

ALEXANDER KOYRÉ, FIFTY YEARS AFTER HIS DEATH – REGARDING FOUR RECENT PUBLICATIONS

Zambelli, P. (2016): *Alexandre Koyré in incognito*. Leo S. Olschki Publications.

Koyré, A. (2016): *De la mystique à la science : cours, conférences et documents (1922–1962)*. L'École des Hautes Études en Sciences Sociales (EHESS) publications.

Koyré, A. (2016): *La révolution astronomique : Copernic, Kepler, Borelli*. Paris: Les Belles Lettres publishing house.

Seidengart. J. (ed.) (2016): *Vérité scientifique et vérité philosophique dans l'œuvre d'Alexandre Koyré, suivi d'un inédit sur Galilée*. Les Belles Lettres publishing house.

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REVIEW ESSAY

1. Introduction

To truly understand the work of a great scholar of the past, and a great historian of thought in particular, it is generally considered necessary to implement the following four recommendations: 1) know the life of its author in order to become immersed in the specific context, one very different to our own, in which this work was forged; 2) pay attention to the genesis and evolution of their thinking, so as to understand how this work gradually developed; 3) re-read their publications many times over, as what one finds in their work will vary according to one's own knowledge and questioning each time it is read; 4) consult secondary literature, because while reading the work itself is certainly essential, it is nonetheless insufficient.

Since in our case this concerns Alexandre Koyré, this is precisely the programme that was followed, at least partially, in order to write the four books selected here¹. That published by Paola Zambelli, after having travelled extensively around the world in search of archives, is an accurate recount of his "working life". The one that Pietro Redondi had the great idea of updating thirty years after its first publication (Koyré 1986a), allows us to witness, over the course of his lectures and seminars, the progressive development of his theories and his

¹ To these four books, one could well add the very recent and equally pertinent Pisano, R. et al. (eds.) (2018). Having taken part in this collective work, however, we felt it inappropriate to report on it ourselves.

most prominent works. That republished by Les Belles Lettres is indeed one of his greatest works, even if not the most well-known, and is worth reading time and time again. Finally, the one published under the direction of Jean Seidengart is certain to prove very helpful to us when reading his works.

After having dealt with the preliminary question of why rereading Koyré is a worthwhile endeavour, we will also consider whether he himself would endorse the four aforementioned recommendations, before examining each of the selected books in more detail in order to implement them.

2. Why read A. Koyré again?

Considering the half-century rift between us and his demise, are we indeed certain that it remains beneficial to read Koyré's work? Aside from those whose profession it is to trace the history of thought's historiography, would one not be running the risk of remaining dependent upon a work of the past, and one that may even be considered somewhat outdated, instead of turning resolutely towards more current topics and themes of study?

While the authors under consideration here highlight almost all the shortcomings of the Koyrean work, including the overly unilateral character of his perspective, and although many do provide partial answers to this question, none of them tackle it directly. By way of example, and without prioritization, let us consider some of the arguments put forward in favour of the usefulness of reading Koyré again: the remaining value to be found in his analyses (J. Seidengart); the universal relevance of his methodological invitation to seek the ontological insight of each author studied (G. Jorland); the addition, to his history of science, not only of a philosophy but also of a philosophy of the history of science (J.-J. Szczeciniarz); or the novelty of his encouragement to allow for the interdependence between philosophico-theological concepts and those of a physico-mathematical nature (P. Redondi).

Since reviewing each of these justifications isn't possible here, we have chosen to expand upon that of the continuing importance of his historical methodology. Indeed, this one held a very personal significance for us: it is at Koyré's school that we believe we learnt the methodology that we feel should be implemented by all science and philosophy historians. Irrespective of this autobiographical element, however, knowing this methodology is entirely indispensable to understanding the Koyrean work, as evidenced by each of the four publications gathered here. To this end, we will take P. Redondi's introduction to his reissue of *De la mystique à la science* as a starting point. Although this author does indeed highlight the singularity of this Koyrean methodology, which we feel is what constitutes the timeless and universal nature of the Koyrean work, in our opinion, he appears to be mistaken — or at least gives the impression of being mistaken — on how one could best benefit from it.

Koyré, he suggests (Koyré 2016, 8), was a revolutionary historian to the extent that he disrupted the accepted historical methodology of his time: opposing the positivist conception of history that sought to keep doctrines separate in order to better ensure the domination of science, and that was more concerned with judging the past than understanding it, he

supported the formal unity of thought and rebelled against any judgement of the past made in the light of a present laid down as a standard universal measure². If Koyré's work still merits consideration today, irrespective of the judgement one passes on his particular historical or philosophical theories, it is thus owing to the profound and productive methodological thoughts that inhabit it.

So precisely which parts of his work should one turn to in order to benefit most from these reflections? P. Redondi notes that those who had the opportunity to attend his oral teaching pointed to its "greater richness" over his printed work, attributing this superiority to the striking presence of his innovative methodological ideas, and feels that these are rarely to be found³ in his printed work, or if present, are most often confined to the footnotes. He therefore steers his readers toward the idea that the contents of *De la mystique à la science* might be the source of this "greater richness" that contributed to Koyré's reputation for being a revolutionary historian. This, however, is not the case at all! Nowhere in this volume, at least if we restrict ourselves to the texts directly relating to his teaching, do we find methodological ideas similar to those in his printed work: neither in his numerous teaching reports⁴, nor in the texts of his lectures, which have mostly been preserved in extenso⁵. So while the methodological revolution brought about by the master was particularly evident in his oral teaching — as evidenced by the lecture on Galilee published by J. Seidengart — it isn't as clearly defined in *De la mystique à la science*. We thought it important to point this out so that the reader would not misinterpret what makes this reissue — indisputably — worthwhile. Its value lies elsewhere, namely in the exceptional reconstruction of the genesis and evolution of Koyrean thought that it provides and from which we ourselves have already benefited (Stoffel 2018).

Where, then, should we seek these profound Koyrean methodological reflections? Not where we were led to believe they were, but rather where we were told they were not: in his printed work. P. Redondi was indeed correct in pointing out that they are barely visible. Being scattered and hidden, one is even obliged to search for them in the least-read Koyrean publications, namely his numerous books reviews. It is indeed therein, in particular, that Koyré had the opportunity to denounce the unsatisfactory nature of the methodologies implemented in the books he was analysing.

Incidentally, it is regrettable that not a single commentator, in order to complement the remarks of G. Jorland (1981), has ever thought of bringing all these sparse methodological

² In the unpublished conference about Galileo, one notes the presence of an allusion to this idea (Seidengart. J. (ed.) (2016), 328).

³ To the two articles that are an exception, mentioned by P. Redondi (Koyré, 1955 and 1966), we feel it is worthwhile to add a lesser-known text, namely Koyré (1946).

⁴ In the lecture reports, we were able to find only one warning against giving priority to the first expressions of a thought to the detriment of its finished form (Koyré 2016, 99) and an allusion to the historical relativity of that which may seem curious (Koyré 2016, 241). Significantly, the use of the term "precursor", as encountered in the text, does not give rise to the methodological caveats that traditionally accompany it: if anything Koyré seems content to affirm that "Only Milič could claim this title" (Koyré 2016, 69). This absence is quite understandable: the aim of these lecture reports is to present, briefly and primarily, the results obtained.

⁵ In the twelve lectures of 1944 and 1945, and also considering the three lectures of the two conferences provided in the appendix, we find, explicitly, the Koyrean image of the spectrum displaying a profound continuity that does not preclude the radical diversity of colours (118) and, implicitly, various interesting methodological remarks which were not expanded upon (147, 158, 278).

notions together in the form of a summary article. Despite the laborious nature of such a task, and a repetitive one as regards a presentation, it would have been the ideal opportunity to achieve that which the master himself never entirely accomplished: to explicitly theorize about what constitutes his methodological revolution. It would also have been an opportune moment to point out to what extent he set himself apart from Bachelard's school of thought. It would even have been a chance to show how these reflections are merely a hundred different ways of stating, depending on the situation, the same two main ideas of the Koyrean methodological revolution, namely the unity of thought and sympathetic intelligence instead of judgement. Finally, it would have been a good occasion to emphasize the fundamental correlation between these two ideas: if it is really a question of "grasping the progress of [scientific] thought in the very movement of its creative activity", then it is truly "essential to restore the studied works to their own intellectual and spiritual environment" (Koyré 2016, 189), and this in the most authentic and accurate way possible. Within the framework of such a project, this authenticity and this accuracy, far from being a goal in itself, actually become the necessary means to achieve an otherwise ambitious goal, namely to "illuminate more recent periods" and to "better understand the philosophico-scientific revolution of our time" (Koyré 2016, 190). Koyré's point is not, therefore, to denounce such an objective — to illuminate the present from the past — but to discredit the ill-considered methodology that prevents it from being realised. Indeed, by deceptively reconstructing the past from our present, this rash methodology fails to provide us, within this poorly reconstructed past, with enough to enlighten us, but instead with only enough to flatter us, namely the mirror image, which we ourselves have unconsciously shaped, of our present (Koyré 1946, 110)! While off in search of the Other one, Meyerson would say, it ends up being the Same one that, without us knowing, is offered to us instead.

If this historical methodology is so important that it earned its author the reputation of being a revolutionary, then why did Koyré leave it undeveloped? The fact that he himself did not do what we would have liked a commentator to have done in his place — and that he has thus favoured sparse reflections over what would have been an, undoubtedly useful, treaty of historical methodology, yet one which we would have come to consider as somewhat artificial — turned out to be a good thing. Owing to this shortfall and this disparity, his thoughts are shown for what they really are: the consequence of methodological questions which can and do arise or even impose themselves, quite naturally and at any given time, upon the research historian. Far from being weaknesses, the disparity and the relative sparsity of these reflections thus become indisputable evidence that such reflections are an integral part of any somewhat thoughtful research work.

The usefulness of re-reading Koyré having thus been enhanced by these few comments prompted by the reading of P. Redondi's⁶ introduction, let us turn, to ascertain relevance, to each of our four initial recommendations.

⁶ Does this need clarification? In the introduction, P. Redondi says quite a bit more than the few sentences we thought we should comment on.

3. How does one read A. Koyré?

Is it true that our knowledge of the scholar's life necessarily helps us to understand his thinking and his work by furnishing the particular context in which both were forged? It is regrettable that Paola Zambelli did not ask herself this question which would have enabled her to confront, or even to dispel, the apparent paradox of her own making: to have devoted a remarkably well-researched biography to a thinker who, as everyone knows (Jorland 1981, 89, 140–141, 220; Koyré 2016, 9), feared, above all, that the narration of life circumstances would distract from the essence: to read the text and explain it by the spiritual network in which it is integrated instead of invoking elements extraneous to the thinking of its author.

Indeed, Koyré tolerated biographies in that they are "more a history of the times than that of the man" directly concerned (Copernicus 1934, 5, n. 1) and that they endeavour to reconstruct, not the details of his life, but rather his spiritual context. Yet again, however, it should be pointed out that the context in question should not, in his view, be purely and simply identified by referring to the era of the person being considered. Indeed, he noted, that even if some thinkers are certainly of their century, others are not necessarily so (Koyré 2016, 118 and 147), while still others are both "ahead and behind [their] time" (Koyré 2016, 238). Therefore, tracing the spiritual context of a scholar may well oblige one to look into other people who are, chronologically, separated by several centuries from the one whose biography is being traced, but who, spiritually, prove to be his "contemporaries" (Koyré 1922, iv–v)!

Drawing on these all-too-brief remarks, the diligent reader of Koyré's work cannot help but wonder: what judgement would have been made concerning the biography of P. Zambelli by someone reporting on such a clear-cut position about what a biography should be and, above all, on what it cannot be?

Since an author's work should not be explained by the details of his life, did Koyré at least allow commentators to pay attention to the genesis and evolution of his thinking? Not anymore! In the early 1930s, he pointed out the danger of focussing on Hegel's early work to the detriment of his *Logic* (Koyré 1986b, 150–151 and n. 1). A few years later, maintaining that Spinoza's thinking lay in *Ethics* and not in the *Short treatise*, he once again stressed that "the danger of methodological corruption consists in seeking the intelligence of a doctrine in puerile babbling, instead of in the assertions of a mature mind" (Koyré 2016, 99).

So where Koyré might accept our first two recommendations without any particularly strong reservations, at least he would certainly welcome the last two: knowing full well that it is easier to write about certain authors than to read them (Koyré 1934–1935a, 529) and that those who have read them do not necessarily understand them (Koyré 1934–1935b, 476), he knew better than anyone how much more difficult it is than it seems to understand and comment on an author to the extent that is required — oh how difficult indeed! — simply allow him to speak for himself (Koyré 1934–1935b, 483)!

4. Assistance with reading his work

Drawing on these few preliminary remarks, let us examine in detail three of the four selected books⁷, namely those that are likely to be of assistance, not only in the reading, but also in the understanding of his work.

4.1. "Alexandre Koyré in incognito"

We already knew that Koyré's biographical journey was as complex and as rich as his intellectual journey. But what we did not yet know, and what P. Zambelli's biography reveals to us, is that even though we were aware of this complexity, we were still relatively in the dark. His real life, deliberately kept hidden at first through prudence and then out of habit, was even more tumultuous than the official version already hinted at! Two examples will suffice. In the last years of Tsarist Russia, the secondary school student Koyré was arrested twice, in 1907 and 1908, for terrorism in favour of the Socialist Revolutionaries. The first of these arrests, for propaganda, obliged him to change secondary school due to the fact that he was banned from going to the governorate of the school he was attending. As for the second arrest, for terrorist actions, or at least initiatives, it resulted in his father asking permission to send him to study abroad. It should be mentioned in passing that Koyré was to experience, at least, a third arrest: in 1919, and by the French Navy this time! But let us move on to our second example. During the Great War and the years that immediately followed it, our young man seems to have been moonlighting as a double agent in support of the Bolsheviks and the French. One gathers, by these two examples, that he felt the Cartesian motto "Larvatus prodeo" applied to himself! While in these examples we chose to mention the two most innovative chapters of this biography, it should be stressed that it is far from being limited to his political involvement alone: it goes on to trace his studies and work during his time of exile.

Thanks to this biography, it is not only Koyré's intellectual horizon that is opened to us, but also — because of the richness evoked by his journeys — that of his entire era: phenomenology, Bergson, Gilson, Lévy-Bruhl, Meyerson, Hegel, Hannah Arendt, Heidegger or even Panofsky. We find it a pity, however, that the care taken in editing the text does not match up to the considerable investment made by its author: the French quotations, for example, contain many spelling errors, making it difficult to discern whether they are due to careless transcription or to mistakes in the original text. Once these mistakes have been thoroughly rectified, it would be highly beneficial to have this biography, which is particularly erudite while remaining very pleasant to read (if not very structured), published in French: it is indeed indispensable.

4.2. "De la mystique à la science"

Does the revised and expanded edition of *De la mystique à la science* bring anything new to the table? Without relying on the changes indicated by P. Redondi himself (Koyré

⁷ Regarding *La révolution astronomique : Copernic, Kepler, Borelli* we need only mention one feature, a secondary one yet interesting nonetheless, of this reissue: although the text was entirely typographically re-composed, it retains precisely the same pagination as the initial edition, which is tremendously practical for citing quotations and references.

2016, 20), we will show that, from a strictly documentary point of view, there are very few innovations, namely: 1°) the "Rapport d'Alexandre Koyré sur le premier semestre d'activité de l'École libre des hautes études" (document N°9, 112–113); 2°) the "Élection d'Alexandre Koyré comme directeur cumulant de la VI^e section de l'École pratique" (document N°12, 181); 3°) the "Lettre d'Alexandre Koyré à Fernand Braudel" of 12 July 1957 (document N°19, 196); and, lastly, 4°) the lecture report for the year 1948–1949 (210–214), which had unfortunately been omitted in the previous edition. Besides 1°) the addition of an "introduction to the new edition" (7–20); 2°) the revision of the old preface and of the notes which introduce each chapter; 3°) the redesign of the iconographic file (between pages 160 and 161); 4°) the updating of sources and bibliography; and, finally, 5°) the extremely worthwhile addition of an index of personal names which also includes the students and attendees of Koyré's seminars (315–331), it is ultimately a whole series of improvements which are very discreet, but nevertheless very much appreciated⁸, and we thus find ourselves before a complete and thoroughly successful revision of the first edition of this book.

4.3. "Vérité scientifique et vérité philosophique"

The collective volume under the direction of J. Seidengart bears the title *Vérité scientifique et vérité philosophique*, which may seem somewhat surprising: not only does this make one think of the double-truth doctrine which Koyré commented on by pointing out that "two truths" ultimately meant "no truth at all" (Koyré 1950, 268) — yet we know that he himself strongly advocated for a migration of thought towards the truth — but it also focuses attention on the contents of thought, whereas one is essentially describing a historian that was mainly interested in its forms (or, to use his terminology, its substructures). The fourteen contributions, all in the French language, of this volume are divided into three themes: "Koyré the Philosopher", "Philosophy and History of Science" and "Koyré the Historian of Philosophy". We dare to offer another classification: "biographical", "general" and "specific" studies. Under a final heading, "Miscellaneous", we will bundle the four contributions, which are regrettably beyond the scope of this critical analysis in terms of length, as well as the edition of Koyré's unpublished conference which concludes this volume.

4.3.1. Biographical studies

P. Zambelli's contribution consists in offering French-speaking readers the revised version of an extract from the biography we have just introduced (Zambelli 2016, 155–172). Endeavouring to "reconstruct the stages and modalities of his integration in France and of his international relations" during the inter-war period (Vérités 2016, 21), it tackles, with exceptional mastery albeit lacking a sufficiently logical or chronologically structured plan, various topics: Koyré's economic difficulties during his years of study in Paris and his subsequent attempts to integrate into Jewish or Slavic circles, as well as his work in the fifth section of the École pratique des hautes études. However, it is above all his relations

⁸ It should be noted, for example, that there is greater accessibility to footnotes which are now placed at the bottom of the page, more precise references to archival documents, a clearer distinction between "Note", "Documents" and "Lecture reports", not to mention a more polished page layout that better defines the difference between the main text and the quotations.

with Germany that make up the larger part of this contribution: his many travels probably embarked upon in the hopes (at least until he abandoned this idea in the 1930s) of resuming an academic career there; his encounter with Alexander Kojève and especially his privileged and instrumental relationship with Max Scheler; the particular attention he paid to the evolution of the German political situation and to the attitude of the Catholic authorities towards Nazism; and, finally, his dealings with the Frankfurt sociologists and their *Zeitschrift für Sozialforschung*.

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Recognising that, at least in the French works devoted to Koyré, the influence of Meyerson was generally obscured in favour of Brunschvicg and especially Bachelard, whose figure was supposed to unify the entire French epistemological school, Bernadette Bensaude-Vincent fervently studied, between 1920 and 1930, the combined material, moral and intellectual debt that Koyré claimed he owed to this man who was thirty-three his senior and yet who quickly, and tactfully, denied this indebtedness publicly. This study, consistently conducted with clarity and intelligence, leads the author to review what these two immigrants from Eastern Europe have in common: for example, a shared conviction based on their working knowledge of pre-modern thought, of the profound entanglement between science, philosophy and religion, and also a common historical methodology characterised by the rejection of the notion of precursor, the attention paid to errors and the will to seek the inconceivable behind what is explicitly stated. Among what differentiates them we note their divergent interpretations of Hegel, and especially their varying (surprisingly prominent) versions on the theme of the unity of thought which they nonetheless share: while the self-taught philosopher brings an unlimited scope to this unity (everyone, everywhere and always), the young historian of thought grants it only a relative scope (a unity common to a historically situated community). The relationship between Meyerson and Koyré is thus one of mutual enrichment and not a teacher-pupil exchange, since the youngest, entirely acknowledging his debt, does not hesitate to subvert part of the inheritance received from his elder!⁹

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While the contributions of Zambelli and Bensaude-Vincent certainly merit their place in this biographical section, one might rightly be surprised that this same section goes on to study Descartes! Its presence, however, seems to us to be justified not only for the Koyrean definition, which we have discussed, of those who can be described as a thinker's "contemporaries", but also for another reason offered to us by the author of this study who cleverly suggests that it is "the elucidation of his own thought which Koyré achieves by studying Descartes" (284).

Remarking that while it was from the Scholastics that Koyré read Descartes in his 1922 memoir, it was from Montaigne that he did so in his 1937 cycle of conference lectures, Emmanuel Faye conducts a very fine critical study of these two publications in order to address not only the modifications and consistencies of the Koyrean interpretation, but also

⁹ It should be noted that B. Bensaude-Vincent was apparently unable, for this study, to access the information contained in P. Zambelli's biography, which might have served to clarify his argument in certain places.

the negligible influence, as well as the equally interesting and unexpected posterity (Husserl, Heidegger, Edith Stein), of the former. Keeping in line with the Koyrean conviction of the interdependence of the various forms of thought, which we will soon be looking at in P. Redondi, he stresses that, for the Koyré of 1922, the Cartesian concept of the positivity of Infinity is to be understood, not by referring to his possible reading of medieval theological history, but rather from his mathematical practice. In this initial study, our commentator thus also reads Descartes from Cantor's arithmetic of Infinity! In 1937, however — and herewith we find the second "justification" for the presence of this study in this biographical section — the "great Cartesian discovery" "of the intellectual supremacy of Infinity" (282) is no longer interpreted as being the result of the transposition, in metaphysics, of a mathematical discovery, but rather as the expression of thought itself. So does this include that of Koyré himself?

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Although the main title of Massimo Ferrari's contribution, namely *Alexandre Koyré et Thomas Kuhn*, leads us to classify his text as part of the biographical section, its scope could equally have justified its placement in that devoted to general studies. Indeed, this erudite study not only allow us to discover the similarities and differences that exist between Thomas S. Kuhn and someone who could be seen as one of his chief "mentors", but also to witness the passing of the baton between two generations of science historians, where one embodies the European version and the other the American version. Bearing in mind the other contributions in this volume, it should be noted that M. Ferrari is aware of the profound influence exerted by Meyerson (cf. B. Bensaude-Vincent); that he too refers to the "historiographical revolution" carried out by the author of *Études galiléennes* (cf. P. Redondi); and that he speaks of the very different conception that Koyré and Kuhn had of the Einsteinian revolution (cf. J. Seidengart). Finally, among many other things, we would like to clarify the first occurrence of the expression "scientific revolution": this is to be found in Giovanni Vailati (1863–1909) and not in Koyré. This clarification prompts us to recall, in passing, that the expressions "Copernican revolution" (as it was formulated in those days) and "astronomical revolution" are already to be found in P. Duhem's work in 1905 and 1913, respectively (Stoffel 2017, 286–287).

4.3.2. General studies

This "unity of thought" is mentioned in every contribution of this volume, explains Gérard Jorland in a particularly succinct way. Better still, he proposes to demonstrate "the fecundity of this phenomenological method consisting in grasping, through empathy, the ontological intuition founding a thought" (66). He does this by borrowing two examples belonging to the Koyrean work (Galilée and Descartes), as well as by using three other, more personal, examples (Lavoisier, Marx and Pasteur). In doing so, he demonstrates that this method was not, in any way, restricted to either the era or the discipline studied by Koyré. At the end of this contribution, which is as fundamental as it is evocative, the reader might, however, have the impression that this unity of thought is merely that of singular individuals, whereas Koyré, who is certainly less ambitious than Meyerson and less ideologically interested than Duhem, promised us more: that this unity is one which was forged

by a historically situated community (see the contributions of Bensaude-Vincent and of Fruteau de Laclos).

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Within this necessarily subjective journey discovering the contributions that constitute this volume, that of Jean Seidengart, dealing with the Koyrean history of cosmology as the place where his philosophical purpose was fulfilled, seems to us to stand out in terms of the relevance of the questions it poses. To illustrate his observation that Koyrean historical analyses rarely confirm his general philosophy of classical science, the author retraces, in a few particularly compelling pages, *Du monde clos à l'univers infini* in hopes of understanding how the passage announced in the title was actually carried out. This hope having proved futile, he joined Ernest Coumet in asking his first question: "So wherein lies the cosmological revolution?" (310). Noting that the "brutal and deliberately laconic ending" of this work stands in contrast to both the achieved result, namely the "triumph of Newtonian science", and the "bubbling enthusiasm" shown by Koyré in his research, he then questions which factors could have led to such an unexpected conclusion. He goes on to make a series of hypotheses, all more or less linked to the idea of Infinity (311–312). Since the distinctive style of the ending of this book suggests that in these lines it is less of Koyré the historian expressing himself and more the man who is known to have "tried to let himself be convinced by the attestations to the existence of God" (62), and who leads us to wonder whether he possessed an adequate theology of Creation, it might be necessary, as we recently suggested (Stoffel 2018, 447–449), to further broaden the interpretative context: should we not consider it within the turmoil of his time, and even the nostalgia that he seems to have experienced? Finally, noting that Koyré downplays the philosophical importance of relativity and quantum mechanics, as evidenced notably by the periodisation he adopts, Seidengart wonders whether our historian "saw contemporary science as a mere extension of the scientific revolution of the 16th and 17th centuries, or whether he considered the 20th century to be a new phase in scientific cosmology" (313). Regarding this third and final question, we will certainly also refer to M. Ferrari's contribution.

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In keeping with the study of B. Bensaude-Vincent, who had already lamented the increased influence of Bachelard and the diminished hold of Meyerson in French literature, Frédéric Fruteau de Laclos does not hesitate to question Koyré's adherence to French epistemological tradition. Somewhat provocative, his remarks will — I am certain — be described as liberating by a certain number of Koyrean commentators who share the fact that they were not born in the Hexagon and, as a result, were not immersed, from a very early age, in the works of Bachelard!

Because it combines the disparity of the end result with the continuity of the path followed in order to obtain it — let us mention here the extinction of the strong opposition between the (so-called) "continuism" of the author of *Système du monde* and the (equally alleged) "discontinuism" of the author of *La révolution astronomique*¹⁰ — Koyré is Meyersonian. We

¹⁰ The surprising emphasis on the pervasive term "revolution" in Duhem's historical work (Stoffel 2017) is thus matched by the equally unexpected uncovering of the continuity of historical transitions in Koyrean history.

would like to qualify this with a "partially" because one should not forget the fundamental difference, so eloquently expressed by B. Bensaude-Vincent, which clearly distinguishes it from Duhem (Fruteau de Laclos reiterates this), and also from Meyerson (although this time he doesn't mention it). Because he seeks to understand the past and not to judge it from the present — we expressed this at the beginning of this article — and because his recognition of a difference in the states of knowledge is not accompanied by a disqualification of the states that now belong to the past, Koyré is not a Bachelardian. Consequently, he is neither an analytical philosopher — as we have long known — nor a French epistemologist — that is what this study teaches us. Allow us to temper this remark by pointing out that whether or not he adheres to French epistemology naturally depends on the way one chooses to define it. From this perspective, it would possibly be interesting to take A. Brenner's definition (182) into consideration. Based on a revision of the traditional interpretation (G. Jorland) of the Koyrean declaration describing Meyersonian philosophy as "phenomenological", the author comes to the conclusion that Koyré is a historian-philosopher who does not hesitate "to apply revisited phenomenology to an anthropology of knowledge" (219).

4.3.3. Specific Studies

Other contributions are devoted to a much more circumscribed part of the Koyrean work.

A thorough study of a conference on Jan Hus (v. 1370–1415) given by Koyré between 1943 and 1948 and published for the first time in 2008, is furnished by Annarita Angelini and focuses on seeking methodological parallels between "the conceptual analysis devoted to Hus's ecclesiology and that devoted to the major themes of modern science" (80). Having identified, more or less convincingly, common elements on either side — such as biographical details that do not make sense, how failures can explain successes, or yet another similar usage of the concept of revolution — she ambitiously attempts to justify the relevance of these methodological similarities. It is, she says, because Hus and Galileo share the same realistic presupposition, one in his conception of theology and the other in his vision of mathematics, that "Koyré can approach the ecclesiology [of the former...] with the same mental tools he uses to analyse mathematical thought [of the latter]" (86). The flaw in this explanation is that it must be accepted, which does not seem historically viable to us, that Hus and Galileo still belong to the same era, namely that which the author characterizes by the continued existence of a mediation between science and theology.

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In keeping with the collective work he had just co-lead (*La nature et le vide dans la physique médiévale*), Joël Biard focuses on the question of the vacuum as it is addressed in two Koyrean articles which both deal, firstly, with Pierre Duhem (*Le vide et l'espace infini aux XIVe siècle*), and secondly, with Alistair C. Crombie (*Les origines de la science moderne*). The underlying theme — the origin of modern science in view of the continuism of the author of *Système du monde*, and the discontinuism of the historian of *La révolution astronomique* — could have left the outdated remarks as implied, since they have already been dealt with to the point of caricature. This is not the case! Duhem and Koyré, J. Biard tells us, generally share a common conviction: Aristotelianism was such an epistemological impediment to the

development of science that any innovations in the field of natural philosophy could only emerge from sources exterior to it. It is with regard to identifying this "exterior" to Aristotelianism that their views begin to diverge: the former opts, naturally, for Christian theology personified here by the condemnations of Étienne Tempier, while the latter chooses, just as obviously, Platonism. Because of this profound divergence, the latter announces that the identification of the former does not correspond to historical reality, thereby "making room" for the one he himself put forward. It is immediately apparent that, although this debate is already well known, it is remarkably well presented. Drawing on his knowledge of the vacuum in the Middle Ages, J. Biard develops this issue through several pertinent observations. Reliant upon the themes and texts advanced by Duhem, Koyré misjudges the position of the vacuum issue in the Middle Ages, which is less related to cosmology (infinity) than it is to physics (place and space). Understanding the question of the origin of modern science as a stand-off between two monoliths, Aristotelianism and Platonism, the first of which necessarily embodies the obstacle and the second the solution, he fails to perceive that it is at the very heart of natural Aristotelian philosophy that serious and lengthy reflection, and even a questioning of the issue of the vacuum, took place.

* * *

We all know that one of the most valuable methodological principles, and certainly the most innovative, that we inherited from Koyré is to be mindful of the historical interdependence of the various forms of thought: scientific, philosophical, religious. But has he himself always been? Has he always shown the same reliability with regard to these interactions? This is the excellent question Pietro Redondi poses. To answer it, he traces the evolution of Koyré's attitude towards the Galilean cosmogonic hypothesis. Whereas, in 1939, he sees only a "pseudo-platonic cosmological myth", or an almost Galilean propaganda argument for countering the natural Aristotelian philosophy, twenty years later, that is, in 1959, he attributes "great importance" to it. Might Koyré himself have taken a while to realize that these interactions are valid... even in the case of Galileo?

4.3.4. Miscellaneous

Being unable to attribute the same importance to all of the contributions, but nonetheless anxious to furnish at least a brief overview of all those comprising this volume, we'd like to mention the following four contributions.

After having extensively summarized P.-M. Schuhl's *Machinisme et philosophie* and having pointed out the novelty provided by the preface to its second edition, Walter Tega thoroughly examines the two Koyrean articles — one directly (*Les philosophes et la machine*) and the other indirectly (*Du monde de l'« à-peu-près » à l'univers de la précision*) — that resulted from this. On this occasion, he identifies a number of Koyrean presuppositions including this one: while many other philosophical conceptions could testify to the existence of interactions between science and world view, Koyré restricts himself to platonic mathematics as if he alone could fulfil this role (p. 117).

Rightly considering that "the context of the elaboration of the Koyrean work deserves to be subjected to rigorous examination" (172), Anastasios Brenner reviews a few of Koyré's

predecessors, such as Paul Tannery, in particular, and including Pierre Duhem and Gaston Bachelard.

Making a comparison of sorts between the Copernicus of Koyré and that of Kant, Jean-Jacques Szczeciniarz offers a study based essentially on *La révolution astronomique*, evoking numerous Koyrean methodological principles, but he casts his net wide and surprisingly claims that Koyré "is at the origin of the theories about the decentering" of humankind in the world (166).

The contribution of Alexandre Guimarães Tadeu de Soares in a sense complements that of E. Faye, since it relates to Descartes's idea of the world by emphasizing how the paradox of our era — which no longer thinks of the world, but the idea of the world — results from the former founding paradox which required that, before one could comprehend the surrounding nature, it was necessary for one to first know oneself.

* * *

Finally, we should mention that the volume thankfully concludes with the unpublished conference on Galileo given by Koyré in 1946 at the Parisian secondary school Louis-le-Grand. This publication allows us to truly savour — I was going to write "understand", because Koyré is obviously speaking in a largely improvised manner, and we truly understand him — the ability of our historian to put himself at the level of secondary school students, and this at a time when his interpretation of the Florentine scholar is already "mature and stabilised" (326).

5. Conclusion

It is, of course, difficult to obtain a few general lessons from these varied, generally high-quality contributions, for which no common thread was pre-arranged. We would also like to point out that despite Koyré's reservations, mentioned at the beginning of this article, many of these contributors did not shy away from taking certain biographical elements into account or from including the genesis and evolution of the thought being studied. Fortunately!

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