the values in force in the previous state have lost their validity, while those of the state of arrival have not yet been consolidated. The legal category that corresponds to this interim is the "state of exception", in which human action takes place without a relationship to the norm. This is a "zone" that, as Giorgio Agamben puts it,

> coincides with an extreme and spectral figure of the law, in which it splits into a pure being-in-force [*vigenza*] without application (the form of law) and a pure application without being in force: the force-of-~~law~~.
>
> (Agamben 2005, 60)

In the "zone of transition", the values belonging to the past state of affairs do not simply disappear, rather, they persist in a spectral manner: on the one hand, they continue to subsist as mere references without binding force; on the other, their binding force is unleashed – freed from its value-reference – and operates directly, without mediation. The dominant features of the transition zone are thus *value fetishism* and *brute operativity*.

The traditional values that persist as fetishes in this transitional landscape are, for example, those that revolve around the "state" and the "market".[32] These institutions, once central to the governance and organization of societized science, continue to exert influence but in a spectral, hollowed-out form. They no longer function as frameworks grounded in ideal principles or social norms (no matter

how contentious they may [or may not] be); instead, they linger as symbolic references, stripped of their former binding authority, yet still invoked as legitimizing forces. In this sense, the state and the market, along with the wide array of values traditionally linked to them, become fetishized, and thus imbued with a kind of abstract vigour that conceals their loss of coercive power, yet simultaneously renders them immune to critique and almost untouchable. It is no surprise that fetishized values tied to the state and the market become easily interchangeable in policy agendas; for example, a rise in military spending can be equally framed as fulfilling the imperative of "national security" or as a stimulus for "industrial investment", depending on which narrative is most expedient at the time. After all, who would dare to oppose "security" and "innovation"?

Meanwhile, brute operativity informs the policyzation of science in its liaison with the Evaluation Machinery. Policies operate as a mechanism of direct, unmediated action, bypassing not only the need for normative grounding or value-based justification, but also the traditional dimension of law-making. It is no coincidence that the enforcement mechanisms tied to science policies typically adopt the form of "soft law". The soft-law-driven Evaluation Machinery serves as the executing instrument of policies, relying on metrics, rankings, and assessments that complete the degeneration of scientific performativity into sheer progressive operativity, in which research-generated values are replaced by a-scientific metrics.[33] In this way, the Evaluation Machinery ultimately ratifies the replacement of science's pursuit of vital needs *of the society* with an alignment to the (always only brandished) operational effectiveness *of the policy*.

Together, the fetishization of state and market values and the dominance of Evaluation-Machinery-enforced policies illustrate the nature of the transition: it is a time where the remnants of old systems persist as hollow symbols, while new forms of brute force emerge, unmoored from "values" determined by technicized and societized science and driven by the a-scientific logic of operational effectiveness. This duality defines the essentially transitional time, marking it as a time that simultaneously maintains a spectral connection to science's hidden technical essence while embracing the extreme derailment from that essence brought about by (Evaluation-Machinery-enforced) brute operativity.

6.5 The Evaluation Machinery as a perennial transition machine

The "transition" rhetoric functions as the conceptual ring that binds together two interdependent phenomena: the subjugation of science to policy imperatives and the hegemony of the Evaluation Machinery; in other words, the total policyzation of societized science. This dynamic operates through two mutually reinforcing mechanisms.

On one level, as seen above, policies increasingly frame science as instrumental to the achievement of predefined "transitions" – be they green, digital, military, or other. Since the values shaping the landscape of transition narratives are essentially hollow and lack any inherent coercive force, artificial measures must

be produced in the form of indicators of "performance", where the latter no longer means capacity to address "vital problems" but allegiance to policy-driven fetishized values. The Evaluation Machinery absorbs policy directives by reshaping scientific activity around these benchmarks. It positions itself as the arbiter of "scientific progress", determining what constitutes "true" science and what does not: only research that meets certain evaluative criteria is deemed legitimate and worth continuing (and eventually converted into feedstock for the policy factory). In this framework, the scientist's path is no longer esteemed for its singular contribution in meeting societal (i.e., vital) needs but reduced to a teleological march towards compliance with the Machinery's standards – a never-ending "transition" towards officially sanctioned knowledge production.

At the same time, the Evaluation Machinery portrays itself as a "science in transition". Its brute operative instruments – metrics, indices, rankings, etc. – are admitted to be imperfect proxies for scientific value; yet, crucially, they are framed as only temporarily flawed, as they are constantly being "improved" in the pursuit of attaining policy objectives – an improvement that allegedly occurs, in part, by virtue of the "feedback" obtained from the very scientific knowledge they are designed to monitor and regulate. There may be no logical or empirical basis for claiming that today's metrics are objectively superior to yesterday's (however "superior" may be defined); nevertheless, the Machinery fuels an eschatological faith: scientists are conditioned to believe they are advancing towards a future in which the assessment of scientific merit is perfectly objective, undisputed, and fully aligned with policy relevance. This undisputed objectivity will take the form of an assessed policy contribution, in which the true meaning of the scientists' work will be finally revealed. As the following chapters will explore, this culminates in the Machinery's ultimate goal: the full automation of evaluation, where human deliberation is entirely replaced by self-optimizing systems that dictate what counts as (valid) scientific knowledge and what does not.[34]

The mechanisms described above reinforce each other through their inherent interdependence: science policy relies on the validation of its value-setting by means of "objective" measurements of its impact on science, while the very tools designed to measure this impact fabricate "science" as the object of measurement that satisfies the validation of those values. Against the backdrop of this circular interdependence, the notion of "transition" acquires central tenant and frames the entire Evaluation Machinery discourse. We can observe this occurring across four key aspects:

i "Transition" ceases to function merely as an interpretive lens for complex socio-economic changes, and instead becomes an objective reality in itself, or, in other words, a *natural* phenomenon. The underlying crisis which prompts transition – whether framed as the advent of a "disruptive technology", an energy shift, or an economic or geo-political transformation – is not primarily taken as something worth interrogating as to its causes, but is treated as a "given", to wit, a brute fact that demands nothing but *action* and convenient organization of cognitive efforts. Here the term "transition" is heavily affected from its use in Darwinian sense, where the "transition of species" refers to a natural change

without inherent causation. Notably, Darwin also refers to "transitional varieties" as intermediary forms that are destined to rapid extinction due to the competitive pressures of more improved species.[35] Much like Darwinian natural selection, the discourse of transition in science policy treats crisis-induced changes as driven by unavoidable forces, framing the required response exclusively in terms of adaptation, competition, and "survival of the fittest", while frustrating any attempt to interrogate their sense, meaning, or causes.[36] *In terms of the Evaluation Machinery*: sciences that do not contribute to transitions (and are not themselves prepared to transition) are marked with the stigma of extinction.

ii The naturalized and depoliticized notion of transition conveys at the same time a frightening and reassuring message. The latter aspect emerges as we observe that, unlike what the word "revolution" suggests, "transition" does not imply a subversion of existing relations or of existence as such. Hence, the reassuring message is that no matter how we change, life itself will remain the same. Here, too, the use of the term in natural science plays an important role: just as the transition between states (such as from gas to liquid, and vice versa) does not alter the underlying substratum (e.g., water), shifts such as those from print to digital, from fossil fuels to renewables, from peacetime to wartime economy, etc., do not disrupt our fundamental relationship with "life". Life remains central, unchallenged, and undisturbed. *In terms of the Evaluation Machinery*: sciences that do not contribute to making life easier (and that are not themselves easily "livable" as policy contributions) are instantly marked as potentially non-scientific.

iii By effect of its reassuringly apolitical natural-scientific flavour, the notion of "transition" provides a sense of forward momentum while not requiring to be filled with any particular sense or meaning. Indeed, the role of science is not to interrogate or critically engage with the concept or the underlying phenomenon but rather primarily to *impose upon it the character of sustainability*. Once this is achieved, transition ceases to appear as an empty or contested notion and instead assumes the guise of *feasibility*. The implicit message is clear: "no matter how, we will ensure science will make it happen". This rhetorical move transforms transition from a possibly contested political notion into a mere technical challenge, one that can be managed through expert interventions. *In terms of the Evaluation Machinery*: sciences that are of no use to sustain this continuing feasibility (and that are not themselves sustainable) are soon to be deemed an unaffordable luxury.

iv When humankind is attuned to the ever-pervading, frightening-reassuring tone of *sustainable transition* and its "feasibility", the sense of feasibility opens up appeasing perspectives of empowerment. This circumstance is charged with moral valence and creates a subtle sense of guilt. If transition is natural and inevitable, then either we rule *it* or we are ruled *by it*, and resistance or hesitation become instances of moral failure. Scientists, positioned as the key agents of the only instrument available to address the many impending "challenges", and hence capable of steering this process, bear an implicit burden: the fear of not doing *enough* to uphold sustainable transitions. This guilt, in turn, fuels the expansion of the Evaluation Machinery, which thrives on the perpetual demand

> for measurable progress and optimization of "scientific labour" towards these imposed ends. Therefore, *in terms of the Evaluation Machinery*: scientists who do not acquiesce to the morality of sustainable transition and the consequential system of reward and punishment (and who are not themselves recruitable as enforcers of that system) are potentially banned from the scientific community.

Thus, policyzed science, bound to the rhetoric of transition, functions within a perennial *state of exception* where traditional norms – including legal constraints – are indefinitely suspended, giving way to the brute imperative of mere *operational necessity*.

Notes

1 Mjöen (1934). Norwegian eugenicist (1860–1939).
2 Vladimír Šucha is the former Director General of the Joint Research Centre of the European Commission. From Šucha and Sienkiewiez (2020).
3 As we shall see, in Arendt's analysis, the exclusive focus on elimination of vital needs (on which society is grounded) obscures the boundaries between freedom and necessity, undermining the very basis of *scholē*, which rests on freedom *from* necessity (see above, paragraph 3.2).
4 In 1929, Heidegger referred to *Lebensferne* ("remoteness from life") as a "contemporary catchword" used as a reproach to science. The response of scientists to this accusation, namely their commitment to "science popularization", is extensively discussed by Heidegger as a remedy much worse than the "disease" itself (see Heidegger [1996] 2024, 25).
5 See the entry "civis" in Ernout and Meillet (1932).
6 From this viewpoint, the way modern zoology uses expressions like "social insects", "sociability of penguins", and "society of bees" is perfectly (albeit unwittingly) Greek.
7 As Arendt notes elsewhere:

> > It is the peculiarity of modern society, and by no means a matter of course, that it regards life, that is, the earthly life of the individual as well as the family, as the highest good; and for this reason, in contrast to all previous centuries, emancipated this life and all the activities that have to do with its preservation and enrichment from the concealment of privacy and exposed them to the light of the public world.
> >
> > (Arendt 1961, 184)

> Although we do not have the space to explore all the implications that Arendt derives from this "peculiarity of modern society", it is sufficient to note that as society erases the boundaries between private and public dimensions, introducing a "social sphere" where the private is made public and vice versa, it becomes increasingly challenging to nurture matters that inherently require concealment, time, and patience to mature, to wit, *scholē* (see above, paragraph 2.4).
8 "The playfulness [i.e., the freedom to configure (a world)] of the artist is felt to fulfil the same function in the laboring life process of society as the playing of tennis or the pursuit of a hobby fulfils in the life of the individual. […] From the standpoint of 'making a living', every activity unconnected with labour becomes a 'hobby'" (Arendt 1958, 128). In Arendt's analysis, the playful character of artistic creation consists in configuring a world, i.e., a sense to be shared in common. The transformation of the artist into an *animal (non) laborans* occurs in the "worldlessness", that is, within the actual disappearance of the world. This phenomenon leads to what we nowadays call "globalization".
9 The dichotomy "policy-driven" vs. "curiosity-driven" science saturates the whole contemporary discussion on science. See below, paragraph 6.4.1.

10 On the term "coalescence" see above, paragraph 5.4.1, 134, note 56.
11 See above, paragraph 5.5, 124.
12 A comprehensive and phenomenologically oriented interpretation of "life" as an ontological concept in the modern sense is provided in the context of Heidegger's interpretation of Nietzsche's thought (cf. Heidegger 1961). While a thorough exploration falls beyond the scope of this book, we can highlight some key aspects that help to understand the reference of societized and technicized science to life in a sense that cannot be reduced to mere survival:

    i In Nietzsche's understanding, life is never about maintaining or preserving a given status but fundamentally about *self-overcoming*; it is an unceasing movement in which conservation is just a necessary condition for *growing* and *becoming stronger*.
    ii Since life is characterized by a movement of self-overcoming, its essence is the *empowerment of self-outpowering*: life's aim is essentially the power to overcome each successive stage of power. In Nietzsche's words: "Life itself is not a means to something; it is only a form of growth of power" (Nietzsche 1999, 486; 16[2]).
    iii In its quest for empowerment, life sets "goals", the achievement of which has the sole purpose of surpassing them: these goals manifest as *values* that serve as signposts along the path of power expansion, and remain "valid" as long as they function as conditions for empowerment; as soon as they become useless or even dysfunctional to further empowerment, they are dismissed and replaced by other values. (On this last point, see paragraph 6.4.4, 155–57.)

13 We are indebted to Davide Valenti for drawing attention to this statement in his insightful essay on the modern conceptions of scientific discovery (Valenti 2024).
14 While the popularization of science – understood as the simplified communication of scientific results to the wider unacculturated public – might appear consonant with science's constitutive social character, this impression proves misleading. In truth, popularization represents an insidious form of derailment from the track of societized science (a derailment of which Feynman seems to be fully aware in his conference). Indeed, what we call "results" – be they theoretical findings or their practical applications – are never merely "brute facts" that can be passed on, from hand to hand, rather they are always phenomena in need of (scientific) interpretation. For a discussion on science and popularization, see Heidegger (1996, 24–26). On the transformation of "scientific results" into policy values, see below, paragraph 6.4.4, 157.
15 In an earlier annotation on *Science*, Heidegger wrote:

> The 'Institute of Technology' has long since outstripped the 'Universities'; the latter can only exist by aligning themselves with the former; the alignment becomes an aggregation of academic sciences around the core which is the Institute of Technology; at the heart of that core is the Faculty for Defense Technology.
>
> (Heidegger 2014a, 124–25)

16 See discussion above, paragraph 6.3.
17 A provisional, and by no means exhaustive, list of conceptual placeholders in today's science policy narratives include: accountability, sense-making, evidence gaps filling, evidence-based, evidence-informed, multi-level, horizon scanning, boundary spanning, co-design, co-creation, cross-disciplinarity, out-of-the-box and out-of-the-silos thinking, anticipatory culture, participatory culture, peer community, and extended peer community. It is a trans-disciplinary jargon that conveys notions of "innovation", "anticipation", and "competitive cooperation" (compare the analysis in paragraph 5.4.1 above). All of these notions ultimately define skills and strategies that, from an evolutionary perspective, support the struggle for survival in a challenging environment. For an exemplary engagement with these terms, see Šucha and Sienkiewicz (2020, *passim*).
18 See above, paragraph 5.1.1.
19 https://joint-research-centre.ec.europa.eu (accessed April 30, 2025).

20 © European Union 2024 (on file with the authors).
21 The JRC mission statement defines *anticipating* as "looking ahead and seeing more clearly what's coming to us to be better prepared and react more efficiently to new challenges" (https://joint-research-centre.ec.europa.eu; accessed 30 April, 2025). One might be tempted to draw an analogy with the foresight of a "good servant" who anticipates the master's desires before they are voiced.
22 Defined as "connecting the dots and disentangling cross-overs thanks to multi-disciplinary and analytical capability" (https://joint-research-centre.ec.europa.eu; accessed 30 April, 2025).
23 See by analogy the analysis of the fabrication of the cognizable in paragraph 5.2.2 above.
24 Text in bold is as shown in the original.
25 For a discussion on "excellence" and the hollow rhetoric that has grown around it, we direct readers to the seminal analysis by Bill Reading (1996, 21–43).
26 These three terms appear 197, 108, and 78 times, respectively, in the abovementioned 96-page Horizon Europe strategic plan 2021 – 2024 (European Commission: Directorate-General for Research and Innovation 2021). Meanwhile, the term "transition(s)" surges to a striking 135 appearances in the subsequent 134-page plan for the years 2025 to 2027 (European Commission: Directorate-General for Research and Innovation 2024). For context, in the same document, the term "science(s)" appears 97 times, while "philosoph(ical)" makes just a single measly appearance.
27 The verb "to accelerate" appears over a 100 times in the 96-page document.
28 A comprehensive mapping of the scientific landscape emerging from policyzation lies beyond the scope of our analysis. However, it is worth noting examples such as the "digital humanities", a field that has emerged to assist the so-called "humanities" in their struggle for survival, or the "ethics of artificial intelligence", a clear example of a new discipline reclaiming a place in the driver's seat of future science.
29 In a related document outlining the outcomes of a consultation on science's priorities, entitled *Synopsis report – Looking into the R&I future priorities 2025–2027*, "stakeholders" are categorized into groups such as academic or research institutions, companies or business organizations, citizens, and others. However, the document provides only aggregated statistics for these categories, with no specific individuals or entities named (European Commission: Directorate-General for Research and Innovation 2023). Meanwhile, the earlier-referenced policy document (Horizon Europe strategic plan 2021 – 2024) includes a disclaimer stating, "The views expressed in this publication are the sole responsibility of the author and do not necessarily reflect the views of the European Commission" (European Commission: Directorate-General for Research and Innovation 2023, 1). Yet, no *author* is named in the publication. For further elaboration on the role of anonymity in the Evaluation Machinery, see Chapter 7 of this book.
30 Ironically, the use of "transition" as an economic concept began with Marx, who in the *Critique of the Gotha Programme* theorized the transition to the communist society as involving an inevitable period of "revolutionary dictatorship of the proletariat" (Marx [1890] 1970, 30). The term was later co-opted by neoliberal economists to describe the opposite process: former socialist states "transitioning" to capitalist market economies.
31 In policy language, these processes are commonly represented as "challenges": the climate challenge, the security challenge, and so on.
32 Examples of state- or market-related fetish values, which abound in the aforementioned policy documents, include, among others, "democracy", "diversity", "inclusiveness", "fairness", and "competitiveness".
33 See discussion above, paragraph 4.2.
34 See in particular, paragraphs 7.7 and 8.7.
35 It is worth quoting the entire passage from the section of the *Origins of Species* titled "On the absence or rarity of transitional varieties":

> As natural selection acts solely by the preservation of profitable modifications, each new form will tend in a fully-stocked country to take the place of, and finally to exterminate, its own less improved parent or other less-favoured forms with which it

> comes into competition. Thus extinction and natural selection will, as we have seen, go hand in hand. Hence, if we look at each species as descended from some other unknown form, both the parent and all the transitional varieties will generally have been exterminated by the very process of formation and perfection of the new form.
> (Darwin [1859] 1996, 141)

36 The de-philosophization of science discussed in paragraph 3.3.3 provides the necessary fertile ground for this "frustration" to succeed.

Bibliography

Agamben, Giorgio. 2005. *State of Exception*. Translated by Kevin Attell. Chicago, IL: University of Chicago Press.

Arendt, Hannah. 1958. *The Human Condition*. Chicago, IL: Chicago University Press.

Arendt, Hannah. 1961. *Between Past and Future: Eight Exercises in Political Thought*. New York: The Viking Press.

Balbi, Gabriele. 2023. *The Digital Revolution: A Short History of an Ideology*. Translated by Bonnie McClellan-Broussard. Oxford: Oxford University Press.

Darwin, Charles. [1859] 1996. *The Origin of Species*. Oxford: Oxford University Press.

Ernout, Alfred, and Antoine Meillet. 1932. *Dictionnaire étymologique de la langue latine: histoire des mots*. Paris: Klincksieck.

European Commission: Directorate-General for Research and Innovation. 2021. *Horizon Europe strategic plan 2021–2024*. Publications Office of the European Union, February 2021. https://data.europa.eu/doi/10.2777/083753

European Commission: Directorate-General for Research and Innovation. 2023. *Synopsis report – Looking into the R&I future priorities 2025–2027*. Publications Office of the European Union. April 2023. https://data.europa.eu/doi/10.2777/93927

European Commission: Directorate-General for Research and Innovation. 2024. *Horizon Europe strategic plan 2025–2027*. Publications Office of the European Union. March 2024. https://data.europa.eu/doi/10.2777/092911

Feynman, Richard P. 1998. *The Meaning of It All: Thoughts of a Citizen-Scientist*. New York City: Basic Books.

Heidegger, Martin. 1961. *Nietzsche (I – II)*. Pfullingen: Verlag Günther Neske.

Heidegger, Martin. (1996) 2024. *Introduction to Philosophy*. Translated by William McNeill. Bloomington: Indiana University Press.

Heidegger, Martin. 2014a. *Überlegungen VII–XI (Schwarze Hefte 1938–1939)*. Gesamtausgabe, Bd. 95. Hrsg. von Peter Trawny. Frankfurt a. M.: Vittorio Klostermann.

Heidegger, Martin. 2014b. *Überlegungen XII–XV (Schwarze Hefte 1939–1941)*. Gesamtausgabe, Bd. 96. Hrsg. von Peter Trawny. Frankfurt a. M.: Vittorio Klostermann.

Marx, Karl. (1890) 1970. "Critique of the Gotha Programme". In *Marx and Engels Selected Works*, vol. III, 13–30. Moscow: Progress Publishers.

Nietzsche, Friedrich. (1889) 1999. *Götzen-Dämmerung*. In *Kritische Studienausgabe.* Bd. 6, hrsg. *von* Giorgio Colli und Mazzino Montinari. München: Deutscher Taschenbuch Verlag.

Nietzsche, Friedrich. 1999. *Nachlaß 1887 − 1889.* In *Kritische Studienausgabe.* Bd. 13, hrsg. *von* Giorgio Colli und Mazzino Montinari. München: Deutscher Taschenbuch Verlag.

Reading, Bill. 1996. *The University in Ruins*. Cambridge MA: Harvard University Press.

Šucha, Vladimír, and Marta Sienkiewicz. 2020. *Science for Policy Handbook*. Amsterdam: Elsevier.

Valenti, Davide. 2024. "Che cosa significa scoprire? (terza parte)." *Eudia* 18: 1–26. Accessed April 30, 2025. https://www.eudia.org/wp-content/uploads/Valenti_Che-cosa-significa-scoprire_Parte-3.pdf.

7 Anonymous enforcers

7.1 The ubiquitous presence of anonymity

In the previous chapter, we discussed how the Evaluation Machinery typically manifests as a "no-man rule", largely enforced through policies of unclear origin and questionable legal validity. Indeed, many of the processes that constitute the broader machinery of scientific evaluation lack a discernible owner, author, or accountable party. The lack of an identifiable source of legitimacy is not a weakness but rather the system's core strength and the foundation of its effectiveness: in fact, the machinery functions effectively without the need for a *deus ex machina*, operated instead by a faceless authority of anonymous enforcers.

It is by no coincidence that a practice which would typically be reserved for exceptional situations – such as seeking opinions from individuals shielded by anonymity – is the standard approach underpinning most evaluation processes. Indeed, academia is abounding with procedures applying anonymity as an essential component of their workflow. Anonymous is the student who expresses her views in course evaluation questionnaires. Anonymous is the "peer" who provides his opinion on the bulk of so-called "scientific production", from articles submitted to scientific journals to book proposals presented to scientific publishers. In turn, the journals in which (and the publishers with whom) scholarly work is being published are also classified and ranked on the basis of judgements issued by anonymous evaluators. Also anonymous is the evaluator who decides whether a research project should be granted funding or not. Furthermore, anonymous is the colleague who, on instruction from a higher tier of the university's administration, formulates an appraisal of another colleague's scholarly "profile" in the case of a potential recruitment, promotion, request for sabbatical leave, or simply as part of an internal "evaluation exercise" for whatever purpose may be envisaged. In each of these crucial contexts of academic and scientific life, scholars are increasingly finding themselves on the receiving end of anonymous judgements on their own work as researchers, teachers, and academic citizens in a broad sense. Such judgements may determine whether an article is accepted or rejected, a course continued or cancelled, a career advanced or halted, a research project funded or let to falter – in essence, whenever a significant decision needs to be taken in academia, it has

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become standard practice to depend on the judgement (whether binding or merely procedurally requested, but nearly always decisive) of an anonymous evaluator. The latter has transformed from an occasional presence in the scientific discourse, mainly confined to external peer review in the context of "hard sciences" journals, into an almost ubiquitous protagonist in the life of the academy.

In this chapter, we address the role of anonymity in the Evaluation Machinery and its implications for the scientific endeavour. This leads us to a critical question: within an academic environment dedicated to teaching and research, what does it truly mean to depend on judgements delivered from behind the cloak of anonymity? Certainly, the expression "anonymous enforcer" is itself fraught with ambiguity, since – and objections may be raised – "behind" that cloak there is, or there should be, always a flesh and blood person who thinks, deliberates, and finally issues a judgement, being presumably qualified to do so. But this is precisely the point: what does it mean to think, to judge, and to deliberate behind the cloak of anonymity? Namely: what does it mean for the scientific discourse as such? The question is not merely speculative, but has clear practical implications: is it conceivable that a scientific academic endeavour be *entirely* entrusted, in both of its essential branches (research and teaching), to decisions taken on the basis of verdicts, for the most part unappealable, issued in an anonymous form? And what are the implications of such in terms of unfolding trajectories?

Anonymity imposes itself in today's academic life with an air of nonchalance and obviousness that would be typical for things considered innocuous and of no particular importance; in other words, for things that exist "for a reason". Sure enough, a number of reasons can be (and typically are) put forward to justify reliance on anonymity. The first that comes to everyone's mind is the following: in a context in which evaluation procedures are "necessary", in obedience to the machinal trait of evaluation, anonymity guarantees freedom of thought to the evaluator and objectivity of judgement to the evaluatee. Both points deserve careful examination, and we shall return to them later in this chapter. In the following paragraphs, we will question the pervasiveness of this phenomenon and its consequences for today's university and scientific research. We will begin our discussion by contextualizing this phenomenon against a more fundamental backdrop, namely the nature and purpose of scientific dialogue in the context of societized and technicized science.

7.2 The aim of scholarly publication: a Kantian argument

While a history of anonymity in academia has yet to be written, we can probably trace its origins back to the practice of external refereeing exercised by scientific journals. As shown by science historian Mario Biagioli, the system now known as "peer review" was originally developed during the 18th century by state-controlled scientific academies (like the French Académie des sciences and the British Royal Society), before being adopted much later on by university publishers in the following centuries. The peer review systems adopted by scientific academies are a direct spin-off of state and Church censorship methods, namely systems for controlling

written texts and ensuring conformity to disciplinary standards. In these contexts, the censors or academic reviewers may occasionally have been anonymous, especially when they concluded their examination by rejecting the book or article. "It is almost funny", writes Biagioli,

> to see how closely the relationship between early modern censors and authors maps on that of academics and referees today: censors who try to gain the authors' favours by writing positive, book-review-style censorship reports to be published with the book (and with the censor's name attached to them), and, alternatively, censors who try to keep their anonymity when they turned down manuscripts.
>
> (Biagioli 2002, 39)

It was only in the last decades, however, that anonymity became standard practice in peer review, first in journals of physics and the hard sciences, and later extended to the whole of scientific publishing, including the so-called "humanities".[1]

This brief inquiry into the origins and evolution of anonymous peer review already reveals two critical insights. First, the use of anonymity in scientific exchange serves as a deliberate mechanism for regulating and controlling scientific discourse on behalf of external (and possibly extra-scientific) bodies. Second, this very system highlights the inherently disruptive and transformative potential of scientific writing. By enabling insights that may challenge established paradigms, scientific writing is "charged" with a subversive power that cannot be ignored. For our purposes, this leads to a preliminary question regarding the role and purpose of scientific publishing, specifically, what is the purpose of publishing in science?

The importance of publication in the context of technicized and societized science is almost self-evident: every scholar knows that publishing is an important tool for the progress of their work because it is a means by which the results of research, often conducted in solitude or within a restricted circle of persons, can be examined by other scholars, including those operating outside one's own sphere of knowledge. Kant's well-known view that the freedom to share one's thoughts with others through publication constitutes an indispensable condition for the exercise of scientific knowledge, and of thought in general, immediately springs to mind. In a highly cited passage of his essay *What does it mean to orient oneself in thinking?*, Kant writes:

> It is often said that a superior power can deprive us of the freedom to *speak* or to *write*, but not of the freedom to *think*. But how much and how correctly would we think, if we didn't think, so to say, "in common" with others, to whom we *communicate* our thoughts and who communicate theirs to us? Thus one can really say that the external power that deprives men of the freedom to communicate their thoughts publicly, also deprives them of their freedom to *think*, that is, the only treasure left to us in the midst of social impositions, the only means which can still permit us to find remedies for the ills of our condition.
>
> (Kant [1786] 1964, 280)

Scientific thought, in the Kantian sense, is fundamentally the expression of a "judgement". While it is true that thought can only be exercised individually ("collective thought" is both an aberration and a contradiction in terms), and that a judgement's validity does not rely on the extent of the consensus it garners (an "unpopular" truth remains true, just as a universally accepted falsehood remains false), it is equally true that interaction and confrontation with other thinking beings serves as a crucial testing ground for human thought. So, in Kant's view, denying the importance of this interaction and confrontation – which, for an academic today would result in keeping the outcome of their research secret, or in publishing only what is already part of commonly accepted knowledge – represents a form of *egoism*, namely an insidious lack of scientific thought, which in *Pragmatic Anthropology* he defines as "logical egoism" in order to distinguish it from the more common forms of "aesthetic egoism" (which consists in reducing every relationship with art to the judgement "I like" or "I do not like") and "moral egoism" (in which individual profit is the ultimate criterion for distinguishing right from wrong):

> The *logical egoist* considers it unnecessary to test his judgment by submitting it to the understanding of others, too, as if he had no need at all for this touchstone (*criterium veritatis externum*). But we cannot dispense with this means for assuring the truth of our judgments; this is so certain that it may be the main reason why educated people clamour so urgently for *freedom of the press*. For if we are denied this freedom, we are deprived at the same time of an important means for testing the correctness of our own judgments and left open to error.
>
> (Kant [1798] 1974, 10)

No form of scientific thought, not even pure mathematics, can completely disregard this "external" means of verification, and in this sense, no science can thrive without this freedom to "publicly subject to <others'> judgment one's thoughts and doubts that one cannot resolve on one's own" (Kant [1781] A, 752 [1787] B, 780, 1964, 650). Now, in order for that freedom to be exercised fully, it is necessary that the field within which one communicates one's thoughts – that is, the field which Kant called "the public use of reason"[2] – be, as far as possible, clear of obstacles and free from distortions. The freedom of the press, understood as the absence of censorship and other legal impediments to publication, is just one material condition for the exercise of that more fundamental freedom which consists in communicating one's own judgement to other thinking beings – a freedom that is, in turn, the condition for being free from error. Freedom from error, and more precisely the freedom from being *at the mercy* of error (that is, constitutively unprepared to shield oneself against the insinuation of errors into judgements), is the reason for which human communities – at least those which have an interest in the truth – freely debate individual's judgements *in public*. In this regard, scientific knowledge is essentially knowledge that is exercised publicly; otherwise, it ceases to be knowledge.

However, as explored earlier in this book, modern scientific knowledge has moved away from the traditional understanding of truth as "correspondence" or

"adequation" (the alignment between judgement and reality) towards a conception of truth defined by the "efficacy of its effects".[3] In this framework, "true knowledge" is no longer what accurately corresponds to an external reality but rather what demonstrably produces measurable "gains" – specifically, the expansion of controlled, reproducible effectiveness. Given this shift, one could argue that the Kantian argument on the necessity to submit one's own judgement to public scrutiny may no longer hold the same weight in a context where "performative truth" dominates. Here, what matters is not whether knowledge reflects an independent reality, but whether it "works" – whether it generates predictable, useful outcomes, even with respect to a fabricated reality.

Yet, it is crucial to recognize that performative truth does not supersede the notion of adequation; rather, it fundamentally *transforms* it. Truth as correspondence is not replaced by performativity but transformed: instead of matching a pre-given reality, knowledge must now align with "functional criteria", to wit, measures that ensure its operational success and reproducibility. This means that, even when science moves to a performative paradigm, knowledge still retains an essential "public dimension", though the concept of "public" is transformed as well. It must be verifiable, communicable, and subject to collective scrutiny, ensuring that its efficacy is not merely declared but experimentally sustained. Thus, while the essence of truth has shifted, the necessity of intersubjective verification remains.

7.3 Friendship for truth versus anonymity

If the public circulation of thought has the purpose of freeing human communities from error, as it must, one can easily understand why it needs to be informed by rules, such as sincerity, willingness to listen to others, frank and honest responses, and openness to explanation, as well as disinterest in "personal" matters, sincerity in recognizing the merit of another's reasoning, and honesty in admitting one's own errors; in short, a basic unwritten code of conduct, summed up in what ever since ancient times has been called "friendship for truth".[4]

Now, assuming that friendship for truth is still the cornerstone of every scientific knowledge worthy of the name, the question arises as to how such a stance can be compatible with systematic recourse to anonymity in the expression of judgements. One might object that under the present system of scholarly publication, anonymity only serves in selecting *what* should be published – in Kantian terms, in deciding which judgements deserve to be subjected to the judgement of others and which do not – while it does not affect the way in which publications are circulated and discussed in the respective "public spheres" of scholarly debate. In other words, anonymity would not have any concrete impact on scholarly debate as such, since it only concerns a (necessary) preliminary, "pre-debate" phase of scholarly communication. Once the judgement in question has passed preliminary scrutiny and is admitted into the public sphere, it is subject to testing according to the accepted rules of scholarly debate.

However, while this argument may seem correct in principle, *it completely misses the actual reality of today's scientific communication and debate*. The notorious

"publish or perish" syndrome (on which much ink has already been spilled) has inevitably created the conditions for a *profluvium* of scientific publications. Academics are publishing more and more, and they are starting to do so right from the start of their careers, before receiving their doctorates or even their undergraduate degrees.[5] One of the effects of this abundance of publications is that it is making it increasingly difficult for scholars to simply stay abreast of the publications in their own field of research, let alone study them in depth, and to engage with the judgements expressed and formulate a thought-out response. The phenomenon is probably more acute in the so-called humanities, where it has become customary to cite others' contributions in long footnotes where they feature as mere general references ("On this point *see* x, y, and z…"). Here the citation functions as a mere marker of the fact that the contribution has been "duly noted"; to wit, it has been seen and received its deserved "credit" within the relevant scholarly community.[6] Hardly ever does the scholar engage in a rigorous examination of the actual content of the contribution. Even "book reviews" tend to offer a sugar-coated presentation of a book, garnished here and there with some "critical trimmings" and only a swift appraisal of its content.

Where and in what context, therefore, does scholarly work today receive a truly in-depth examination by other scholars, and an honest, frank judgement without reservations? Answer: in the context of peer review, more often than not expressed under the veil of anonymity. What the scientific community *really* thinks of a scholar's research is now entrusted, *de facto*, to the unique, exclusive voice of some anonymous enforcer in charge of some evaluation procedure. Thus occurs a curious phenomenon: while in public, the contribution is either ignored or only formally credited and summarily dismissed or praised; *in private*, it receives – under the critical gaze of an anonymous evaluator, on the occasion assigned official authority in the evaluative procedures of the case – a seemingly comprehensive examination in the form of inquisitive scrutiny that results in a firm and often indisputable "final word".[7] The supposed "preliminary stage" of scholarly communication, namely the stage in which the judgement is subject to anonymous scrutiny to assess its worthiness for entry into the "royal ballroom" of public scholarly debate, is, in reality, already a milestone, if not the very end, of the scrutiny. So, while it had become customary to refer to "published" articles as outcomes – that is, the end products of scientific research paths, rather than the necessary means through which research progresses – it is now conventional to refer to "accepted" articles as the culmination of a research effort. Academics discuss more eagerly about *where* something has been accepted for publication, rather than *what* has been published or accepted. This custom suggests that any chance of real scrutiny occurs (if at all), at the stage of selection, and not as a consequence of its circulation in the wider public sphere.

In this respect, the effect of anonymous evaluation on today's public scientific sphere is much more profound than its "function", as it is formally understood, would imply. Yet the same applies to all areas in which anonymous evaluation imposes itself within today's academic life – from research to teaching, where ever-increasing opportunities for students to express (strictly anonymous)

judgements on their instructors by means of evaluation questionnaires is matched with a growing mutism on the part of the students themselves when it comes to expressing their thoughts in front of their instructors. It is as if the entire pedagogical relationship between teacher and pupil, once again, boils down to the incontestable sentence of anonymous enforcers.

7.4 Anonymous enforcers in action

The anonymous enforcer is an undisputed figure in today's academic and scholarly life. Procedures that involve his presence are ever more numerous, and within these procedures, his judgement is nearly always binding and incontestable. The emergence of the anonymous enforcer's role has occurred for the most part in a tacit and unvoiced manner, without special justifications or arguments invoked in support of its role. In other words, it is as if the scientific community does not need to be convinced of the desirability of relying on anonymous judgements in academic and scholarly practices. This also means that the anonymous enforcer imposes himself and operates within a favourable climate. In this part of the chapter, an attempt will be made to illustrate this "climate" in some of its essential features. We shall begin our examination with an example.

The example is an email received by the authors of this book in their capacity as members of the editorial board of a journal, which was undergoing a process of evaluation by a national evaluation agency. It is a response to a request for clarification concerning the method used by the agency in their evaluation and ranking of scientific journals. With reference to the evaluation procedure as explained on the agency's website, the editorial board asked, among other things, to know the names of the experts who would be entrusted with the evaluation of the journal, as well as the list of names from which potential anonymous reviewers would be selected. After noting that "experts have the authority to send the dossier to external anonymous referees, in order to obtain their opinion", and that "experts will write a reasoned judgement, which will utilize all the criteria formulated" by relevant ministerial policies, the official specified that

> the list of referees will not be published for *obvious reasons* of scholarly practice: since we are speaking about a small and highly specialized group, *it is necessary to ensure the referees' anonymity*, which would be violated immediately with the publication of their names, thus revealing the connection with individual journals requesting review.
>
> [our emphasis]

The official's reply reiterates a basic rule that applies when personal information must be anonymized. If the population from which personal data are extracted is too small – for instance, the staff of a small-size company – the identity of the data subjects can be easily reconstructed in spite of efforts to anonymize or pseudonymize data. In this case, special precautions must be taken when dealing with personal information, and in particular "sensitive information", namely,

information which – among other things – reveals details about political opinions, religious or "philosophical" convictions, trade-union membership, or one's health or sexual life.[8]

Drawing on this basic principle of data protection, now elevated to an *obvious reason* of scholarly practice, the official builds a self-justifying rationale: if the list of names were to be published, it would immediately violate the anonymity of the referees; but the anonymity of the referees cannot be violated; therefore, the list of names cannot be published. Nothing is said as to why it is *necessary* in the first place to ensure the anonymity of referees, and why this necessity should prevail over the (equally "obvious") need to guarantee the transparency of the evaluation procedure. Furthermore, it is anything but clear in what sense a best practice for the processing of *personal data* can be the basis for determining a *scholarly practice*. What does a supposedly informed and qualified judgement on the scientific merit of a journal have to do with the "personal opinions" of a private individual?

These questions do not normally find answers in ministerial policies. The use of anonymous referees is typically and ubiquitously presented as a crucial, indisputable, and non-negotiable requirement of every decision-making process belonging to the Evaluation Machinery. Within this machinery, anonymity seemingly holds the function of instantly transforming a private act (the expression of a "personal opinion") into an act endowed with public significance (the "objective" ranking of scientific journals). This mechanism is at odds with the way in which anonymity operates in other areas of our social, political, and cultural life. Indeed, the type of anonymity relevant to today's evaluation practices originates from customs and traditions that predate – and are independent of – academic life. This raises the question: in which spheres of human interaction is it typically deemed appropriate to conceal a person's identity through anonymity (or similar measures) when they express a judgement or take a position? To respond to this question, we must briefly consider the broader use of anonymity and the limits that are normally imposed on it.

7.5 Scope and limits of anonymity in a civil society

In our present social order and rule of law, there are circumstances that trigger a generally accepted right to conceal or disguise one's identity while expressing one's own thoughts. We can single out those circumstances in relation, for instance, to healthcare, justice, and political life. A brief examination of those contexts will provide guidance on the scope and limits of anonymity in a civil society.

Anonymity protects individuals in need of receiving social or healthcare assistance, for example, treatment for alcohol dependence. Anyone can approach Alcoholics Anonymous and attend meetings where anyone can freely express themselves without revealing their own identity (apart from perhaps their first name). In this and similar cases, anonymity safeguards individuals disclosing information that could cause them discomfort or distress, and, precisely for this reason, represents at the same time an incentive to utilize the service.[9]

In the administration of justice, witness anonymity orders can be made for the protection of witnesses in criminal proceedings.[10] The effect of these orders is that

the defendant is prevented from knowing the identity of a witness. Before requesting such an order, the prosecutor must carefully weigh all the relevant circumstances of the case and give particular consideration to the defendant's case; this is because the order may limit the defendant's ability to challenge the accuracy or credibility of the witness's evidence, ultimately affecting the fundamental right to a fair trial.[11] Accordingly, the court's decision on whether or not to allow a witness anonymity order is made on the basis of a judgement, on balance, of the impairment of the witness's fundamental right to security[12] by effect of the exercise of the defendant's right to confront the witnesses against him vis-à-vis the reciprocal impairment suffered by the defendant's right to a fair trial by effect of the anonymous testimony. Beyond the legal technicalities of the provision, it is crucial for our purposes to emphasize that the judgement is grounded in the principle of proportionality, and can never be reduced to a unilateral assessment of "pros" and "cons". Under a rule of law, *witness anonymity must not contradict the overarching principle of open justice*.[13]

Similarly, in parliamentary democracies, decisions in deliberative assemblies are typically made through open balloting or recorded votes. Secret balloting is reserved for exceptional circumstances, such as the appointment of official positions (e.g., the Speaker of the House of Commons in the UK or Congress in the USA) or matters concerning the personal affairs of a member. For example, Italian parliamentary regulations permit secret ballots in exceptional cases when a parliamentary branch must deliberate on a member's personal situation – for instance, in case of a request for indictment – to safeguard the members' "freedom of conscience". This is yet another instance that goes beyond the ordinary parliamentary process.

These examples should suffice to make the point that, in societies committed to the rule of law, anonymity in expressing one's own thoughts is an exceptional measure justified by exceptional circumstances only. Within a rule-of-law framework, such exceptions must be interpreted narrowly, especially in cases where the expression of one's thoughts has legal implications or significantly impacts other individuals or society at large. An unregulated and extensive use of anonymity would indeed undermine the integrity of civil society.

In our society, however, anonymity in the expression of thought extends beyond the strictly legal domain, as there is a longstanding tradition of anonymity in literature, the arts, and culture more broadly. Indeed, authors are at liberty to publish anonymously or under a pseudonym if – for whatever reason – they wish to separate their true self from the authorial self. In states that prohibit preventive censorship and uphold freedom of speech as an inalienable right, individuals cannot be compelled to disclose their identity (or that of another speaker) unless the speech has caused harm, such as libel or defamation, and is the subject of an ongoing investigation by a judicial authority. One can name several examples of great writers who, in particular circumstances, have had to hide their identity and therefore resort to anonymity or use of a pseudonym.[14] To name just one example, the Italian writer and scholar Niccolò Tommaseo (1802–1874) used to write under a pseudonym for the literary journal *Antologia*, edited and published by Giampietro Vieusseux in Florence during the years preceding the Italian unification. When one of his articles landed in the firing line of censorship, due to its allegedly anti-Austrian political

implications (Northern Italy was under the Austro-Hungarian Empire at that time), he asked Vieusseux to reveal his identity to the authorities. Vieusseux refused to disclose his name to the police, and the journal was shut down (Tommaseo and Vieusseux 1956). For intellectuals like Tommaseo and Vieusseux, it was first and foremost a question of *honour*: a publisher would never betray his pact with an author – and, in the same vein, an author would never take advantage of his own anonymity to escape the consequences of his writings.

Anonymity is not, therefore, foreign to the expression of one's own thoughts, whether it be a free or obliged choice. At the same time, however, anonymity is not *the norm*. Indeed, it is easy to see that the circumstances under which it is allowed and acceptable (either in a legal, cultural, or simply conventional sense), and the contexts in which it is utilized, effectively constitute *exceptional* situations. Even in these cases, its use is subject to well-defined limits. Anonymous is the investigator who conducts an "undercover" investigation – but never the prosecutor who signs the arrest warrant. Anonymous is, in exceptional cases only, the witness – but never the judge or the court issuing the sentence. Authors can write anonymously or under a pseudonym – but mainly to safeguard their freedom of expression under threatening external circumstances. In sum, anonymity – as a measure to protect a person called to express his or her own thoughts in public – is justified in situations of policing, or war, or repression, or serious danger to one's own safety. Outside of these exceptional situations, the concealment of identity as a rule in interpersonal communication exists mainly in contexts of dubious integrity – for example, in the meetings of secret societies ("hooded orders" such as freemasonry and the like) or for the purpose of blackmail (anonymous letter writing).

Certainly, one might also recall positive implications of anonymity in our culture, such as the case of the praiseworthy "anonymous benefactor". This particular case highlights a key characteristic of anonymity; namely, that it is more properly suited to *silent* interaction between human beings rather than to explicit verbal exchange. The essence of an anonymous donation lies in the idea that the gift itself should "speak", not the donor. The anonymous benefactor seeks precisely this: silence, allowing the act of generosity to reach its recipient "wordlessly". Anonymity, here, is just a visible expression of a deeper quality inherent in the act of giving itself: its gratuity, meaning the fact that it does not seek "recognition". For the donor, remaining anonymous simply means adhering to the silent language of the gift. However, when a person is called upon to express their own judgement or thought *in their own words* (whether compelled or by free choice), anonymity is deemed acceptable in exceptional situations only.

We can conclude this brief reflection on the scope and limits of anonymity in a civil society with the following observation: there seems to be no "healthy" human mode of expressing one's own thoughts which provides for the concealment of personal identity as a normal condition of conduct.

7.6 The functions of anonymity in the Evaluation Machinery

If the argument developed in the previous paragraph is correct, then the question arises as to whether evaluation procedures in academia determine "exceptional

situations" that justify the concealment of the evaluator's personal identity. Stated differently: to what extent are there, in today's university, situations "outside the norm" which warrant the systematic use of anonymous enforcers?

The email from the official from the Italian agency, cited above, can serve as a "case study" in our attempt to find an answer. It suggests, without evoking outright, a scenario of this sort: the referees responsible for evaluating a journal or a scholarly work could be subjected to the pressure to "inflate" their own judgement; or, even worse, they could suffer reprisals after the fact, when their unflattering judgement becomes public. In other words, it is presumed that referees operate in a climate of *temptation* and *intimidation*: incumbent on them, on the one hand, are the temptations presented in order to acquire a favour and, on the other hand, the unmentionable fears of possible consequences and repercussions. In this scenario, anonymity serves to protect the referees and, at the same time, ensure the objectivity of their judgement. Thus, we can distinguish two functions of anonymity embedded in this implicit assumption: a *defensive* function (to protect the evaluator) and the function of creating *objectivity*. To these we may add a third, which is a derivative of the latter and which we shall call the "parameterizing" function. Let us proceed in this order.

7.6.1 Anonymity as a "defence"

Anonymity is needed to shield individuals expressing judgements or evaluations from potential consequences, such as retaliation, reprisal, revenge, or spiteful acts of any sort. For instance, a teacher might "retaliate" against a student who ranked the course badly in an evaluation questionnaire by giving that student a bad grade on the exam. Similarly, the author of a submitted paper might be tempted to seek reprisal against a peer who tore their paper or research project apart by responding tit for tat when the tables are turned, or by not inviting them to a conference, or by turning their pupil down in a recruitment procedure, and so on. But even before expressing any judgement, the evaluator not protected by anonymity may feel pressure to approve a grant application or positively evaluate an article. No great effort is needed to imagine countless situations in which the function of evaluation can put the evaluator at risk by the mere fact of having expressed (or having to express) a negative judgement in some sort of evaluation procedure.

Yet all these hypothetical situations – so easy to conceive within the imagination – reveal a scenario that should prompt some serious consideration. They presuppose, in fact, a kind of community not only divorced from basic principles commonly in effect within civil society but actually governed by the systematic denial of every code of ethics and conduct. How else could we consider a community in which it is conceivable that the most likely reaction towards a critical judgement is *retaliation*? It would obviously be a community at war, and, even worse, a war without rules or quarters. To imagine that the one who expresses a judgement should be *defended* against those who are at the receiving end of the judgement – be they "peers", colleagues, or teachers – means to implicitly assume that the academic and scientific community is anything but "academic" and

"scientific". Certainly, there may be *exceptional* situations where the person who is called to express a judgement should be defended: for example, one can grant that a form of protection is required when the evaluator is in a subordinate position with respect to the "evaluatee". Yet, unless we assume that the scientific community operates primarily as a hierarchy of "superior" and "inferior" roles – dominated by power dynamics more suitable to a corporate or military milieu rather than functioning as a community of equals – it is difficult to justify anonymity in academic evaluations *as a general norm*. Its justification, based solely on its defensive function, seems necessarily limited to exceptional and narrowly defined circumstances.

7.6.2 Anonymity to ensure objectivity

As mentioned earlier, anonymity is supposed to have yet another function. In protecting the evaluator from temptations and external threats, it isolates and "purifies" their judgement from undesired interference. Accordingly, the evaluator should be less hesitant to speak up and truly speak their mind. Only anonymous judgement can be *brutally honest*, as the saying goes: truly sincere, without scruples, and with no regard for the consequences. In actuality, the typical situation in which anonymity exerts this function is as follows: an evaluator *would like to* issue a ruthless judgement on the object of evaluation (a submission, a grant application, a colleague, a teacher, etc.), but he does not *feel like* doing so because the act would incur undesirable consequences.

This "objectivity function", as we may call it, coincides with some aspects within the defensive function, but it covers a wider spectrum of situations, including, most notably, those where there exist no reasonably risky consequences from which the evaluator must be protected – as in most cases where the evaluator is not in a subordinate position with respect to the evaluatee. In *all* cases, anonymity liberates the evaluator from *all* consequences of their judgement, be they truly threatening or simply burdensome and annoying. For example, an evaluator may avoid criticizing a submission simply because he is just too lazy to justify his "hatchet job" on the paper, or worse, to avoid facing the author's counter-arguments, and, more generally, to avoid having to answer, in any way, for his own negative judgement. By unburdening the evaluator from the consequences of his evaluation, anonymity enables trenchant judgements to emerge without impediment. Here anonymity is no longer (only) defensive but is also (and especially) *offensive*, insofar as it takes every duty of "courtesy" off the table when expressing a judgement on another's work. A license to attack without fear of retaliation: this is what is given to the evaluator in exchange for anonymity.[15]

The main point is not just that anonymity incentivizes bad behaviour (which may well be the case), rather, it is that those behaviours – be they bad or not – are the effect of a singular operation, whereby *the judgement is divorced from both its source and its consequences*. The judgement takes on a life of its own and is ready to be "used" for purposes that may not coincide with, or may even be contrary to, those for which it was requested in the first place. The judgement can be literally claimed by the highest bidder. This means, among other things, that scientific

discourse ceases entirely to be a *dialogue* – namely, a mutual exchange for the sake of a common pursuit of truth.[16] Instead, it becomes a unilateral value determination, worth only the measurable effects it produces within the relevant evaluation procedure.

7.6.3 From objectivity to parameterization

The objectivity function is thus linked to the third function of anonymity, which is that of ensuring the *parameterization* of judgements. Not only must judgements be "objective", they must also, and more importantly, be measurable, in the sense of being commensurable against each other and with respect to achieving the targets set in the respective evaluation procedure. In this regard, parameterized judgements enable the ranking of the objects of evaluation based on their capacity to be integrated into mechanized operations. Examples include: how effectively an article meets a journal's "quality standards"; how efficiently a teacher "delivers" course content; and how successfully a research proposal addresses the "challenges" outlined in the call for submissions – in short, how functional each of these items is in meeting predefined proxies for "scientific quality" in each specific context. Whilst remaining mindful of our previous analysis of the "proxy fallacy",[17] we can observe a twofold process at work here: anonymous judgements are taken as proxies for genuine scientific judgements; these, in turn – given the impossibility of deriving anything true about scientific knowledge or teaching without engaging in genuine scientific and pedagogical dialogue with them – are employed as tools for the mechanized measurement of proxies for scientific validity. The Evaluation Machinery's peculiar insistence on anonymity may, in fact, serve an implicit "pedagogical" purpose: to train scholars and students to construct "scientific discourses" grounded in proxies that are devoid of any true scientific meaning.

For the purpose of our analysis, it can be observed that "the parameterization function" is more important than the other two we discussed previously. Indeed, within evaluation procedures, a judgement can be short (and even run afoul) of objectivity as long as it is parameterizable, namely, capable of performing its function in the procedure. *By isolating the evaluator from the evaluatee, as well as the judgement from its consequence, anonymity pre-disposes the judgement to parameterization, meaning its reduction to a proxy*. From the perspective of the evaluation procedure, anonymity annuls from the outset all differences between evaluators. Under the veil of anonymity, a judgement informed by reasoned and reflective thinking is worth the same as one which arises from extemporary reaction and ignorance; the view of a scrupulous referee counts as much as that of a dishonest, lazy, or biased referee; the opinion of the most negligent student carries the same weight as that of the hard-working student who has attended all classes and completed the whole reading – and all this on the ground that, "on average", the extraction of anonymized judgements will return a workable proxy of scientific quality, teaching efficiency, etc. All expressions of appreciation or depreciation (*like* / *dislike*) become summable, subtractable, and mediatable; in short: subject to a computation of values in pursuit of the effectiveness of measuring for measuring's sake.

This anonymity-induced equivalence is not a fault of evaluation procedures but their very condition of possibility. A judgement only becomes an "evaluation", namely the attribution of a computable value to an object, when it is divorced from both its consequences and the singularity of the subject expressing it. *Anonymity ensures both.* Once translated into values, judgements become mutually comparable and computable. Each object of evaluation becomes potentially classifiable, and, as such, part of a classification: projects, papers, journals, scholarly publishers, departments, universities, degree courses, modules, individual lessons, individual teachers or researchers, and the daily work of the latter – *every single element of academic life* translates into a determined position (ranking) within the relevant classification or league. Anonymity is the cornerstone of this translation of the entire academic and scientific language into a set of parameters for decision-making, on the basis of which every act *upon* the university and *upon* science – from the advancement of a research project to the elimination of an entire department – may be successfully undertaken.

While the functions of anonymity discussed so far – defence, objectivity, and parameterization – operate simultaneously, it is undoubtedly the last of the three that directs and guides the other two. Indeed, anonymity is extensively adopted by default, even in contexts where the defensive function is wholly unnecessary, and when the "objectivity" of judgement is not reasonably in question (as when the evaluator is, quite simply, a serious scholar or a serious student). The need to parameterize each judgement – that is, to translate judgements into a set of parametric values, in order to meet the compulsive requirement to implement policy-driven acts *upon* the university and *upon* scientific research – determines in the last instance that climate of *permanent exceptionality* which permeates today's academia and scholarly existence. By this, we mean that the "exceptional circumstances" which, in every other sphere of civil society, justify the use of anonymity in the expression of one's own thought are supposedly defining the "normal" status of technicized science today.

7.7 Towards algorithmic (de-humanized) enforcement

In this chapter, an attempt has been made to elicit the trajectory which anonymity is impressing on academic and scientific life: a trajectory *away* from public communication and humanly informed dialogue for the sake of truth *towards* secretive, unilateral, metrics-driven interaction subjugated to the effectiveness of the measurement for the sake of measurement. By quietly becoming the default norm for the exchange of judgements in every scientific community, anonymity operates as a powerful tool for the disciplining of scientific discourse – a mechanism potentially more powerful, because all-pervasive and endogenous, than externally imposed censorship or control practices, from which the tradition of anonymous peer review initially emerged.[18]

Indeed, one of the observable effects of this disciplining is that evaluation, in all its forms, is about to be taken over by fully automated systems and "Artificial Intelligence" (AI). In principle, for the purpose of evaluation, there is nothing an

anonymous human can do that cannot be done more accurately, efficiently, and cheaply by a self-learning algorithm.[19] Indeed, the academic discourse has already incorporated the assumption that AI-assisted science is an "inevitable" development of the times, with which academia will have to come to terms, the discussion being primarily centred on the details of this capitulation, such as whether some "ethical" boundaries should and could still be imposed.

However, the peculiar threat conveyed by this seemingly inevitable development does not consist in the fact that AI may at some point supplant human scientists and human teachers (who may then lose their jobs), but in the fact that academic and scientific discourse is prepared to let this happen. By allowing anonymity to be the source of every decision-making criterion, the unavoidable intermediary of every meaningful scientific dialogue and educational relationship – in short, by allowing the anonymous evaluator the unconditional *right to speak* – scientists are surrendering nothing less than their freedom to think scientifically. What anonymity truly puts at stake is not just the credibility of clumsy (and possibly already outdated) evaluation procedures but the ability of scientific knowledge to survive its derailment from the path of technicization and societization.

Notes

1 The reasons behind the adoption of anonymity in scientific publishing remain unclear. As part of a study carried out in 2000 on scientific publishing (Mudden 2000), the question was addressed by email to editors of major scientific journals, directors of prominent scientific libraries, and others. Notably, none of the respondents could identify when and why peer review first became anonymous.

2 "By 'public use of one's reason' I mean that use which each individual, as a scholar, makes of it before the reading public. I call 'private use' that which the individual can make of his reason in a civic position that has been entrusted to him" (Kant [1783] 1964, 55; our translation).

3 See paragraph 5.3.3, 111 sqq.

4 Isaac Newton (n.d.) famously paraphrased Aristotle's (1894) dictum from *Nicomachean Ethics* (1096 a 11–15) into: "Amicus Plato amicus Aristoteles magis amica veritas" (Plato is my friend, Aristotle is my friend, but my greatest friend is truth). The sentence appears as an exergue to the set of notes known as *Quæstiones quædam Philosophiæ* (text available from The Newton Project by the University of Oxford, http://www.newtonproject.ox.ac.uk). A discussion of the transition of the meaning of "friendship" and "truth" from the Greek (Aristotelian) to the modern (Newtonian) period is beyond the scope of this chapter. It suffices here to note the *continuity* of the reference to truth throughout the philosophical and scientific tradition, namely, in the terms of our analysis, in the transition from "technical *epistēmē*" to technicized science (see above, Chapter 5).

5 In the United States, it is now a widespread practice to hold "undergraduate conferences" (scholarly conferences open only to undergraduate students). In the United Kingdom, every university department has its own *Student Review*, with much the same apparatus as a peer review (anonymous, of course) for the benefit of students only.

6 "Credit" is easily translated into numerical, and thus evaluative, terms (n citations = X value = position Y in the scholarly community).

7 Here, we observe the inversion of "public" and "private" described by Hannah Arendt in her analysis of the rise of *societas* as the dominant form of being together (see above, Chapter 6, 142). The appearance of anonymous enforcers within the

Evaluation Machinery underscores, specifically, a derailment from societized science as a knowledge system oriented towards problem-solving.

8 See Regulation (EU) 2016/679 (General Data Protection Regulation), Article 9.

9 Alcoholics Anonymous. 2011. "Understanding Anonymity." https://www.alcoholics-anonymous.org.uk/document/3330-understanding-anonymity/.

10 In the UK legal system, anonymity orders are provided for in the Coroners and Justice Act 2009, Part 3, Chapter 2. The provision outlines three conditions for a proposed order to be granted: (a) the order must be necessary to protect the safety of the witness, to avoid property damage, or harm to the public interest; (b) it must be consistent with ensuring the defendant receives a fair trial, considering all circumstances; and (c) the witness's testimony must be critical to justice, and either the witness would not testify without the order, or testifying without it would harm the public interest. Guidelines on the prosecutor's role in applications for Witness Anonymity Orders are available at https://www.gov.uk.

11 Universal Declaration of Human Rights, Article 10: "Everyone is entitled in full equality to a fair and public hearing by an independent and impartial tribunal, in the determination of his rights and obligations and of any criminal charge against him". https://www.un.org/en/about-us/universal-declaration-of-human-rights.

12 Universal Declaration of Human Rights, Article 3: "Everyone has the right to life, liberty and security of person". https://www.un.org/en/about-us/universal-declaration-of-human-rights.

13 In the *History of the Common Law of England* (1793), Sir Matthew Hale contrasted the English practice of taking evidence in public to the secrecy of the Spanish Inquisition. One of the reasons why public trials serve justice better than private or secret hearings is that "if the Judge be partial, his Partiality and Injustice will be evident to all By-standers" (cited in Nettheim 1984, 28).

14 Famous examples in English literature include Jonathan Swift, Lewis Carroll, and Daniel Defoe. See Griffin (2003). Use of a pseudonym is not necessarily a sign of the desire to conceal one's identity. There is none of this intention, for example, in the writings in which Sören Kierkegaard uses the aliases "Climacus" and "Anti-Climacus", or in Friedrich Hölderlin's so-called "tower poems", which the poet signed as "Scardanelli" or "Salvator Rosa".

15 Here, we can see how such de-humanization sets the stage (as will be explored in sections 7.7 and 8.7) for the total displacement of human evaluators by automated systems. In this context, a remark by C.S. Lewis in *The Abolition of Man* seems particularly pertinent:

> 'Why are you supposing them to be such bad men?' But I am not supposing them to be bad men. They are, rather, not men (in the old sense) at all. They are, if you like, men who have sacrificed their own share in traditional humanity in order to devote themselves to the task of deciding what 'Humanity' shall henceforth mean. 'Good' and 'bad', applied to them, are words without content: for it is from them that the content of these words is henceforward to be derived.
>
> (Lewis [1943] 1978, 39)

16 As discussed in the previous chapter, this dialogue is fundamental to science, even in the context of technicized and societized science; namely, when the "truth" that guides scientific research is understood in terms of enhancing the effectiveness of processes aimed at addressing vital societal problems.

17 Paragraph 1.4.

18 See above, paragraph 7.1.

19 See below, paragraph 8.7, on the "AI-peer". Another function increasingly taken over by automated algorithms is the selection of a scholar's "best publications" for evaluation purposes.

Bibliography

Aristotle. 1894. *Aristotelis: Ethica Nicomachea*. Edited by Ingram Bywater. Oxford: Clarendon Press (Oxford Classical Texts).

Biagioli, Mario. 2002. "From Book Censorship to Academic Peer Review." *Emergences: Journal for the Study of Media & Composite Cultures* 12 (1): 11–45. Accessed April 30, 2025. https://api.semanticscholar.org/CorpusID:143577949 DOI:10.1080/10457220220000003435

Bloom, Lynn Z. 2008. "The Seven Faces of Anonymity in Academe." *Symplokē* 16 (1/2): 43–50.

Griffin, Robert J., ed. 2003. *The Faces of Anonymity: Anonymous and Pseudonymous Publication from the Sixteenth to the Twentieth Century*. New York: Palgrave Macmillan.

Kant, Immanuel. (1781) (A), (1787) (B), 1964. *Kritik der reinen Vernunft*. In *Werkausgabe*. Bd.e III/ IV, hrsg. von Wilhelm Weischedel. Frankfurt a. M.: Suhrkamp.

Kant, Immanuel. (1783) 1964. "Beantwortung der Frage: Was ist Aufklärung?" In *Werkausgabe*. Bd. XI: *Schriften zur Anthropologie, Geschichtsphilosophie, Politik und Pädagogik 1*, hrsg. von Wilhelm Weischedel, 53–61. Frankfurt a. M.: Suhrkamp.

Kant, Immanuel. (1786) 1964. "Was heißt: sich im Denken orientieren?" In *Werkausgabe*. Bd. V: *Schriften zur Metaphysik und Logik 1*, hrsg. von Wilhelm Weischedel, 265–83. Frankfurt a. M.: Suhrkamp.

Kant, Immanuel. (1798) 1974. *Anthropology from a Pragmatic Point of View*. Translated by Mary J. Gregor. The Hague: Martinus Nijhoff.

Lewis, C. S. (1943) 1978. *The Abolition of Man*. London: Fount Paperback.

Mudden, Andrew D. 2000. "Comment. When did peer review become anonymous?" *Aslib Proceedings* 52 (8): 273. Accessed April 30, 2025. https://www.emerald.com/insight/content/doi/10.1108/eum0000000007021/full/html

Muller, Jerry Z. 2018. *The Tyranny of Metrics*. Princeton, NJ: Princeton University Press.

Nettheim, Garth. 1984. "The Principle of Open Justice." *University of Tasmania Law Review* 8: 25–41.

Newton, Isaac. n.d. *Quæstiones quædam Philosophiæ* ("Certain Philosophical Questions", MS Add. 3996, Cambridge University Library). The Newton Project. University of Oxford. Published online 2003. Accessed February 2, 2025. https://www.newtonproject.ox.ac.uk/view/texts/normalized/THEM00092.

Suls, Jerry, and René Martin. 2009. "The Air We Breathe: A Critical Look at Practices and Alternatives in the Peer-Review Process." *Perspectives on Psychological Science* 4 (1): 40–50. Accessed April 30, 2025. https://doi.org/10.1111/j.1745-6924.2009.01105.x

Thelwall, Mike. 2019. "Artificial Intelligence, Automation and Peer Review." Bristol: JISC. Accessed September 9, 2025. https://repository.jisc.ac.uk/7614/1/AI_and_peer_review_briefing_paper.pdf.

Tommaseo, Niccolò, and Giovan Pietro Vieusseux. 1956. *Carteggio inedito*. A cura di Raffaele Ciampini e Petre Ciureanu. Rome: Edizioni di Storia e letteratura.

Weil, Simone. 1952. *The Need for Roots: Prelude to a Declaration of Duties toward Mankind*. Translated by Arthur Wills, with a Preface by T.S. Eliot. London: Routledge.

Weil, Simone. (1950) 2013. *On the Abolition of All Political Parties*. Translated by Simon Leys. Melbourne: Black Inc.

8 Peers and their counterfeits

8.1 The peer

The current system of research evaluation – whether it be the evaluation of scholarly work in view of its publication, that of a scientific project in view of its funding, or that of a scholarly profile with a view to hiring or career advancement – remains dependent on the figure of the so-called peer (see below, Observation 1, 192).

This is not only true under the operative profile (in the sense of the completion of various evaluation procedures) but also primarily with regard to the *very likelihood* (i.e., the credibility and acceptability) of these procedures. In fact, that likelihood rests in a substantial way on the warranty provided by peers, namely by their capacity for scientific inquiry and the very promise of scientificity which they bear.[1] Regardless of the circumstance that systems of evaluation might, in certain cases, appear "good" and "effective", and therefore "useful", as opposed to "defective" and "ineffective", and therefore "harmful", in others, well, the very fact that such a system of evaluation remains *likely*, i.e., that the Evaluation Machinery as a whole appears as *promising*, *suitable*, and *credible*, and as such *acceptable* and *accepted*, is due to the fundamental role played by the peer within it.

Peers are the guarantors of the likelihood (i.e., the credibility and acceptability) of research evaluation; *they are the linchpin of the promise of fostering true science, a promise that the practices of the Evaluation Machinery must, at least rhetorically, imply.*

8.2 The likelihood of the peer

This circumstance, after all, finds its foundation in the very essence of scientific research. In fact, scientific knowledge is *autonomous* by nature: only within itself can it find its own (philosophical) source and its own laws, even though the individual sciences do not, as such, have access to that source, and cannot, therefore, interrogate the origin of those laws, let alone institute them.[2] However, it remains true that *only the scientist truly understands science*. From this circumstance, it follows that the field of scientific *thought* is necessarily a sphere of exclusively internal jurisdiction: the judgement of scientificity lies with scientists, while no external

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instance may pass judgement on the scientific soundness of research performed in the sphere of a specific branch of inquiry.

Scientists themselves are essentially "on par" with each other – that is: they are *peers* – by virtue of their constitutive "growing-in-common" within "the warding"[3] of "truth" (a trait which we indicate with the word "coalescence"[4]), and hence of their being bound to the latter only. While different from one another, they are *likewise*, or rather "*pairwise*", engaged in the warding of truth, where the adverb "pairwise" does not indicate an *equal* degree of engagement, or of insight, but the circumstance of being pledged to this *same* truth in a manner that knows no hierarchy: their being-pledged to the truth, by itself puts them "on par" with each other (or pairs them) in difference; in one word, it se-parates[5] them *in* the truth, while at the same time distinguishing them from those who are not scientists (in the respective field of cognition).

Jurisdiction in the field of science must, therefore, necessarily be founded on judgement among peers: *judgement among peers, and this alone, is, in principle, likely, hence credible and acceptable*. Conversely, as long as it relies on peers, a system of judgement enjoys a presumption of scientific likelihood, a fundamental trust on the part of those to be judged.

8.3 The word and its inversion: the transmutation of the peer

The English word *peer* is a term of comparing and indicates "a person of the same rank". In its true sense, the peer is "the person who has the right to be judged by other people of his same rank".[6] This notion applies perfectly, therefore, to those who, being equal (and thus, as we have said, "se-parated") in the warding of truth, have the right to be judged as researchers only by those who, in turn, draw their measure of judgement from the very same cognitive need,[7] while they must remain untouched by judgements which draw their criteria from a different source. Such is the element of justice which informs "the freedom of scientific research".

However, precisely this reference to the original meaning of the peer permits us to discern a difference; indeed, an essential *inversion*. In fact, while the concept of the peer, as we have seen, implies the *right to be judged* by those equal in rank, thus assuming, first and foremost, a sense of *support* (of autonomy) and *protection* (from heteronomy), nevertheless, in systems of research evaluation, this notion refers in, the first place, to those who have the right to judge or, more precisely, to whomsoever is invested with the *mandate* (i.e., the role, the function) *to evaluate* those whose peer he is by decree declared to be. Consequently, the peer now appears primarily as the bearer of a requirement of, and a will to, *control*.

[N.B. Before proceeding with our analysis, we must make a crucial observation. The scientist, while constitutively single in his engagement with the truth, remains a single scholar *of* (i.e., *belonging to*) a likely coalescence wherein this truth is *primarily* safeguarded. Researchers are, therefore, constituted *as* single scholars *by virtue of that coalescence*;[8] hence, in their inquiries, they remain constitutively entrusted to the encouragement and the protection that can only derive from the latter: the judgement of those whom scientists recognize as their

peers is, for the single scholar, a guarantee and a privilege, as well as a constant recall and inspiration to the highest rigor in their dedication to the truth. Now, since coalescence is established precisely in the *right* to be judged by one's peers, the single scientist is, as such, one "judged by right" – whether or not there happen to be, in actual fact, judges or occasions of judgement. *Without the right to judgement by one's peers, no scientist and no scientific research is, as such, likely*. The very source of knowledge plays its game by giving rise to and upholding such a right, and therefore a likely (and thus expectable) coalescence of interrogators, namely those who belong together – and, thus gathered, grow se-parately – *within* that right. That same source of knowledge safeguards, within the single scholars of this coalescence, its *own* truth, so that the latter be finally accepted and established within the community at large. We can formulate, therefore, the following essential proposition: *the right to be judged by one's peers not only acts as a guarantee against any encroachment through inquisitorial actions but is, first and foremost, constitutive of the very circumstance of being scientists-in-coalescence.*[9]]

Returning now to the point, we can immediately note that it hardly seems justified to speak of inversion, or of the consequent turning of protection into control; that is, of "being supported" into "being targeted". In fact, one would say that "in the peer model" each scholar is, depending on the case, interchangeably the judge and the one being judged; each exerts a function of control over his peers, and each remains protected, as a researcher of the truth, by the assurance that there will always and only be a peer who passes judgement.

Nevertheless, the analogy between the "peer in judgement" – the judging peer – and *its proxy*, the "peer in evaluation" – the evaluating peer –, is merely formal: in truth, the *substance* changes, so that the tone and tenor of encouragement and support that resounds in the word "peer" (namely, the sense of being liberated "into coalescent singularity") is reshaped into a discouraging accent of threat, or even of aggression (namely, the sense of being profiled through a parametric scan which isolates each scholar into a set of values; in short, the sense of minatorial parameterization). As long as this turning remains covered by the presumption that the peer is still an equal in the ward of truth (i.e., the more or less esteemed and trusted "colleague in the search for the truth"), that inversion, and therefore what sustains it – namely, the replacement of protection by control –, remain themselves undetected. This leads to the following key claim: *The system of evaluation – the Evaluation Machinery – obtains and maintains its own appearance of likelihood (hence its* prima facie *acceptability) thanks to the "cover" offered by the undetected transmutation of the peer.*

8.4 The evaluating peer lacks scientific likelihood

The insight into the inversion from "the right to be judged" to "the mandate to evaluate" has led to the emergence of the essentially *surreptitious* nature of the apparent likelihood enjoyed by evaluation pivoting around the peer. In fact, in order to ensure their own likelihood and acceptability, evaluative practices employ the peer

as an intermediary: he acts, so to speak, as a "Trojan horse" and a "mimetic cover", giving to understand, in a deceptive manner, that we are *always still* speaking of the truth, *still* of science, *still* of the protection of research and the researcher, *still* of mutual trust between peers and colleagues, and all this to ensure, in the end and *always still*, the freedom of genius and the progress of knowledge.[10]

The shape (or mask) of the peer thus smuggles in a "supply" of truth and trust, now merely presumed, while, as is the case with every deception, it generates stubborn confusions and appearances, and therefore confusedly perceived ambiguities. "To obtain through deception" is precisely the meaning of the Latin word *subreptio*. The likelihood of the system of evaluation dependent on the peer is, therefore, founded on what we might call a *vitium subreptionis* or "error of subreption".[11] Because, in the case at hand, likelihood is achieved by virtue of such an error; it remains without foundation and without truth. In other words, it is an unlikelihood which makes the peer-based evaluation of research scientifically unpromising and, finally, entirely inacceptable.

The nature of the fundamental transformation – from which both the said inversion and the change of meaning that sustains it are generated, and thus the surreptitious replacement of the judging peer by the evaluating peer – consists in *the fall of truth* (namely, the original drive towards the true) *into performative truth*, and the fatal degeneration of the latter *into mere progressive operativity*.[12] While the fall of truth into performative truth is at the basis of the peculiar character of the technical trait of modern science (which we have thus called "technicized"), the degeneration of this truth into progressive self-referred operativity, in which research-generated values are supplanted by a-scientific metrics, marks the definitive forfeiture of any scientific likelihood.

At this point, we must explicate an important trait of this transformation: where truth has become mere operativity, or operational efficacy, man is no longer *claimed* (or needed) as a warden of the truth itself – the latter, in turn, being understood as the essence to which he *appeals* in his creative work. On the contrary, peers are now *imperiously required* to be, or rather to operate and function, *at the service* (i.e., *as slaves)*[13] of the implementation of the incremental mechanism of performativity constituted as a control circuit, which by its essence is always in a deficit of power.[14] While operating the circuit at the latter's behest, peer-functionaries remain unceasingly *pursued* (traced, hounded, halted, framed, examined, censured, censored) by it in the unique perspective of the performance level they will be able to ensure. In the relationship between man and truth, *the conversion from the claim* (to be a warden of truth itself) *to the exaction* (of functioning as a facilitator of the empowerment and potentiation of operativity) *enjoins and dictates unnoticeably the inversion of meaning* – the previously characterized transmutation – *of the peer.*

The transformation of the meaning of truth causes the latter to be construed as an *offensive against the world*, insofar as, under the regime of that truth, the world itself is reduced to a stock of resources, that is, of values. Consequently, the knowledge in which man roots and moulds his own action – which is, in turn, entirely informed by the self-potentiation of power – must be enlisted precisely for, and made subservient to, that offensive.[15] The "evaluative transference" (i.e., the shift

to the regime of the Evaluation Machinery) draws from this submission of science to performative truth the blueprint and the perspectives for the subjugation of science to a "truth", which, as said above, has irrevocably cut all ties to *scientific* performance and *scientifically* generated values. From the enlisting or enrolment of science in a counterfeit performative enterprise descend both the tone and the sense of all "evaluation criteria", of "productivity indicators" and of "scientific standards", as well as the "rules" and "timelines" in which the procedures to be performed by the evaluating peers serving the Evaluation Machinery are articulated. When functioning as executors of the degenerate performative truth, these peers are now *peers in enrolment* only; that is, they belong to and have an equal role *in the task of "enrolling control" which aims at the equalization (or uniformation, standardization) of "scientific practice" in terms of parametric performativity*.[16] The hallmark of the thus established "equality" is that, instead of owing itself to a liberation into equal (or non-hierarchical) difference (i.e., the previously mentioned "se-paration"), it consists in the "shared fate" of subjugation to scientifically meaningless disparities of value.

Now, along with the transformation of the meaning of the peer, and under the cover of his supposed remaining "equal *in the ward of truth*", there occurs a sign change – an inversion causing the mentioned sense of exaction, control, and assurance – among all of the traits and constitutive moments which render concrete an authentic scientific coalescence between those who are separated, and in which a genuine parity is substantiated; namely, to name but a few, the traits and moments of criticism, dialog, exhortation, solidarity, aid, and responsibility.

In fact, who in our era is unaware of the prevailing suspicion and mistrust, as well as a generalized "presumption of guilt" – to wit, the sense of an irremediable performative insufficiency with regard to a variegated set of benchmarks – vis-à-vis researchers and scholars as such?; and even of that occurring, meanwhile, *among* them, given the institutionalized alienation and compartmentalization of the branches of knowledge and the obscene personalization of science?[17] Thus, the individual is indeed perpetually pursued, until (owing to a singular inversion of the "burden of proof") he provides elements which are useful for justifying the "persistence" of his tenure,[18] confirmations of his "scientific quotation" (in the respective "field" or "sector"), and constantly updated attestations of his "impact" (on the "community" to which he is assigned, if not on the whole of "society"). Such tests, confirmations, and attestations are ever more promptly and automatically translated into the most tangible instrument of reward and punishment, and therefore of relative validation on the operativity scale, to wit, *money*, to be understood here, first and foremost, in its intrinsic capacity of taking into pay; in other words, of "solding".[19] The eye, the word, and the gesture of the evaluating peer: they all speak this "language", and this language only, while they remain alien, empty, and mute when they are called to the level of the warding of truth.

Again: who does not experience first hand the palpable lack of trust and confidence reigning within the institutions responsible for the "promotion" and "support" of research, as well as the indifference and inertia with regard to every exigency of the warding of truth (indifference and inertia occasionally charged

with emphatic slogans, or replaced by the prompt intimidatory reaction against any sensible resurgence of that warding); finally, who does not perceive the peremptory and excessive prevailment of procedural requirements upon the spaces and times necessary for scholarly research?[20]

In terms of the meaning of scholarly existence, this "climate" implies that the *perennial protection* enjoyed by those who were *once* judged wardens of the truth, and therefore a peer in judgement, has given way to the obligation of the *unending rush to assurance* that is expiring *every hour*. All this, however, occurs precisely while the peer executes the "high stakes" of "reviewing" and "refereeing", by levelling out and expunging every attempt and every errancy, and completing the "surgical" sterilization of the genius willed by the "truth" that "solded" (i.e., enlisted) him as an evaluating, "soldiering" peer.[21]

8.5 Vilification and diagnosis

It is beside the point to recall that the evaluation procedures dependent on the institution of the peer are today being imposed, "like it or not", by the "very nature" of modern, highly specialized branches of knowledge; by the "dimensions" and "dynamics" of scientific research; by the resulting requirements of "management" and "governance" in terms of efficiency, transparency, and objectivity; and they are so in order to guarantee the maximal result in terms of "utility", given the increasingly "heavy investments" on behalf and on account of society.

In truth, similar warnings, which point to "practical constraints" or "moral responsibilities", or both, have no true weight: in fact, by relying on (while at the same time being subjected to) the "reality" of "science today", they come too late, fatally so. For that supposed "reality" is nothing more than the tardy consequence of the oblivion of scientific knowledge's original political trait;[22] a trait which presupposes the realization that *only if* the warding of truth is awakened, within a political community, can the *essence* of the *polis* regenerate, and thus find support in the fields of knowledge that this same *polis* fosters and nourishes. What likelihood (and therefore what credibility and acceptability) can there be to a discourse which wields the argument of the pressing "reality" of "facts", when it remains silent before the havoc wreaked on the debased and forgotten truth? (see below, Observation 2, 193).

The explicit act of disdaining, of holding as vile with open disrespect, is known as "vilification". The institution of the evaluating peer is founded, in this sense, on the *vilification of the truth*, which is brought about precisely through that institution. "To vilify", here, does not mean "to weigh and estimate, to judge and recognize that something is of little worth", but rather "to *render* vile, to revile something *by reducing it to an object to be estimated and evaluated*"; in other words, reducing it to something one would buy and sell at a price.[23] Thus, the degeneration of truth, transformed into performativity, towards mere evaluative performance, is sufficient to constitute (a) vilification. Nevertheless, that transformation and, therefore, the ensuing degeneration and vilification are not caused by man. They belong to the very essence of truth, as its constitutive temptation.[24] However, this temptation

cannot take place without man's *being* (i.e., his constitutive awareness of the truth) yielding and giving in to it, and acknowledging and actuating it in various ways. The *primary mode* of this yielding passes through that knowledge – namely, *epistēmē* – by virtue of which man founds the *polis* and, within the *polis,* his own human essence. In turn, the outlined degeneration insidiously leans on that primary "epistemic" yielding.

We thus arrive at a first diagnosis of the evaluating peer: he is a primary mediator, an executive arm of the self-vilification of truth and of the consequent becoming-vile of all meaning. This mediation is fourfold:

i the evaluating peer is the *bearer* of *vilification*, by virtue of which the awareness of truth, transformed into the calculation of *performance*, is spent (namely, spends *itself*) as the value of every value;
ii the peer is, accordingly, the *carrier* of the *revilement* of the coalescence and the accord of those who are separate; a coalescence and accord which, from being the abode of the warding of truth, degenerate into a market of valorial interests and procedures of assurance;
iii for this very reason, the peer is the *inducer* of the *avilement* of each single scholar's scientific existence, forced to translate himself entirely into a *format*, and to extenuate himself in the effort of remaining at the level of "scientific quotation" in its multiform and iridescent operational ganglia;[25]
iv the peer is, finally, the *inflictor* of *vileness* into scientific demeanour and practice (now often reduced to mere pose), and, through the latter, into the political existence of peoples.

The peer, originally the judge *of* the true, the arbitrator to whom is assigned the task of deciding between what "has being" and what "has none", has now become the referent ("the referee") of the "omniparifying" (i.e., indifferent to being, and in this sense *arbitrary*) will to will. The peer, by vocation a guardian of the true against the insidious arrogance of the non-true, is now the implementer of the gesture that equates everything within the comparability of extenuating computation.[26]

8.6 A phenomenological synthesis

Regardless of the procedural modalities which may regulate the knowledge of each other's names between the controllers and the controlled, *no matter* how many "visually impaired" parties may be involved in a peer review process (depending on whether the latter is "sighted", merely "blind", more safely "double-blind", or even safer yet "triple-blind")[27]: the evaluating peer is, in most cases, not only factually anonymous but, above all, *constitutively* anonymous. For, indeed, only he who has a true renown and reputation – being known, in the first place, by a reference to what is, in itself, unknown and enigmatic – speaks in the name of the (attempted) truth[28] (see below, Observation 3, 194).

Regardless of the conscientiousness, integrity, and competence with which he carries out his mandate, the evaluating peer is essentially *irresponsible*, in the sense

that he *nullifies responsibility as such*, or, in any case, stands in for the nullification of any accountability to truth. Indeed, the peer acts without ever having to answer for the truth of his own operations, while collaborating to orient fellow peers towards the neglect of the truth, through coercion and monitoring within the apparent order of the regime of "the progressiveness of science".[29]

Regardless of the professional composure with which he may carry out his own office, he remains, behind the mask of the expert accountant of scientific values, intrinsically *fanatical*, to the extent that the pernicious rite which he officiates (indeed the more reviling for the festiveness of knowledge, and the more aviling for its celebrants) is necessarily aimed at the removal of anything that could stand in opposition to the domain of naked performativity in the system of knowledge.

With a concluding formula, we may say:

The evaluating peer – the peer of today – is the enrolled-enrolling controller of the performative roll; the anonymous-anonymizing militant of the dictatorship of a- and counter-scientific value; the vile-aviling soldier of the vilification of the truth.

He is, in this way, the scientific dissimulation (and as such the "scientist-guarantor" or "operating scientist") of the unique will that wills the unconditional regimentation of science in the form of absolute, truthless performativity.

This formula must be heard as a phenomenological synthesis, and therefore *not* as a moral condemnation imposed on a given "category of scholars and experts".

Who, indeed, are the peers of today? To this question, we must respond in the manner of Socrates in Plato's *Politeia* (Book VII), when, in response to Glaucon's surprise at the strangeness of the prisoners in the cave, he replies: "They are like us".

Thus, "peers" are not, first and foremost, "some of us" – perhaps the swiftest to seize the opportunity of building a "scientific career" on "evaluative merit" or "distinguished evaluation service"[30]; nor are they primarily those who, through an ill-advised sense of justice (how, indeed, can there be justice without judgement?), or through a misguided understanding of the duty of "rewarding merit" (as mentioned before, there is no true merit in the dictatorship of a-scientific value), offer, with missionary zeal, to act as "peers-in-chief" in evaluative procedures.

Today's peers, equals in the catastrophe of judgement, are precisely "like us", and therefore, in an essential sense, *are all of us*. And this is not only true in the moment in which one of them – the likely "unknown *miles* of truth"[31] – is unexpectedly called upon to compile a "ranking" among "peers" drawn from the planetary "academic job market", or to "review", on behalf and on account of some performance evaluation agency, "a scientific output". Peers are "like us" – "peers" *are us*. And this is so from the moment in which each of us – now made transparent and "readable" for the computation of values through the reduction of one's knowledge to the format of a "scientific-disciplinary sector", through the reduction of one's attempts to the format of "scientific products", and finally through the reduction of one's "errancy in the truth" to the format of a "scientific profile" – *is* simply *subject* to such practices[32]; or rather, is subject to them without raising, not even for an instant, his voice in warning.

8.7 The AI-peer

The evaluating peer fulfils a control function within the cybernetic circles of the Evaluation Machinery. His actions complement those of another functionary of the same machinery, to wit, the content-supplying scholar.[33] Having traced the status of the evaluating peer to his origin in the judging peer and having shown how that status involves an uprooting from "the warding of truth", we are perhaps in a better position to briefly diagnose the most recent evolution of the "evaluative function": the transition towards a progressively wider, ultimately perhaps exclusive, employment of so-called artificial intelligence (AI) tools in the evaluation of scientific and more broadly academic "products" (from scholarly articles to research projects, from scientific curricula to entire research institutions, etc.). This diagnosis is an opportunity for bringing out more clearly the function of the evaluating peer in the context of the Evaluation Machinery, as well as the nature of that machinery itself.

It is common knowledge among scholars that "human peer review", as involved in present-day academic contexts, not only presents "challenges" but also, more often than not, resembles a collection of impossibilities, partialities, imperfections, and absurdities, which even the indolence of enforced habit and the carelessness induced by the internalized pressure to perform can barely override. The hope that those challenges, and the damage they entail, be counteracted now meets with the promise of automatizing some or even all phases of the process in such a manner as to eliminate or at least attenuate certain pitfalls which, it is deemed, come with the fact that those phases are handled by (too often impossible, partial, imperfect, absurd) human beings.

Reflections concerning the upsides and downsides of the automatization of peer review processes are based on the general premise that there exists an objective problem of quality control, which those processes are meant to optimize: it is a responsibility of the scientific community, it is held, to make sure that, for the sake of scientific progress, and the dependence of society on that progress, what is shared and disseminated as the result of scientific research, be reliable according to "generally agreed-upon" standards, so as to contribute to the establishment of a solid basis for further research-related activities. Hence, the discussion consists in identifying the problematic aspects of human-based quality control and assessing how those aspects could be corrected or eliminated through the partial or complete automatization of those processes.

For the purpose of the present diagnosis, we shall focus on peer review applied to "products" proposed for publication. Apart from articles and monographs, this includes abstracts for admission to presenting, in the context of a scientific gathering, and other documents through which access to the publicly shared domain of recognized knowledge is sought.

As mentioned before, considerations about the potential or actual employment of "AI-peers" do not address the implications of the circumstance that something resembling a problem of "quality control" (i.e., an issue which is typical of industrial production cycles) appears in the first place; furthermore, they show no awareness of the mutation from the "judging peer" to the "evaluating peer". The need to rely on peer review to carry out the task of quality control, on what counts as a

product of societal relevance, is considered evidence that requires no justification; moreover, it is assumed that "a peer is a peer", namely, a functionary of quality control, whose scientific-societal task, typically carried out by human beings, could now – to an extent and under certain provisions[34] – be delegated to algorithms.

This is, for instance, how a recent concise article on the status and prospects of integrating AI into peer review introduces the topic:

> Peer review has a history dating back to the 17th century when the Royal Society of London initiated the practice to evaluate scientific manuscripts. Over the centuries, it has become *the heart of scholarly publishing*, a process through which experts in a field review and assess research papers before publication. Its purpose is to ensure the quality and validity of research, identify errors or methodological flaws, and provide constructive feedback to authors to uphold the "Trust in Science". Traditionally, this process has been carried out by human peers, but the advent of AI has opened up new avenues for enhancing and potentially transforming peer review.
>
> (Bhosale and Kapadia 2023; our emphasis)

The same article conveniently assembles the corner stones of the discourse on peer review, to wit,

i the value which in this discourse holds the position of the highest good, namely "trust in the integrity, validity, and impartiality of the process of disseminating scientific findings", which (that trust), in turn, "is essential for the progress of humanity"; and
ii "the core", or "the constitutive elements", of peer review (viewed as "the gold standard for ensuring the quality and credibility of research publications"), namely "fairness in [the] critical analysis of manuscripts; the selection of appropriate reviewers with relevant expertise; identifiable, publicly accountable reviewers; timely reviews, and helpful critical commentary".

Based on the thus outlined scope, the article goes on to list the ways in which AI can "help address these issues without compromising the gold standard", broken down into the above-mentioned core elements. Thus, it is stated that AI can:

i improve the speed and validity of reviewer matching (core element: "selection of appropriate reviewers with relevant expertise");
ii speed up the analysis and assessment of research manuscripts "based on predefined characteristics" (core element: "timely reviews");
iii attenuate the effects of human biases (core element: "fairness in critical analysis of manuscripts"), despite itself being "trained on biased data";
iv improve the transparency and accessibility of the review process by providing, and making "accessible to both reviewers and authors", "data-driven review reports" (core element: "identifiable, publicly accountable reviewers");

v finally, detect misconduct "such as plagiarism or data manipulation" (core element: "helpful critical commentary").

It is reasonable to anticipate that the effectiveness of the "AI-peer" in carrying out these tasks will rapidly and vastly improve, notably with regard to the scope of what is seen as "helpful critical commentary".

After mentioning issues of confidentiality entailed by the use of tools in "AI-enhanced", or "AI-powered", peer review, the article enumerates five requirements that use must meet in response to ethical concerns which that same use raises:

i "ethical oversight" (in the form of ethical guidelines to be followed);
ii "human oversight" (in the form of human expertise remaining indispensable in regard to many aspects of the process);
iii "data privacy and security";
iv "ethical AI development" (in the form of the respect of fairness, transparency and accountability in designing algorithmic tools);
v "reviewer expertise" (in the form of "genuine expertise" being ultimately secured through an appropriate self-assessment of the automatically matched reviewer).

It is not necessary to analyse, one by one, the ways in which AI tools promise to "enhance" or "power" peer review, and the requirements which must be met to ensure that their use does not generate unethical outcomes. A synthetic look, informed by a sense for principle-based distinctions, suggests the following considerations:

i there is not a single operation carried out by an AI tool, at whatever stage of a peer review process, which exhibits the character of a judgement or autonomous decision; hence,
ii such a tool can neither act as a judging peer nor serve as some kind of "basis" for "genuine" peer review, unless transparency to *human* judgement of every single operation that tool carries out is granted; therefore,
iii a tool of that nature is only apt to carry out a "review process", or any phase thereof, if based on a previous human decision to *subduct* that process or that phase from the domain of human judgement through the definition of "critical" metric standards, which (that decision) amounts to substituting scientific review with the computation of scientifically "agnostic", or arbitrary, values; in other words,
iv AI is capable of fulfilling the function of an *evaluating* peer, but can never in any form be a *judging* peer; this, however, leads to the conclusion that
v the substitution of human peers with "AI peers", at whatever stage or even for the entirety of a review process, marks either the abandonment of peer judgement or a step towards the operational optimization and streamlining of a process which, being an instance of evaluation, *from the outset* had the structure of a scientifically arbitrary (hence, counter-scientific) control circuit;

that is, fundamentally, of a computational exercise, albeit provisionally and "imperfectly" carried out by enlisted scholars.

In this manner, it becomes clear that the evaluative peer is *ab ovo* a fill-in (a human proxy of sorts) for an algorithm, who, for some time still, might be needed to "supervise" the latter's working and "correct" its residual operational imperfections. However, such "supervision" or "correction" will under no circumstances have a "scientific" or an "ethical" quality, *unless*, again, the evaluative peer turns into a judging peer, thus effectively annulling the Evaluation Machinery and its control processes into their scientific nullity.

The progressive automation of peer review, in short, the implementation of the "AI peer", is to date the most "advanced" symptom of science's derailment from its path of technicization, namely, the Evaluation Machinery. The "metaphysical horizon" of that machinery is a closed system, in which AI-generated "scientific products" are "reviewed" by "AI peers" in view of the optimization of production cycles in terms of successively defined standards of output performance. Finally, this leads to the following diagnostic verdict:

The Evaluation Machinery itself is, in essence (or "by design"), nothing but the whole of the scientific enterprise turned into a scientifically void and scholar-less "learning" machine; a machine whose "deepening" senselessness, however, ultimately still requires to be validated by "the scientific community".

Finally, such ultimate validation, in which man offhandedly renounces his intelligence, is the truth of what, in contemporary debates on "AI-powered peer review", is purported as a "need for human oversight".

*

Annex – Additional observations

Observation 1 – The community of peers
(See above, paragraph 8.1, 181)

In today's academic usage, the peer group is defined by a shared affiliation within a scientific discipline (or "panel"),[35] characterized by certain subject matter and methods of investigation. A community of peers extends out broadly on a planetary scale. It is believed that scientific judgement must remain limited to the community thus defined, since the necessary competence cannot be guaranteed outside its borders.

One may note how parity is already understood here in a purely technical-operational sense; that is, in the *one* sense willed by the will to evaluate. The single scholar *necessarily* falls into a specific "scientific community", namely into an identifiable group of parified scholars; he is *forced* to define himself in terms of his affiliation to that group, to position himself in it as one of its "expressions" and "manifestations".

This obligation responds to the operational requirement that a single scholar should be transparent, readable, monitorable, in a word, *evaluable* according to a

standard, and precisely *with regard* to his degree of parification within the domain ruled by the standard itself.

Therefore, the evaluating peer is always the representative of the scientific community thus defined; as such, he is the controller of "parity" – that is, now, *of the degree of conformity to the scientifically indifferent standard* –, while, as regards his own scientific activity, he too is always controlled.

The peer, therefore, is not primarily "*my* peer" (i.e., the peer of the scholarly "me"), but rather one who controls the extent to which I, too, am a peer; *to wit*, the extent to which I am parified (i.e., made uniform as an output producing persona) within the standard.[36]

Observation 2 – "Utility for life"
(See above, paragraph 8.5, 186)

Who could deny that the reality of scientific research, and the conditions in which it takes place, have profoundly changed with respect to the way in which they were structured just a few decades ago? And, consequently, that it is no longer plausible to rely on "the old values" for the administrative management of research; to wit, values such as trust and constructive criticism among colleagues, raised in a common commitment to the truth?

Who could deny that today's "scientific system" requires necessarily forms of top down direction, programming and quality control and assurance, together with related criteria of implementation, as well as responsible controllers, assurers, and censors, in order to manage what is otherwise at risk of remaining "uncontrolled", "random", and ultimately "vain" research?

Who, in short, could deny that it would be unacceptable and almost "unethical" to let research unfold without "procedures" securing the achievement of the best possible "results" in terms of measurable "impact", so as to justify the resources committed in a particular "sector" or "project" rather than in another?

However, even restricting ourselves to this (to be true, quite miserable) level of awareness, it is necessary to admit that the underlying motivations and the ultimate ends of procedures focusing on the evaluation of peers *remain confined entirely within the circle of operativity*. In other words: *Never do such procedures occur in view of the "ontological" truth of knowledge and of its utility for* human *dwelling*. In fact, none of the concepts and indicators of "utility", through which the various methods of research programming and evaluation are implemented, appears to be sensitive to the only thing that "counts" and has a "value", and, therefore, as Nietzsche would say, "ultimately decides": that is, "utility for life"; namely, both for life understood as "brute life" (i.e., the form of life which formulates the problems that societized science is called upon to resolve), and for life intended as meaningful, earthly, "truly human" existence. (Consider, for instance, the so-called *impact factor*, a measure that notoriously fails to display even the faintest soupçon of truth.)

"Ontological truth" is the truth of what *is*. We have seen in Chapter 3 how Plato, in the dialogue *Theaetetus*, elucidates the difference between one who is educated

in *scholē* (to wit, the temporality of philosophy) and, therefore, to freedom, and one who is, instead, trained in *ascholia* (to wit, the timelessness of sophism) and therefore to slavery. It is not difficult to envision the destiny of any quest for the true – or, again, for what *is* – in the regime of valorial "peers" and "evaluators", who, by confining each and every elucidation to the limits of the *format* which outlines the issue under debate, prevent the *agon* (i.e., the struggle for truth) from freely unfolding within its relation to the source of knowledge; and who, by turning that *agon* into a mere race to gain prevalence in terms of performance, cause the human being's relationship with the truth to become inert and sterile.[37]

A possible objection to our diagnosis could sound like this: these considerations, while perhaps commendable, nevertheless move on "too high" a level, running the risk of missing a decisive point. Indeed, given the fact that, on the planetary scene of scientific research, more and more is published at an ever faster rate, a primary, in some circumstances even "vital", aim of peer review is to avoid errors and manifest shortcomings, or the lack of respect for minimal and shared standards of scientificity, in whatever obtains the final "seal of approval", thus helping to ensure the reliability of the results which present and future peers acknowledge in order to draw on them for their own research.

Here, too, we need to discern: in fact, the objective aid provided by a reviewer who corrects an error once again masks the intrusive hand of performativity. *We all ask our peers to "review" our texts*: not only to avoid errors, but also, and in the first place, to obtain indications concerning possible insufficiencies, suggestions for improvement, etc. However, in the context of the Evaluation Machinery, such "reviewing" is now part of the "quality control" applied to a product that, in order for it to be inserted into the circuit of merely numerical outpowering and outperforming, and thus to function as a useful (namely, quotable) resource for the users belonging to a certain "catchment area" of sorts, must survive a stress test of reliability (or cybernetic assurance) by passing through an apposite "performance filter".

Observation 3 – Objectivity and domesticity
(See above, paragraph 8.6, 187)

Objectivity. Anonymous review, motivated by the need to ensure the objectivity (i.e., impartiality and neutrality) of the evaluation procedure, is in truth a means of performative training: it establishes a "game", the aim of which is that both evaluators and evaluatees interiorize the principle of operativity as a guiding principle, and that they regulate themselves by it; a game which has, by the way, already come to its end with the preventive obeisance to the *formats* and standards of reliability and the spontaneous self-modelling that this obeisance implies. From the point of view of *those who write*, this obeisance is motivated by the obligation of productivity and by the consequent coercion to "publish" ("publish or perish"), while, for *those who read*, it is determined by the need to "list oneself" as an evaluating peer within one's "community".

The circumstance that one aims to remove any residual element of "subjectivity" (or "bias") from this valorial game, precisely while proclaiming one's desire to ensure the single scholar's "freedom of judgement", once again conceals the will to surrogate judgement *as such* with the calculation of performativity. In the moment in which the adaptation to this will, and thus the intimate anonymization of knowledge, will have occurred, the anonymous form of the procedure will have lost its function and will be ready to be abandoned. (While the more experienced will have adapted thanks to the oblivion of "past practices", the younger ones will have done so by virtue of the oblivion of what they have never even been able to witness "in real life".) In fact, once the single scholar is gone and has been replaced by the newly born "E[valuation]M[achinery]-peer" (not to speak of the "AI-peer"), the renunciation of anonymity will no longer imply any "risk of frankness", "veridicity", or "truth".

Domesticity. The elimination of the "subjective" factor in evaluation processes aims, on the one hand, to eliminate "human error" in a standardized valorial – and therefore, as suggested above, in principle already automatic – computation; on the other hand, it aims to expel true parity among scholars, once again in a surreptitious manner. Indeed, for the single scholar, parity, or "friendship in (the warding of) truth", is never a "vested good" but a condition suffered and maintained through relentless struggle. An essential element of this struggle is constituted by the temptation of domesticity (or *ta oikeia*, as Aristotle says in the *Nicomachean Ethics*)[38]; that temptation attacks the very same (warding of) truth by informing the friends' friendship, that is, by domesticating it. The anonymity of the peer is a mask that, while suggesting that it wishes to correct the distortions (or "biases") caused by domesticity, instead implements the essential anonymization mentioned above. The deception is insidious: who, in fact, can declare himself free from the temptation of domesticity and the distortions that it involves? Who, therefore, would not have to agree, *in the primary interest of the warding of truth*, to receive support, in his freedom of judgement, by the neutralization of what could impair that freedom? And is a "well-gauged", "perfected" algorithm not the most accomplished neutralization one can think of? The insidiousness consists in this: the same gesture which offers the "aid" of anonymity, in a sort of game of three-card monte, *subtracts the truth*, leaving in its place what is but an operational surrogate. In this way, peers are deprived of the one element which (as, again, Aristotle warns) can genuinely liberate friendship from the error of domesticity; to wit, the primary orientation towards the truth. Therefore, anonymous peer review removes the basis of true parity while corroding the coalescence among scholars.

Notes

1 The adjective "likely" means "having an appearance of truth or fact"; "apparently suitable, able, fitted"; "strong or capable looking"; "giving promise of success or excellence"; "comely, handsome"; "seemly, appropriate" (for these meanings see the entry "likely" in the *Oxford English Dictionary*; https://www.oed.com/). While remaining mindful of these meanings, in the present context we understand the noun "likelihood"

not in the sense of (statistical) probability, but as that source-like element which (*while* withdrawing into imperceptibility) *bestows* apparent promise, suitability, fittingness on that which appears to us. In other words, "likelihood" is the unitary, to-itself-keeping origin of trustworthiness and credibility, veritableness and conceivability, reasonableness and acceptability, expectability and attainability, thanks to which *a configuration of sense* (i.e., a world) may take shape; conversely, it is the reference to what is thus originally constitutive whence such a configuration draws the appropriateness and fittingness that we can recognize in it.

2 This constitutive limit of science is dealt with above in Chapter 5 (81–82). On the same point, cf. also De Gennaro and Zaccaria (2011).

3 The word "warding" (in the sense of the action of watching and guarding) is chosen to indicate the "escorting" and acceptance of truth through its mindful preservation along the paths of inquiry which truth itself bestows. Note that "ward" comes from the root **wer-* "perceive, watch out for, expect"; thus, "warding" preserves thanks to the perceptive acception of what is in itself and from itself likely, hence acceptable, expectable, true (see above, note 1).

4 On the word "coalescence" see above, paragraph 5.4.1, 134, note 56. In the present context, it indicates a unified response to the truth's "need of being acknowledged and borne as such"; in other words, coalescence implies a "growing-in-common" *within* the warding of truth. This same coalescence – which is nothing but parity itself – is the foundation of every authentic colleagueship and collegiality among scholars, as well as of a genuine scientific community. The fact that, in present-day academia, any sense of community seems to be hollowed out; that collegiality among colleagues is progressively vanishing, and more and more often replaced by a mere association (or conflict) of interests, is primarily due to the lack of coalescence, to wit, of genuine parity.

5 We hyphenate the word so that one may hear its etymological sense; in "se-parate", the particle "se-" indicates division, while "parate" implies putting on a par. Hence, "to se-parate" means: "to put on par one *over against* the other", "to pair *while* simultaneously distinguishing".

6 French *le pair* and Italian *il pari* are the same word as "the peer". The quoted passage is, in fact, drawn from the entry "pari" in the Italian dictionary *Treccani* (https://www.treccani.it).

7 Namely, the need of truth itself to be interrogated and preserved in an attuned and fitting cognition.

8 Which is why even the most solitary of scholars, insofar as they serve the truth, will never cease to expect others to engage – in their own, unique, singular, unrepeatable manner – in the same quest.

9 It can be shown that the constellation of truth, coalescence, and the single scholar, as laid out in this remark, is at the basis of, and implicitly presupposed by, Kant's considerations on the public use of reason, which is dealt with above, Chapter 7, 167 sqq. The annihilation of the "publicity", or the "openness", which is required for "the public use of reason" (see also the following note) is a consequence of the "defunctness" of that constellation.

10 In the case of peer review, intended as a filter on the way toward the publication of a scientific contribution, the heart of the deception is concealed in the very sense of publication, of "speaking to the public (of scholars)"; in fact, the calculation the peer is asked to perform is not based on the notion of "offering to the struggle for truth": the very "process of publication" by now is nothing more than a control phase within a mute circuit of production. However, the lack of a genuine "publicity" (such as the one invoked in Kant's "public use of reason") is equivalent to a lack of freedom in the warding of truth. As will become clear in what follows, the evaluating peer is indeed configured as a functionary of the self-censorship of freedom.

11 The term is already in use in philosophy and here adapted to the present context.

12 The nature of the fundamental transformation, from which are generated both the said inversion and the change of meaning which sustains it, and thus the surreptitious replacement of the judging peer by the evaluating peer, has been indicated in greater detail in De Gennaro and Zaccaria (2011).
13 Here we should think back to the "slaves" and "fellow slaves" mentioned in Plato's *Theaetetus* (see above, Chapter 3, 58 sqq.). This helps us not to forget that the evaluative peer is a product of *ascholia*, to wit, of the ceaseless annihilation of "the time of study" by the enforcement of what we have called "the dead line".
14 Cf. the elucidation of the trait of insufficiency in De Gennaro and Zaccaria (2011, 5–6). While the operational circuit is condemned to eternal insufficiency, the truth is instead sufficient in its remaining in need of man's support.
15 See De Gennaro and Zaccaria (2011, 3).
16 This sense of equalization and alignment can be heard in the German word *Gleichschaltung* (originally a term used in electrical engineering to indicate the action of operating a switch to make different elements or components move in the same direction), which may be assumed (beyond the historical context from which it draws its repressive and oppressive meaning) to be a diagnostic term to indicate the tacit technical-operational guideline of the evaluating peer. With regard to the relationship between parity, difference (or scissure), and sameness (or rather "self-sameness"), one can meditate upon the following thought: "Je ursprünglicher die Selbigkeit des Selben, um so wesentlicher ist in einer Gleichheit die Verschiedenheit, desto inniger ist die Gleichheit des Gleichen":

> The more original is the sameness of the same [to be understood, here, as the self-sameness of truth, i.e., as its firm call directed toward man's being], the more constitutive is the scissure in a parity, and the more intimate is the parity of what is on par; <that is, the parity among peers>
>
> (Heidegger 2007, 250)

17 One of the most notable manifestations of this personalization is the contemporary practice of dispensing prizes and awards to scientists at different stages of their career paths. Such prizes are ostensibly tokens of recognition for *anticipated* accomplishments, which they should on the one hand incentivize, while on the other, by virtue of their periodicity, they must necessarily *presuppose* them. However, what those prizes themselves seem to "accomplish" is, *among other things*, the reduction of what is immense and unique to something evaluable and comparable; the violation of both philosophical coalescence and techno-scientific alliance (see above, Chapter 5); the corruption of the "silent grace" and the self-effacement which characterize free creation; the transformation of "natural self-love" into brute lust for oneself. For an elucidation of the Greek sense of the prize in the context of Olympic games, see Zaccaria (2021, 189–209, especially note 312).
18 In other words, he is forced to constantly justify the circumstance that a trait, which supposedly *by nature* does not expire (and which, therefore, once recognized, is never again questioned), has *in actual fact* not expired.
19 The noun "sold" is an old word for the pay given to those who serve in the army, and who were called "soldiers" precisely for that reason; hence, the verb "to sold", which means "to take into pay, enlist". (On the role of money in the spiral of power, cf. Zaccaria [2014, 77–82].)
20 These procedures, willed by an ever more widespread control apparatus, now distinctly demonstrate their character of automated calculations: lacking within them (or reduced to a purely engineering sort of intelligence and prudence) are the moments entrusted to the judgement of man, who is now merely called to implement a cybernetic device by adapting himself to it. This horizon of automation and mechanization, which is intrinsic in the Evaluation Machinery, is further discussed below in paragraph 8.7.
21 One may define the evaluating peer as the controller who is provisionally secure within his logistical positioning. With good cause we speak of "the solding truth", because it

is truth itself, by virtue of its transformation into performativity, which makes the peer into one of its soldiers. The soldier-like implementation of performativity is a mutation, or a version, of the warding of truth, hence the same as the latter, and yet profoundly different from it.

22 See De Gennaro and Zaccaria (2011, 26, 35–37).

23 This sense of vilification is implied in the analysis of value in Chapter 2.

24 See De Gennaro and Zaccaria (2011, 20). The vilification of truth is understood in a philosophically rigorous sense within the diagnosis of "the will to will" (i.e., the will which wills nothing but its own willing) as the principle which constitutes beings as such (i.e., their being-character) in our epoch. In this regard, Heidegger writes: "Dem Wesen des Willens zum Willen entspricht im Bezirk der menschlichen Zurichtung der Fanatismus … Anonymität – Verantwortungslosigkeit – Entwürdigung des Menschen und Zerstörung seines Haltes; die äußerste Entschränkung aller Willkür im Schein der Ordnung" (Heidegger 2009, 116): "The biding [the sway] of the will to will <as the condition of likelihood of today's being> is accomplished, within the circle of human arranging and regulating, by fanaticism … by anonymity – by irresponsibility – by the debasement of man and the destruction of his firmness; <thus is generated> the extreme unleashing of every arbitrariness within the appearance of order".

25 The aviling and reviling concern both the evaluator and the evaluatee, the possible judgement of whom (as a genuinely scientific trait) is, however, equally "infiltrated" with the performing will.

26 The sense of the incomparable – without which no truly human world can be generated – is in this way annihilated.

27 This "escalation of anonymity" shows how the will to impose a pretended objectivity can be taken to the extreme.

28 On the issue of anonymity in the academic world, addressed in detail in the previous chapter, cf. Borghi (2022).

29 The order is apparent, first of all, because of the constitutive insufficiency and the groundlessness of the evaluation regime, both of which are masked through a degenerate computational coordination, with numbers (as mentioned before) creating a mere semblance of rigor, objectivity, and all kinds of relations and correlations. However, such coordination is merely an operative surrogate of a genuine order: it only "holds" as an accounting outcome based on the arbitrary rules of the current phase of evaluation. The cybernetic order is the operational mask of the chaos of arbitrariness.

30 It is still a widely held opinion (meanwhile asserted and defended also for its relevance to the functioning of the Evaluation Machinery) that peers are, typically, colleagues with the necessary preparation and authoritativeness; consequently, we might complain of the circumstance that there are, however, those "who evaluate as a full-time job", to wit, those "professional evaluators", who build an entire career path precisely on "evaluative fatigue duties" (i.e., "corvées of evaluation", namely non-scientific duties in the field of science, in analogy to non-military duties in the military). In truth, the operating of peers, even where it relates to purely scientific matters, has nothing to do with science: the peer, whether "scientifically worthy" or not, is, for what he is worth, a functionary trained in the control of the parameters of reliability in an increasingly "militarized" context of quality assurance.

31 The reason for which we don't speak of an "unknown soldier of truth" should be clear from previous considerations (see, among others, notes 21 and 30 above). The Latin word *miles* is related to *mille* (thousand), in which we hear the root mil- "to convene, to reunite, to gather". Contrary to the innumerable (scattered, isolated) "militants" of the anonymous militia of evaluation, the "*milites* of truth", mostly unknown to one another (that is, even before they are so to "the others"), are in essence *mille*, where the number "thousand" is, however, devoid of any valorial connotation, and therefore not graspable through evaluative computation. While anonymity is based on the annihilation of

names – and consequently of responsibility –, unknownness, on the other hand, implies the awaiting of a name in responsibility. (On the concept of number as originally free of valorial imprint, cf. Zaccaria [2011].)

32 The reduction to a format can be called "formatation", which is to be distinguished from the technical operation of formatting (i.e., endowing with the capacity to sustain the storage and elaboration of formats). What is described in this chapter is, on the whole, the formatation of the parity (or peership) between scholars.

33 In the control circuits of the publication industry, scholars have the status of potential suppliers of the raw materials on which the industrial machinery feeds in various ways. Of late, one of these ways is that scholarly publications flow into training systems of automated text production, including the production of science-themed texts. An implication of this circumstance will be pointed out at the end of this chapter.

34 Present reservations concerning the benefits of automated peer review are motivated, among other things, by the range of biases which may affect the algorithms to which the task is confided. As reasonable as these reservations may be, we will not address them in the present discussion, which focuses on the judgement-related constitution of all review-algorithms, including the most "perfected" and "bias-free" ones.

35 Scientific "panels", such as those defined and currently updated by the European Research Council, are based on societally recognized problems rather than "regional ontologies".

36 On the distinction between "I", "you", "he", etc. and "my", "your", "his", etc. "person" cf. Weil (1957).

37 On the issue of the "temporality of philosophy" vs. the "timing of sophism", see above, Chapters 2 and 3. On the same topic, cf. De Gennaro (2013; 2014; 2020) and Zaccaria (2018).

38 See Aristotle, *Nicomachean Ethics* I.6, 1096 a 11–17.

Bibliography

Bhosale, Uttkarsha, and Anupama Kapadia. 2023. "AI Integration Can Future-Proof Peer Review – But only if we define and drive the right principles." Accessed February 18, 2025. https://www.enago.com/academy/ai-integration-in-peer-review/.

Borghi, Maurizio. 2022. "Anonymity as a Threat to Academic Freedom". In *Academic Freedom in the European Context: Legal, Philosophical and Institutional Perspectives*, edited by Ivo De Gennaro, Hannes Hofmeister, and Ralf Lüfter, 95–116. London: Palgrave Macmillan.

De Gennaro, Ivo. 2013. "Σχολή: Platon und das ökonomische Problem". In *Wirtliche Ökonomie: Philosophische und dichterische Quellen*, Elementa Œconomica. Bd. 1.1, hrsg. von Ivo De Gennaro, Sergiusz Kazmierski, und Ralf Lüfter, 43–88. Nordhausen: Verlag Traugott Bautz.

De Gennaro, Ivo. 2014. "Was ist Muße?" *Freiburger Universitätsblätter* (Heft 201.6): 7–17.

De Gennaro, Ivo. 2014. "Die Zahl." *eudia* 8: 1–4. Accessed April 30, 2025. https://www.eudia.org/wp-content/uploads/Lettura_68_De-Gennaro_Zahl.209-1.pdf

De Gennaro, Ivo. 2020. "'The promised land': Das Bild der Zukunft in Keynes' 'Economic Possibilities for our Grandchildren'". In *Imagination und Bildlichkeit der Wirtschaft. Zur Geschichte und Aktualität imaginativer Fähigkeiten in der Ökonomie*, hrsg. von Walter Otto Ötsch und Silja Graupe, 275–96. Wiesbaden: Springer.

De Gennaro, Ivo, and Gino Zaccaria. 2011. *The Dictatorship of Value: Teaching and Research in the Planetary University*. New York: McGraw-Hill. (A related text, focused on teaching, is published in *Value: Sources and Readings on a Key Concept of the Globalized World*, edited by Ivo De Gennaro, 451–80. Leiden-Boston: Brill.

Heidegger, Martin. 2007. *Heraklit*. Hrsg. von Manfred S. Frings. Frankfurt a. M.: Vittorio Klostermann.

Heidegger, Martin. 2009. *Das Ereignis*. Hrsg. von Friedrich-Wilhelm von Herrmann. Frankfurt a. M.: Vittorio Klostermann.

Weil, Simone. 1957. *La personne et le sacré*. Paris: Éditions Gallimard.

Zaccaria, Gino. 2011. "Il numero senza valore." *eudia* 5: 1–5. Accessed April 30, 2025. https://www.eudia.org/wp-content/uploads/Lettura_41_Zaccaria_numero.143-1.pdf

Zaccaria, Gino. 2014. *Lingua pensiero canto: Un seminario sull'essenza della poesia*. Pavia: Ibis.

Zaccaria, Gino. 2021. *The Enigma of Art: On the Provenance of Artistic Creation*. Leiden-Boston: Brill.

Conclusion – A dialogue on an evitable evil: or, soothingness

Aleth, Eth and Euth

> There is no scientific evidence for the fact that evaluation has benefited, is benefiting or will ever benefit the scientific pursuit of truth. More importantly, to produce such evidence is a scientific impossibility.
>
> Anonymous, without date

The unsaid

Euth: First of all, I propose that our dialogue should bring to the fore that which has remained unsaid throughout the diagnosis of the Evaluation Machinery attempted in this book.

Aleth: Indeed, it is precisely the unsaid which should allow us to discern more clearly what we have been considering on the diagnostic path.

Euth: A path which unfolded according to the three well-known moments, or tasks, of phenomenological inquiry, to wit, those of de-struction, reduction…

Eth: … and construction.[1] I can see the first two moments at work in our endeavour quite clearly; however, this last one does not seem to have been accomplished to the full.

Aleth: I do not fully agree. Have we not exposed how the Evaluation Machinery itself – as a whole – poses a threat to the very menace hanging over science? Does that not already constitute the first, and most important, step towards the construction of a path to liberation?

Eth: In a way, yes. Yet, true construction – to wit, the genuinely constructive moment of our project – would require that two tasks be carried out: i. the indication of a path to liberation for each technicized science, namely, of those specific paths of affranchisement *from* the Evaluation Machinery which each single form of knowledge merits; ii. that the fundamental "spheres of sense" be established (the human being and language, the law and the state, nature and deity, space and time, etc.), in reference to which each form of knowledge can de-technicize itself

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in view of a regeneration in its original ethical sense. However, nothing of such has even been hinted at in the book.

Euth: Your observation is persuasive and certainly touches the unsaid. However, the first obstacle to the opening of a frank discussion among scholars (itself the prelude, perhaps, of the aforesaid construction) consists in the widespread acquiescence to the Evaluation Machinery, which (the acquiescence) is saturated with subservience and passivity.

Aleth: It seems to me that the said acquiescence characterizes a particular existential state…

Eth: … the state in which many scientists find themselves with regard to the "crisis of knowledge". I'm referring to the most peculiar condition affecting the constitutive trait of all true knowledge in the present world hour. I mean, all scientists worthy of that title cannot fail to perceive "deep down" that "their" science is, at its core, "critical"; that it needs to be founded at every single step; and that these foundations are never sufficient; that whatever appears to be known and established is, in truth, unstable and precarious; and that both instability and precariousness are bound to grow the more one advances in the methodical penetration of nature and its continuous "mathematical treatment"; and that…

Aleth: … exactly, that is precisely the point: "crisis-aware" scientists are now provided a safe haven in the form of the Evaluation Machinery. And we can interpret their acquiescence as their preference to remain at the mercy of the multiple threatening vexations inexorably inflicted upon them by the Evaluation Machinery…

Euth: … and to let themselves be constrained in its coils…

Aleth: … rather than facing up to the crisis, and thus to the impending menace.

Euth: In brief: the Evaluation Machinery sets the seal on de-philosophization, and it does so by offering the latter as the "short" and easy (albeit vexatious) way of escape from the "long" and trying path to liberation, which can only be constructed by acknowledging the state of menace and the manner in which it is attacked by the threat of definitive, value-driven de-philosophization.

Aleth: I would not say that the Evaluation Machinery "offers"! Instead, it blatantly *imposes* and *dictates*, after having annihilated any *scientific* relationship with science. Today, you won't find anyone in our universities talking about *science* anymore, not unless it is "evaluated science".

Eth: So what Plato intended in his allegory of the cave is true: the path from "cave-truth" towards "the truth of the idea" is a form of ascension, which the "shadow-sages" decidedly refuse…

Aleth: … a refusal which can transform into violence directed against those who try to alert those sages to the "ever more critical" status of the crisis of knowledge.

Euth: This existential state we've now outlined concerns us, too. As we elaborate our diagnosis, we are necessarily liable to the Evaluation Machinery.

Eth: We are forced to host "two minds" in our reasoning: one which is constrained to play the game of the Evaluation Machinery, as the latter sets the seal on de-philosophization; and the other which withdraws from that game in order to diagnose its traits.

Euth: Thus, a "split" or "scissure" inheres in our meditation. Now, since the Greek word for "mind" is *phrēn*, and "to split" is *schizein*, we can say that a singular "schizo-phrenia" is imposed on us.

Aleth: Finally, our schizophrenia is not dissimilar to that of all those scientists who, while remaining true to their scientific calling, find themselves "under the yoke of value".

Eth: Indeed, just like them, we perceive the arduousness of the diagnostic task. And that is precisely the reason for our raising a flag to signal the danger of "diagnostic intelligence" atrophying under the weight of the Evaluation Machinery until its final quashing by the "eternal anguish" in the face of thought.

De-philosophization

Euth: Let us consider the scientists who denounce the multiple distortions and damages inflicted on the sciences by the array of phenomena which can be ascribed to the Evaluation Machinery and attempt to expose their absurdity and illogicalness.

Aleth: Many interesting and sharp analyses of the aberrations of the Evaluation Machinery are available to read. However…

Eth: … so far, we have not come upon any inquiries which make any attempt to thematize the traits that, in light of our diagnosis, characterize the Evaluation Machinery, to wit: its counter-scientificity and its de-philosophizing action.

Euth: In fact, many current analyses remain in the sphere of what we refer to as "opining through values", to wit, in the sphere of discourse in which the radicalness and essentiality of the difference between judging and evaluating is not grasped.

Aleth: Yet, that is precisely the issue of all issues. Today we have grown accustomed to the opinion that a judgement can only be such if informed by the trait of evaluation. It is surprising: evaluative opining "evaluates"

judging as unacceptable unless it bows down to and recognizes "the value" of evaluating and its multiple practices, and by doing so ceases to be what it professes to be.

Euth: Evaluating itself defines itself as a value…

Eth: … indeed, as the value *for* the establishment of all values, hence for any "valid pronouncement" regarding the sense of things. One can hardly fail to see, here, the abyss of unfoundedness. For how can a foundation derive from that which demands to be founded?

Aleth: That would be like the erection of a brick building that relied exclusively on the bricks themselves to lay out its foundations.

Euth: A paradoxical scenario: the building would then simultaneously be both the origin and the result of its own stability. The internal structure would be responsible for generating and sustaining its own internal balance…

Aleth: … in a sort of self-referential maelstrom…

Euth: … which wrecks any sound construction project, so that everywhere we come across instances of foundation without foundations.

Aleth: And, in the first place, without the very sense of the *necessity* of a foundation; the necessity we cease to feel when we become mere evaluators.

Euth: It seems to me that these observations clearly show the counter-scientific action of the Evaluation Machinery and its seal on de-philosophization.

Aleth: Certainly. We need to catch, so to speak, the Evaluation Machinery red-handed for its lack of any foundations in the evaluating it performs. That very lack, bereft of any self-awareness, constitutes that Machinery's de-philosophizing violence. The self-referential swirl of the Evaluation Machinery means that no-one and no-thing exhorts us to philosophize, instead, every-one and every-thing incites us to evaluate, in order that science itself remains, finally and definitively, in want of a foundation.

The ruins

Aleth: Who are those who devote themselves to the planning and implementation of the Evaluation Machinery with often disconcerting impetus and euphoria? How can we define or name them?

Euth: What else but "fabricators of the yoke of value"?

Eth: Yes, "fabricators" seems like the right word. It calls to mind some verses of "Cours naturel" by Paul Eluard (1968, 801): "Regardez travailler les bâtisseurs de ruines / Il sont riches patients ordonnés noirs et bêtes" (Watch the fabricators of ruins [ruin-makers] at work / they are rich, patient, orderly, dark and beastly [brutal]).

Aleth: In this case, "fabricating" presupposes the traits of order, of concocting, of making up, which should not, of course, be intended here in a "moral" sense.

Euth: In the verb "to fabricate" we can hear the Latin *faber* resonate, whose root conveys the notion of "modelling", among others. This allows us to introduce the sense of producing a schema, or schematizing, of setting up a spectrum. Indeed, our "fabricators" are the producers of valorial spectra which have, in turn, the power to subjugate scientific knowledge, that is, of reducing it to ruins. One might thus speak of "spectral" "fabricators", an easy yet fitting pun.

Eth: A "fabricator of ruins" would be the antipode of an architect, which comes from a Greek word for those who guide the entire building process. An architect must know and master both the sense of human dwelling and the sense of building, while preserving the link between the former and the latter in thinking or meditating…

Aleth: … thus in the philosophical act as such.

Eth: Indeed, the architect is necessarily a philosopher. Only in the freedom of philosophy can architectonics arise, that is, the art of giving spatial form to the existential time of human beings…

Euth: … or, in other words, the art of spaciosity.

Aleth: Either the grace of architectonics or the brutality of the yoke: evaluation cannot build anything, as it de-philosophizes and ruins whatever it comes into contact with.

Euth: Thus, an insidious deceit occurs: the fabricators of ruins at the service of the yoke of value present themselves everywhere as the true architects of the house of science!

Eth: They are: "rich", because they teem with coercive power to impose automatic, counter-scientific processes; "patient", because they take all the time to realize their temporicidal strategy of "science governance"; and "orderly", because they meticulously pass off what is hostile to science as that which sustains its development.

Aleth: Which, in turn, renders them "dark", because they obscure scientific genius while ceaselessly stifling any soupçon of frankness, and "brutal", because they offer themselves to the cult of brutality of the God-Will, with the velleity and wantonness that characterize them.

Euth: They are indeed its idolaters.

Eth: A title to assign to those "fabricators of ruins" comes to mind: I would coin the name "Velleitarians" for them…

Aleth: … or "Wantonians" even.

Euth: They fabricate the conditions of the yoke of value in the name, or rather on the authority, of a will that unconditionally wills itself.

Aleth: Finally, it is necessary to remark that today the most willing Velleitarians and Wantonians have the most smart "engineerical" minds…

Euth: … without a doubt, they have genial minds, which, however, they put at the service of the inept cybernetic accountancy…

Eth: … which they must accompany with a "meliorist rhetoric" …

Euth: … thus becoming the most zealous officiants of the cult of (the yoke of) value…

Aleth: … that is, the "Velleitarians-in-chief".

A hint at "the table of values"

Euth: Thinking about that cult, the question of the guiding values of the Evaluation Machinery comes to mind, which one might envisage to include aspects such as "research quality", "scientific impact", and "productivity".

Eth: And many more, of course. We would need a great deal of time just to list them, let alone discuss their arbitrariness and a-scientificity. To start, however, let us offer some words on the last element you mentioned, that of "productivity".

Aleth: Sure. Its operational definition reads as follows: "the quantity and regularity of publications and other scientific contributions".

Eth: What could be more anti-scientific than this "value"? A scholar engaged in a conceptually delicate study, which inherently requires time to yield its fruits (let us once again think of *scholē*), becomes excluded from the game…

Aleth: … and is soon suspected of being "unproductive". If he wants to avoid being marginalized, or worse, deprived of the possibility to work, he has no other choice than to "de-scholarize", to unwind his scholarliness, to survive, which will cause his genius to be dejected until it eventually becomes sterile. Here, the very humanity of the human being is debased, if not defiled. But the production shop must keep producing.

Eth: This bespeaks a serious "point of unfoundedness": no one can explain the ultimate aim of this "production", the purpose of so much bustle.

Euth: Yet, as long as we use images related to the worlds of business and finance, notwithstanding their fittingness and suggestiveness, we are not fully grasping the unfoundedness that is at play here. For the guiding values of productivity and impact have remarkable power: that of undermining the relationship with truth.

Eth: Moreover, if, as we have shown, the relationship between scientific knowledge and truth is what is being menaced in the growing technicization of science, then it is precisely the guiding values of the Evaluation Machinery which constitute a threat to that menace, such that this technicization isn't even noticed…

Euth: … and with the consequence that truth itself appears as a mere illusion, like junk of no interest to anyone. However, when the sense of truth vanishes, and, by consequence, when the interrogation into its essence (or sooth) comes to an end, then the intrinsic ethicality of any cognitive enterprise will likewise collapse: for science is only *ethical* if it remains rooted in that interrogation…

Eth: … in other words: if it does not allow itself to be de-philosophized!

Aleth: "Productivity" and its close relative "impact" now show their true colours. These values are a veritable poisoning of ethicality.

Euth: These considerations make me think of another guiding value of the Evaluation Machinery, namely, "applicability", or the capacity to generate so-called "technology transfer". This value is particularly baleful. Its metric (or "performance index") is built considering patent numbers, collaborations with industry, impact in applied sectors, and the like. I call it "baleful" because in one fell swoop it covers the phenomenon of ill-technism, to which we have devoted a brief analysis, aimed, above all, at showing the unfoundedness of the related "ethical debate".[2]

Aleth: Finally, we must not fail to at least mention the value of bibliometric indices, which is the value that valorizes all other values.

Euth: The topic of bibliometrics is so amply discussed that any further attempt to do so would be superfluous. The same is true for other basic values, such as "rigorous anonymous peer review", and the emphasis placed on "prestigious journals", "international publishing houses", "high-ranking universities", and the "English language" …

Aleth: … as the uniform medium of the evaluative control of planetary science.

Eth: That said, there is one more question that remains to be dealt with: that of scientific "addiction" to the Evaluation Machinery.

Dies ultimus

Euth: By "scientific addiction" are you referring to the addiction of scientists to pure counter-scientificity?

Eth: Yes, I am.

Euth: Here, we finally touch upon the apex of de-philosophization…

Aleth: … which the Evaluation Machinery – via the university, which has been "tamed" by the yoke of value – transmits to the "political guides" of

the peoples and nations of the world. I say "tamed", but also "domesticated", because the university, once it has been subjected to the Evaluation Machinery, loses its long-standing (and future) pride.

Eth: Pride and liberty, to wit: the frankness which is necessary to sustain the care for truth. Being tamed and domesticated, and therefore debased, soon turns into *addiction*. Science and scientists are now addicted to value. They constantly yearn for it. It has unwittingly become their drug of choice.

Aleth: A drug which produces hallucinogenic, narcotic, and hypnotic effects: on the one hand, it distorts the real condition of contemporary scientific knowledge (i.e., its technical and societal character) by imposing its intrinsic unfoundedness and unfoundability everywhere; on the other hand, it dazzles the mind, bereaving it of critical judgement; finally, it induces scientists to enter a kind of trance, in which they forfeit their relationship with their specific domain of study and, by consequence, lose any mastery over their research…

Euth: … while being pushed, or rather dragged, into the baleful abstraction of science wanted and concocted by the Evaluation Machinery.

Eth: This makes me think of another analogy: the drug of value – its yoke – could be a kidnapper of sorts, who ends up being defended by his victims.

Aleth: You are alluding to Stockholm syndrome!

Eth: Exactly. We could speak of a "scientific-technicized Stockholm syndrome" (STSS). Even though she suffers from the yoke of value which enchains her, the scientist ends up legitimizing, or even defending and commending, the very system that oppresses her.

Euth: If this is how things stand, an exit from the Evaluation Machinery and the affranchisement from the yoke of value cannot occur, so to speak, "in a single day"! And even despite the fact that the final day – the *dies ultimus* – of the Evaluation Machinery has already come…

Aleth: … *has always come!* For, as we have shown in this book, it is a derailment of, or from, technicity…

Eth: … a fatuous fate, a run without a destiny. It is, indeed, technicity itself, which, by virtue of its ancient Greek-metaphysical genesis and thus of the menace which hangs over technicized science, has come to stir and reawaken philosophical thought today, compelling it to engage in its diagnostic, and therefore therapeutic, attempt.

Euth: The drug of the Evaluation Machinery versus the remedy of philosophy.

Eth: De-philosophizing science is a bit like wresting humidity away from water.

Aleth: The affranchisement from the yoke cannot, in any case, occur through a "revolution" or a "paradigm shift". Paraphrasing Heidegger (1998, 23), we could say that, in this case, "no revolution is sufficiently revolutionary".

Euth: That's right! Affranchisement can only come as a gift.

Eth: Which is, in fact, the same as the gift of *scholē*…

Aleth: … which, therefore, (no offence meant to the God-Will) cannot be willed…

Euth: … but only awaited, provided we are able to abide in awaiting.

Eth: However, we can neither abide nor pause as long as we remain subdued by and jointed within the Evaluation Machinery and inert in our acquiescence. Hence, it seems that the only way is to somehow disjoin ourselves from that evitable evil that is the yoke…

Euth: … and to finally re-join the truth and ethicality, in one word: the sooth, which inheres in any genuine cognitive endeavour…

Aleth: … a re-joining which (as it occurs under the auspices of the Goddess-Sooth) cannot but be informed by soothingness.

Notes

1 *De-struction* consists in deconstructing and dismantling the assumptions, prejudices, and crustifications which shroud the phenomenon, thereby freeing the latter from that which obscures or falsifies it. it is the act of "questioning" the conceptual apparatus which was previously taken for granted. *Reduction* involves "bracketing" (cf. *epochē*, *scholē*) what does not pertain to the original experience, allowing the phenomenon to reveal itself in its own right. This moment aims to grasp the fundamental element that characterizes the phenomenon, purging it from superimposed constructs and unfounded "semantic burdens". Finally, *construction* is the propositional phase to which one moves after having eliminated all distortions and attained the true being of the phenomenon that is being investigated; in this phase, a new horizon of meaning is "reconstructed", which yields new and unprecedented intuitions, capable of establishing a genuine experience of the phenomenon's truth. Examples of both "de-struction" and "reduction" can be found, i.a., in paragraphs 5.2.2.1, 5.2.2.2, and 5.5. Examples of "construction" are contained in paragraph 5.4 and in Chapter 4 (especially paragraph 4.5).

2 See above, paragraph 5.5.

Bibliography

Eluard, Paul. 1968. "Cours Naturel." In *Œuvres Complètes*, edited by Marcelle Dumas and Lucien Scheler, 801. Paris: Gallimard.

Heidegger, Martin. 1998. *Geschichte des Seyns*. Gesamtausgabe, Bd. 69. Hrsg. von P. Trawny. Frankfurt a. M.: Klostermann.

Appendix – Ten remarks on the dialogue between technicized science and philosophy[1]

δὲ ἀνεξέταστος βίος οὐ βιωτὸς ἀνθρώπῳ …

an existence which doesn't live off interrogation
will never be, for man, a true existence
Plato[2]

1 Science in its most initial determination, including in its technicized version, is generated through the interrogating word (*dia logon*), intended as the primary access for, and to, the sense of things.

Philosophical-scientific dialogue envisages the regeneration of scientific knowledge in order for its interrogation to concur with the building of a human world on the earth.

2 Science consists in attempting truth and preserving what is true in all its forms, and this in such a manner that the forms of the true constitute themselves as the primary guide of building and dwelling.

Philosophical-scientific dialogue invites the different forms of knowledge and those who cultivate them not to venture upon a sterile clash which aims at letting one truth prevail over the other, or even at the affirmation of a pretended "Absolute Verity" or of so-called "Eternal Truths", but to a cooperation which first and foremost pursues the clarification of the sense of truth and of its generation.

3 Ever since its Greek inception, science has been inspired by the beauty of the simple and pure as the original criterion of truth (*simplex sigillum veri*).

Philosophical-scientific dialogue summons today's scientific knowledge and technical competences to a constructive contention with the ever-young and coming art of the beginnings.

4 Science finds its first and meanwhile forgotten abode in Greek thought and in the philosophical tradition which arose from it.

Philosophical-scientific dialogue predisposes the conditions for the awakening, in today's forms of knowledge, of the essentially problematic sense of the philosophical formation of their operative terms and conceptual processes.

5 Science, which began within the sphere of the ancient Greek idiom and attained the modern European languages through the critical mediation of Romanity,

today "inhabits" the element of mathematical formalism and the vehicular language (presently, global English; one day, perhaps, a "Chinese for all").

Philosophical-scientific dialogue creates a critical space in which the intrinsically linguistic essence of knowledge can be reawakened, while at the same time warning against the menace which is inherent in a scientific progress based on the unconditional informatization of mother languages (i.e., languages insofar as they are the mothers of all sense).

6 Science, grasped in the becoming of its Greek-European tradition, has regard for and at the same time fails to have regard for the divine. When it has regard for it, it heeds the myths and founds theology (in its various acceptations); when it disregards it, it becomes "the mind" of the dissolution of all divinity.

Philosophical-scientific dialogue offers to be a venue where the regard for and the disregard of the sphere of the divine can come to a fruitful contention in view of a reformulation of "the question of godhead" in its simplest and most original sense.

7 Science "lives" in the various forms of knowledge as that *unique* superhuman freeness *towards which* (*versus*) each one of them is always-already oriented (and which each one of them is invited to preserve) according to the peculiar nature of its inquiry (Free Universitas).

Philosophical-scientific dialogue anticipates the configuration of Universitas and thus aims at kindling anew, amidst the single forms of knowledge, the memory of their fundamental orientation, so that the cognitions they spawn may enshrine the coming-true (the averment) of freeness.

8 Science assigns the task of projecting the dimension of the useful so that any cognitive project may sustain man in the regard for the useless to which he is natively suited.

Philosophical-scientific dialogue aims to exhort all those who care for knowledge to wonder at the aberrance constituted by the technical potentiation of the useful in which mainly, if not exclusively, the sheer will to potentiation itself escalates; moreover, it elaborates reflections capable of mitigating those excesses.

9 Science originates from the awareness of the need for a foundation in which abides the sense of things. It engages in instituting time as the primary architect of space; in leading the earth (i.e., nature) towards the genesis of a world (i.e., reality); in providing to "the coalescence of mortals" (*humanus consessus*) the capacity for indicating their languages; in preserving the enchantment of art and the grace of faith; in meditating the remedy to disease in the respect of death; and in offering to law its source and to technics its measure.

Philosophical-scientific dialogue aims to build the ways and methods thanks to which single forms of knowledge can be recovered from being scattered into separate "disciplines" in order to be critically traced to their genuine principle, which today takes the unique shape of "cybernetics" (i.e., the constitutive trait of technicization), that is, of a race to "expedient results" and "value".

10 Science, albeit unawares, harbours in itself the source of an original meditation: that of the strife between the "Yes" of the world (i.e., the good) and the

"No" (i.e., the evil) which this "Yes" necessarily implies, thus outlining the cornerstones of ethics. Science: finally, nothing other than the "house of the world's hospitableness".

Philosophical-scientific dialogue does not aim at a "new philosophy of science", nor at the foundation of a "super-" or "meta-science", nor at a negotiation concerning the concept of scientificity. It is solely and uniquely a seed – sown in our "epochal world" – of the most ancient and genuine vocation of science itself.

Notes

1 This is a marginally amended version of the manifesto of a scientific-philosophical project entitled *ScienzaNuova*. That project provided the context for the long-standing research efforts which led to the writing of the present volume. The mission of *ScienzaNuova* is outlined as follows on the project website (www.scienzanuova.org):

> *ScienzaNuova* aims to provide a space for research and experimentation on the fundamental concepts of contemporary sciences, and an opportunity to question their meaning through a critical debate between diverse interpretive approaches. A context of dialogical research, structured in round tables, workshops, laboratories, and conferences, establishes a collaborative forum for fruitful interaction among some of the most distinct forms of knowledge of our epoch. Thus, *ScienzaNuova* seeks to promote awareness of the role of scientific and technical knowledge, as well as of the ways in which it can truly serve humanity.

2 Plato, *Apology*, 38 a 4.

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Note: Page numbers followed by "n" denote endnotes.