

Transversal: International Journal for the Historiography of Science, 1 (2016) 46-51

ISSN 2526-2270

www.historiographyofscience.org

© The Author 2016 – This is an open access article

Dossier Ludwik Fleck

Ludwik Fleck's reception in Brazil: from an anonymous visitor to a renowned thinker¹

Mauro L. Condé²

Abstract:

The main purpose of this article is to provide a type of general framework of Ludwik Fleck's reception in Brazil. Although this is not strictly a review of Fleck's work – what I did in some papers before – we can use some of Fleck's concepts to understand how his ideas have spread in Brazil. In other words, how was the genesis and development of Fleck's thought-style in different thought collectives in Brazil.

46

Keywords:

Ludwik Fleck; Fleck's reception in Brazil; historiography of science

Received: 20 August 2016. Reviewed: 25 October 2016. Accepted: 29 November 2016.

Introduction

In the 1950s, Fleck traveled to several countries (Schnelle, Schäffer, 2010, 9). In 1955, he visited Brazil to participate in the "Second International Seminar of Allergology" sponsored by the "Brazilian Society of Allergology" and held in the city of Petropolis, in the state of Rio de Janeiro, between the 6th and 13th November. In the following year, he co-authored with Irena Lille-Szyszkowicz, a paper reporting the main issues that were discussed at the Seminar (Fleck, Lille-Szyszkowicz, 1956). As we know, although Fleck had already written his main epistemological contributions, in that moment, he was still far from being acknowledged for this part of his work and he was just only one of many participating physicians. One that would become the celebrated epistemologist Ludwik Fleck went through this event absolutely anonymous. In this condition, as we can imagine, he did not have the prominence given to honored guests present at the event as the Nobel Prize in medicine (physiology), in 1936, Henry Dale (1875-1968), the American

¹ This paper is based on a presentation delivered at the conference "Ludwik Fleck's Theory of Thought Styles and Thought Collectives – Translations and Receptions" which took place in March 2016 in Wrocław, Poland. I am very grateful to the organizing committee, particularly to Paweł Jarnicki. I am also grateful to the Project Science Foundation (Fundacja Projekt Nauka), the Ludwik Fleck Zentrum at the Collegium Helveticum in Zurich, the Federal Institute of Technology in Zurich (ETHZ) and the Max Planck Institute for the History of Science in Berlin for their financial support to enable my participation in the conference.

² Mauro L. Condé is a Professor in the Department of History at the Universidade Federal de Minas Gerais. Av. Antônio Carlos, 6627, Belo Horizonte – Brazil. E-mail: mauroconde@ufmg.br

immunologist and allergist Robert Cooke (1880-1960), and the also physician Louis Pasteur Vallery-Radot (1886-1970), biographer and editor of the complete works of his grandfather, the eminent French scientist Louis Pasteur.

If, at that time, Fleck was not a celebrated name as we know today, in a sense, not even Brazil was Brazil, as we understand it today. If Fleck had not yet received his international notoriety, in that decade, Brazil also just began its modernization process. For different reasons, it would be very difficult to exist, in that context, an interlocutor for Fleck as an epistemologist. Although there was an incipient philosophical community in Brazil, we did not have yet a thought collective organized and dedicated to epistemological and historical issues of science. Coincidentally, shortly after this visit of the author of *Genesis and Development of a Scientific Fact*, Brazil had quickly undergone a major transformation. In 1955, Juscelino Kubitschek was elected the president of Brazil, and with him came a push for industrial development and the Brazilian modernism, the construction of Brasilia, the new capitol, as a landmark of modern architecture of Oscar Niemeyer. By the end of 1950s, Brazil would build some of the icons that marked its image abroad that, rightly or wrongly, still prevail today as the bossa nova, samba, carnival and football.

Indeed, although Brazil had received this visit of the Polish thinker, as well as much of the world, it had to wait not only the well-known quote of Fleck's book in *The Structure of Scientific Revolutions* (1962) of Thomas Kuhn, but also the translations of Fleck's work into English in 1979, and especially by the proximity of the Portuguese language, the Spanish edition in 1986. The spreading of Fleck's book in Brazil during 1980s created more and more readers interested in Fleck's thought. I have not found records of the existence of the first Swiss edition, 1935, of Fleck's book on Brazilian territory. Much less I found, among the first papers by Brazilian authors referencing to Fleck's book, which were not written from these editions in English or Spanish. Finally, the spreading of Fleck's book in Brazil mainly occurred from the late 1980s, about thirty years after his visit.

In the 1990s, the increasing of papers on Fleck's work written by Brazilians (Ilari; Oliveira, 1991), (Bombassaro, 1992, 1995) and foreigners researchers (Löwy, 1994a, 1994b) and the already great interest among readers indicated the need to make a Brazilian edition of his *magnum opus*. And although arouse interest from some publishers, we managed to accomplish the project only a decade later, with the publication in 2010 of the Brazilian edition (Fleck, 2010), which I had the honor and pleasure to write the foreword. Two years later, we can edit in Brazil the first book devoted exclusively to the work of Fleck, with the collaboration of Brazilian and foreign researchers (Condé, 2012).

Fleck's thought-style in Brazil

To understand how was the reception of Fleck's thought-style in Brazil; we need to start from the very originality of his thought. As we know, the work of Fleck is multifaceted. By analyzing the science, he knew it was impossible to ignore history, social and philosophical aspects, and even political, in the production of scientific knowledge. So, perhaps due to this perception, he used the expression: "science of the science" in his article of 1946, "Problems of the science of science" (Fleck, 1986 [1946]). According to Fleck, "the science of sciences is a separate science based on observation and experiment, on historical and sociological investigations". (Fleck, 1986 [1946], 127) For him, we need to look at the science from these multiple perspectives to know what, actually, the knowledge is and how it works.

This complexity of science, with its sociological, historical and epistemological nuances, pointed out convincingly by Fleck, generated, among Brazilian researchers, different interests and applications. Thus, in Brazil, emerged at least four distinct thought collectives interested in the work of Fleck – nevertheless with close connections. These four thought collectives that spread Fleck's thought-style in Brazil are as follows: 1) History of science – in particular, the history of medicine and history of biomedicine; 2) Science Education; 3) Philosophy; 4) Sociology.

The first two thought collectives already have a good level of development and the last two are still incipient. Although there are communications between them, each one of them has their own interests, their own academic programs, meetings, conferences and specific journals for their publications. However, this communication of Fleck's ideas among these different thought collectives, which our author called *interkolektive Denkverkehr*, maintains the Fleck's thought-style in Brazil. According to Fleck, "the intercollective communication of ideas always results in a shift or a change in the currency of thought" (Fleck, 1979, 109). Indeed, we realize in these thought collectives the different uses of Fleck's epistemology that

are adjusted to different objects and contexts. Anyway, these different thought-styles feed the research, publications and the strong interest in the work of Fleck in Brazil. In what follow, I will report a brief synthesis of these different thought collectives.

Thought collective of the history of medicine and biomedicine

As we know, the microbiologist Ludwik Fleck used the history of medicine to show us a new way to understand the workings of science. In a sense, it is natural that the community of historians of medicine can see immediately how this connection between the history of medicine and the new epistemological perspective offered by Fleck works. Partly, due to this type of direct connection, many historians of medicine in Brazil have become very seduced by Fleck's ideas. History of medicine has been produced in Brazil with the guidance of Fleck's epistemology. Some title examples are: *A Construction of knowledge about the AIDS epidemic* (Santos, 1999); *Thought-Style and practice in nursing* (Backes, 1999).

In Brazil, an important push for the use of Fleck's ideas in understanding of the history of medicine came from the pioneering work of Ilana Löwy. Consequently, she also helped a lot to the understanding of Fleck's epistemological perspective among us. At least since the early 1990s, this international researcher, who also speaks Portuguese, has strongly contributed to the increased interest of Brazilian researchers in the work of Fleck. Not only her articles on Fleck published in Portuguese (Löwy, 1994a, 1994b) or in English (Löwy, 2004) are widely read in Brazil, but her personal performance in courses and lectures at different Brazilian universities were (and are) a key reference for the work of Fleck in Brazil. Moreover, Löwy's guidance of Brazilian PhD students, in Brazil or in France, has also been important because these researchers, after complete their PhD, are strongly committed to the thought of Fleck in their workings in Brazilians universities. In addition, of course, these students learn with Löwy the high academic standards in the practices of the history of medicine. And sure, this is not just my understanding, but something that has already spread among Brazilian experts in the literature about Fleck. As is affirmed, for example, by Lorenzetti et al, the works of Ilana Löwy (1994a, 1994b, 2004) are widely used in Brazil, and she is "the great promoter of Fleck's epistemological thought" among us (Lorenzetti et al, 2013 193).

Thought collective of science education

Although focused on the thought collective of the history of medicine, in Brazil, Löwy's influences had important ramifications in science education and also in the philosophy and historiography of science committed at reflect Fleck's ideas (Löwy, 2012). In 1996, Löwy delivery a course in the PhD Program of Science Education (Delizoikov et al., 2002, 65) in the Federal University of Santa Catarina that was very important to spread Fleck's ideas in the thought collective of science education. In this collective, we find another key name for the dissemination of Fleck's ideas in Brazil: Demetrius Delizoikov. From intense work of research, publication and supervision of PhDs in the science education, Delizoikov formed several researchers committed to the work of Fleck, constituting thus a real network in this area.

In a survey that seeks to show the influence of Fleck in science education in Brazil, "The reception of Fleck's epistemology for research in science education in Brazil", Lorenzetti et al (2013) confirm that the very first science education studies guided by Fleck's ideas emerged in the 1990s. These studies concentrated on institutions in southern Brazil, especially in the Federal University of Santa Catarina and certainly around professor Delizoicov. Also according to Lorenzetti et al., these researches in science education have focused on the following main themes: "genesis of a scientific fact", "teacher training" and "analysis of academic production". Understanding of these issues in science education was oriented mainly from the concepts of "thought-style", "thought collective" "communication of thoughts both within a thought collective and among thought collectives" (Lorenzetti et al, 2013). Lorenzetti gave us several examples of the production of this thought collective of science education, among them, "Socio-genesis of knowledge and research in education: contributions from Fleck's ideas" (Delizoicov et al., 2002); *Academic research in biology education* (Slongo, 2004); *Thought-styles in environmental education* (Lorenzetti, 2008).

Thought collective of philosophy

Although Fleck was first discovered by sociologists, who understood him primarily as a sociologist of science and, in a second moment, by historians, who, in their turn, made great use of his ideas, the Polish thinker's work does not seem to have yet been evaluated, in depth, in its epistemological dimension. His philosophical contribution does not seem to have been fully exploited. In other words, the epicenter of his epistemological ideas – even if based in history and social practices – has not received the attention that it deserves from a large number of philosophers, even that important philosophers like Ian Hacking has already made important reflections on Fleck's philosophy. After more than five decades of the return of Fleck, the philosophical analysis of his work are still relatively low, considering its high importance.

In Brazil, this situation is no different. There is little interest by philosophers in Fleck's work. The main philosophical Brazilian association, National Association for Philosophy – ANPOF –, in its biannual meeting brings together more than 3,000 researchers presenting a wide variety of philosophical topics. In this association there are more than 40 study groups with different topics in philosophy (Descartes, Kant, Wittgenstein, etc. Contemporary Philosophy, Modern, etc.). I presented two lectures about Fleck in two of these meetings and Fleck's ideas were well received. Nevertheless, interest in the work of the Polish thinker among Brazilian philosophers is still far from establishing a study group in this philosophical association. Although however, the thought collective in philosophy is still small, it has increased and some dissertations, theses and articles have already been written by philosophers in some Brazilian universities, for example, Federal University of Minas Gerais, University of São Paulo, Federal University of Santa Catarina and the State University of Londrina.

Thought collective of sociology

In Brazil, the interest of sociologists of science in Fleck's work is still very punctual. It is limited to some sociological studies of medicine. However, for the Brazilian edition of Fleck's book in Portuguese, the interest of sociologists was very important. Sociologists as Baldamus, Merton (why not Kuhn and Schnelle?) were involved in the edition of Fleck's book in German and in the translation into English – and thus sponsored the return of Fleck in the historiography of science – a similar process occurred in Brazil. In other words, while Fleck was read mostly by historians of science, it was a small group of sociologists of science who have made efforts to accomplish the project of the Brazilian edition of Fleck's book. So after some attempts to edit Fleck in Portuguese, I was contacted by Rodrigo Ribeiro, a sociologist of science and technology that was a former Harry Collins's PhD student. Ribeiro sought to expand the editorial repertoire in studies on science and technology in Brazil. Collins suggested to him to edit Fleck's book. So, in a sense, Collins gave the impulse that was missing.

The Brazilian edition of Fleck's book and its reception in Brazil

Genesis and development of a scientific fact was translated from the German edition of Surhkamp, 1980, by Georg Otte and Mariana Oliveira. This first Brazilian edition had 2,000 copies of which, to the present day, about 1,200 were sold. With this rate of sales, the intention of the publisher is making a second edition soon. This edition has been widely used by Brazilian researchers. Below I use the Google Scholar to compare the Brazilian edition with some of the main editions of Fleck's book. This comparison (Table 1) can give us a quantitative idea of Fleck's book reception in Brazil.

Table 1

Edition	Year	Google Scholar
<i>Genesis and development of a scientific fact</i>	1979 / 37 years	3017
<i>Entstehung und Entwicklung einer wissenschaftlichen Tatsachen</i>	1980 / 36 years	2054
<i>Genèse et développement d'un fait scientifique</i>	2005 / 11 years	162
<i>Génesis y desarrollo de un hecho científico</i>	1986 / 30 years	582
<i>Gênese e desenvolvimento de um fato científico</i>	2010 / 6 years	150
<i>Genesi e sviluppo di un fatto scientifico</i>	1983 / 33 years	36

On February 18, 2016

In addition to Google Scholar that enables the comparison of the Brazilian edition with these different international editions, that is, a comparison outside the country, there are other possible parameters to understand the spread of Fleck’s thought inside Brazil, for example, the Platform Lattes from CNPq³ and the CAPES Platform of Theses.⁴

The Lattes Platform is a platform of the National Council for Scientific and Technological Development – CNPq. It is the leading research agency in Brazil.⁵ From the Lattes Platform, we can map all Brazilian researchers (and also the several registered foreign researchers in this platform) who dedicated some type of research to Fleck, such as thesis, dissertations, books, articles and book reviews. In a simple search by subject⁶, made on February, 18 2016, we realize that there are 219 occurrences of researchers who carried out some kind of work on Fleck (adviser of thesis, papers, and chapters in books). In turn, 1098 occurrences show us the number of researchers in Brazil who had some kind of work on the American thinker Thomas Kuhn. Thus, in a comparison with Kuhn, Fleck represents about 20% of the interest of Brazilian researchers. Of course, we should consider the longer exposure of Kuhn’s work.

In their survey, Lorenzetti et al (2013, 2016) use CAPES Platform to understand Fleck’s impact in research on science education in Brazil, that is, they mapped the number of dissertations and theses written in the epistemological perspective of Fleck. Using the exact words “Ludwik Fleck”, “Fleck” and “thought-Style”, they find 40 works (PhD and Master degree) written in Brazilian universities.

Conclusion

Something very interesting that we can see on the work produced by these different thought collectives concerned with Fleck’s epistemology in Brazil is not only the dynamic aspect of their research and publications, but a cross-reference in their citations. In other words, although they also are guided by the international literature on Fleck’s work, there is a very strong interconnection in the literature produced by these different Brazilian thought collectives. By means of this cross-reference, a collective complements to each other. Indeed, we can speak thus in a real Fleck’s network in Brazil. And judging by the lively interest in the Polish thinker’s ideas on Brazilian territory, I believe that this network will continue to grow exponentially.

As a last important point, beyond this cross-reference is the fact that, from the international scope of epistemology of the anonymous visitor of Brazil, these Brazilian thought collective seeks to think the local

³ Website www.lattes.cnpq.br

⁴ Website www.capes.gov.br/servicos/banco-de-teses

⁵ Although Google Scholar does not seem to be a more reliable source, it can show this comparison for an international audience in different languages. Platform Lattes and the CAPES Platform of Theses are more reliable but not so accessible to international researchers.

⁶ Collected on the website www.lattes.cnpq.br

reality, analyzing scientific education in Brazil or the history of Brazilian medicine. Most likely, in your trip, Fleck has never imagined how, decades later, his ideas would help Brazil to better understand itself.

References

- Backes, V. M. S. *Estilo de pensamento e práxis na enfermagem: a contribuição do estágio pré-profissional*. 1999. Tese (PhD Dissertation – Nursing) – Universidade Federal de Santa Catarina, Florianópolis – SC, 1999
- Bombassaro, Luiz Carlos. *As fronteiras da epistemologia: uma introdução ao problema da racionalidade e historicidade do conhecimento*. Petrópolis: Vozes, 1992.
- Bombassaro, Luiz Carlos. *Ciência e Mudança Conceitual*. Porto Alegre: EDIPUCRS, 1995.
- Camargo Jr, Kenneth Rochel de. “A biomedicina”. In: *PHYSIS: Rev. Saúde Coletiva*, Rio de Janeiro, 15 (Suplemento): 177-201, 2005.
- Condé, Mauro L. “Ciência e linguagem: Ludwik Fleck e Ludwig Wittgenstein” (“Science and language: Ludwik Fleck and Ludwig Wittgenstein”). In: Condé, Mauro L. (Org.) *Ludwik Fleck: estilos de pensamento na ciência*. Belo Horizonte: Fino Traço, 2012.
- Condé, Mauro L. “De pé de página a novo clássico” [Prefácio]. In: Fleck, Ludwik. *Gênese e desenvolvimento de um fato científico*. Belo Horizonte: Fabrefactum, 2010.
- Condé, Mauro L. “Paradigma versus estilo de pensamento na história da ciência”. In: Condé, Mauro L.; Figueiredo, Betânia. (Orgs.) *Ciência, História e Teoria*. Belo Horizonte: Argumentvm, 2005.
- Delizoicov, D. et al. “Sociogênese do conhecimento e pesquisa em ensino: contribuições a partir do referencial fleckiano”. *Caderno Brasileiro do Ensino de Física*. Florianópolis, SC, v. 19, número especial, pp. 52-69, jun. 2002.
- Fleck, Ludwik. “Problems of the science of science”. In: Cohen, R.; Schnelle, T. *Cognition and facts: materials on Ludwik Fleck*, Doehdrecht: D. Reidel, pp. 113-128. 1986.
- Fleck, Ludwik. *Gênese e desenvolvimento de um fato científico*. (Trans. G. Otte, M. Oliveira). Belo Horizonte: Fabrefactum, 2010.
- Ilari, Rodolfo; Oliveira, Roberta Freire de. “Considerações linguísticas sobre de *A gênese e o desenvolvimento de um fato científico*: uma leitura semântica de Ludwik Fleck. In: Revista da Abralim (Associação Brasileira de Linguística), no. 12, 1991. pp. 95-107.
- Löwy, Ilana. “Ludwik Fleck e a presente história das ciências”. In: *Manguinhos – História, Ciências, Saúde*. Rio de Janeiro: Fiocruz, v. 1, n. 1, 1994a.
- Löwy, Ilana. “Fleck e a historiografia recente da pesquisa biomédica”. In: Portocarrero, V. (Org.) *Filosofia, história e sociologia das ciências: abordagens contemporâneas*. Rio de Janeiro: Fiocruz, 1994b.
- Löwy, Ilana. “Introduction: Ludwik Fleck's epistemology of medicine and biomedical sciences”. *Stud. Hist. Phil. Biol & Biomed. Sc.*, n. 35, p. 437-445, 2004.
- Lorenzetti, Leonir; Muenchen, Cristiane; Slongo, Iône. “A recepção da epistemologia de Fleck pela pesquisa em educação em ciências no Brasil”. *Revista Ensaio*. Belo Horizonte: v.15, n. 03, p. 181-197, set-dez, 2013.
- Lorenzetti, Leonir; Muenchen, Cristiane; Slongo, Iône. “The growing presence of Ludwik Fleck's epistemology in science education research in Brazil”. *Transversal: International Journal for the Historiography of Science*. n. 01, p. 52-71, December, 2016.
- Santos, A. L. G. dos. *Uma Construção dos saberes sobre a epidemia de AIDS - os formulários de notificação de casos em perspectiva (1982-98)*. 1999. Dissertação (Mestrado em Saúde Pública) - Fundação Oswaldo Cruz, Rio de Janeiro – RJ, 1999.
- Schnelle, Thomas; Schäffer, Lothar. “Introdução” in: Fleck, Ludwik, *Gênese e desenvolvimento de um fato científico*. (Trans. G. Otte, M. Oliveira). Belo Horizonte: Fabrefactum, 2010.