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Dossier Ludwik Fleck

Ludwik Fleck as a theorist of thought as *res gestae* – or, Does a pair of dots in Swedish matter?

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Abstract:

Fleck's "comparative epistemology" approached its main object, *thought*, as human action. Using English and Swedish translations as test cases, this article ascribes significance to Fleck's preference for the verb *denken* in forming his core terminology (*Denkstil, Denkkollektiv, Denkverkehr*). Fleck referred to "thinking" (the word he preferred in English) as *Tätigkeit*. This is juxtaposed with an anglophone tradition in intellectual history harking back to Collingwood and speech-act philosophy. Still, Fleck's stress on the profoundly *social* nature of *denken* (always being *inter*action) is his distinctive characteristic as a theorist of thought as *things done*. Furthermore, Fleck's approach was formed to deal with *any* kind of thought, and this was important to his dealing with the special cases of science. The term *Denkverkehr* ("traffic/intercourse" in thought) is also examined within an argument stressing the deliberateness of Fleck's linguistic choices and his flair for pursuing deeply serious intents by means of playfulness and humor.

Keywords:

Ludwik Fleck; thought as action; processes of intellectual interaction; language; humor

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A serious case of toying with words

It is hard to translate jokes. It is tricky to invite similar smiles or to trigger the same kind of laughter as an original text by means of a new set of words within a foreign linguistic frame of reference. A playful author's peculiar sense of humor is highly susceptible to being lost in translation. But is this a problem in scholarly writing? Has humor anything to do with serious messages in academic life? The answer to that question will probably depend on what the message is. Doubtless it is possible to be dead serious precisely in choosing to adopt a playful attitude to a subject. Seriousness and playfulness are hardly opposites or mutually exclusive qualities. That claim is not only valid in the sense elaborated by Johan Huizinga in 1938, that you need to be dead serious in order to actually *play* – mentally going in for it, sticking to the rules of the game (or developing them) (Huizinga [1938] 1955). It is also possible to convey deeply serious messages precisely

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by taking a playful stance in *doing things with words*. In philosophy the typical case would probably be the critic of human hubris: the voice of warning, the jester, bringing pompous, self-aggrandizing intellectual behavior down to earth, disclosing its human brittleness and mundane limitations. Irony, in particular, has been used to preach humbleness in human thought in a line of thinkers from Socrates via Montaigne to people like Kierkegaard or J. L. Austin (if we stick to the common canon of dead white males).

I propose to count Ludwik Fleck into this lot. His attempt to provide arguments for intellectual humility was clearly fueled by a sincere ethical and political sense of mission to his contemporary world. Instigating a new kind of "comparative epistemology" turned into an urgent calling rather than a trifling hobby, demanding its fair share of the medical doctor's spare time. Intellectually "making room for the future", and doing so in a spirit of tolerance and curiosity towards people who have been shaped in their habits of perceiving and processing their world by other "schools and books" than the ones that formed one's own, was clearly a dead serious task in Fleck's mind. The notion of forming a "democratic reality" was hardly a joke, quite the opposite.

But the more glaring the contrasts to such ideals and values became among the human realities surrounding him, the stronger the strand of playfulness in his writing appeared to become. For example, in Entstehung und Entwicklung einer wissenschaftlichen Tatsache (1935) and other texts from the interwar years he poked fun at the positions he attacked with his recurring analogy between the "epistemologia imaginabilis" of conventional philosophical wisdom and an "anatomia imaginabilis" of medieval medicine. In an essay from 1946, when he still must have been physically as well as mentally recovering from the ordeals of Auschwitz and Buchenwald, the smile between the lines from earlier texts suddenly cracked up in sheer laughter. Using the example of an "epistemological experiment" he had happened to witness in Buchenwald, he triumphantly claimed his ideas about human knowledge to have been empirically confirmed. (For other aspects of my take on Fleck, see Östlund 2007 - which uses this Buchenwald example as its point of departure.) Fleck did so in the form of a pastiche of a Galilean dialogue. But by replacing Galilei's Salviati with a certain "Sympathius" in the conversation with Simplicius (the simpleton), he also equipped his account with a sense of self-irony that would be hard to find in his 17th century model. Although this essay was written in Polish (Problemy naukoznawstwa), Fleck's macabre playfulness in dealing with a still ghastly fresh experience from an absolute human hell is guite manifest also to those of us who are only able to take part in it in German or English translation. His peculiar way of applying humor in a deeply serious manner was in this case not as tightly tied to his habit of toying with words as it was in most cases.

Fleck had an obvious penchant for inventing his own, idiosyncratic vocabulary. This has often been treated as a problem with his texts – in the case of his writings in German as a matter of east-Habsburg dialect or just linguistic maladroitness. The idiosyncrasies have not been respected as deliberate linguistic choices. Theoretical interpreters and translators have been quite eager to help poor Fleck out, normalizing his knotty language. This is for instance the case with the translations I am able to compare with the texts written in German: the English and Swedish renditions. The English translation of *Entstehung und Entwicklung* from 1979 is in fact hardly anything better than an absentminded paraphrase of the original, using the jargon of anglophone science studies of the 1970s in an oftentimes misleading way. The Swedish translation from 1997 is far more ambitious and adequate. Much less of the content is lost in translation. But in Swedish as in English, Fleck's sense of humor is more or less obliterated. The text has become grave and academically polished, unable to invite the smiles and laughter I have experienced, reading the original. This is a serious, even grave problem, I would say, because Fleck's playful idiosyncrasies are part and parcel of the core message. Terminological choices were crucial in forming his *Lehre vom Denkstil und Denkkollektiv*. In Fleck's case words really matter.

The erratic dynamics of intellectual intercourse and traffic in words

Let us consider an example, the key term *Denkverkehr*. It is a compound of the verb *denken*, "to think", and the noun *Verkehr*. The second part has mainly two meanings. On the one hand *Verkehr* may mean "traffic" – both in the sense of physical communications and communication systems such as railroads, trucks, cars and airplanes ("there was a lot of *Verkehr* in the street"), and in the sense of *trade* in goods or people (as in Gayle Rubin's "The Traffic in Women"). In this case *Verkehr* indicates the spatial relocation of things or persons. On the other hand *Verkehr* may mean human *intercourse*, activities among people getting together to interact. The everyday term for "sexual intercourse", for example, is in German *Geschlechtsverkehr*



(literally "gender-intercourse"). Now, the term *Denkverkehr* is in the major English translations rendered as "communication". This is the case also in the relatively qualified versions of Fleck's epistemological essays in the volume *Cognition and Fact* from 1986 (Eds. Cohen & Schnelle). This may appear to be obvious and neat. But the problem is that this word's immediate counterpart in German, *Kommunikation*, is quite as common as in English, and has pretty much the same range of meanings as in English. So, if Fleck really meant *Kommunikation*, why did he so stubbornly refuse to say *Kommunikation*? Why did he persist in applying an odd homemade term, indicating something as strange as "traffic/intercourse in thinking"? Why do that, instead of simply saying what the English translators think he meant to say? What was his point in making this *obviously* deliberate, but somewhat quirky linguistic choice? (A kindred criticism of the prevalence of the term "communication" in translations of Fleck – who only used its Polish counterpart twice in his philosophical writings – has recently been offered from a philological point of view by Paweł Jarnicki (Jarnicki 2016). Jarnicki is also making a parallel argument concerning the deliberateness and consistency in Fleck's way of playing with words in both of his two "first languages", Polish and German.

If we examine the line of argument in which Fleck used the term Denkverkehr more closely - the one dealing with the social "dynamics" of human thought - it will be perfectly clear that Fleck intended to avoid speaking of Kommunikation. Thus he avoided a whole set of connotations, for example any invocation of the ideal of genuine and full understanding between interlocutors, all in accordance with each party's true intentions. By using the term Denkverkehr Fleck was able to speak in a very different way about the messy realities of interaction between human beings, stressing the element of chance and creative misunderstanding in the development of our ways of perceiving our world and "working up" the world we perceive. Looking even closer at his argument, it will be obvious that both major senses of Verkehr were set in motion in Fleck's usage. On the one hand he speaks about intellectual intercourse between people within and without collectives - collectives defined by sharing more or less similar modes of perceiving and intellectually processing the world around them. Intra-collective intercourse would oftentimes be fair to describe as "genuine" communication - at least that would fit with the experience of the actors involved. But such smooth intercourse is in a bigger perspective relatively sterile, according to Flecks analysis of the dynamics of human thought. In Fleck's view most of the fun and creative stuff in human thought is happening when people try - and fail - to practice communication between different segments of a collective or across the borders between different collectives. Such adventures in creative misunderstanding generate new modes of perceiving and thinking, according to Fleck in an "authorless" way. Had he been able to follow up the attempts to get his Lehre phrased in English which he made late in life, he would probably have become fond of speaking in terms of serendipity.

A peculiar and important instance of inter-collective quasi-communication is the case of the individual who tries to put different ways of perceiving and thinking into interplay within his or her own head. Here the second main point in using a compound involving *Verkehr* is activated. The term *Denkverkehr* does namely also refer to processes of *traffic in words*. The element of linguistic philosophy in Fleck's *Lehre* is essential and quite sophisticated. He claimed that words attain specific meanings (thus being able to function in something like genuine communication) only within collectives of people initiated in shared ways of seeing and thinking, mainly by means of "schools and books". Thus he also stressed that words and phrases always *change* meaning (if not losing meaning altogether) when they are transported or "trafficked" between collectives of thought.

Such traffic in words is, Fleck's analyses clearly implies, mainly occasioned by people's use of *the technology of writing* – in particular the printed text. In fact he applied in practice an insight later phrased particularly clear by Walter J. Ong: writing "technologizes the word" by turning the passing acts of speaking into "things" that are persistent in time and transportable in space (Ong 1982). An important example of Fleck's use of this insight is his analysis of the function of different genres of printed texts in shaping the levels of initiation and rigidity within modern *scientific* thought collectives (an aspect of *intra-collective Denkverkehr*): the role of the journal article at the strictly esoteric research front; the role of the textbook in initiating generally qualified professionals; the role of popular science in translating esoteric thoughts into metaphors within a periphery of exoteric members. But *Denkverkehr* in the sense of traffic in words is also what oftentimes occurs in the head of thinking individuals who are initiated in the thought styles of more than one collective (an aspect of *intercollective Denkverkehr*). Such individuals try to "communicate" with themselves by using the same words and phrases in different contexts. The result is that those words necessarily take on shifting meanings, becoming used in different ways. Such attempts are oftentimes fruitless and confusing, but occasionally they turn out to be serendipitous – opening up new ways to see the



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world.

Much of what Fleck attempted to communicate about all this to his readers (he was well aware of the paradox involved) is lost in the English translations, as they unsuspectingly speak of "communication". The argument thus comes across lacking much of analytical vigor of the original texts in German. This is less of a problem in the Swedish translation of *Entstehung und Entwicklung*, as *Denkverkehr* in most cases is rendered as *tankeutbyte*, which literally means "thought exchange". *Thought exchange* would probably be a workable choice in order to render *Denkverkehr* in English as well. But there would still be a problem: English and Swedish do both lack the opportunity to speak of "intercourse" and "traffic" in one single word, the opportunity which Fleck exploited in such a playful way. Lacking the possibility to toy with words in the same manner as Fleck did, the best way out for a translator would probably be to tell the reader that he did do so, while using a stopgap as "thought exchange" in the text itself.

Thinking: things we *do* (but never alone)

But as we speak of *tankeutbyte* in Swedish, another, even more fundamental, trouble in translating Fleck surfaces. The translation in Swedish is actually quite inadequate – and this in a way that reveals a problem that remains hidden in English renditions of Fleck's basic ideas. The whole core of Fleck's terminology in German, the terms used to phrase the *premises* of the project, builds on the *verb denken: Denkstil, Denkkollektiv, Denkverkehr.* It is consequently *not* built on the *noun Gedanke.* This fact is actually a key to major points in his general argument. His preference for the verb-form is very salient, although he never hesitated to speak occasionally of *Gedankenaustausch* for example – literally "exchange of thoughts" – instead of *Denkverkehr*, as a matter of *variatio sermonis.* Fleck's terminology never went rigid. The occasional occurrence of alternative terms based on the noun-form only stresses the deliberateness of the choice to give priority to the verb-form in the core terminology.

In order to perceive the significance of the verb-form, it is instructive to compare the challenge of translating Fleck's core terminology into English and Swedish, respectively. Whereas the English term "thought" may refer to an act as well as an immaterial entity. Swedish – like German – offers a clear and unavoidable distinction between the verb, att tänka (the counterpart of zu denken), and the noun, tanke. This means that speaking of "thought style" and "thought collective" is in a way unproblematic in English. This is so by virtue of the fact that the words in English conceal the issue, which is not necessarily a good thing. In contrast to this, it matters crucially if one keeps or drops the pair of dots over the "a" when speaking of tänkestil and tänkekollektiv in Swedish. Most texts trying to convey Fleck's ideas in Swedish are inadequate in this sense, leaving out the dots, speaking of tankestil and tankekollektiv. The 1997 translation of Entstehung und Entwicklung added the case of tankeutbyte to this pattern. At first these choices may appear obvious to Swedish readers. The terms sound pretty natural, based on the noun-form. Speaking, more adequately, of tänkestil, tänkekollektiv, and tänkeutbyte, may sound somewhat knotty until the ear has become used to the terms. But in fact there is nothing strange at all with such compounds, based on the verb att tänka. For example a common but somewhat old-fashioned word for "proverb" in Swedish is tänkespråk. A more common term in everyday language – not guaint at all and guite Fleckian in intent from the outset - is tänkesätt, which literally means "mode of thinking". Keeping the dots steady in place, it is easy to render Fleck's core terminology in a distinct and adequate way in Swedish.

But what about English? Late in life, after leaving Poland for Israel, Fleck actually attempted to get some of his ideas about a "comparative epistemology" phrased in English, a language he did not speak. (Particularly in Fleck [1960] 1986) It is thus hard to say whether the choices of words were nearly as deliberate as they were in German. But if they were, he and his assistants clearly preferred the unequivocally verb-based form – "thinking" – to the ambiguous term "thought". *Denkstil* and *Denkkollektiv* became "style of thinking" and "community of thinking". In the case of internal *Denkverkehr* the English version of his message spoke of "mental intercourse", alternatively "intra-communal exchange". Rendering the concept of external *Denkverkehr* it actually applied the term "communication", although alternately with "intercommunal exchange". This is obviously in harmony with Fleck's consistent eagerness to deal with *acts* rather than *objects* – things that people *do*, rather than things that people *have*. Avoiding to speak of "thought", preferring the clear-cut gerund "thinking", fits the pattern very well.

The matter with the term "thought" was actually discerned the year after *Entstehung und Entwicklung* was published in 1935 by R. G. Collingwood, the contemporary British thinker whom Fleck probably had



most in common with. Re-examining his own conception of history in general as "the re-enactment of past thought" in a manuscript, Collingwood analyzed the equivocality of the word "thought". He pointed out that it may refer to *noēsis*, the act of thinking, as well as to *noēma*, the object of thought. Collingwood concluded that the task of writing history (and doing archaeology) ought to be seen as *noēseōs noēsis*, an act of thinking about an act of thinking (van der Dussen 1994, xxxvii). The stress on understanding the *thought* in things done in the past – the intentions, the "point" in doing this or that (e.g. building a Roman wall in northern Britain) – did not mean that Collingwood pointed towards some ethereal world above the everyday dealings of human beings in time and space. Quite the contrary, as he made clear in his posthumously published *The Idea of History*:

What kind of things does history find out? I answer, *res gestae*: actions of human beings that have been done in the past. Although this answer raises all kinds of further questions many of which are controversial, still, however they may be answered, the answers do not discredit the proposition that history is the science of *res gestae*, the attempt to answer questions about human actions done in the past. (Collingwood [1946] 1994, 9)

As Collingwood made quite as clear in *An Autobiography* from 1939, this attitude did in particular count for writing the history of human thought in a more narrow sense – the history of philosophy and science, or *intellectual history* in general. To understand e.g. the "thought" manifested in the act of phrasing the words in the dialogue *Parmenides* was basically the same kind of challenge as to understand the *point* in the acts of having built a Roman fort – although the former was a far more complex and demanding task in terms of the historian's skills. The need to reconstruct the context in which such actions were done was far more challenging. Just reading the words in the book was far from sufficient to understand the thought behind them, was Collingwood's key message – and he phrased it with an acerbic sense of humor that underlines his affinity to Fleck as a thinker (See in particular Collingwood 1939, 34-40).

In Collingwood's Greek and Latin terms, it seems quite clear that Fleck's *Lehre* intended to deal with *noēsis* as *res gestae*. The choice to build his core terminology on the verb *denken* is only one of many factors testifying to that. Another crucial term in his German texts is *Tätigkeit, activity*. Fleck repeatedly used this word to indicate what the object of study within his "comparative epistemology" really was. He intended to study *people doing things*, situated in time and space – not non-human sets of ethereal things such as "ideas" or immaterial "texts". This is instructively clear when he occasionally appears to be speaking of "objects of thought" with fixity over time. The most obvious case is his argument concerning *Urideen* ("primeval ideas"). The whole point of the argument is here to stress that such "ideas" are *always in a state of flux*, that they are never "the same" in different contexts. What they *really were* at this or that moment in history is completely dependent on what thinking people were *doing* – actual people of flesh and blood, situated in specific contexts in time and space. To analyze the historical and social specificity of such contexts was a major task for a "comparative epistemology" in Fleck's sense (this in contrast to any form of *epistemologia imaginabilis*).

There is clearly an affinity between Fleck's project and an anglophone tradition in intellectual history which has taken the cue from Collingwood and brought the theme of *thought as action* even further by connecting its research program to the philosophy of speech acts. In particular J. L. Austin's *How To Do Things With Words* (posthumously published in 1962) has been a steppingstone for analyzing past thought in terms of linguistic conventions and attempts of thinkers to intervene with linguistic "deeds" in their specific contexts in time and space. In particular the "Cambridge school" in the history of political thought, with Quentin Skinner as a front figure, has attempted to identify *illocutionary forces* in philosophical texts in order to "get" the originally intended "points" in putting certain sets of words together (Cf. Skinner 1970, 1988, 2002). It is hardly bold to believe that Fleck in such a project would have recognized kindred ways of perceiving and "working up" aspects of the world – a *Stimmung* ("mood") that would have made mutual understanding fairly easy. For example the theme of linguistic acts being dependent on, but also made possible by, socially and historically specific *conventions* – conventions also being challenged and transformed by linguistic intervention – would be fairly easy to translate into Fleck's analysis of the interplay between the usage of words and expectations created by "schools and books".

On the other hand I must claim that Fleck would have much to contribute to a critical self-reflection within this English speaking tradition. Already in the interwar years Fleck was much aware that authors' intended meanings in texts are only one of many facets of thought as human *Tätigkeit, res gestae* in history. There is an instructive corrective to a narrow focus on authors' intentions to be found in Fleck's attempts to

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shed light over the erratic dynamic of *Denkverkehr*. A troublesome factor in the anglophone tradition is the habit to treat material artifacts within the technology of writing (in particular copies of books in print) as if they were oral speech acts, which they are clearly not. Fleck was eager to analyze acts of readers, *reading* written material – people who were thus creating traffic in words and opening up new ways of perceiving and processing what is perceived, but doing so in an "authorless" way.

Such a possibility, to use Fleck as a corrective, also points towards his most distinctive characteristic as a theorist of thought as *res gestae*. That is his persistent and ubiquitous stress on the *Tätigkeit* of *denken* as something profoundly *social*. Such a stress is in a way also present in for example Quentin Skinner's theme about intellectual deeds being conditioned by historically specific social and linguistic conventions – a theme with obvious parallels in Fleck's *Lehre*. But Fleck's focus is never limited to the individual intellectual "deed" in history. For him intellectual action is always something to be analyzed as social *inter-action*, and as such always tangled up in complex *processes* of interaction. Even the loneliest, most isolated and eccentric thinker is doing something profoundly social when indulging in thought. For Fleck "thinking" is the *preeminently* social form of action among all kinds of human activity: "*das Denken*" is identified as "*eine soziale Tätigkeit katexochen*", which can never be "fully localized within the borders of an individual" (Fleck [1935] 1980, 129). And when he applies this perspective to the kind of thought which in certain contexts functions as *knowledge*, he immediately also stresses the fundamentally social nature of the things we can do with words:

This thing, knowing something [*das Erkennen*], stands out as the most socially conditioned of all human activities, and knowledge [*die Erkenntnis*] is the preeminently social formation, the social formation par excellence [*das soziale Gebilde katexochen*]. Already in the structure of language lies a compelling philosophy of the community; already in singular words are intricate theories given. Whose philosophies, whose theories are these? (Fleck [1935] 1980, 58; my translation)

Thought in general and science in particular

At this point some readers may be protesting, as they now finally get a glimpse of the "Fleck" they claim to know. Hasn't the most obvious thing about Fleck been left out in the previous pages, namely that he was above all - dealing with science? He didn't do general intellectual history, so why would it be of any interest to see his project in parallel with the kind of analysis of classical political philosophy that scholars are doing at Cambridge? Hasn't the fact that he was a theorist of science been left out of the picture? Let me answer with a counterguestion: Was he? Did he ever say he was that? Who says he was? Obviously, I am not trying to deny that analyzing scientific thought was a central part of the task of Fleck's "comparative epistemology". Neither do I deny that the examples he invested most of his efforts in dealing with were fetched from natural science - in particular his own professional fields, medicine and microbiology. All this are matters of course. But we are here approaching a particularly troublesome aspect of the history of Fleck's reception in the wake of Thomas Kuhn's The Structure of Scientific Revolutions, published in 1962. Let me put my point in the form of a question phrased in terms of Fleck's own Lehre: what theory are we as readers prepared to perceive in Fleck's historico-philosophical texts? What have we been conditioned to see by the influence of "schools and books"? I would say that probably the most harmful effect of Kuhn's book, always being there as a screen through which Fleck's writings are perceived, is the tendency to turn Fleck's attempt to initiate a vergleichende Erkenntnistheorie into a mere and narrow "theory of science", as something as restricted in its intentions as Kuhn's book was.

This tendency is very plain to see in the translations of Fleck in English and Swedish. It is part and parcel of the problems with the distracted English paraphrase of *Entstehung und Entwicklung* from 1979. In the volume of essays titled *Cognition and Fact* from 1986 (Eds. Cohen & Schnelle), much was dramatically improved – although *Denkverkehr* was still rendered as "communication". But the implicit dogma about Fleck being first and foremost a forerunner to Kuhn, and to the whole wave of science studies of the 1960s and 70s, was unmoved. This meant that the English in which Fleck's arguments were rendered became a Procrustean bed in certain ways. Although the Swedish translation of *Entstehung und Entwicklung* from 1997 was far better than its English counterpart, a similar Procrustean tendency became the major defect of the book. The Swedish translation mainly renders *Wissen* (knowledge, cognition) as if the original read *Wissenschaft*, or rather "science" in the narrower sense that the term has in English. Thus, when Fleck speaks of a "field of knowledge" it becomes a "branch of science". When he speaks of "the history of



knowledge" the phrase is delivered in Swedish as "the history of science". One of Fleck's sharpest thrusts against *die spekulative Erkenntnistheorie* is turned into a vague mutter in Swedish about the "theoretical theory of science" (Fleck, *Uppkomsten och utvecklingen*, 146; cf. *Entstehung und Entwicklung*, 50). This is a passage from a footnote – number 17 in both editions – but the displacement of meaning is revealing nevertheless. One may also wonder why theories wouldn't be allowed to be theoretical – why Fleck would bother to bicker about *that.* Such a passage becomes unintentionally funny, whereas the German original invites the reader to smile in a pretty forceful way (invoking the theme of an *epistemologia imaginabilis*). In general the Procrustean inclination in the Swedish translation, the tendency to squeeze Fleck's text into a box of expectations to deal exclusively with science, is intimately linked to the earlier mentioned tendency to normalize him and to tame the playfulness in his language, making his argument far less fun to read.

So, what is lost when the scope of Fleck's ambitions is narrowed down to the size of Kuhn's? Paradoxically enough, probably the most important loss is the absence of contours around a point he apparently wanted to make about *science*. A crucial aim in making the knowledge production of modern science "researcheable" within a "comparative epistemology" was to bring science down to earth, to the mundane plane of human thinking in general. Thus his *Lehre* is an attempt to deal with human thought in general. Fleck's explicit pretention was to launch a way of examining *any* kind of human thinking. All the core concepts were (in sharp contrast to Kuhn's) explicitly designed to be able to apply to *any* kind of human thinking. Thus, *any* kind of human thought would be possible to analyze in a comparative way. Only by means of such an inclusive *Lehre* would it be possible to treat modern science as nothing more or less than a version of the social activity (*Tätigkeit*) called *denken* in general, although Fleck cherished it as an in many ways marvelous and fruitful one. There was nothing that *a priori* separated out modern science as an elevated and privileged form of thinking, in spite of the fact that Fleck really liked it – at least as long as science was humble and dynamic enough to make "room for the future" and was able to create a "democratic reality".

Obviously, though, Fleck invested his own major efforts in applying the concepts of his theory in analyzing *scientific* thought, mainly within medicine and microbiology. But it was important to his argument to also offer other forms of thought to compare science with, although such analyses never became more than scattered sketches. To deal with science in splendid isolation would have been at odds with the inner logic of the argument. Fleck's favorite example of non-scientific modes of thought became those in the world of fashion (See in particular Fleck [1935] 1980, 141-142) He appears to have had quite a bit of fun writing about this, doing so in a playful way. In the world of fashion he was able to see a far-reaching set of parallels with the world of scientific thought. Here were to be found certain historically specific ways of "seeing" and "working up" aspects of reality. Here were to be found communities carrying (and being defined by carrying) certain styles of thinking and "seeing". Such communities were stratified in a complex way, providing patterns of intra-collective *Denkverkehr*. In the center there was an esoteric kernel of inventive, free-minded trendsetters. Around this a belt of well initiated, but fairly dogmatic, experts was formed. In the exoteric periphery the knowledgeable people trying be à *la mode* were to be found.

Fleck also made another point concerning science by forming the core concepts of a "comparative epistemology" in such a way that they would be applicable to any kind of thought. This had to do with the dynamics of intercollective Denkverkehr. Intellectual intercourse and traffic in words with other forms of thinking, foreign thoughtstyles in non-scientific thought collectives, was dealt with as a major factor of change and development within scientific thinking. One of the premises of Fleck's project was that one needs to have tools to analyze any kind of thought in order to analyze scientific thought, because science never lives a life of its own, retracted from interplay with other forms of thinking. A peculiar instance in which this is important has already been mentioned, namely the case in which an individual has become initiated in the thoughtstyles of more than one thought collective. The members of collectives such as those in the worlds of fashion or serology research are always participants in other thought-styles and thought-collectives as well. The sharp dresser can simultaneously be a dedicated Sunday school teacher in his church, and be a skilled football coach, while also being a researcher in serology by profession. Within such a person scientific, sports-related, religious, and fashion-related ways of seeing the world and acting in the world are welded together. In Fleck's view this is part of a dynamic that constantly changes the ways in which people are perceiving their world and intellectually "working up" the world they perceive. New options to "see" the world are opened up at the same time as others become shut off. In the case of science such processes sometimes, in serendipitous moments, lead to the kind of occurrences in the history of thought that we call useful knowledge, and to the intellectual compulsions we call "facts" (the ones that make initiated members



of a thought collective feel that "this can't be in any other way").

Something that Fleck feared in the interest of the vitality of science was attempts to shut down of the dynamics of *Denkverkehr:* dogmatic rigidity among experts and isolation from ordinary people's interests in getting good means to deal with nature and reality. In order to be fruitful for humanity science should not retract from interplay with other forms of thinking, and experts within the esoteric kernels of scientific thought collectives should not lock themselves up in ivory towers. (In short he actually warned about most of the things Thomas Kuhn would celebrate between the lines in 1962) This was obviously one of the motives behind his eagerness to preach intellectual humility by means of undermining the *epistemologia imaginabilis* of conventional philosophical wisdom, providing historical and sociological arguments with a good share of playfulness and humor.

As promoting intellectual tolerance was obviously a task at the center of his mission, Fleck's sense of humor was basically good-natured. His irony could be quite caustic, especially when tenets of neopositivism were brought into the line of fire. But the playful approach in his writing did never attain the tone of despise towards fellow human beings, or the pretention to be able to disclose dark truths about human thinking from a position above others, that for example have often been a trademark of intellectual traditions harking back to Nietzsche. Fleck's writings are rather permeated with a forgiving sense of curiosity about the diversity of ways to perceive our world and about the possibilities that might be hidden in the vicissitudes of human thinking. In strict harmony with his analysis of the unpredictable dynamics of *Denkverkehr* this attitude was revealed in such everyday things as what he felt could be expected of academic conferences. In a letter sent from Lublin to Wrocław in 1948 he gave air to his skepticism about the meaningfulness in squandering time by attending such gatherings, but added:

But who knows: if people get together and start to shuffle words and sentences intensively, perhaps a new combination just happens, which may prove to be useful. Perhaps it is not even noticed at once. Someone takes it away and it will mature sometime somewhere. Anyway such a marketplace is better than this cluttered desert we have here. (Fleck 2011, 589)²

References

Austin, John Langshaw. How to do things with words. London, Oxford UP,1962.

- Cohen, Robert S. & Schnelle, Thomas (Eds.). Cognition and Fact: Materials on Ludwik Fleck. Dordrecht: Reidel, 1986.
- Collingwood, Robin George. An Autobiography. London, Oxford UP, 1939.
- Collingwood, Robin George. The Idea of History, Revised Edition. Oxford & New York: Oxford University Press, 1994.
- Dussen, Jan van der. 'Editor's introduction', in R. G. Collingwood, *The Idea of History, Revised Edition.* Oxford & New York: Oxford University Press, 1994.
- Fleck, Ludwik. "Crisis in science. Towards a Free and More Human Science" [1960]. In Cohen & Schnelle (Eds.), *Cognition and Fact: Materials on Ludwik Fleck*. Dordrecht: Reidel, 1986.
- Fleck, Ludwik. Entstehung und Entwicklung einer wissenschaftlichen Tatsache: Einführung in die Lehre vom Denkstil und Denkkollektiv. Frankfurt am Main: Suhrkamp, [1935] 1980.
- Fleck, Ludwik. *Erfahrung und Tatsache: Gesammelte Aufsätze* (Eds Lothar Schäfer & Thomas Schnelle). Frankfurt am Main: Suhrkamp, 1983.
- Fleck, Ludwik. Denkstile und Tatsachen: Gesammlete Schriften und Zeugnisse Herausgegeben von Sylwia Werner und Claus Zittel. Frankfurt am Main: Suhrkamp, 2011.
- Fleck, Ludwik. Genesis and Development of a Scientific Fact. (Eds. Thaddeus J. Trenn & Robert K. Merton. Translation: Fred Bradley & Thaddeus J. Trenn. Forword by Thomas S. Kuhn.) Chicago: University of Chicago Press, 1979.
- Fleck, Ludwik. Uppkomsten och utvecklingen av ett vetenskapligt faktum: Inledning till läran om tankestil och tankekollektiv. (Translation: Bengt Liliequist) Eslöv: Brutus Östlings bokförlag Symposion, 1997.
- Huizinga, Johan. *Homo Ludens: A Study of the Play-element in Culture.* Boston, Mass.: Beacon press, [1938] 1955.

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- Jarnicki, Paweł. "On the shoulders of Ludwik Fleck? On the bilingual philosophic legacy of Ludwik Fleck and its Polish, German and English translations", *The Translator*, 22:3, 2016, pp 271-286.
- Kuhn, Thomas S. *The structure of scientific revolutions*, 2. ed., enl. Chicago: University of Chicago Press, [1962] 1970.

Ong, Walter J. Orality and Literacy: The Technologizing of the Word. London: Methuen, 1982.

- Östlund, David. "Our Preeminently Social Activity: Ludwik Fleck and Thought in History", *Ideas in History*, vol. II, 2007:3, pp. 9-44.
- Skinner, Quentin. "Conventions and the Understanding of Speech Acts", *The Philosophical Quarterly*, Vol. 20, No. 79, April 1970, pp. 118-138.
- Skinner, Quentin. *Meaning and context: Quentin Skinner and his critics,* Edited and introduced by James Tully. Cambridge: Polity, 1988.

Skinner, Quentin. Visions of politics. Vol. 1, Regarding Method. Cambridge: Cambridge UP, 2002.



