



Philosophia Scientiæ

Travaux d'histoire et de philosophie des sciences

22-3 | 2018

Sur la philosophie scientifique et l'unité de la science

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Electronic version

URL: <http://journals.openedition.org/philosophiascientiae/1656>

DOI: 10.4000/philosophiascientiae.1656

ISSN: 1775-4283

Publisher

Éditions Kimé

Printed version

Date of publication: 25 October 2018

Number of pages: 289-305

ISBN: 978-2-84174-908-9

ISSN: 1281-2463

Electronic reference

Hans-Joachim Dahms, "Mission Accomplished? Unified Science and Logical Empiricism at the 1935 Paris Congress and Afterwards", *Philosophia Scientiæ* [Online], 22-3 | 2018, Online since 25 October 2020, connection on 30 March 2021. URL: <http://journals.openedition.org/philosophiascientiae/1656> ; DOI: <https://doi.org/10.4000/philosophiascientiae.1656>

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Mission Accomplished? Unified Science and Logical Empiricism at the 1935 Paris Congress and Afterwards

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Résumé: Pour la plupart, les membres du cercle de Vienne se sentaient investis d'une mission philosophique et aussi culturelle : poursuivre la tradition française des Lumières et l'adapter aux exigences du temps. Si l'on se demande dans quelle mesure l'objectif a été atteint, la réponse est double. Quand ils ont cherché à élaborer une encyclopédie empiriste, à savoir l'*Encyclopédie internationale de la science unifiée*, qui serait comme l'équivalent de la *Grande Encyclopédie* de Diderot et d'Alembert, l'échec a été flagrant. À cela, il y a des raisons externes, comme la seconde guerre mondiale, ou la mort d'Otto Neurath, le principal éditeur et aussi le moteur de toute l'entreprise. Mais cela tient aussi à des facteurs internes, comme l'insistance de Neurath sur un *Index verborum prohibitorum*, qui a empêché certaines contributions importantes d'aboutir. Si maintenant l'on élargit l'horizon pour considérer le mouvement dans son ensemble, un bon point de départ se trouve dans la critique très polémique formulée par Max Horkheimer en 1937. L'examen des arguments avancés montre que les positions défendues par l'empirisme logique étaient beaucoup plus solides que ne l'imaginaient Horkheimer et l'École de Francfort : la prise en compte des faits et théories scientifiques est et reste un ingrédient important de toute politique éclairée.

Abstract: Perhaps not all, but certainly many of the logical empiricists of the Vienna Circle, felt that they were undertaking a philosophical and cultural mission for their time, namely to follow in the tradition of the French Enlightenment and to adapt it to the requirements of their own time. My question here is whether they were able to fulfill this ambition, and if so, to what extent. The answer is twofold: when they tried to construct an empiricist encyclopedia, namely the *International Encyclopedia of Unified Science*, as a counterpart to Diderot and d'Alembert's *Grande Encyclopédie*, the project was a quite spectacular failure. There were a number of "external" reasons for this,

including the start of the Second World War and the death of Otto Neurath, the chief editor and main driving force behind the whole thing, shortly after the end of the war. But it also had to do with inbuilt “internal” factors, such as Neurath’s insistence on his strange *index verborum prohibitorum*, which stood in the way of some important contributions. I then widen the horizon and take the whole movement of logical empiricism as the object to be evaluated. I take as a suitable starting-point Max Horkheimer’s very polemical criticism of the movement (published in 1937) and evaluate his critical arguments. The result is that logical empiricism fares far better than Horkheimer and the Frankfurt School imagined: the acknowledgement of empirical facts and scientific theory was (and remains) an important ingredient of every enlightened politics.

1 Introduction¹

Let me start this paper by explaining its title. Its presupposition is that unified science and logical empiricism had a definite aim. But did unified science have a mission at all? And if so, what was it? Was its aim something that was actually possible to accomplish at a given time? Or was it something that is a permanent task?

As a relatively easy basis upon which the first question can be answered, I will focus on the *International Encyclopedia of Unified Science* (IEUS), a project that was initiated at the 1935 Paris Congress for Unified Science. From this point of view, the answer to the first question is yes—at least in the sense that its most important promoter and later on chief editor, Otto Neurath, had a sense of such a mission, namely to achieve in his own time what the promoters of the *Grande Encyclopédie* of the Enlightenment, Diderot and d’Alembert, had achieved in theirs. It would be interesting to know when and how Neurath conceived the idea of such an ambitious task, and what the other editors and contributors of the IEUS thought of it.

And then of course we have to look at what became of the project: what was the original scope of its ambition, and how much of it was achieved over the following decades? From this point of view, my answer to the question “Mission accomplished?” will be a largely negative one: very little of the original plan was carried out. Of course, shortly after the publication began, the war started, and some envisaged contributors found themselves with other duties and/or priorities. But perhaps there were some intrinsic impediments to the success of the project as well.

1. I have tried to preserve the lively style of the oral presentation delivered in Cerisy, and have added toward the end some short remarks on the current political developments (such as Brexit in the UK, and the election of Trump) of 2016, when the article was submitted for publication. I thank the English translator for the very valuable help in transforming my text into readable English

So, if the mission was *not* accomplished, then perhaps the movement of unified science and its logical empiricism—taken as a whole—succeeded in achieving what the *International Encyclopedia of Unified Science* did not. It is of course difficult to answer this rather global question, and one has to look for a suitable starting point from which to tackle it. I will take as my starting point a definitively *negative* answer that was being given already between the first and second Paris Congresses of 1935 and 1937 respectively—that of the exiled Frankfurt School (including thinkers such as Max Horkheimer and Theodor W. Adorno), who, up until that point, had been on surprisingly friendly terms with the logical empiricists [Dahms 1994a, 21–68]. I will list the most important points of criticism formulated *at the time*² and discuss some of them, paying special attention to the peculiar methodological approach chosen by the critical theorists. My conclusion will then be that their criticism was largely unjustified, and that logical empiricism fared better as a force of progressive thinking than its most outspoken critics thought it would. In other words, logical empiricism did indeed succeed in an important part of its mission.

2 The history of the IEUS and its original ambition

At the first International Congress for Unified Science in Paris in 1935, it was Charles Morris who submitted to the audience the plan to start an international encyclopedia of unified science. In the proceedings of the meeting one finds only small traces of his proposed resolution and the ensuing decision procedure among the audience, in remarks relegated to two footnotes. One of them appears after Morris’s talk “Remarks on the proposed *Encyclopedia*”. It reads:

Resolved: That this Congress express its approval of the *International Encyclopedia of the Unity of Science* [...] and its willingness to cooperate in the execution of this project.
[Morris 1936, 74, n. 1]

And in the first footnote of Neurath’s talk “Une Encyclopédie internationale de la science unitaire”, we find:

Sur la proposition du professeur Charles W. Morris, de Chicago, le Congrès a donné son approbation au projet d’Encyclopédie internationale de la science unitaire. [Neurath 1936]

2. There was a kind of revival of some of the arguments in the so-called positivism dispute of the 1960s in German sociology [see Dahms 1994a].

So it seems that somehow, between both Morris's and Neurath's talks, perhaps simply by a raising of hands, the plan was approved by the philosophers gathered in Paris.

After the Congress, the organizers of this endeavor started to look for a publisher, and also for contributors. Otto Neurath, who had given a sketch of the envisaged encyclopedia in the subsection "Encyclopédie" of the main section "Unité de la Science", where he explained his ideas for the unity of this encyclopedia, became its chief editor (the others being Charles Morris and Rudolf Carnap). They both entertained quite different ideas of its unity, one (Morris) putting the emphasis on semiotics, the other (Carnap) on the idea of reduction of terms and scientific laws. These themes were pursued in more detail in the first published pamphlet of the encyclopedia [Neurath, Bohr *et al.* 1938], to which the "big names" (as Neurath called them) Niels Bohr and John Dewey also contributed.

After two years of busy searching, the publisher chosen was University of Chicago Press (UCP). The delay was in part caused by UCP's demand that at least 250 subscribers had to be in place for the first series of twenty pamphlets. It would be interesting to compare the total of around 3000 people and institutions that received the advertisement prospectus for the IEUS with the list of actual subscribers, and to analyze in detail their national and professional composition.³ After a provisional list of contributors to the *Encyclopedia* had also been fixed, publishing of the the first pamphlets commenced in 1938. As you know, the penultimate one was Thomas Kuhn's "The Structure of Scientific Revolutions", which appeared in 1962 [Kuhn 1962]. It was not until 1970 that publication of the first twenty pamphlets, under the collective title "Foundations of the Unity of Science", would be complete.

But now: what were Neurath's original ambitions with the IEUS, and how did he manage to persuade Morris to collaborate and to submit the above-cited resolution of the whole project to the Paris Congress of 1935? Let me quote from a long letter written in March 1935 in which Neurath tried to convince Morris of the project:

I have been busy with the plan for an encyclopedia—which has undergone many changes—for over fifteen years [that is, from the beginning of the twenties—Dahms]. It is now a long time ago that I, together with Einstein and Hahn, and other mathematicians and physicists, high above Vienna on the Kahlenberg, sketched out the plan for the first time. Those were different times. We thought of it in terms of Enlightenment, like the old encyclopedists, and Einstein also thought of it in this way. Everything gets its turn in the long run. [Dahms 2005, 105]; see also Bourdeau's article in this issue [p. 17–32]

3. Both lists are preserved among the inactive UCP records in the special collections department of the Regenstein Library of the University of Chicago, but up until this point, they have been ignored (at least in publications).

What had Einstein said on the Kahlenberg?⁴ In his letter to Morris, Neurath cited Einstein's letter of recommendation for the envisaged project, as follows:

You have convinced me that your plan to build a people's library [*Volksbücherei*] is apt to fulfill the deeply felt need of many people for education and cultural development in a highly effective way. Your project can achieve for the broad masses [of today—Dahms] an importance similar to that of the Encyclopedia of the eighteenth century for the educated France. I am prepared to collaborate with, as well as I am able, and will also try to find benevolent specialists for your plan [as contributors—Dahms]. [Dahms 2005, 105 *ff.*, my translation].

A copy of this letter is indeed preserved in the Einstein papers, and Neurath used it more than once (not only in his correspondence with Morris, but also, for instance, with UCP), and, I am sure, brought it out whenever he was trying to convince people of the importance and usefulness of the project.

The plan for a people's library need not detain us here—some ideas were formulated, some possible contributors named, but nothing came of it, in part as a consequence of the economic crisis of the early twenties in Central Europe; but also because Einstein declined to become editor for the overall project.

Later on, in 1928 the plan was taken up again. And here it might be useful to say a little about the aims and structure of that project, now called a reading dictionary (*Leselexikon* [for details see Dahms 2005, 108])—that is, an encyclopedia not ordered alphabetically (like the French *Encyclopédie*), but designed as a series of short pamphlets on special subjects to be read from beginning to end, but with a register of all of them so as to serve also as a dictionary in the usual sense. The overall aim was to give a general overview of the contemporary state of knowledge in all scientific disciplines. Again the parallel to the *Grande Encyclopédie* is drawn, which means that Neurath had absorbed the idea from Einstein's letter of a link to that tradition, into his own thinking. Although the *Leselexikon* should be “free from all politics” in the narrower sense, it should be empiricist and anti-metaphysical, unlike some of the leading dictionaries of this time such as, in Germany, the Catholic Herder's *Lexikon*, or “the Brockhaus and Meyers *Lexikons*, with their nationalist and reactionary tendencies” [Dahms 2005, 110].

The contents list of the *Leselexikon* was as follows:

1. Stars and stones (astronomy, geology, mineralogy, 5 pamphlets)
2. Plants (3)
3. Animals (not including man) (10)

4. It was from this hill that Prince Eugen of Savoy led his army to drive back the Turks who had besieged Vienna.

4. Man (including society and economy, technology, art, religion, science, etc.) (60)
5. Logic and mathematics (2)
6. Geometry, physics, chemistry (10)
7. General biology and physiology (10).

Whereas the first project of the early twenties was to have been directed mostly toward workers and employees as a reading public, now those “bourgeois circles that are prepared to break with the past”, were also envisaged as addressees. When one thinks, on the other hand, of the IEUS, the proportions are completely reversed (think for example of the sixty pamphlets on man, and only two on logic and mathematics, in the *Leselexikon*).

Before I proceed to discuss the IEUS project, it should be mentioned that Neurath, in 1928, also thought about what he called renovation cycles—that every couple of years a new edition should be published in order to bring the pamphlets up to date with contemporary knowledge in their respective fields (ranging from physics every six or seven years to society and economy every one or two years). But then the development of the real economy (in this case the global economic crisis of 1929 and after) brought that second project to an end as well.

When the IEUS finally got underway, from 1935 onward, the boundary conditions had changed dramatically. Now it was not the proletariat and certain special progressive bourgeois people of Austria and other German-speaking countries who were to be approached as a readership, but the *international* community of *scientists*. Neurath nevertheless stuck to his ambition and his aim to found something like the French *Encyclopédie* for his times, and even spoke of the editors and authors of the IEUS as the “new encyclopedists”. It is telling that Morris, who himself, at the beginning of the thirties, had nurtured ideas of a big project for scientists,⁵ was from the start skeptical even about the term “*Neue Enzyklopädisten*”. He wrote in July 1937 to Neurath:

It seems to me that the phrase “*Neue Enzyklopädisten*” should be your own private one, rather than an official title, because such a title has connotations which many persons otherwise interested in the movement are not inclined to accept. The interest of many people is going to be purely scientific. Furthermore I think that, while there are some real relations to the French encyclopedists, our movement is wider and with a somewhat different orientation—at least for many members. Thus our Enc. is really addressed to a different reading public than the French

5. This was perhaps also meant as a counter-project to his Chicago colleague Mortimer Adler’s enormously successful project of a collection of philosophical classics.

Enc. was. [Morris to Neurath, June 13, 1937]; [Morris papers, Regenstein Library, Chicago]

The remark about the different reading public is certainly true. But it seems that Morris was in addition skeptical about the Enlightenment ambitions of the project. So it seems that, from the start, there were some minor divergences concerning the envisaged aims and functions of the IEUS, even among its editors. Nevertheless one might ask whether what was achieved in the end fulfilled Neurath's grander (or Morris's more modest) ambitions. This is the question I will try to answer now.

I start with the overall plan with which the IEUS began. According to Morris's report [Morris 1969], four large sections were planned:

1. Foundations of the unity of science,
2. Methodological problems of the special sciences,
3. Systematization in the special sciences and the relations between them,
4. Methods and results of sections 1 through 3 for applied sciences or the application of sciences (in education, engineering, law, and medicine).

The whole thing was to be accompanied by a visual thesaurus (as in the French *Encyclopédie*), using visualizations produced with the Neurath/Arntz ISOTYPE method of visual education [Neurath 1991], [Simoniello 2017]. Furthermore, a comprehensive index (as was already the case for the *Leselexikon*), was to be added, but now in English of course. Ideally, the IEUS was to run to twenty-six volumes (each of ten pamphlets), along with ten volumes of the visual thesaurus.

So what became of the project? More than twenty years after the project began, only the first two volumes of "Foundations of the Unity of Science" (the thirteenth part) had been completed. This is important, because the methodology of the special sciences (section 2) as distinct from the "Foundations", was largely left out, not to mention applied sciences, technology, and so on. I also really wonder what the visual thesaurus would have looked like, when it was meant to represent visually—at least in part—such extremely abstract subjects.

So, all in all, the IEUS project remained but a "torso" [for details, see Dahms 1999] and thus failed spectacularly to fulfill its ambition to become a contemporary counterpart of the French *Encyclopédie* for the twentieth century.

The reasons were manifold: the war, the reluctance of UCP to continue publication during the war, only very narrowly overcome by the combined effort of Morris and Neurath; and then Neurath's sudden death shortly after the end of the war, in December 1945. It seems as if the remaining editors Morris and Carnap increasingly lost interest in the whole project. But it should also not be forgotten that some authors failed to deliver their

promised contributions. While it is easy to trace the published volumes, I will concentrate here on the perhaps more interesting question of what was *not* published.

Three cases stand out in particular. One was about the history of logic: the Polish logician Jan Łukasiewicz was to write it, but did not deliver. Perhaps his *Aristotelian Syllogistic from the Standpoint of Modern Formal Logic* can be seen as a more fully-fledged version of the first chapter of it [Łukasiewicz 1951].

I will expand a little more on the other two cases. The second in this series of no-shows is “Interpretation and Judgment of Art”, as the envisaged author phrased its title. It was to have been written by Meyer Schapiro, professor of art history at Columbia University, who had been introduced to Neurath by Ernest Nagel. The correspondence between Schapiro and Neurath is revealing.⁶ As in so many other instances, Neurath insisted from the outset that the title proposed by Schapiro should be changed, because, as Neurath informed Morris, both terms (“interpretation” as well as “judgment”) were dangerous ones.⁷ In some cases, then, the obstacles to the *Encyclopedia*’s progress came from within the group of editors themselves.

The longer the correspondence between Neurath and Schapiro went on, the more the discussion entered into wider and wider fields: international politics and the war of course, but also the situation of the intelligentsia and the universities in Germany. Here Neurath singles out Heidegger as his main enemy, telling Schapiro that he would like to teach this “little fascist boy” some manners. Now, Schapiro did not deliver his contribution, as promised many times throughout the fifties. When he missed another deadline, the already notorious “Meyer Schapiro problem” was solved by Carnap, who in the sixties served as the only remaining editor, by giving up the idea of a pamphlet about art altogether and instead handing it to his former Prague colleague Gerhard Tintner, who instead wrote something about economics.

One interesting thing perhaps came out of Schapiro’s discussions with Neurath: when Heidegger later published his article “Das Kunstwerk”, in which he gave a sort of *Blut-und-Boden* interpretation of one of van Gogh’s shoe paintings, Schapiro would react with sharp criticism, perhaps somehow trying to teach Heidegger scientific manners. He pointed out that what was depicted in the painting was not the shoes of an old farmer woman coming in from the fields after a long day of hard toil, as Heidegger maintained, but van Gogh’s own shoes. Of course, the episode delivered a blow to Heidegger’s

6. It is now available in the special collections department of Columbia University.

7. Here Neurath’s habit of pestering everyone with his *index verborum prohibitorum* surfaces again, after his effort to convince John Dewey not to use “value” in his contribution to the *Encyclopedia*, and later on his refusal to let Herbert Feigl write something about scientific explanation for it, because the term “explanation”, of course, is dangerous as well. According to Neurath, science does not explain, but only aims to describe.

philosophical approach since, in “Das Kunstwerk”, he had pointed out that, in order to detect and describe the essence of something, we don’t need to look at actual things in the outside world, we can just as well (and often even better) depend on works of art depicting them.

As a last example of this number of unfinished contributions to the *Encyclopedia*, I would like to mention a planned, but never executed contribution on the sociology of science. Louis Wirth (a sociology professor at Chicago) was singled out as the one to write it. He had delivered his *Dissertation* in late 1928 on the ghetto (a phenomenon that can still be witnessed today in the area around the university in South Chicago), but then turned for a while to the sociology of knowledge and translated, among other things, Karl Mannheim’s book *Ideologie und Utopie* [Mannheim 1929]. In Wirth’s long introduction you will find the most concise early characterization of that new field of the humanities (the sociology of knowledge and science) and a list of its tasks. Wirth did at least contribute a paper on that topic to the 1939 Congress of Unified Science at Harvard; but he too never delivered his promised pamphlet before his premature death in May 1952, because he joined the war effort, and afterwards took on organizational responsibilities within the International Sociological Association, while also continuing to assemble material on a large but ultimately never completed study on “The City”.

But why are these examples of Łukasiewicz, Schapiro, and Wirth of special interest? They show that logical empiricism would have looked different—more historical, more sociological, and also more culturally engaged—had the original plan been executed. It seems to me that the IEUS operated a sort of canonization of respectable fields of scientific investigation. Had it included those other pamphlets, much delay and controversy about what could and what could not be responsibly tackled, could have been avoided.

But, to sum up, the IEUS did not live up to the expectations of its editors, especially those of Neurath and his ambition to form a group of “new encyclopedists”, and perhaps to become, himself, the Diderot of his age.

In writing several articles on the empiricists’ *Encyclopedia*, I have asked myself from time to time whether an empiricist encyclopedia could not also be a desideratum for *our* time. But of course the specialization and branching out of the sciences has reached such a level of intensity that it is virtually impossible to get contributors for all the areas to be covered. It is also not easily conceivable that, on the reception side, people of today are really interested or sufficiently prepared to absorb everything that the different sciences have to say.

There is also another problem: the innovation cycles Neurath already thought about in connection with his *Leselexikon* in the late 1920s. The sciences move forward at such speed that an encyclopedia must constantly be rewritten. So it is no wonder that, in the end, all the great encyclopedias such as the *Brockhaus* in Germany or the *Encyclopedia Britannica* in Great Britain, have over recent years increasingly given way to *Wikipedia*. Of course,

Wikipedia has more contributors than Neurath's *Encyclopedia*, but it lacks cohesion, since it is once again organized in the way of a Neurathian *Leseslexikon* (or the IEUS), and lacks much of its Enlightenment impetus.

3 Logical empiricism from the thirties to the fifties

To come back to the historical description and evaluation of logical empiricism in the thirties and forties of the last century: while the IEUS was not so much of a success, could logical empiricism, taken as a whole, perhaps be regarded as a force of Enlightenment in troubled times?

It is of course difficult to tackle such a complex phenomenon (the partly overlapping fields of scientific philosophy, logical empiricism, and unified science) as a whole and then to form a judgment on its performance on the international scene vis-à-vis the tradition, ambition, and heritage of Enlightenment and the application (so to speak) of the latter to the historical moment and political situation of the mid-thirties and beyond.

My approach here is to start with a severe criticism leveled at the empiricist movement, published by Max Horkheimer, head of the exiled Frankfurt Institute for Social Research, and to ask whether this criticism is justified. It was published in the spring 1937 edition of the Institute's journal *Zeitschrift für Sozialforschung* under the title "Der neueste Angriff auf die Metaphysik" [The Latest Attack on Metaphysics] [Horkheimer 1937, 2002]— interestingly enough, alongside an article by Neurath on the problem of the international comparison of standards of living. The traditions of the Vienna Circle and of the Frankfurt Institute were at that time not so diametrically opposed as they may seem from today's perspective. Horkheimer wrote his *Dissertation* and *Habilitation* under the supervision of Hans Cornelius, a German adherent of the neopositivist scientist-philosopher Ernst Mach; subsequently, as director of the Institute for Social Research he succeeded Carl Grünberg, an empirically-minded Austro-Marxist from Vienna. In the first half of the thirties the Frankfurters enlisted the collaboration of Paul Lazarsfeld and Marie Jahoda, both excellent young empirical social psychologists from Vienna (impregnated with both psychoanalysis and logical empiricism), both of whom contributed to the large 1935 volume *Autorität und Familie* [Horkheimer 1936].

During this time, Neurath discussed various themes such as the application of logical empiricism and unified science to the social sciences in the exiled institute in New York. He got a big surprise, indeed a shock, when he received Horkheimer's polemical article, the main idea of which is that the positivists' concept of experience is doomed to remain ignorant of the evils of the present time, and is therefore completely inapt to serve as a weapon against fascist dictatorship.

The main points of criticism are:

- a nihilistic attitude toward tradition and history,
- a lack of ethics and morals,
- the inadequacy of physicalism to describe social phenomena,
- a neglect of the distinction between the essence [*Wesen*] and appearance [*Erscheinung*] of things and phenomena.

Quite a list! I will make only some brief remarks on the first two items. Logical empiricism was indeed largely unhistorical, and sometimes anti-historical. We need only think of the *Programmschrift* of the Vienna Circle, *Wissenschaftliche Weltauffassung: Der Wiener Kreis*. There we read that the members of the circle are glad to remove “the metaphysical and theological debris of millennia” [Stadler & Uebel 2012, 89] and set out into a bright new empiricist and anti-metaphysical future. As if the philosophical tradition was comprised mostly of rubble! I doubt that any of them read a single page of Aristotle’s *Metaphysics* (unlike the Polish logicians, of course). But this Viennese anti-historical attitude is something that we find in contemporary Middle-Europe in many progressive circles, both inside and outside philosophy. I find especially telling the juxtapositions in the famous design journals *Das neue Frankfurt* and *Die Form*, where photographs of good modern designs, say of furniture and everyday utilities, are shown alongside counterparts loaded with outdated superfluous and ugly ornaments. The latter are not criticized or commented upon, they are simply crossed out with big red lines!

Likewise for the lack of ethics and morals! It has always been an astonishing fact to me that philosophically brave empiricists and politically brave socialists such as Carnap, Frank, Neurath, Zilsel, and others adhered to a noncognitivist meta-ethics (whether in the Carnap-Ayer-Stevenson form of emotivism or in the less well-known Dubislav-Reichenbach-fashion of prescriptivism [Reichenbach 1951, 276 ff.]) at a time when not only democracy, but humankind as a whole was in danger [Dahms 1994b, 342–346]. It is worrying in this respect that the logical empiricists were absent—almost demonstratively so—in the numerous sections on the Crisis of Democracy at the Eighth International Congress of Philosophy in Prague in 1934 [Dahms 2016, 150–151], one year after the Nazi “seizure of power”. It was probably their non-cognitivism that hindered them from engagement in these themes. But that can only serve as a factual explanation. In my opinion it is logically at the same time a sort of *reductio ad absurdum* of their (noncognitivist) meta-ethical standpoint.

This also, it must be added, goes back to a time when logical empiricism as such did not exist at all. Reichenbach, who advocated it in *The Rise of Scientific Philosophy* [Reichenbach 1951], had already, at the beginning of the First World War, written an angry open letter (together with Walter Benjamin, incidentally) to a leader of the German youth movement, Gustav Wyneken:

You old people who inflicted upon us this terrible catastrophe,
 you really dare to talk to us about ethics and to try to give aims
 to our lives? [Dahms 1994b, 335]

But whatever the roots of the anti-historical and noncognitivist attitude of the logical empiricists may be, their standpoint was and is wrong in these respects.

But what about the distinction between essence and appearance, which marked the difference between the logical empiricists' and the critical theorists' conceptions of experience? I concentrate on these aspects because the way in which Horkheimer and his school discuss these problems is very interesting; but they completely fail in their attempt to show that a logical empiricist attitude is unable to tackle the pressing problems of their time.

Horkheimer singles out three historical examples for the test of logical empiricism:

- the case of a group of anti-vivisectionists visiting an establishment that conducts cruel experiments on animals,
- witch-hunting, from the Middle Ages onwards,
- contemporary anti-Semitism (i.e., in the first half of the twentieth century).

What these examples have in common is that they put logical empiricism to the test in especially precarious, dangerous, and deadly circumstances. Otto Neurath would have approved of such an approach, given his major unfinished manuscript on "Prejudice and Prosecution". Except that his evaluation of the test was (in one case) and would have been (in the other cases, I am sure) very different.

Take the first example, vivisection: here Horkheimer describes a historically testified visit of an organized group of people against the vivisection of animals to a biological institute. The group was deceived by the director of the institute about the pain the animals had to bear because, as Horkheimer cites from the report of that visit, "a simple transection of their vocal cords had deprived the animals of the ability to give voice to their suffering". He continues with the following commentary:

The pleasure which the younger Vogt [the experimenter—Dahms] derived from the gullibility of those good people is a perfect example of the pleasure to be derived from naïve empiricism in a world in which everything is attuned to deception. [Horkheimer 1937, 293], [Horkheimer 2002, 151]

But this example tells us nothing about the value or non-value of empiricism. Both the voices of the animals and the removal of their means of expressing their pain are empirical occurrences. As Neurath remarked in his long and

only recently published answer to Horkheimer's article,⁸ he wondered why the group was not suspicious enough to look closer into the setup of that particular vivisection experiment. No differentiation between mere empirical appearance and a non-empirical essence of things needed to be invoked in order to solve this case.

The second case concerns witchcraft and witch-hunts, also a historical example, but this time about humans rather than animals. Horkheimer writes:

In the presence of a large number of protocol sentences bearing on the existence of witches, the empiricists would not even have been able to fall back on improbability. [Horkheimer 1937, 293], [Horkheimer 2002, 174]

Neurath did not care to comment on that example. To me it seems totally misleading. One has to distinguish here between the general belief in the alleged attributes and powers of witches, and the different tests for answering the question whether a given individual is a witch or not. Whereas the first (the "theory") can in principle be falsified by experience (and was indeed falsified many times), the second group (the tests) already does not pass even a purely logical critique. Witches were depicted as causing every conceivable damage: causing diseases and mass epidemics (including the plague), causing impotence in men, stealing the harvest from one farmer's land and bringing it through the air to that of another, and so on. All of this can be put to the test of empirical observation and, of course, does not pass it. With the tests for being a witch it is even worse. Take the case of the needle test. Here, the prosecutors looked for a mark of contact between the devil and the female body. That mark was thought to be insensitive to needles. If they found such a mark, they knew that the woman was a witch. If they didn't find such a mark, all the worse for the woman, because the devil is known for his habit of not marking his truest followers. So whatever the outcome, the test delivered negative results for the victim. In fact it was only a pretext for the sadistic judges' torture of "witches".

The third case concerns anti-Semitism and possibly other endangered minorities:

While nine-tenths of the people agree that they see spectres in broad daylight, and brand innocent social groups as devils and demons, when they exalt desperados to the office of gods, in other words, when a hopeless state of confusion prevails, a state which usually precedes the disintegration of a society, it becomes clear that the empiricist conception of knowledge is fundamentally incapable of checking the spread of such "experiences" and

8. Pombo [Pombo 2011] and especially Barck [Barck 2011]; the authors and editors of that volume suggest that they made this "trouville" recently, although it was already described and discussed at some length in [Dahms 1994a, 166—173].

of criticizing “common knowledge”. [Horkheimer 1937, 142],
[Horkheimer 2002, 166–167]

Now, neither racism (and more concretely, anti-Semitism) nor Hitler are named here, but it seems clear that Horkheimer has them in mind when he speaks on the one hand of the people singling out minorities as devils and demons, and on the other of the elevation of gang chiefs to gods. So what about this example? Jews were accused in Germany in and after the First World War of being “*Drückeberger*” (people who avoided going to the fight, in any way possible), as enriching themselves during the war effort behind the front, as the ones who stabbed the glorious German army in the back and so caused their defeat, only to once again enrich their international ilk by letting the Germans pay the severe reparations imposed on them in the Treaty of Versailles. All of these alleged “facts” can be put to the test of experience—and that is what the Jewish Defense League had already done extensively in their research and publications.

So this case does not prove Horkheimer’s criticism of logical empiricism either. I am sure that the same outcome would be reached if, nowadays, one took the problem of refugees, and especially asylum seekers as the example of a persecuted minority: you only need to read what people like Trump in the United States, Farage in England, or the adherents of the AfD party in Germany say about them in order to see the great potential for empirical refutations of their prejudices and lies.

The question is of course whether the analytical tools and potentials of logical empiricism were employed in sufficient measure by the logical empiricists in the thirties and after in order to fight the forces of antirationalism, imperialism, and racism. Edgar Zilsel certainly tried to do this in articles such as “SA philosophiert” [Zilsel 1933a] and “Das Dritte Reich und die Wissenschaft” [Zilsel 1933b], which combine rich material with incisive critical analysis.

I would also mention Moritz Schlick’s paper, presented to the 1934 Prague International Congress of Philosophy, on “Der Begriff der Ganzheit” [Schlick 1936], [see Dahms 2016, 160–161 for comments]. Here he attacked holistic conceptions in biology and social philosophy, in this critical category. This paper was of course directed to an international academic public and so contained hardly any direct political polemic, as was the case with Zilsel’s work. Neurath, in exile in England, found time to write critical articles about Plato as an (alleged) forerunner of fascism and national socialism [Sandner 2014, 284].

So perhaps logical empiricists, busy philosophizing and preparing their *Encyclopaedia*, did not care *enough* about the pressing issues of their time. Therefore, their Enlightenment mission was accomplished, I would say, only in part during the thirties and forties (see [Reisch 2005], let alone afterwards). But it would be vastly misleading to underrate the potential of the empirical assessment of alleged facts in politics. Particularly nowadays, when right-wing populists in Europe and the USA say and publish

whatever they like—regardless of any factual truth in the content—and most of their followers believe it without any attempt to put it to the test of experience, the need for an empiricist philosophy remains as pressing as ever, and perhaps even more so.

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