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## Dossier Ludwik Fleck

### For your eyes only: Transcendental pragmatism in Ludwik Fleck

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#### Abstract:

Ludwik Fleck's main contribution lies in the awareness for the deeply social and collective dimension of scientific work, its procedures, but also its style and mode of thinking. However, it is this very focus that gives for a lot of his reader the licence to put Fleck into the constructivist camp. This is wrongheaded and based on a misinterpretation of the status of the social element in research. To show that I read Fleck as a humble (i.e. non-Kantian) transcendentalist to appreciate both, the historically sensitive approach in Fleck and its non-constructivist aspects. Thereby, we find a middle ground circumventing naïve realism as well as full-blown relativism. One might call this position transcendental pragmatism.

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Es gibt eine Gemeinschaft von Menschen mit gemeinsamem Denkstil. Dieser Denkstil entwickelt sich und ist in jeder Etappe mit seiner Geschichte verbunden. Er schafft eine gewisse bestimmte Bereitschaft, er verleiht sie den Mitgliedern der Gemeinschaft auf soziologischen Wegen, und er diktiert, was und wie diese Mitglieder sehen. (Fleck, 2011 [1935], 226)

### Introduction: on not starting off with James Bond

“For Your Eyes Only” is the first James Bond movie that is not based on an Ian Fleming novel; the title is rather derived from one of Fleming's short stories, and the 1981 film is the typical melange of hero-villain-duality on the background of the not highly ambivalent iron curtain romantic. The not very romantic side of that historical background influenced, arguably, also the last years of Ludwik Fleck's life and work. However, whereas the mentioned title means in Bond's case not some sort of visual limitation—for your eyes *only*, but

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simply the crucial secrecy of Roger Moore's character—Fleck uses, by contrast, constant and, I think, consistent visual metaphors in order to express the limits of mutual understanding and to explicate a hermeneutics of conditioned and insofar necessarily particularized epistemic access.<sup>2</sup>

In fact, Fleck creates a narrative of learning to see (or: to discern) as fragmented circumscription of growing up academically. Therefore, in the beginning was ... the chaos, in the sense of seeing unclearly and without style (*ein "stilloses Schauen"*), Fleck holds (Fleck, 2015 [1935], 121). To achieve this style is to become familiar with the sense or meaning entailed in the act of seeing, since there is, Fleck adds, no seeing other than a "sense-seeing" (*ein "Sinn-Sehen"*) and no other representations than "sense-pictures" ("*Sinn-Bilder*") (Fleck, 2015 [1935], 186). Getting educated is to become better at seeing things, but not by looking at something with greater awareness, but rather by being advised to grasp the *Gestalt*, i.e. the structure of a given object as embedded in a context; you might also say it is about seeing something as something, a genuinely *hermeneutical* act.<sup>3</sup>

This sketch leads already to three important consequences: first, it remains impossible to base epistemology on sense-data; this was precisely the confusion with empiricism; what counts as 'data' is already embedded in a practice that takes it to be a fact in the first place (Fleck, 2015 [1929], 53). Second, it is an illusion to search for an act of observation purified from prejudice and prejudgment; this notion is even as ideal impossible and an approximation beyond the potential to be right (and wrong).<sup>4</sup> Thirdly, seeing is not only thematized as epistemic act, but more specifically as a readiness or disposition to see something in a particular way; hence it is not about the object alone, but also about the non-cognitive attitudes, expectations and codes of right and wrong that are involved in that very—stylish—seeing (Fleck, 2015 [1935], 85).

For your eyes only—that means now: something does not show itself how it 'really' is, but is only accessible for the trained sight as part of a collective endeavour.<sup>5</sup> Fleck's main contribution lies (as often and rightly appreciated) in stressing the social as well as educational aspect of science, its non-rational (which is not to say: irrational) elements.<sup>6</sup> Thus, he describes the act of seeing as multifaceted event taking—very similar to Wittgenstein—into account the collaboratively structured and determined style of thought as normative cluster for scientific evaluation. It is this appreciation of earlier on neglected aspects of scientific work that led some commentators on Fleck enthusiastically—and a bit hyperbolically—to expect that Thomas Kuhn will be in not a too distant future a mere footnote to Fleck's hermeneutical epistemology<sup>7</sup> while giving up the old distinction between the theory of science and its history (Rheinberger, 2015, 111).

All that sounds modern—and is already classical. It is also disputed, because of the conventionalist or even relativist allusions to be found in Fleck. My claim is, negatively speaking, that this rests on an avoidable misunderstanding of what Fleck was up to; and, constructively speaking, the claim is that there is a transcendental dimension in Fleck's account of the style of thinking and seeing that has to be reconciled with his emphasis on practice. Accordingly, Fleck's non-essentialist and non-relativistic hermeneutics is based on a transcendental pragmatism (or: pragmatist transcendentalism). And I will try to elaborate on that claim now in three short chapters.

## Transcendental pragmatism. A first sketch

Traditionally speaking, transcendental arguments are considered to be distinctive in implying a certain kind of claim, namely that *x* is a necessary condition for the possibility of *y*—so that, given that *y* is in fact the case, it follows that *x* must be the case as well.<sup>8</sup> Now, there are two basic forms of transcendental arguments

<sup>2</sup> For these metaphors of vision (Fleck, 2015 [1935], 85, 121-122).

<sup>3</sup> See (Graeser, 1993, 559-572).

<sup>4</sup> Fleck states: "Sie gibt es nirgends, weder in der Geschichte noch im gegenwärtigen Moment, unmöglich ist sie auch als Ideal, an das man sich durch Analyse oder Kritik annähern könnte, weil alles ‚Legitimieren‘ von Beobachtungsdaten genauso dem Denkstil unterliegt." (Fleck, 2015 [1935] 233).

<sup>5</sup> This seems to be a standpoint that has, anew, to be defended against a neo-realism trying to catch 'absolute facts'; see for instance (Boghossian, 2006).

<sup>6</sup> See also Alvin Goldman and Thomas Blanchard, "Social Epistemology", available under: <http://plato.stanford.edu/archives/sum2016/entries/epistemology-social/>

<sup>7</sup> Cf. Sylwia Werner und Claus Zittel, "es wird nicht mehr lange dauern, bis Kuhns Paradimentheorie zur Fußnote einer allgemeinen Fleck-Renaissance geworden sein wird." "Einleitung" in *Denkstile und Tatsachen*, (Fleck, 2015, 16).

<sup>8</sup> See Robert Stern, "Transcendental Arguments", available under:

(or considerations).<sup>9</sup> On the one hand, we have the classic Kantian version that combines the argumentative structure with *apriori* assumptions belonging to a theory of subjectivity with anti-sceptic ambitions. That means, Kant's transcendentalism is a claim about our epistemic apparatus taken to be culturally and historically invariant in securing that the fact that we actually possess experiences let us infer from that very fact the *apriori* structure of the categories and forms of ideas (*"Anschauungsformen"*) in our mind, such as space and time.<sup>10</sup>

In contrast to this Kantian approach, there is a more humble form of transcendentalism that dissolves again the combination between a transcendently structured argument and its accompanying *apriori*-status and unlimited relevance. What is left here is the claim, that there are (something like) transcendental clusters, whereas these structures are not all-encompassing syn- and diachronically, but embedded in concrete cultural environments, contexts, practices, or conceptual schemes. Here, we deal with transcendentalism without the metaphysical ingredients of before-every-experience and the alleged universalism. It is a "situated" transcendentalism, to borrow Gadamer's term (Gadamer, 1990 [1960], 310).

The observation, that there is a transcendental dimension in Fleck's epistemology is by no means new or original. It might even go back to Fleck's Polish colleague Tadeusz Bilikiewicz.<sup>11</sup> However, it is clear, that Fleck is not a transcendentalist in the first, Kantian sense. I would even say that it is not easy to pin down in which sense Fleck is a transcendentalist in the more decent contextualized way. What is, I think, obvious is that he did not consider himself to be belonging to that tradition. Hence the label is put on him externally and has to be justified heuristically, which means by way of unfolding the implications of the transcendental assumption and the effect for our understanding Fleck: what does this assumption that Fleck is a humble transcendentalist let us see, and see in a new or clarified way?

To begin with, Fleck's transcendentalism might be described as a culturally sensitive take that enables him to characterize scientific thinking (and, in fact, thinking in general) as an institution that entails both creative and realistic elements of scientific discovery. 'Creative' means here, that the scientific facts are actually made up, but not by the intention of an individual or collective subject, but by a structure, style and mood of thought that, in a way, transcends the individual. One might add that Fleck's transcendentalism has no transcendental subject. Accordingly, the common charge Fleck had been a member of the conventionalist or even constructivist camp is wrong, since there is no explicit, only a range of unavoidable and factual conventions without the act of conscious decision-making. The assumption of a transcendental dimension—historized and aware of cultural differences and practices—restricts at the same time the relativist allusions and, in the end, undermines or withdraws them.<sup>12</sup> The shared framework of a thought collective has, of course, contingently developed and is permanently updated, but is not in the hands of manipulation, random change, and not even subjected to practical utility and intellectual comfort. In that sense, Fleck's transcendentalism is pragmatic not in the Jamesian way of useful truth, but in the Wittgensteinian sense of dealing with changeable, but stable structures embedded in the practical interaction with the world that surrounds us.

## The transcendental in Fleck. A closer look

We already stated that the transcendental claim (T) says: that  $x$  is a necessary condition for the possibility of  $y$ —so that, given that  $y$  is in fact the case, it follows that  $x$  must be the case too (given the sufficient conditions are fulfilled). Now, how does this rather technical formula look like from a Fleckian perspective? First of all, I argue, that what Fleck calls 'thought style' stands for the transcendental element  $x$  in question. Following from that what counts as scientific fact and 'discovery' (expressed in true scientific statements and propositions) is the result  $y$ , which—put upside down—serves also as symptom in such a way that a given

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<http://plato.stanford.edu/entries/transcendental-arguments/> (rev. version 2015). Obviously, it only follows that  $x$  is the case, if all sufficient conditions are fulfilled.

<sup>9</sup> Cf. Dimitri Ginev, who distinguishes three forms of transcendental arguments in his "The Transcendental in Ludwik Fleck's Social Epistemology", (Ginev, 2015, 379-380).

<sup>10</sup> See Immanuel Kant, *Kritik der reinen Vernunft*, B275-79.

<sup>11</sup> Bilikiewicz said: "Und so werde ich nicht weit von der Wahrheit entfernt sein, wenn ich in den Ansichten von Fleck einen Widerhall eines transzendentalen Idealismus im Sinne mancher Neukantianer entdecke." ("Bemerkungen zum Artikel von Ludwik Fleck 'Wissenschaft und Umwelt'", (Fleck, 2011, 341).

<sup>12</sup> See (Ginev, 2015, 123).

fact brings us back to a thought style  $x$  that enabled us to have facts in the first place. On a structural level, the transcendental claim (T) does not tell us more than that there are no facts without a style, and the existence of facts let us infer from their factuality that there must be a style (which is the equivalent to the traditional anti-sceptical element in classical transcendentalism).

Hence, we have to ask what it is that the style actually does to the collective as the bearer of a style or the stylish bearer? Fleck gives, as far as I can see, three interrelated answers. A style implies a compelling element, a cognitive compulsion that leads the members of a certain collective in a particular direction in excluding alternatives. Fleck even gives a hint of how that compulsory element comes to the fore, namely by ‘colouring’ concepts which means that the ‘thought compulsion’ (“*stilgemäße Denkwang*”) (Fleck, 2015 [1935], 131) is based on a conceptual element, a particular usage of terms, phrases and expressions (Fleck, 2015 [1935], 85). Then, we have the creation of a readiness or disposition to see things in a particular way; the style even dictates, Fleck holds, in which way this seeing develops and gets actualized (cf. Fleck, [1935] 2015, 226). One could also say that the transcendental element forms a certain expectation for particular results along the process of scientific work. And finally, there is a collective mood, Fleck says, (Fleck, [1936] 2015, 287), a non-cognitive atmosphere among the participants of the collective, while ‘mood’ does, obviously, not mean the personal temper and vein, but an intellectual taste and a notion of what counts as good result and appropriate way to it. All three elements allow for the possibility of the change of style; in fact, Fleck underlines that his theory of thought style regards truth as the actual state within the mutation of a style (“*aktuelle Etappe der Veränderung eines Denkstils*”) (Fleck, [1936] 2015, 301).

So, I do hope that it has become a bit clearer by now why it helps to regard the relation between style and facts in transcendental terms: what is left from the initial Kantian scenario is the necessity of a style  $x$  for the possibility to have a fact  $y$ .<sup>13</sup> The transcendental phrasing—“the condition of the possibility”—is important, because we do not deal here with mere conditions that necessarily lead to a certain result; there’s no scientific determinism here; the claim is more cautious in expressing that a style is already in place to have and find out about facts scientifically. With Kant, one might suppose that there are further transcendental structures (such as space and time); and beyond Kant one might consider the possibility that there is more than just one style, but a collision (not a coalition) of incompatible styles. And against Kant, one has to appreciate the changes, ruptures and adaptations of a style in relation to cultural, conceptual, but even political upheavals. Styles themselves are embedded in something that is more extensive than they are. And now, Fleck’s definition of a thought style should not sound surprising or astonishing: ‘We can, hence, define a thought style as focused discerning, combined with a particular cognitive and factual processing of the discerned object’.<sup>14</sup>

From here, one could also re-evaluate the highly disputed question of whether (or, in which sense) we can find an incommensurability thesis in Fleck. It is interesting to see that especially authors having sympathies with reading Fleck in transcendental terms—I think here, for instance, of Dimitri Ginev—have strong reservations against ascribing to Fleck something like the claim that styles of thought are (or could be) incommensurable to one another.<sup>15</sup> I assume, however, that the transcendental reading leads into the quite opposite direction and supports the possibility that styles actually are incommensurable; this is one of the essential features making a style a distinguished style in the first place. Fleck himself uses the term often and with the meaning of limiting mutual understanding and reference: the ‘incommensurability of ideas’, Fleck says, indicates that there is no common object for them because of dealing with two divergent styles here. He adds, that the one style (or a term belonging to it) is not open to get replaced by another style (or term) without loss or reduction. Accordingly, Fleck sketches a constellation in which a notion cannot be right for a person A and wrong for a different person B. Two options are left then: either A and B belong to different thought styles or the notion is not the same notion at all (Fleck, 2015 [1935], 131).<sup>16</sup>

All three considerations of Fleck, especially the last one, only make sense if we go for an incommensurability thesis in his approach. In fact, Fleck uses this very thesis - (Fleck, 2015 [1935], 82 and 145; cf. also Fleck, 2011 [1927], 41-51, esp. 46 and 48) - for overcoming a strong and self-refuting relativism in

<sup>13</sup> It is a fair question of whether the same move that we did with Fleck’s ‘thought style’ is also applicable to Kuhn’s ‘paradigm’; I think, it is with some altered emphasis; see on this matter (Babich, 2003, 75-92, esp. 81).

<sup>14</sup> The German original reads: “Wir können also *Denkstil als gerichtetes Wahrnehmen, mit entsprechendem gedanklichen und sachlichen Verarbeiten des Wahrgenommenen, definieren.*” (Fleck, 2015 [1935], 130).

<sup>15</sup> See (Ginev, 2015, 130 and 136).

<sup>16</sup> See also (Fleck, 2011 [1935], 220).

showing how practically embedded (and in that sense non-metaphysically determined) a thought for a member A or B of a collective really is, how deep this latent or explicit commitment reaches, and why a relative and, in a way, holistic picture of truth and facts does not allow for a full-blown relativism (cf. Strobach, 2011, 111). Yes, there are no absolute facts for Fleck, but no, it does not mean that the facts we actually have suffer from arbitrary conditions. A historized version of transcendentalism clarifies that there is no gap between these two poles.

## The pragmatic dimension

How does Fleck combine what I have called the transcendental dimension with the emphasis on change, context, and the collective element of scientific work? It has often been noted, that Fleck is best known for being a pioneer and classic figure of the practical and cultural turn within the research on science.<sup>17</sup> This turn consists of two further aspects: one, that the ‘real’ is essentially dependent on a theory; two, that there is a social element in science as performed by teams, collective groups or by schools (cf. Strobach, 2011, 101). The first one is an epistemological claim that was not new even in Fleck’s 1930s, but is shared by authors being critical of the positivist movement; the second, social item, however, is something that is bound to Fleck’s name, and it leads us to the pragmatic element in his transcendentalism.

Referring to his own immunological research Fleck stresses the fact of ‘how long the way is’ from a section to a theory in order to add that this is not a lack, something to regret, but rather hints to the cultural and social condition of all of our performances. From here Fleck states that there are not only two, but three elements in the scientific research that one has to give an account of: the individual, the ‘objective reality’ (put in inverted commas) and a mediating collective between the first two. That is the reason for Fleck to note that the thought style had made it necessary to construct the notion of a ‘thought collective’.<sup>18</sup> The collective is the bearer of a style, while the style is the culturally embedded transcendental element for scientific work between discovery and invention. This embeddedness entails, hence, the claim that there is no contradiction between speaking of the necessity of a collective style for facts and observations and, yet, the changeability of that transcendental condition. Accordingly, necessity does not imply temporal and cultural unlimitedness, but rather the possibility to lose its transcendental status as much as it has been an equal process to gain exactly that significance.

Now, often the side of invention (in contrast to the more realistic emphasis on discovery) has led to the aforementioned assumption according to which Fleck appears to be a relativist, at least in disguise. Relativism might be taken to be not only the notion that there is an essential dependence of facts to culture, language, a theoretical framework or even a form of life; but also the claim, that the choice of the peculiar context is at our disposal (cf. Seidel, 2011, 219–240). This last claim is according to Fleck: wrongheaded, and the reasons for repudiating that confusion are, I think, quite obvious: First, an important non-relativist (and in fact non-constructivist) element lies in the development of the style and the ways of getting integrated in it as a member. It is, as Fleck highlights more than once, a question of getting accustomed to that very style, an educational matter that brings about a readiness, a partly self-fulfilling willingness to see things in a stylishly impregnated way. It is similar to what Wittgenstein called “*Abrichten*” (*to train, to true off*) speaking of learning a language and moving in it as a quasi-spatial entity (cf. Wittgenstein, 1994, § 318).<sup>19</sup> Second, there is, Fleck holds, an internal conservatism within a cluster of opinions, a resistance to change up to the point of a “harmony of deception” (“*Harmonie der Täuschung*”) (Fleck, 2015 [1935], 40). Hence, one cannot make up facts or the way there, since the loyalty to nature is nothing but the loyalty to the culture we are part of (Fleck, 2015 [1935], 48). Third, that brings about a, as it were, cult-like exclusivism. A thought collective is also the frame of mutual understanding and influence whereas outsiders are what they are because of not participating in that style. And this is not open to a sovereign option or free choice. Rather one is thrown into this collective.<sup>20</sup> Fourthly, we find in Fleck a move that is known from Gadamer’s hermeneutical

<sup>17</sup> See (Ginev, 2015, 130 and 136).

<sup>18</sup> See (Fleck, 2015 [1935], 48, 50, 56-57).

<sup>19</sup> See also (Polanyi, 1946, lecture 1); and (Fleck, 2015 [1935], 111); (Fleck, 2011 [1927], 41).

<sup>20</sup> Accordingly, Fleck defines ‘thought collective’ “als *Gemeinschaft der Menschen, die im Gedankenaustausch oder in gedanklicher Wechselwirkung stehen, so besitzen wir in ihm den Träger geschichtlicher Entwicklung eines Denkgebietes, eines bestimmten Wissensbestandes und Kulturstandes, also eines besonderen Denkstils.*” (Fleck, 2015 [1935], 54-55), italics in the original text.

ontology. There, Gadamer speaks of the game as an analogy for our understanding with the clue that the player loses himself in the game to be, eventually, being played by the game itself. Fleck states similarly that the researching person does not think by himself. Rather in the community he is part of, something is thought.<sup>21</sup> Fleck does not think, that it is all about mere passivity and inactive contemplation, but he underlines the passive (or receptive) element in research that appears, otherwise, to be a mere intentional endeavour.<sup>22</sup>

It is this non-subjectivist ingredient that saves Fleck from turning into a relativist. While it is true that there are relativist elements in Fleck—the theory-dependent character of scientific facts, the empirically under-determined justification of a theory, (cf. Egloff, 2015, 59)—the transcendental dimension as covering term for educational and structural elements of thought styles lead into quite a different direction. I assume, if you like labels, one could characterize Fleck's ambitions as belonging to a hermeneutical contextualism.<sup>23</sup>

## Coda: facts, eyes

At the end, we meet the question: what does this mean, 'hermeneutical contextualism'? It is the attempt to bring together the different and sometimes divergent voices in Fleck's work in the history and philosophy of science. There is a deep interest in being realistic about reality, to use an ambivalent expression, i.e. Fleck is as much of a realist as it is possible in relation to what he is else. Being something else is necessary, because reality has at least one feature that is dependent on us, namely to be discernible by us. That is the entrance door for positions beyond a 'robust' realism, also in Fleck. In grasping reality we do not (apart from some exceptions) change reality, but we rely on mediums (language, symbols, styles, codes) without which there is no reality at all. It is true, the thought style creates the fact, but as a transcendental condition of having and finding out about facts at all. Hence, if the transcendental cluster differs between different collectives or over time, other facts are 'created'.<sup>24</sup>

These rules of science apply also for the science on science, i.e. the transcendental dimension affects also our account of giving an account of science. Fleckians can celebrate, but also suffer from the condition that only their or our eyes will see certain things accompanied by aspect-blindness for what others can and will see. Therefore, the condition of the possibility for seeing a fact is, at the same time, the condition for the impossibility of seeing something with other stylish(ed) eyes.

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<sup>21</sup> Fleck following Ludwig Gumpowicz in (Fleck, 2015 [1935], 63); see also (Gadamer, 1990 [1960], 108-109 and 498.

<sup>22</sup> See also Fleck stating: "*Denn Erkennen ist weder passive Kontemplation noch Erwerb einzig möglicher Einsicht im fertig Gegebenen. Es ist ein tätiges, lebendiges Beziehungseingehen, ein Umformen und Umgeformtwerden, kurz ein Schaffen. Weder dem 'Subjekt' noch dem 'Objekt' kommt selbständige Realität zu; jede Existenz beruht auf Wechselwirkung und ist relativ.*" (Fleck, 2011 [1929], 54)

<sup>23</sup> Another important issue that I cannot address here is the relation between Fleck's contextualism and what Michael Polanyi calls 'tacit knowing,' the inexpressible, but underlining mode of practical knowledge; see (Polanyi, 2009 [1966] esp. lecture 1).

<sup>24</sup> See also (Fleck, 2011 [1936], 301)



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