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***Thought Styles
in Text and Discourse***

edited by

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PREFACE

*One must not forget
that there exists no fully completed science
but only one that is becoming.*
Ludwik Fleck¹

At the beginning of the 1960s, linguistics turned away from traditional issues in linguistic research and focused on cognitive aspects. This so called cognitive turn in language analysis opened up new research perspectives. It pointed to the relevance of language as a medium of thought, and thus to the dialectical correspondence between language and thought.

This new approach to linguistic analysis let the researchers rediscover the forgotten writings of the Polish physician and natural scientist Ludwik Fleck. The monograph he published in 1935 as well as his epistemological works on the sociology of knowledge based on some important findings in the field of bacteriology and serology failed to gain any recognition for decades. It was not until 30 years later that Thomas S. Kuhn referred to Fleck in the preface to *The Structure of Scientific Revolutions* – a fact that gave impetus to the renewed studies of Fleck's work.

The papers in this volume deal with such Ludwik Fleck's concepts as thought style and thought collective. They aim at presenting thought styles in various disciplines, especially in languages for special purposes and specialised communication, sociology, but also in literature, foreign language learning and in the study of national mentality.

Krzysztof Nycz
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¹ (1986, p. 55)

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THOUGHT STYLES IN LANGUAGES FOR SPECIAL PURPOSES

1. Introduction

Ludwik Fleck was a Polish microbiologist and immunologist, whose specialist achievements in the field of microbiology received the highest academic acknowledgement. In the years 1945 to 1952 he was a professor at the Faculty of Medicine of Maria Curie-Skłodowska University, and then of the Medical School in Lublin. In the mid-50s he became a member of the Polish Academy of Science. Fleck's monograph *Entstehung und Entwicklung einer wissenschaftlichen Tatsache. Einführung in die Lehre vom Denkstil und Denkkollektiv* (1935), which contained crucial philosophical and scientific considerations on methodology and sociology of knowledge based on the history of the discovery of Wassermann's reaction, failed to gain such recognition as his works in the field of microbiology. Albeit, the monograph failed to arise interest among Fleck's contemporaries – mostly due to the historic events of the time. It was not until 30 years later, in 1962, that Thomas S. Kuhn referred to Fleck's philosophical thought in the preface to *The Structure of Scientific Revolutions* – a fact which constituted a source of inspiration for Kuhn's constructing of the theory of scientific revolutions. This mention is believed to have inspired a renewed interest in Fleck's theory. The first Polish issue of Fleck's monograph was published only in 1986, which was 50 years after its first German issue.

2. Thought Style

Fleck (1979, p. 99) provides the definition of thought style along the following lines: “directed perception, with corresponding mental and objective assimilation of what has been so perceived”. Thought style is characterized with commonality of problems distinctive for a given collective, as well as commonality of obvious judgments and methods used for cognitive purposes. A thought style is a certain mood of an individual belonging to a thought collective which creates inner readiness “for selective feeling and for correspondingly directed action” (*ibidem*). Hence, each thought style forces individuals within a collective to adopt a certain way of thinking and defines anything “what can be thought in no other way” (*ibidem*). It becomes invisible for individuals, almost as subconscious as breathing. It becomes an obligation, within the boundaries of which whole generations dwell – generations which persecute individuals who think differently, individuals who fail to co-exist in the collective mood. This lasts until the thought style alters.

Once we compare thought styles which are used by particular fields of science, members of distinct social groups, different cultures or different historical periods, we need to note that wide divergences may occur among them. Fleck points out that the

divergence between the thought style of a physicist and that of a biologist is not as wide as between the thought style of a physicist and a philologist, or a Chinese physician or a cabalistic mystic (for discussion, see *ibidem*, p. 108). If the social, cultural or historical distance between two thought styles is so big that the same concepts or motives are interpreted or understood differently – or they lack any common features – the agreement between the members is virtually impossible. In this context, Fleck (1986, p. 82) emphasizes the following:

The subject of the conversation does not play a decisive role because on an apparently identical subject, e.g., a certain disease or a celestial phenomenon, a physicist will understand a biologist, but will be unable to come to an understanding a theologian or a Gnostic. They will talk next to one another, but not to one another: they belong to different *thought-collectives*, they have other *thought-styles*.

From the historical point of view different thought styles mesh with one another to a greater or lesser extent. Although new eras create new intellectual moods, old ideas never disappear completely or suddenly. Fleck points to the fact that each thought style leaves a trace either in the form of small communities, which are left out of the current mainstream and retrieve the old style, or in the form of historical-developmental elements included in a new style, which are reminiscence of the former elements. Fleck is a representative of an opinion that only few newly created concepts fail to show connections with the earlier thought styles. Their associations change most frequently, they may be interpreted differently into the language of a new style, and there occurs the meaning shift. In this manner the historical kinship of thought styles is born (Fleck, 1979, p. 100). Such concepts common to a number of thought styles, formed in the course of many epochs, and retained in the history of thought despite numerous changes are named by Fleck as *proto-ideas*. Proto-ideas are historical beginnings of modern theories formed on the basis of a particular social thinking (for discussion, see *ibidem*, p. 23). In this context, Fleck (*ibidem*, p. 23) argues that “many very solidly established scientific facts are undeniably linked, in their development, to prescientific, somewhat hazy, related proto-ideas or pre-ideas, even though such links cannot be substantiated”. The case of the discovery of the so-called Wassermann’s reaction is provided as a piece of evidence:

We have described a hazy idea of syphilitic changes in the blood and shown that this idea existed centuries before scientific proof was available. Emerging from a chaotic mixture of ideas, it developed over many epochs, becoming more and more substantial and precise. Evidence of it was adduced from various points of view, and a dogma concerning syphilitic blood gradually consolidated. Several researcher workers, such as Gauthier, succumbed to public opinion and claimed to have found proofs which actually were impossible to establish. The entire repertoire available at the time was used to an unprecedented degree until the goal was reached. The idea of syphilitic blood thus became scientifically embodied in the Wassermann reaction and subsequently in more simplified reactions. But the proto-idea has survived

among the common people, who still refer to syphilitics as having impure blood (*ibidem*).

Additionally, Fleck provides further examples from other fields of science, such as atomistics of Democritus, theories of the elements and of chemical composition, the law of conservation of matter, the principle of spherical earth and the heliocentric system. The author argues as well that it may be the case that there are no corresponding proto-ideas for some scientific discoveries. There were cases of rejecting certain proto-ideas after long research studies when this proto-idea failed to be scientifically justified (for discussion, see *ibidem*, p. 24).

For Fleck the concept of thought style is directly linked to the concept of *scientific observation*, which is subdivided into two main types: 1. the vague initial visual perception and 2. developed direct visual perception of a form. In this respect, Fleck clarifies that the ability to encompass the sense and the entity directly and comprehensively results from suitable training and introduction into a particular field of knowledge. This ability is nothing else but the readiness for directed perception mentioned in the foregoing. The ability to perceive an entity is then an obvious question of style thinking. Together with the direct perception of an entity there vanishes the ability to perceive the irrelevant – the phenomena that stand in opposition to a given thought style (for discussion, see *ibidem*, p. 92).

In contrast with the direct perception of an entity, the initial vague inspection is the random, chaotic, convoluted perception which links elements of different thought styles. The researcher perceives entities this or that way, almost randomly. “There is a rivalry among visual fields of thought. Nothing is factual or fixed. Things can be seen almost arbitrarily in this light or that. There is neither support, nor constraint, nor resistance and there is no ‘firm ground of facts’” (*ibidem*). Fleck (*ibidem* p. 94) provides the following comparison:

The first, chaotically styled observation resembles a chaos of feeling: amazement, a searching for similarities, trial by experiment, retraction as well as hope and disappointment. Feeling, will, and intellect all function together as an indivisible unit. The research worker gropes but everything recedes, and nowhere is there a firm support. Everything seems to be an artificial effect inspired by his own personal will. Every formulation melts away at the next test.

In such chaos a researcher is searching for firm grounds, thought compulsion which they could obey as “maximum thought constraint with minimum thought caprice” constitutes, according to Fleck, the gist of cognitive work. “(...) At first there is signal of resistance in the chaotic initial thinking, then a definite thought constraint. and finally a form to be directly perceived” (*ibidem* p. 95) – this is the process of developing a scientific fact, which is defined as the signal of resistance against free thought arbitrariness, as a result of a particular thought style (for discussion, see *ibidem*, p. 101).

3. Thought Collective

Thought collective, mentioned on numerous occasions in the foregoing, is a group of people related to one another through mutual intellectual influence and thoughts exchange. It is “the special ‘carrier’ for the historical development of any field of thought, as well as for the given stock of knowledge and level of culture” - hence, a certain thought style (*ibidem*, p. 39).

Thought collective arises whenever at least two people exchange opinions between each other – they are then *fortuitous*, *transient* collectives. Additionally, Fleck enumerates *stable* collectives (*ibidem*, p. 103), which develop in specific, organized social groups. If such a group exists for a longer period of time, the thought style consolidates and acquires a formal structure. However, thought community only rarely overlaps the official community. It also has different organization: a thought collective of a religion comprises all sincere believers, and an official religious community includes all members accepted formally without considering their thought structure. Hence, one can belong to a thought collective of a religion without being formally accepted as a member of a religious community, and vice versa. Similarly, the internal structure, or organization, of a community’s thought collective is distinct from the official organization of a community. Spiritual leaders as well as circles that arise around them fail to overlap with the official hierarchy and organization (*ibidem*).

On the basis of stable collectives their characteristic features may be shown, the most important of which is “a certain exclusiveness both formally and in content”. “(...) statutory and customary arrangements, sometimes a separate language or at least special terminology” (*ibidem*) are features which formally differentiate between thought collectives. Fleck postulates greater significance for the so-called content isolation of each collective as a special realm of thinking. The access to this world is preceded with an apprenticeship period, during which there occurs “a purely authoritarian suggestion of ideas”, introduction to a given field of knowledge, “gentle constraint” (for discussion, see *ibidem*, p. 104). The content exclusiveness of every thought commune corresponds directly to stylistic limitation of potential problems: “(...) It is always necessary to ignore or reject many problems as trifling or meaningless. Modern science also distinguishes ‘real problems’ from useless ‘bogus problems.’ This creates specialized valuation and characteristic intolerance, which are features shared by all exclusive communities” (*ibidem*).

The greater the content isolation of a thought collective, and consequently the more specific potential problems are, the stronger the intellectual bond is between its members.

What does the structure of a thought collective look like? Around each scientific idea there develops a small *esoteric circle* and a greater *exoteric* one comprising members of a thought collective. Significantly, the multiplicity of ideas within a single thought collective corresponds to the multiplicity of mutually intersecting circles. The centre of each esoteric circle is made up of “a specialized expert” working on a given problem and “general experts” dealing with related problems. The exoteric ring comprises “more or less educated amateurs” trusting the competence of the insiders (for discussion, see *ibidem*, p. 111). The consequence of such a structure of a thought collective is the division of knowledge into *specialist*, the

medium of which is the esoteric circle, and *popular* characteristic for exoteric circle. Unlike popular knowledge, specialist knowledge is – from a practical point of view – pointless and non-visual. For a better understanding, one needs its description, but every description contains an element of simplification, which – in turn – results in specialist knowledge becoming more exoteric, popular. Popular knowledge is for non-specialists, that is generally educated group of adults. It is characterised by the lack of details and controversial opinions, artificial simplification, pleasant, lively and vivid disquisition as well as peremptory judgment. However, it constitutes an indispensable element of inter-collective scientific relationship. It forms a specific public opinion and outlook, and in this form it influences a specialist back (*ibidem* p. 114). Hence, the relation between esoteric and exoteric circle is not unilateral – the esoteric circle depends on the opinion of the exoteric circle, that is the opinion of the so-called public opinion. Fleck (*ibidem*, p. 106) compares this relation to the attitude of the elite towards the masses along the following lines:

If the masses occupy a stronger position, a democratic tendency will be impressed upon this relation. The elite panders, as it were, to public opinion and strives to preserve the confidence of the masses. (...) If the elite enjoys the stronger position, it will endeavor to maintain distance and to isolate itself from the crowd. Then secretiveness and dogmatism dominate the life of the thought collective. (...) The first, or democratic, form must lead to the development of ideas and to progress, the second possibly to conservatism and rigidity.

However, it is not only the relation of intellectual superiority and subordination that occurs between the members of a thought collective. It is undoubtedly the relation of two equal participants, between which the feeling of thought solidarity, mutual intellectual interdependence and mutual mood develop, that stabilise and strengthen the structure of a thought collective.

Each researcher usually participates in numerous thought collectives at the same time: apart from their own characteristic scientific collective, the thought style of which they believe to be the only correct one, they can belong to a political party, sports club, religious group, etc. In this way, they are continually confronted with other thought styles and become a medium in the inter-collective communication. As a result of this inter-collective stream of thoughts, thought styles interfere with each other with some of the elements shifting from one thought style to another, undergoing modification or assimilation.² However, the more contradictory styles are, the smaller the thought exchange is. The rules of an alien collective are perceived – if noticed at all – as an arbitrary, optional justification. An alien thought style seems to be mystic. The questions that are rejected by such a style are frequently considered as the most important, the explanations as unconvincing or inappropriate, and the problems are often an insignificant or pointless game. Only individual facts and concepts – depending on the kinship of collectives – are considered as free ideas, which are not

²According to Fleck (*ibidem*, p. 110), within a single individual thought styles may retain their distinctiveness only when they are very different. In the case of related styles such division is impossible: “The conflict between closely allied thought styles makes their coexistence within the individual impossible and sentences the person involved either to lack of productivity or to the creation of a special style on the borderline of the field”.

taken into consideration, or – better still – in the case of less divergent collectives they are interpreted differently, that is imported to the language of another thought style, and then adopted by the relevant collective (*ibidem*, p. 109).

In this context Fleck points to the special importance of a *word* as a bartering property usually marked with suitable rhetoric characteristic for a given style. Such a stylistically marked word, being passed from an individual to an individual in an inter-collective journey, changes its colouring, is understood or interpreted in different ways.³ Each journey causes the change or shift of thought value “from a minor change in coloration, through an almost complete change of meaning, to the destruction of all sense (...)” (*ibidem*, p. 110). In these changes or shifts of meaning Fleck observes a positive force leading to a change of a thought style, and hence to the change in the readiness for direct perception. This creates new cognitive possibilities and enables the development of new scientific facts. According to Fleck, this is the most important epistemological meaning of the inter-collective thought exchange.

Although a thought collective comprises a community of people, it is not its sum. According to Fleck (*ibidem*, p. 41), “The individual within the collective is never, or hardly ever, conscious of the prevailing thought style, which almost always exerts an absolutely compulsive force upon his thinking, and with which is not possible to be at variance”. In turn, the knowledge, the medium of which a collective is, greatly exceeds the capabilities of a community. Hence, this epistemological collective postulated by Fleck questions the cognitive autonomy of an individual, whose thought style is definitely outlined by the history of a given field of knowledge and tradition. Each scientific work, theory or discovery is, according to Fleck, of a collective character, and constitutes joint property available to everyone. Thoughts pass around from an individual to an individual, each time slightly modified as other individuals form distinct associations out of them. To be more precise, the recipient never fully understands the thought in the way the sender wanted it to be understood. After a number of such journeys there is practically nothing left of the original content. The thought that is still being passed around is the collective thought, which does not belong to any individual. No matter whether – from the standpoint of an individual – discoveries constitute truths or errors, whether they seem to be right or wrong, they go round in a society, get polished, processed, reinforced or weakened, and they exert influence on other discoveries, concepts, views and thinking habits. After a number of circles within a community, a discovery often returns – fundamentally altered – to its first creator and they also perceive it differently, and do not consider it as their own or – more frequently – they think they have seen the discovery in the present form from the very start (for discussion, see *ibidem*, p. 42-43).

This does not indicate that there is no space for an individual in the cognitive process. Fleck compares an individual to a soccer player and a thought collective to the soccer team, and the cognitive process to the progress of the game. The author then concludes that one should not analyse this progress on the basis of individual kicks as the sense of the game would be lost (for discussion, see *ibidem*, p. 46). Using the example of the development of the Wassermann reaction, Fleck shows that the

³ Suffice it to compare and contrast the meaning of such words as “law” as used by a lawyer and a physicist, “energy” as used by a physicist and a sportsperson, “rule” as employed by a mathematician and a monk, etc.

authorship of a discovery cannot be attributed to the genius of an individual researcher; the discovery was the result of collective work done by many researchers. Just as many rivers simultaneously despite the initial wrong direction, roundabout ways and meandering eventually hit the sea, many researchers work simultaneously on a single discovery to finally – out of false assumptions, out of initial vague experiments, after many errors and intricacies – achieve the aim (for discussion, see *ibidem*, p. 78). Fleck (*ibidem*, p. 78-79) points out the following:

There is no such thing as the *sea as such*. The area at the lowest level, the area where the waters actually collect, is merely *called* the sea! *Provided enough water flows in the rivers and a field of gravity exists, all rivers must finally end up at the sea*. The field of gravity corresponds to the dominant and directing disposition, and water to the work of the entire thought collective. The momentary direction of each drop is not at all decisive. The result derives from the general direction of gravity.

4. Language for Special Purposes as a Medium of Thought Style

According to Fleck, as mentioned in the foregoing, a characteristic feature of a thought collective is a peculiar world of thought, which is a specific thought style ensuring free communication within its limits, though not so clear or hardly understandable for members of other groups. It is usually a peculiar language or, at least, characteristic concepts that differentiate one thought community from another. The comparison of various definitions of language for special purposes (Fluck, 1996; Hoffmann, 1987; Möhn, Pelka, 1984; Schmidt, 1969; Jumpelt, 1961) shows that language for special purposes should be treated as an expression of membership to a given thought collective, and hence as an expression of a given thought style.

The first definitions of languages for special purposes are based mainly on the terminological theory, which propagates that language for special purposes is characterised merely by specific terminology used to express specialist content. For Seibicke (1959, p. 70) and Müller-Tochtermann (1959, p. 89), languages for special purposes are mere sets of specialist words employed together with other, more or less indispensable, general words. According to Schmidt (1969, p. 17), language for special purposes is a medium of optimal communication among specialists from a given discipline. It is characterised by specific specialist terminology and peculiar norms ruling the choice, the use and the frequency of lexical and grammatical linguistic means of general language.

A relatively broader view is postulated by Möhn and Pelka. In their attempts at defining language for special purposes, they accepted three criteria, on the basis of which language for special purposes is distinguished from other variants of language. They are a sociological criterion, a criterion of the place in a linguistic system and a criterion of the use of language. From a sociological point of view, the users of language for special purposes, and hence specialists from a given discipline and people interested in it, boasting the knowledge necessary for the discipline-based communication, constitute – according to Möhn and Pelka – a closed, independent social group, which – in accordance with Fleck's ideas – constitutes a thought collective. The criterion of a linguistic system imposes the definition of language for

special purpose as a sublanguage characterised by the specific choice and use of linguistic elements at the morphological, lexical, syntactic and textual level. Having taken the criterion of the use of language into consideration, there appears an extremely broad-ranging definition of language for special purposes as a variant of general language:

A concept of languages for special purposes is understood as a variant of general language, used for cognition and conceptual description of the content characteristic for a given discipline, as well as for discussing issues connected with it, and simultaneously encompassing specific communicational needs within the boundaries of a given discipline. Language for special purposes is, first of all, typical for specialists. However, it may also be of use to other people interested in the discipline. 'Language for special purposes' variant is realised in more or less separable forms, termed as languages for special purposes, respectively of the multitude of disciplines, which may be more or less precisely distinguished from one another. Depending on the situation determined by the needs of a given discipline, languages for special purposes are employed either in the written or spoken form, both within individual disciplines (intra-disciplinary) and in between them (inter-disciplinary). Languages for special purposes are characterised by the specific choice, use and frequency of linguistic means, especially at a morphological, lexical, syntactic and textual level of a linguistic system (Möhn, Pelka, 1984, p. 26-27, transl. by KN).⁴

Hoffmann (1987, p. 53) defines their essence along the following lines: "Language for special purposes – is a sum of all linguistic means used in communicational context of a given discipline to ensure communication between people engaged in this discipline" (transl. by KN).⁵ Taking the multitude of existing disciplines into account, Hoffmann made an attempt at organising and classifying them. The horizontal classification of languages for special purposes the author proposes is the result of the comparison of linguistic means, which are used for individual specialist disciplines, or the comparison of these disciplines with other sublanguages, which are represented by prose in Hoffmann's works. The number of elements that are common for individual disciplines at a lexical level is provided in percentage terms. The analysis of mutual relations between the languages of physics, philosophy,

⁴ „Wir verstehen unter Fachsprachen heute die Variante der Gesamtsprache, die der Erkenntnis und begrifflichen Bestimmung fachspezifischer Gegenstände sowie der Verständigung über sie dient und damit den spezifischen kommunikativen Bedürfnissen im Fach allgemein Rechnung trägt. Fachsprache ist primär an Fachleute gebunden, doch können an ihr auch fachlich Interessierte teilhaben. Entsprechend der Vielzahl der Fächer, die man mehr oder weniger exakt unterscheiden kann, ist die Variante 'Fachsprache' in zahlreichen mehr oder weniger exakt abgrenzbaren Erscheinungsformen realisiert, die als Fachsprachen bezeichnet sind. Je nach fachlich bestimmter Situation werden sie schriftlich oder mündlich gebraucht, sowohl innerhalb der Fächer (fachintern) als auch zwischen den Fächern (interfachlich). Fachsprachen sind durch eine charakteristische Auswahl, Verwendung und Frequenz sprachlicher Mittel, besonders auf den Systemebenen 'Morphologie', 'Lexik', 'Syntax' und 'Text' bestimmt.“

⁵ „Fachsprache – das ist die Gesamtheit aller sprachlichen Mittel, die in einem fachlich begrenzten Kommunikationsbereich verwendet werden, um die Verständigung zwischen den in diesem Bereich tätigen Menschen zu gewährleisten.“

medicine, chemistry, mathematics and prose has shown that – not surprisingly – the most common features are evidenced between the language of physics and mathematics (55,5%) and chemistry (54,2%), slightly fewer are common with the language of medicine (46,5%) and the language of philosophy (46,0%). The greatest distance is observed between the language of physics and the language of literary prose – the number of mutual elements is only, or as much as, 26,4%. Hoffmann offers an analogous analysis with respect to individual levels of language and linguistic sign, that is with respect to phonemes, morphemes, syntagmas, phrases, as well as symbols, numbers, formulas and drawings. Taking all these elements into account would provide us with a full picture of differences and similarities between languages for special purposes (for discussion, see *ibidem*, p. 61).

The results mentioned above to a great extent reflect the accuracy of Fleck's assumptions and his epistemological considerations on divergences and affinities that occur between different thought styles, in this case languages for special purposes. In his monograph, Fleck pinpointed that the divergence between the thought style of a physicist and a biologist is not as great as the one between the thought style of a physicist and a philologist. The percentage results of the analysis conducted by Hoffmann fully confirm this assumption. The number of common features, shown by Hoffmann, which connect different languages for special purposes also constitutes evidence for different thought styles meshing and for inter-collective thought exchange.

In his study of thought style and thought collective Fleck postulates the existence of the so-called *esoteric circle*, which usually comprises a small group of specialists, highly specialised researchers, forming a given thought style and simultaneously constituting the centre of a thought community. This relatively hermetic group is surrounded by general specialists and masses of more or less initiated laymen, who undergo the influence of the style and form the so-called *exoteric circle*. The vertical classification of languages for special purposes⁶ proposed by Hoffmann, that is the growing level of language precision in specialist communication and a corresponding division into five levels of abstraction, overlaps with Fleck's theory to a great extent. The esoteric circle corresponds – in Hoffmann's terms – to abstraction level A, which occurs only in basic theoretical sciences and is typical for communication between highly specialised scientists. The highest level of abstraction, artificial symbols for expressing elements and relations make the esoteric knowledge incomprehensible for other users of the language (levels B – E), who – according to Fleck – form the exoteric circles.

⁶Hoffmann's vertical model of the division of languages for special purposes exerts controversies among linguists. Roelcke (1999, p. 17) criticizes the unjustified treatment of language for special purposes as "a sum of all linguistic means". S. Grucza (2008, p. 48-49) points to the terminological mess as being the result of the afore-mentioned classification and to the unjustified distinction of five abstraction levels: "Additionally, it seems pointless to link the categorization of languages for special purposes to any level of abstraction (generalization) of fields/ disciplines or their subject matters. The reason for this is twofold. First of all, the categorization of languages for special purposes is done on the basis of the features of the given fields or their subject matters rather than on the basis of the features of languages for special purposes alone. Secondly, thinking abstractly/ generalizing is a gradual process, and as such may potentially include a multitude of 'abstraction levels', not only five as suggested by Hoffmann". Despite this criticism, Hoffmann is one of the most frequently quoted theoretician of languages for special purposes.

Similarly, in Beier's view of language for special purposes one can easily discover reference of language for special purposes to a small group of specialists as its main users within a given field:

The genuine language for special purposes is always linked to a specialist as it requires full clarity of concepts and utterance. A language for special purposes used by a non-specialist loses its direct connection with specialist thinking; concepts and utterances are void of a large part of their content and precision, but most of all, with specialist systematics, which a layman will never be able to grasp (Beier, 1980, p. 14, transl. by KN).⁷

Strevens (1973, p. 226) points to a direct link between language for special purposes and thought style:

Being a scientist or a technologist entails learning a number of habits of thought. These habits of thought directly affect his use of language, and (...) the scientist can only function as a scientist if he learns how to use language appropriate to these habits of thought.

According to the afore-mentioned definition, language for special purposes is a medium of expression and a communication tool of a specialist, who has developed particular thought structures. These structures are outlined by the methods used in a given field, and language for special purposes is their reflection. Characteristic communication structures result from cognitive and research interests of a given discipline. The extent of the development of certain thought structures in each case depends on the extent of specialist socialisation of an expert, and so on the familiarisation with a given field or – in Fleck's terminology – on the level of initiation (for discussion, see Buhlmann, Fries, 2000, p. 12-13).

5. Final remarks

As a word of conclusion, it needs to be stated that language for special purposes is linked to the thought elements and structures of a particular field of knowledge. These structures are expressed not only in specialist terminology, but also in the choice of particular elements and structures at a morphosyntactic and textual level. The choice and use of specific structures acknowledges the communicational needs within a particular field and is an expression of the thought style characteristic for it.

⁷„Echte Fachsprache ist immer an den Fachmann gebunden, weil sie volle Klarheit über Begriffe und Aussagen verlangt. Vom Nichtfachmann gebraucht, verliert die Fachsprache ihre unmittelbare Bindung an das fachliche Denken; Begriffe und Aussagen büßen einem wesentlichen Teil ihres Inhalts und ihrer Präzision, vor allem aber ihre Beziehung zur fachlichen Systematik ein, die der Laie nicht übersieht.“

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THE PLACE OF LUDWIK FLECK'S THOUGHT STYLES AND THOUGHT COLLECTIVES IN LANGUAGES FOR SPECIAL PURPOSES

1. Introduction

Ludwik Fleck, a Polish physician, published the monograph entitled *Entstehung und Entwicklung einer wissenschaftlichen Tatsache: Einführung in die Lehre vom Denkstil und Denkkollektiv (Genesis and Development of a Scientific Fact)* in 1935 and explicated his ideas about the influence of the community in which an individual lives on the formation of his thoughts. However, his book did not make any impact on scholars. In the early 1970s it was rediscovered after his name was referred to in Kuhn's book *The Structure of Scientific Revolutions*. One of the reasons why Fleck's work has recently received more attention was that in his book in the 1930s he dealt with sociology of scientific knowledge, which is currently quite crucial (Harwood, 1986, p. 173-187).

Fleck was born in 1896 in Lwów ('Lemberg' until 1918) and spoke both Polish and German fluently. He studied medicine after World War I and was interested in medical bacteriology. He spent time reading books on philosophy, sociology and history of science and medicine. As put by Schnelle (*ibidem*, p. 174), he carried out unsystematic reading, but took an active part in local scientific societies. These societies helped him develop his scholarly breadth and interdisciplinary interests. Although Fleck was not aware of the contemporary German literature concerning sociology of knowledge, he knew the work of three philosophers at the University of Lwów: Twardowski, Ajdukiewicz and Chwistek.

The problems Fleck tackled in his writings were similar to the ones these philosophers addressed but the solutions offered were different. Twardowski thought that individuals perceive cognitive objects, while Fleck pointed out that humans are influenced by the thoughts of the collective. He stated "we look with our own eyes, but we see with the eyes of the collective" (Sak, 2012, p. 216). As concerns knowledge systems, Chwistek attributed the assumptions people held, to 'healthy human reason'. However, he did not clarify the nature of human reason. On the contrary, Fleck (1979) argued that human reason varied historically and socially. As to Ajdukiewicz's philosophical approach, he put forth many axiomatic structures which had some connections with reality, but he could not say anything about the reason behind people's choosing one rather than another. Fleck asserted, however, that the circumstances in which collectives live dictate people's choices.

Despite the fact that Fleck benefitted quite a lot from the philosophical views of his contemporaries, he could not sustain his productive period due to the Second World War. In 1941, Poland was occupied by Germans and he was confined to the

Jewish ghetto in Lwów. He and his family stayed there until they were deported to Auschwitz in 1943 and then to Buchenwald. At that time, he focused on his bacteriological work and tried to develop a typhus vaccine. He continued his medical career from the end of the war to the late 1950s. He gained professional recognition and improved facilities for his bacteriology research but his interest in sociology receded. He emigrated to Israel in 1957 and died there in 1961.

2. Ludwik Fleck's Epistemology

While explaining the historical development of the disease 'syphilis' going back to the fifteenth century, Fleck (*ibidem*, p. 2) reports that the relation between this disease and astrology as well as religious teaching survived and developed as it fitted in the prevailing thought style. In Fleck's epistemology, there is a bond between many concepts and it is based on their mutual influence. Hence, a thought style is dominant in the formulation of concepts. He also points out that some specific historical laws which govern the development of ideas can be found. He notes that many theories pass through two periods: "a classical one during which everything is in striking agreement, followed by a second period during which the exceptions begin to come to the fore. It is also evident that some ideas appear far in advance of their rationale and independently of it. Again, the intervening of a few strands of ideas can produce special phenomena" (*ibidem*, p. 9).

Fleck thinks that any single experiment has a limited significance if the total experience including many experiments, observations, skills, and transformation of concepts in a field is considered. In this regard, he explicates the difference between experiment and experience as follows:

Whereas an experiment can be interpreted in terms of a simple question and answer, experience must be understood as a complex state of intellectual training based upon the interaction involving the knower, that which he already knows, and that which he has yet to learn. The acquisition of physical and psychological skills, the amassing of a certain number of observations and experiments, the ability to mold concepts, however, introduce all kinds of factors that cannot be regulated by formal logic. Indeed, such interactions as those mentioned, prohibit any systematic treatment of the cognitive process (*ibidem*, p. 10-11).

In the discussion of epistemology, Fleck emphasizes the importance of history. He believes that it is impossible to cut the link between the past and present in the formulation of concepts. He argues that concepts are not spontaneously created but are determined by their "ancestors" (*ibidem*, p. 20) and gives an example from his own experience related to biology to express the importance of establishing ties with the past: "Biology taught me that a field undergoing development should be investigated from the viewpoint of its past development" (*ibidem*).

For Fleck, branches of science have pre-ideas, and the modern, scientific expressions are based on these early pre-ideas. As seen in the development of atomic theory, elements and chemical composition theories, and many others, initially hazy proto-ideas play a crucial role in the production of many features of current

explanations. Fleck summarizes his opinion about proto-ideas by saying that they “must be regarded as developmental rudiments of modern theories and as originating from a socio-cognitive foundation” (*ibidem*, p. 25).

Fleck also draws attention to the change that can be observed in the development of ideas (*ibidem*, p. 26). He thinks that the historical development of thought proceeds rapidly and the occurrence of “mutations” in thought style are continuously witnessed. The contribution of relativity theory to the transformation of physics and its thought style exemplifies such a mutation.

Fleck explains how systems of opinion are formed in relation with thought styles. He asserts that when a system of opinions has been formed, it shows resistance to other opinions contradicting it. He presents “carnal scourge” as an example displaying this tendency. In the history of this concept, although there have been new ideas challenging its position, they have not gained ground. Fleck (*ibidem*, p. 27) accounts for its endurance against new ideas for such a long time along the following lines:

What we are faced with here is not so much simple passivity or mistrust of new ideas as an active approach which can be divided into several stages. 1) A contradiction to the system appears unthinkable, 2) What does not fit into the system remains unseen, 3) Alternatively, if it is noticed, either it is kept secret, or 4) Laborious efforts are made to explain an exception in terms that do not contradict the system, 5) Despite the legitimate claims of contradictory views, one tends to see, describe, or even illustrate these circumstances which corroborate current views and thereby give them substance.

For Fleck, comparative epistemology’s task is to explain the process of passing conceptions and hazy ideas from one thought style to another as well as the process of their emergence as spontaneously generated pre-ideas. Their preservation process through “a kind of harmony of illusions” should also be investigated by comparative epistemology (*ibidem*, p. 28).

3. Ludwik Fleck’s Thought Collectives

According to Fleck, cognition must be construed as a relation between the knowing subject, the object to be known and the existing fund of knowledge. He integrates the knowledge obtained in the earlier studies into this relationship as a basic element of all new knowledge. He clarifies his position with the following statement: “What is already known influences the particular method of cognition; and cognition, in turn, enlarges, renews, and gives fresh meaning to what is already known” (*ibidem*, p. 38).

Subsequent to this remark, he identifies cognition as a social activity rather than an individual process of any theoretical “particular consciousness.” He justifies his explanation with the fact that “the existing stock of knowledge exceeds the range available to any one individual” (*ibidem*). A statement such as “Someone recognizes something”, according to Fleck, is incomplete as long as it does not contain a supplement “on the basis of a certain fund of knowledge,” or “as a member of certain

cultural environment,” or “in a particular thought style, in a particular thought collective.”

Then, he defines his conception of “thought collective” which refers to “a community of persons mutually exchanging ideas or maintaining intellectual interaction” (*ibidem*, p. 39). He makes the further point that through implication it is possible to realize that “it also provides the special “-carrier”- for the historical development of any field of thought, as well as for the given stock of knowledge and level of culture. This we have designated thought style” (*ibidem*).

In connection with syphilis and the earlier research concerning it, Fleck shows that if the researcher sticks to the explanations the collective has, his idea is accepted and used for the further development of the issue under investigation. Individual does not manage to change the thought supported by the collective. Fleck indicates that individuals form the collective but the collective should not be seen as the aggregate sum of individuals. He notes that “the individual within the collective is never, or hardly ever, conscious of the prevailing thought style, which almost always exerts an absolutely compulsive force upon his thinking and with which it is not possible to be at variance” (*ibidem*, p. 41).

Fleck attempts to explicate the structure of scientific activities in a thought collective which resembles an organization. Labour is divided, members of the collective cooperate and carry out some preparatory work. They provide technical assistance to each other, exchange ideas with each other and sometimes have controversies. He writes that “a well-organized collective harbours a quantity of knowledge far exceeding the capacity of any one individual.” This is not the structure that can be found only in scientific activities but also in the humanities. A collective bond is formed through words and customs in any field while any learning activity involves some tradition and society.

The developments of thoughts and the transformations they undergo are discussed by Fleck, as well. Fleck thinks that individuals pass thoughts from one to another and each individual understands a thought in a different way than the transmitter intended in his production. After some encounters like that the original content changes and the thought in circulation becomes the possession of the collective. The collective gives a new shape to this thought through a series of processes such as transformation, reinforcement, attenuation, and concept formation. When the originator comes across the thought after its several rounds in the community, he does not recognize it and sees it in a different form.

As a result of this transformation of thought in the collective, words gain different values; slogans are produced, and they are used to exert mental influence. The words, “materialism” or “atheism”, for example, are the ones that have proponents or enemies. In science such expressions are also found: “vitalism” in biology, “specificity” in immunology, and “bacterial transformation” in bacteriology. The very existence of these terms in a scientific text is well-received by supporters but opposed by enemies.

In order to talk about a thought collective, there should be two or more people exchanging thoughts. In a dialogue, each speaker generates thoughts he would not have produced on his own. The participation of a third person in the small collective of two persons will change the mood and a new collective emerges. Fleck states that

“a thought collective, by analogy, is composed of different individuals and also has its special rules of behaviour and its special psychological form. As an entity it is even more stable and consistent than the so-called individual, who always consists of contradictory drives” (*ibidem*, p. 44).

The individual life of the persons forming the thought collective has not much relevance to the collective, but their ideas have. An individual can be a member of several different thought collectives such as a political party, a social class, a nation, a race, and he shows obedience to their rules. For Fleck, the mutual relationship between the individual and the collective he belongs to is as follows: “The individual can be examined from the viewpoint of a collective just as well as, conversely, the collective can be considered from that of the individual” (*ibidem*, p. 45). The individual efforts which are isolated from the spirit of the age do not achieve great success as in the case of Leonardo da Vinci.

4. Ludwik Fleck’s Thought Styles

In discussing cognition, Fleck makes use of the historical development of the Wassermann Reaction. In general, Fleck describes a scientific fact as “a thought-stylized conceptual relation” (*ibidem*, p. 83).

Fleck offers an analogy between the person who carries out an observation or experiment, and a kind of conqueror (*ibidem*, p. 84), like Julius Caesar who forms his battle strategy on the formula “I came, I saw, I conquered.” The process is the same for a person who wants to know something. He makes his observation or experiment and then becomes the acquirer of the knowledge. In the early observations or experiments some imprecisions may have been found, but the following ones were made to fit the facts. Fleck argues that “cognition modifies the knower so as to adapt him harmoniously to his acquired knowledge. This situation ensures harmony within the dominant view about the origin of knowledge. Whence arises the “-I came, I saw, I conquered”- epistemology, possibly supplemented by a mystical epistemology of intuition” (*ibidem*, p. 86-87). This whole process creates “the intrinsic harmony of thought style” and through it the scientific results become applicable (*ibidem*, p. 87).

For Fleck, “a fact always occurs in the context of the history of thought and is always the result of a definite thought style” (*ibidem*, p. 95) which is acquired through earlier knowledge, many successful and unsuccessful experiments, practice and training, several adaptations and concept transformations.

Having discussed the connection between the thought style, thought collective and new observations, Fleck concluded that thinking was “a supremely social activity which cannot by any means be completely localized within the confines of the individual” (*ibidem*, p. 98). Fleck attempts to explain how a community of thought works.

He asks rhetorically how the performance of an orchestra can be considered the work of only individual instruments without recognition of the meaning and cooperation rules. In fact, an orchestra plays in accordance with some rules of cooperation and meaning which should be produced. In this context, he makes the following remark: “all paths toward a positive, fruitful epistemology lead toward the concept of thought style, the varieties of which are mutually comparable and can each be investigated as a result of historical development” (*ibidem*, p. 99).

According to Fleck, thought style has a certain mood and a way of functioning that helps it to be realized (*ibidem*). He distinguishes two closely connected aspects of mood: being ready for selective feeling related with the situation and for directed action that should be done. In view of collective motives and collective means, suitable expressions are created. Subsequently, he presents the definition of thought style: “directed perception, with corresponding mental and objective assimilation of what has been so perceived” (*ibidem*).

Thought style is shaped in line with the interest of a thought collective, it can also be endowed with a technical and literary style characteristic of a given system of knowledge. The thought style of a collective represents the community it belongs to, and hence it undergoes social reinforcement. An important feature of the thought style, for Fleck, is to constrain the individual by determining “what can be thought in no other way” (*ibidem*).

As a negative aspect, Fleck points out remnants from prior thought styles. For instance, astrologers and magicians who are not part of the shared community mood but adhere to the old style. Every thought style includes some traces from the historical, evolutionary development, some elements from another style. This implies that many concepts are formed with connection to earlier thought styles, e.g. the everyday concept of force influenced the production of the scientific concept of force, or the mystical concept of syphilis was employed for the development of the new concept. Thus, primitive pre-ideas direct researchers to formulate modern scientific concepts.

Another aspect of thought style is related to the perception of truth. Truth is neither “relative” nor “subjective”. A thought style is effective in the determination of truth. It is impossible for an individual to say that the same thought is true for A, but false for B, if they belong to the same thought collective. It should be true or false for both of them. However, in the case of their belonging to different thought collectives it is possible, but this time the thought will be different. That is, it must be ambiguous or one of the individuals must understand it differently. Fleck writes that “truth is not a convention, *but rather 1) in historical perspective, an event in the history of thought, 2) in its contemporary context, stylized thought constraint*” (*ibidem*, p. 100). Examples concerning the thought constraint come from various sources ranging from Greek myths, literature, art to science. In artistic painting, for instance, the constraining style can be identified by comparing a painting with a good painting produced in a definite style and finding the clashes with each other.

Fleck has also addressed the notion of fact and its relation with thought collective (*ibidem*, p. 101). In cognition, a fact is “the signal of resistance opposing free, arbitrary thinking.” Fleck argues that three different relations can be found between every fact and a thought collective: 1) There must be a parallelism between every fact and its thought collective’s intellectual interests, 2) The resistance must form a thought constraint and a form that must be directly experienced, and 3) The thought collective must express the fact in its style (*ibidem*, p. 101-102). Facts are not independent of each other. They affect each other and each new fact alters earlier ones. An interconnected system of facts is created. This gives solidity and tenacity to the “world of facts” and is responsible for the feeling of fixed reality, the independent existence of the universe.

To conclude, the main points can be summarized as follows (Harwood, 1986, p. 177).

1. Fleck argues that a tradition of shared assumptions, that is ‘thought style’, characterizes scientists’ work. Since these assumptions or styles are largely invisible, they are hardly questioned.

2. He reports that thought styles define the significant questions and identify the appropriate answers.

3. According to Fleck, perception is an active Gestalt process which is conditioned by thought styles. Initially, the impressions of objects in a visual field are unclear and even chaotic, but they acquire shape and identity through categories specified by the prevailing thought style parallel to experience.

4. The ideas which go against a thought style are either rejected or assimilated.

5. Members of different research communities have different thought styles.

6. Being part of the research community is connected with a dogmatic form of education. The pupil is instructed about the prevailing thought styles through a process of ‘experience’ in which he acquires craft knowledge.

7. In parallel to the scientific progress, individuals acquire more knowledge overall and solve earlier problems. However, it cannot be said that science approaches the truth because new problems appear due to new thought styles emerging in the community.

5. Using Fleck’s Ideas in LSP and other domains

After the rediscovery of Fleck’s ideas, researchers carrying out studies in various fields have been widely interested in them. Although a broad array of studies exists relating to his ideas, most of the studies are concerned with his influence on the philosopher Thomas S. Kuhn. Brorson and Andersen (2001, p. 109-129) examine the role of scientific literature presented by Fleck and Kuhn and argue that they differ from each other in terms of approaches they use. In review of Fleck’s 1935 book, Harwood (1986) identifies similarities and differences between both researchers. Mößner (2011, p. 362-371) investigates the technical terms “thought style” and “paradigm” used by Fleck and Kuhn, in turn, to show that these concepts are not equal in content. Similarly, Peine (2011, p. 489-508) deals with Fleck’s concepts of thought collectives and proto-ideas, and compares his ideas with Kuhn’s work on paradigms. He proposes a Fleckian perspective for understanding the context of technological change and innovation.

Several studies focus on Fleck’s theory of thought-styles in relation with medical research. Gaudillière (2004, p. 525-543) argues that our representation of the sexes has shaped the history of the sex hormones and he offers the term ‘work style’ (under the influence of Fleck’s thought style) to refer to the material action existing in science. Grzybowski, Sak and Pawlikowski (2013, p. 579-588) discuss the history of ophthalmology on the basis of Fleck’s thought-styles. McCullough (1981, p. 257-261) has been interested in thought styles in connection with the diagnosis of disease. Sak (2013) shows a parallelism to McCullough in considering thought collective and thought style as regards the diagnosis and treatment of diseases. Pena (2011, p. 907-910) presents the effect of Fleck’s epistemology and the concept of the thought community on the classification of the renal allograft pathology. Tréz (2010, p. 633-

642) looks at animal experimentation in a survey study and evaluates the result in view of different thought styles. Siwecka (2011, p. 37-39) argues that a specific thought style influences the diagnosis of mental disorders by putting restrictions on the interpretations of symptoms.

In addition to the studies mentioned above, Fleck's philosophy concerning thought collectives and thought styles has been extensively discussed in the studies carried out by Fagan (2009), Hedford (2007), Heelan (1986), Löwy (2008), Roepstorff (2002), Weiss (2003), Wittich (1981). These researchers have presented Fleck's contribution to epistemology and clarified his understanding of scientific observation as a social and cultural process.

Recently Fleck's ideas have gained importance among language specialists and educators and his explanations concerning thought styles have become a focus of interest. In the design of the programmes of teaching Languages for Specific Purposes (i.e. LSP), his thought styles and thought collectives have been used. As indicated before, Fleck states that in the exchange of thoughts between two or more persons a thought collective comes into being, but it is transient and accidental (Fleck, 1979). The thought collectives formed around organized social groups are *stable* and the thought style of these groups is fixed. These groups are important for contemporary science since they provide the appropriate situation for it to have a specific, thought-collective structure.

Having emphasized the importance of stable thought collectives, Fleck (*ibidem*, p. 105) specifies some structural characteristics shared by them and distinguishes two circles in the general structure of a thought community: a small *esoteric circle* and a larger *exoteric circle*. Each circle has members belonging to the thought collective and gathering around any work of the mind varying from a dogma of faith, a scientific idea to an artistic musing. Such intersecting circles come together and constitute a thought collective.

Any individual may be a member of several exoteric circles, but only of a few esoteric circles. A hierarchical system exists between initiates and various grades and circles are connected through many threads, but there is not any direct relation between the exoteric circle and the creation of thought. It is the esoteric circle which realizes the function of thought creation. However, it is not completely independent as it has to consider "public opinion", namely the opinion of the exoteric circle. In other words, the relation of the esoteric circles with their exoteric circles is similar to the relation of the elite to the masses.

In a community in which the masses hold a stronger position, there will be a democratic tendency and this will cause the development of ideas and progress, whereas in a community having an opposite structure the elite will isolate itself from the mass, and secretiveness and dogmatism will become the dominant force. At the individual level elite and mass communication can be experienced, as well. If a teacher and a pupil communicate with each other, there is a relation of mental superordination and subordination. However, in the case of two individuals belonging to the same thought collective and being on the same mental level a certain solidarity of thought leading them to a superindividual idea can be observed. This idea creates a shared mood between the two individuals.

Each question raised and discussed will have an effect on the thought style. Individuals sharing the same mood can recognize each other after the production of a few sentences and have a true communication. Yet, in the case of solidarity of thought, the speakers have different purposes and this leads to a kind of dependence dominating the whole communication of thought within a collective.

In the context of thought collective, Fleck directs the attention to various intersections and interrelations among collectives in space and time due to the complex structure of modern society (*ibidem*, p. 107). There are professional and semiprofessional thought communities in commerce, the military, sports, art, politics, fashion, science, and religion. He points out an important aspect of these communities focusing on the level of speciality and content restriction: “The more specialized a thought community is and the more restricted in its content, the stronger will be the particular thought nexus among the members. It breaks down boundaries of nation and state, of class and age” (*ibidem*). Therefore, learners dealing with a specific field and wishing to enhance their language skills in this field should know the general structure of a thought collective.

The rapid development of technology has increased communication facilities as well as business possibilities Dita Gálová (2007, vii) states that “globalization of the world economy requires professionals and specialists in various areas to communicate effectively in foreign languages. The success is conditional on their ability to manage language and cultural barriers...”.

Mastery of foreign languages opens new doors to individuals for their professional growth beside their personal growth. In the 21st century multilingualism is a reality of the developing world since it enables people to establish contact with each other, to exchange ideas and to get benefit from the cultural diversity. As opposed to the earlier assumption that speaking a foreign language was important for certain occupations such as managers or diplomats, it has gained importance in all professions. Knowing one or two languages provides individuals with better career opportunities (Pace, 2011). This fact redoubles the importance and necessity of language learning. In some countries, governments support mass education programmes in foreign languages to increase the business growth and find a medium of communication for the partners (Kennedy, 1990). This support has motivated people to learn new languages and an increasing demand for learning foreign languages with specific purposes in an effective form has emerged. Thus, courses related to the teaching and learning LSP have become popular.

The historical development of these courses dates back to the 1960s. Halliday, McIntosh and Strevens (1964), three well known linguists, have made the first remark concerning the importance of LSP in their book *The Linguistic Sciences and Language Teaching*. They write on the subject along the following lines (Halliday, McIntosh, Strevens, 1964, p. 59-76):

Only the merest fraction of investigation has yet been carried out into just what parts of a conventional course in English are needed by, let us say, power station engineers in India, or police inspectors in Nigeria; even less is known about precisely what extra specialized material is required.

This is one of the tasks for which linguistics must be called in. Every one of these specialized needs requires, before it can be met by appropriate teaching materials, detailed studies of restricted languages and special registers carried out on the basis of large samples of the language used by the particular persons concerned.

Following this early remark, LSP practitioners have not taken large steps in the analysis and exploitation of discourse and genre until the 1980s due to lack of sources and perception of discourse, but have continued their descriptions of texts (Swales, 2000). However, in the following years many studies dealing with textual aspects have appeared and the striking aspects of the professional discourse such as economics, physics, health sciences, etc. have been revealed (Carlin, 2005; Swales, 2000). Additionally, researchers have started to make use of the findings of the studies involving mid-sized corpora.

As a result of the popularity LSP gained in recent years, specific programmes such as languages for science, medicine or law, languages for academic purposes, and languages for business purposes have been opened. In fact, most of the learners attending LSP courses have already completed a general course informing them about the basic structures and vocabulary of the target languages, but they want to improve their knowledge for particular reasons like having further education or, - using this language in a specific professional context in social or natural sciences.

In LSP programmes, learners are usually adults. Therefore, they are well aware of the things they need to learn and the identification of their needs can play a vital role in the design of the programme (Kennedy, 1990; Laborda, 2011). Pace (2013) accounts for the importance of the needs analysis as a starting point in the organization of the content and teaching approaches as follows:

... the starting point should always be a study of the learners' needs, objectives and expectations for the course. This may include forming a list of preferences of what the learners would like to learn, as far as language and content is concerned, and of how they would like to learn it. For example, the needs of learners studying a foreign language for scientific or technological purposes are totally different from those of other learners studying for medical purposes or legal purposes, or financial purposes. The same goes for individuals studying a foreign language for specific trades or occupations and others still concerned with finding a job.

Then he mentions that depending on the purposes they study the language, the skills required in the field show diversity and difference. He exemplifies the skill variation with people learning languages for commercial purposes compared with those for working in a call centre. Although the former group needs reading and writing skills to understand the contents of an email and to write an answer to it, the latter group wants to gain listening and speaking skills to answer the phone, to leave a message and to inform the caller over the phone. As it can be understood from these explanations, teaching a foreign language for specific purposes is a complex process as it involves the reasons for learning the new language and the kind of skills and the knowledge the learner wants to acquire. This information is a guideline in the

organization of the content and format of a course corresponding to the interests and needs of the participants (Carkin, 2005; Master, 2005).

In addition, learners should be made acquainted with the thought style of the community they belong to due to occupational or academic reasons, because, as pointed out by Fleck, the thought styles can differ from each other or be close to each other. The physicists' thought style is similar to that of the biologists as long as the latter group does not support the thought style of the vitalists; however, the physicists' thought styles are different from those of the philologists. The difference becomes huge if a modern European physicist is compared to a Chinese physician or a cabalistic mystic in terms of their thought styles. In other words, LSP learners should be informed about cultural differences involving special thinking ways of a community, since cultural content plays a significant role in the construction of messages. It is also vital in the identification of specialized vocabulary (Cambronero, 2013).

Exposing learners to the thought styles of a specific group can help them acquire the conventions related to these styles. Thus, the proper production of the foreign language can be realized. Such a situation is found in the mastery of academic narratives as exemplified by Montgomery (1996, 13):

Scientist or not, one hears the persona of univocity, unbroken statement, the single voice of the scientific style. But how achieved? How constructed? For the most part, through a series of grammatical and syntactic strategies that attempt to depersonalize, to objectify all premises, such that they seem to achieve the plane of a historical essence: recent advances have shown ..."; "Analyses were performed ..."; "The data, therefore, indicate ...". The narrative is driven by objects, whether these be phenomena, procedures, earlier studies, evidence, or whatever.

In the process of acculturation into the chosen scientific or technical cultures, learners conform to the academic discourse conventions but apart from conventions, each subject learns words concerning his own speciality. Being aware of this fact, Fleck states the crucial role played by words in the conveyance of meaning and intercollective communication (*ibidem*, p. 109). He argues that all words possess separate senses which change in accordance with the thought style of a given thought collective. The meaning of the words "force," "energy," or "experiment" are different for a physicist, a philologist, or a sportsman. The word "explain" has a different meaning for a philosopher compared with a chemist, or the word "ray" means different things to an artist or a physicist, and "law" to a jurist and a scientist. Therefore, the learners of language for academic purposes need to be exposed to the lexical items they might use in their occupations or academic areas.

People belonging to different thought styles connected with a special trade find solutions to similar practical problems in different ways (*ibidem*). As explained by Fleck, a crack in the wall plaster is differently tackled by a painter compared with a bricklayer. The painter deals only with the damage on the surface of the wall and fixes it. However, the bricklayer looks at the wall structure. The solutions offered by each profession is directly related to their thinking styles. Therefore, LSP learners need to be familiar with this and should be exposed to sources training them in the appropriate way.

In this regard, there are various sources that can be exploited in LSP classes. For example, Laborda (2011) believes that internet offers various sources for the design of LSP materials. Authentic materials relating to the areas the learners study can be selected and used in the classrooms to increase their motivation. Some of these sources are listening materials such as podcasts, video sharing websites. Others are reference sources such as electronic dictionaries, concordancers, translators and encyclopedias. There are blogs enabling learners to share their ideas with each other. In short, any topic relating to the interest and expertise of LSP learners can be easily accessed and freely used on different websites.

6. Conclusion

The main concern of this study was to explain Ludwik Fleck's thought styles and thought collectives in relation with LSP. In the discussion Fleck's epistemology was presented. In view of the explanations put forth by Fleck, it was also pointed out how an effective LSP programme could be designed. Additionally, certain points that should be considered in the design of these programmes, such as needs analysis, cultural content, specialized vocabulary, etc., were also discussed.

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THOUGHT STYLE AND THOUGHT COLLECTIVE IN RUSSIAN CONSCIOUSNESS ACCORDING TO LUDWIK FLECK'S THEORY

We look with our own eyes, but we see with the eyes of the collective body. This principle is a perfect definition of the world perception presented by the Russian culture circle. Mikhail Bakhtin emphasised several times that the structure of a dialogue was made of numerous individualities, while Valentin Voloshynov stated that we were all mutual mirror reflections.

Ludwik Fleck, a scientist who did research on thought styles and collectives stated that every thinking individual, being a part of a certain community, has its own reality, in which and according to which he or she lives. Everyone possesses a lot of realities, some of them are contradictory: reality of everyday life or professional, religious, political, academic realities (for discussion, see Fleck, 1929).

The mirror in which the thought collective of the leading Russian thinkers is reflected, is the Eastern Byzantine tradition.

Byzantine Empire encountered Russian tribes in 860, when the Russians invaded the area near Constantinople. Both, Byzantine emperor and patriarch were aware of the fact that the best and the safest way to obviate the impending danger would be to Christianise the area of the Eastern Slavdom and to introduce Byzantine influences. The bonds with the Byzantine civilization left permanent marks on spirituality, culture and social mentality of the inhabitants of Rus and subsequently of Russia.

There is no doubt the Byzantine civilization was not entirely isolated from the Roman Empire. In fact, it was the continuator of the Roman tradition. However, soon after christening of knyaz of Kiev, Vladimir the Great, the Christian world was divided into Eastern Christianity and Western Christianity. This fact had a major impact on the perception of the world by the East Slavs, influenced by the Byzantine model, which started to perceive the West as the root of the evil. At the same time, people started to believe in the uniqueness of the East that was to play an important role in the history of the world. The Byzantine -Slavic model was concentrated on the idea of the Eastern Christianity that was the promoter of the Divine idea and the righteous reflection of the image of the Kingdom of God.

Messianism that originated from such thinking was to become the major incentive of the development of the Kievan Rus, Rus of Moscow, and finally modern Russia. The end of Byzantine influences, caused by the fall of Constantinople, did not stop the perception of the world and the mission. The role of the Messiah among the nations of the world remained unchangeable and surely its strong emphasis is present in the modern Russian thought.

The messianic determinant was ascribed to Russian princes and tsars, jointly with the emperors of Russia of the 20th century as well as Communist Russia. The 20th

century negation of the Orthodox Church and introduction of materialistic philosophy is of no importance. Byzantine's model of basileus, viceroy of God on the Earth, accepted by tsar emperors of Rus, and subsequently of Russia, was directly copied to the reality of totalitarian communism. What is more, a widely developed cult of personality of Stalin or Lenin would not have occurred in Soviet Russia if it had not been for Byzantine roots of an ideal emperor.

The criticism of the Orthodox Church, as well as other religious denominations, was not a barrier for communists to create their new opium for people, their new political quasi-religion and quasi-religious schemes and their quasi-God. Even nowadays, 20 years after the fall of the communism, the surveys of the Moscow Levada Center show that more than a half of Russian citizens believe that Stalin did more good than evil for the country and for the world, and almost 40 per cent of the young respondents (aged 35 and below) are certain that Stalin's contribution remits his sins (for discussion, see Duraczyński, 1912, p. 722).

Bolsheviks, who after the revolution of 1917 came to power, rejected the deification of tsar-basileus, but afterwards they restored the same deification with the greater power. According to Vladimir Zharow (2009), only deification of Ivan the Terrible, considered himself the Christ, who came to earth to save the chosen people.

We encounter similar deification when it comes to Vladimir Putin, current president of Russia. Tsar-Putin appears to be the omnipotent vicar of God on earth although his activity does not have much in common with God (for discussion, see Arutunuyan, 2011, p. 245).

Russia, as it was pointed out a by Russian-American journalist Anna Arutunyan, is a typically patriarchal country, just as old Byzantine used to be. In spite of change of the religion in the area of old Constantinople, a patriarchal model remained prevailing until now.

Coming back to the Russian area, it is worth mentioning the definition of a famous philosopher, Nikolai Berdyaev, who believes that:

Russian nation is not a male builder, its character can be described as female, passive and subjected in issues concerning the country. It always expects a bridegroom, a man, and an emperor (*ibidem*, p. 232).⁸

In other words, it expects its basileus, thanks to whom the mission of the nation will be completed. Mission, messianism, responsibility for changing reality are the main concepts of the Byzantine–Slavic thought style.

The above mentioned thought style defines, imposes (to some extent), encourages the individuals within the Russian thought collective to the messianic way of thinking.

According to Nycz, a Polish linguist who conducts research into Fleck's thought style and collective, a thought style determines the matter that cannot be determined in another way. The matter becomes invisible for general public, nearly as unconscious as breathing, becomes a constraint with which all generations live –

⁸ „Naród rosyjski nie chce być męskim budowniczym, jego charakter można określić jako żeński, bierny i poddańczy w kwestiach dotyczących państwa. Zawsze oczekuje oblubieńca, mężczyzny, władcy.”

generations persecuting those who think differently, those who do not participate in a collective mood. It lasts until the change of the thought style (for discussion, see Nycz, 2012, p. 107).

Nycz states that:

From the historic point of view, various thought styles influence one another. Although new eras create new intellectual backgrounds. Old concepts do not disappear at once. L. Fleck points out that each thought style leaves a trace (*ibidem*, transl. by BKK⁹).¹⁰

Confirmation of the thesis can be found in the above mentioned Eastern style of the perception of the world within Russian thought collectives.

Fleck states that in the course of time a certain style, certain thought structure is subjected to evolution, which took place also in Russian area. Currently, no one will call Putin president-basileus, as this notion was not used to name tsars. The leaders of the communist party were not officially named tsars. All these terms have one common sense paradigm – ‘viceroy of God on earth’, or the viceroy of the Absolute, quasi-God.

Fleck would name common denominators pre-ideas, which in his view are historic and arose on the basis of certain social thinking embryos of modern theories (for discussion, see Fleck, 1986, p. 53).

Apart from quasi-divine emperor of the Eastern model, Messianism is a pre-idea mentioned in the paper. The idea of Messianism has determined the thinking style of Russians until now. The mentality of perceiving individualities is inseparably connected with the notion of Messianism and mission. Individuality treated in the individual way has not developed. De Lazari (1985, p. 66), a connoisseur of Russian soul and Russian philosophy states:

In the Russian consciousness a collective body has advantage over an individual (We-Russian Orthodox, We -Russian nation or We-Soviet nation). Russian nationalism, just as every other, still overlooks rights of an individual and still highlights rights of the nation treated as the collective body. (transl. by BKK)

In Russian mentality, an individual is associated with pride and with the culture of the egocentric West, oriented on hedonistic satisfaction of needs. In such a view, there is no place for messianism in the name of the collective body. All actions, the West regards as beneficial to other nations, are viewed as egoistic goals, that have nothing in common with saving the world, but are associated with its exploitation and colonisation aimed at subjecting others to private businesses. According to the Eastern idea, Western thought collective comprises total rejection of Eastern, Russian hierarchy of values. In Russian philosophy and perception of the world, the only righteous criterion of a thought collective is ‘obszczina’, ‘sobornost’, solidarity with

⁹ BKK – mgr Beata Kukielka-Król

¹⁰ „Z historycznego punktu widzenia różne style myślowe słabiej lub silniej zazębiają się ze sobą. Mimo, że nowe epoki tworzą nowe nastroje intelektualne, stare koncepcje nie znikają nagle. L. Fleck wskazuje na fakt, że każdy styl myślowy pozostawia ślad.”

everyone and for everyone, nation, class and group. Aleksey Khomyakov, one of the creators of Slavophilia, says:

The truth, not available to the way of thinking of individuals, is available only for collective bodies tied by love (cited after *ibidem*, p. 112, transl. by BKK).¹¹

It is worth pointing out that Slavophilia, represented by Khomyakov, is a perfect example of communal, collective model of thinking. The basic concept of Slavophilia is the value of faith in peaceful, harmonious symbiosis of nations. Slavophiles highlighted the necessity for creation the community of believers based on truth, love and freedom, that were believed to be the basis of Orthodox Church.

Slavophiles indicated that analogical harmonic relations were prevailing in the Rus of Moscow between the people and the emperors, which resulted from the Orthodox faith. It was meant to determine the character of Russians as people who love justice, freedom of spirit, and common work.

Coming back to the article of Fleck and to his notion of thought styles and thought collectives, it is worth noticing that the scholar in the analysis of the subject, distinguished the notion of the esoteric circle that did not have anything in common with the popular understanding of esotericism. The esoteric circle, according to Fleck, is a small group of specialists that create or develop certain pre-ideas of a specific thought style. Considering this definition, Slavophiles of 19th century Russia, represent such an esoteric circle that popularized ideas widespread in Russia, but described in a different way.

As the Western concepts or hostile thought styles became present in Russian mentality, the belief in the uniqueness and in messianic destiny was to be awoken. Being aware of the necessity of reforms in the country, they searched for an inspiration to conduct them, stating that every nation, every thought collective can develop only on the basis of the schemes developed through centuries and should not be based on foreign cultures, in particular those which refer to different systems of values.

Westernizers – an opposing esoteric circle, fascinated with the Western culture, started the discussion with Slavophiles. It was the first serious ideological conflict among the consistent thought collective. Obviously, in the history of Russia there were numerous situations, when on the territory of the Eastern thought style other influences became apparent. The reforms of Peter I can serve as an example of the first influence of European values on Russian culture. However, it was enforced by the emperor and the conflict of Slavophiles with Westernizers had internal and vertical dimension.

It seems obvious that the typical Russian thought collective was presented by the supporters of the Slavic model. In their view, the removal of the Western thought style, its modernisation and even transformation into the Eastern style, could save Russia and Europe suffering from the crisis of values.

A famous Russian historian Ludwik Bazyłow (1977, p. 123-124) is convinced that such a way of thinking of the Slavophile group was extremely subjective. What is more, this style exists until today.

¹¹ „Prawda, niedostępna myśleniu jednostek, dostępna jest jedynie zbiorowości jednostek powiązanych miłością.”

According to Fleck, there is nothing strange about it, considering the fact, that perceiving the world of a certain thought collective can never be entirely objective, since it is often determined by centuries-old models and formulaic schemes.

The conflict between Slavophiles and Westernizers indicated the moment of inevitable interfusion of thought styles of two contrary cultures. As it has been mentioned, these influences took place a long time ago, but it is the first time they appeared inside the society, and not at the level of authorities. As Fleck wrote:

The rules of a collective are regarded [...] as arbitrary [...] Foreign thought style seems to be mystic, rejected answers are often reckoned the most important, explanations unconvincing or misconceived (Fleck, 1986, p. 142, transl. by BKK).¹²

Hostile Slavophiles and others Russian defenders of values had similar experience. The Western thought style inevitably interfused the Russian area in the course of time. The confrontation of two thought styles at the level of two continents was to bring exceptional results. As an effect of the inter-collective communication and inter-collective exchange of thoughts, thought styles crossed one with another and started to be modified and assimilated (for discussion, see Nycz, 2012, p. 111).

This is the way, in which the Western idea of socialism, originated in France, England and Germany, was modified and assimilated. The answer to the question why this idea had its special place in Russia seems obvious. The above mentioned, Byzantine-Slavic thought styles, characterized with messianic ambitions caused that Russia, as no other country, have become a place where ideology of community creating consistent thought collective could fully develop.

It may seem that subjected, enslaved by tsar society cannot take French principles: equality, freedom and fraternity. However, the fact ought to be shown from a different perspective: the rule that these three revolutionary categories were to realize in community, commune, unity with a thought collective – “WE”.

Tsar-basileus, to whom Russians were faithful, was replaced with the leader and the party, so that the scheme that originated in Byzantine had not been disturbed. The widespread idea of the unique obedience in Russia, and became the most fertile soil for the development of communism.

Another important element was transmitted to the Russian thought collective from the culture circle of West. It was the principle of an individual and the right to individuality. Together with the notion of socialism, Russian intelligence community or intelligentsia of the 19th century started to be acquainted with the notion of human-god, superhuman, creature that is equal or even greater than the Creator.

Fyodor Dostoyevsky, a well known Russian author, who was fascinated with socialism in his youth, read a lot of books of German thinkers. While meeting with other intellectuals in the Petrashevsky Circle, Dostoyevsky studied such books as *Christ and tsar* by Bruno Bauer or *The essence of Christianity* by Ludwig Feuerbach. German socialists believed that there is no God. A human selected the best

¹²“Zasady obcego kolektywu odczuwa się [...] jako arbitralne [...] Obcy styl myślowy, wydaje się być mistyczny, odrzucone przez niego pytania są często uważane za najważniejsze, wyjaśnienia uznane za nieprzekonujące albo chybione.”

characteristics and at the moment he or she realizes that fictional Creator was the result of creation, he or she will become the God with the divine characteristics ascribed. A human, according to this philosophy can do everything and in order to rule the world he does not need the notion of God. It is the human who created God in his/her own image, not reversely.

Thought styles of the German thought collective, and exactly German socialistic esoteric circle, according to Fleck, influenced the Russian thought style in the way it caused the fall of the notion of Christocentricism.

Culture of Rus and subsequent culture of Russia have always been Christocentric. Divinity and humanity of Christ was the ideal, to which people had to strive, but taking into account collective thinking of Russians involving imperfections, and conformity, this ideal could never be achieved in life. Russian literature including prose of Fyodor Dostoyevsky or Leo Tolstoy can be a good example. The characters created by them are always imperfect. Andrzej Lazari states:

The reason why in the Russian literature, the 'positive' characters are in minority is that every human is 'worse' than the God, because in the consciousness of the author there is always the 'better' one (Lazari, 1985, p. 100, transl. by BKK).¹³

Impossibility to achieve the ideal was connected with another belief of the Russian thought collective – the belief in the necessity of life in humility, considered by Berdayev as a female, subjected style of thinking. Humility and patience were the values assumed by the Orthodox religion. Aleksander Zvoznikov, a scholar who does research on Russian culture, proves that patience in humility allows Russians to survive all historical maelstroms and results in the low level of civil expectations. People deal with hard conditions of life, severe climate, despotic rules of subsequent rulers with patience (*ibidem*, p. 95).

Humility, patience, impossibility to achieve the ideal of Christ, considering the idea of divinity, humanity and superhumanity that was aimed at replacing God; came as a collective shock to common people. Although the communist rules were mainly imposed, they had to be accepted with the innate humility and patience. In this way, the developed style of collective thinking, turned out to work in new conditions.

Christocentricism was transformed into the new form of divinity, Leninocentricism and Stalinocentricism. Contrary to the culture of the West where individual 'divinity' of a human was prevailing; in Russia no one would overvalue his or her individual 'I' over the collective 'WE', subjected to one basileus-emperor and presented the thought style of the Byzantine model.

The thought style that originated in Byzantine seemed to be adapted at that time, even by citizens, who could not accept the communist, totalitarian hell of quasi-paradise, quasi-religion promised by the new authority. Fleck states:

¹³ „Dlatego w literaturze rosyjskiej tak mało jest „pozytywnych” bohaterów, każdy człowiek jest „gorszy” od Chrystusa, bowiem w świadomości autora zawsze istnieje ten „lepszy”.

[...] all believers belong to a thought collective of a certain religion – to the official religious community, formally accepted, without including their thought structure. So one can belong to the thought collective of a certain religion, without being officially accepted to a parish and reversely (Fleck, 1986, p. 136, transl. by BKK).¹⁴

As it has been mentioned, a characteristic feature of the Russian thought style is exceptional messianism and the idea of mission. This criterion was present in Russia in various aspects. It was strongly developed in the Russian philosophy, especially in the 19th century. The leading thinkers, Vladimir Solovyov, Nikolai Berdyaev, Sergey Bulgakov and many others spread the idea of the uniqueness of Russia.

In the circle of Russian philosophy, in this paper special attention should be paid to the Russian cosmonauts. Nikolai Fedorov, called ‘Moscow Socrates’, is considered the father of the Russian cosmism. He earned this epithet since he himself did not write any books, but his reflections were written by his students Nikolai Peterson and Vladimir Kozhevnikov.

Fedorov is the author of the exceptional and utopian project ‘common task’. This project is not a coherent philosophical system, it is collection of hints and assumptions with the common aim of the resurrection of the departed – all, starting with Adam, until the last human. The assumption of the project is synergy of all fields of science and connection of all with all and for all.

In the book *Philosophy of the Common Task*, we find a clear instruction, peculiar categorical imperative of salvage, resurrection of all citizens of the world, not only the Russians. Such a thought style is typical for a collective of a Russian cultural area. If I do something, I do it for others.

Although the main concept of Fedorov’s project was the victory over death, the idea of the thinker included many other issues. The philosopher dealt with crucial problems such as ecology, promoting rational regulation of nature and also regulation of the Universe. He proved that coexistence with the earthly nature without considering the rules prevailing in the outer space is not possible.

Russian cosmism is presented by many other thinkers. It is obvious, considering the idea of a philosopher, Siemion Frank (1992, p. 493) who states that “*strong sense of cosmos*” is one of the characteristic features of the Russian philosophy.

Scholar cosmism, popular in Russian cosmism, was influenced by Russian reflections, presented by native authors, and also by visions of the Western philosophers, including Bergson. It seems important that in scholar cosmism not always, as it was in the case of Fedorov, religion plays a significant role. Konstantin Tsiolkovsky, one of Fedorov’s students, the creator of the first rocket and Vladimir Vernadsky, theorist of the concept of noosphere, were critical about the Orthodox Church. In their analysis and studies, also oriented on common welfare of the whole world and the universe, the collective principle of the Russian messianism was more important than religion. That is the thought style that influenced the theory of

¹⁴ “[...] do kolektywu myślowego jakiejś religii należą rzeczywiście wszyscy wierzący – do oficjalnej wspólnoty religijnej, formalnie do niej przyjęci, bez uwzględnienia ich struktury myślowej. Można więc należeć do kolektywu myślowego jakiejś religii, nie będąc oficjalnie przyjętym do gminy wyznaniowej i odwrotnie.”

subjection of nature, its regulation and subjection of the universe. Tsiolkovsky paid special attention to a thought style, when he mentioned Fedorov:

I take my hat off to Fedorov. In my family the love for Russia and respect for Russian mission always came first. Fedorov was a faithful son of Russia. I often repeat his words, many years after his death: "Even the width of Russian territory encourages heroic characters and conquest of the universe" (Tsiolkovsky 1939, p. 159, transl. by BKK).¹⁵

Both Fedorov and Tsiolkowsky, and subsequently Vernadsky represented one thought style within one collective and at the same time found their individual style, creating their esoteric circle.

Most of the representatives of cosmism agreed with their basic issue that the world is the part of the universe, and they jointly create inseparable unities. Tsiolkovsky (1993, p. 269) wrote about the monism of the universe in the following way: "The whole process of the study is striving to monism, to unity, to pre-beginning. Its progress is determined by striving to unity. Monism in science is predetermined by the structure of the universe" (transl. by BKK).¹⁶

Vernadsky, similarly to two others representatives of cosmism, promoted the idea of unity and predicted emerging of new era in the history of the Earth, the era of noosphere. Noosphere is not only given but also assigned to a human, who is obliged to conquer and domesticate cosmic space.

The philosophy of cosmism is such a wide phenomenon that it is hard to present the magnitude of its aspects in this short article. Its messianic dimension seems important as it refers to the thought style of the Russian collective mentioned above.

It is not exaggeration saying that the Russian cosmism has considerably influenced the evolution of thought style concerning the Universe in the whole world. Thanks to the eminent representatives of this trend, the study of the Universe underwent a visible evolution from the static to dynamic picture of the world. Currently, leading scholars of the Universe and of ideas about the unity of the Universe, often mention thesis proposed by the Russian scholars.

Nowadays, in the West, in the United States and in Russia, concepts proposed many years ago by the Russian representatives of the cosmism are getting more popular. One of the tendencies is the thought style promoted by transhumanists, ideology that propagates the use of the science and technology, especially neurotechnology, biotechnology and nanotechnology, to overcome human limitations and enhance human condition. Transhumanists, as the representatives of cosmism, mention the regulation of the surrounding nature, the conquest of the world and the study of the conditions in the universe influencing the conditions of life on the earth. is

¹⁵ „Я преклоняюсь перед Федоровым. У нас в семье любовь к России ставилась на первое место, а Федоров был верным сыном России. Я часто повторяю его слова, ставшие мне известными не от него самого, а много лет спустя после его смерти: "Сама ширь земли русской способствует образованию богатырских характеров и как бы приглашает к небесному подвигу."

¹⁶ „Весь процесс науки состоит в этом стремлении к монизму, к единству, к элементарному началу. Ее успех определяется степенью достижения единства. Монизм в науке обусловлен строением космоса.”

A human whose progress results in achieving longevity and immortality is essential in this study.

There are many groups on the whole world that belong to transhumanism, for example immortalism that is oriented to fight with various forms of death. In 2012, on each continent, Parties Prolonging Life came into being, and in Russia Social Project “Russia 2045” was introduced.

Transhumanic thought collective is based on the thought style developed by the humanist thought style, however its basic thesis includes also styles offered by the development of the contemporary science and technology. On the Russian ground, as it has been mentioned, an important role is being played by the cosmic thought that has its origins in the 19th century. On the web page of the Russian Transhumanic Movement and in many studies, one can read that Fedorov is considered the father of the new ideology, but inspiration comes from other representatives of cosmism and thought styles they present. Even general analysis of the subject allows to state that transhumanists have largely distorted the ideas of the cosmism, in which the changes in the structure of the world, the Universe, the nature and human body, excluding physical aspects, possessed the spiritual dimension. In the philosophy of the transhumanism we encounter excessive cult of technology and robotization of a human, who loses the original essence owing to a transformation process.

On the basis of the example mentioned above, we deal with the phenomenon called a change of the thought style. Fleck stated that every vast thesis undergoes the classic era, in which one can see only corresponding facts, and second era of complications in which exceptions appear. These exceptions may finally outnumber the amount of correct cases (for discussion, see Fleck 1986, p. 57).

A similar situation occurs while adapting cosmic thought styles by transhumanists. Their manifests were based on the theory of the past, however with the development of science and new, contemporary thought collectives, facts that corresponded with their ideology were transformed into their own new code.

It seems obvious that for both concepts there is one common thought style developed by the Russian collective – messianic style of looking at the role of Russia in the world. In spite of the cooperation with the Western transhumanic circle, Russians still strive to the position of the leader on the international arena. In the Western scholar communities, projects that are worth mentioning appear whereas Russians automatically try to copy them and do everything to use their own innovative solutions.

The development of the chronicle is considered one of the achievements of the transhumanist movement. The idea was introduced by the American scholar Robert Ettinger, and then found its reflection in the form of cryonics centre, KrioRus near Moscow, where bodies are being frozen. It is not an exaggeration to say that it is in Russia where the most extreme studies concerning prolonging of human life, and consequently the immortality of a human, are conducted. The technical project of “Russia 2045” seems to be fantastic or even utopian. Their idea to create human Avatars assumes treatment with ill cells of nanorobots implemented in the body until the creation of the artificial intelligence and the artificial body.

The thought collective disseminating the fantastic concepts is gaining more and more supporters. As it has been mentioned, these works are done for the whole

humanity in the name of the messianic mission of the Russian nation. On the Russian ground, there cannot be another thought style, as the members of the collective, brought up within one tradition, present the thought style that is a result of centuries-old beliefs. It is not important whether a proposed idea is consistent with the world's principles of ethics, it is important that it is consistent with the messianic code.

Transhumanic ideology seems to be very dangerous, since it enforces deep change in the essence of humanity, its total transformation in accordance with the technological science. It is a total dehumanisation. It should be highlighted that for achieving the goal, the activists of the transhumanic movement consider facts that pose danger to humanity as irrelevant and by the astronomic social propaganda they make enormous efforts to subject them to their thought style and impose this style to the rest of the world.

The analysis of the assumptions of transhumanists allows to put forward a thesis that in many cases we encounter not fight for life but fight against life since there are many eugenic elements in their theory that eliminate weak individuals in order to make a strong person even much stronger.

Transhumanists, with their messianic thought style, often turn with their projects to politicians, asking for the support of their activity. Considering the fact that many projects have a negative ethical dimension, the threat of creating a new theory, dangerous for the society become apparent. We should remember that politicians, including the Russians, several times used science or pseudo-science to propagate their own inhumane ideas. On the eve of the Second World War Ludwik Fleck in his paper 'Science and environment' emphasized dangers that the thesis about the cultural conditioning of scientific knowledge could bring: many politicians – especially Nazis and Communists preached demagogic political and social slogans getting inspiration from scientific discoveries.

The sociological, group nature of cognition was used to create a political slogan of social, class basis for science and then competitive political trend created the spirit of the nation and of race [...]. Since every science depends on the environment, the process needs to be reversed: for artificially made environments proper science has to be created. After all, there is no objective science! As a result, left-wing, right-wing, proletarian science or national physics, chemistry etc. should be created as soon as possible. Politically required, preconceived results needs evidence to be adjusted. Planned thought economy will be established, bureaucratic facilities will replace free creativity, propaganda will replace autonomic interfusion of the society. [...] Ignoramus or half-ignoramus who heard something about the artificial breeding of horses will try to breed a horse with wings... (cited after Sady, transl. by BKK).¹⁷

¹⁷ „Z faktu socjologicznej, zespołowej natury poznania zrobiono naprzód polityczne hasło socjalnego, klasowego uwarunkowania wiedzy, a potem konkurencyjny kierunek polityczny stworzył ducha narodu i rasy [...]. Ponieważ każda wiedza jest zależna od środowiska, więc trzeba proces odwrócić: do zmienionych sztucznie środowisk dorobić odpowiednią wiedzę. Przecież i tak nie ma obiektywnej nauki! Więc co prędzej trzeba "zrobić" lewicową lub prawicową, proletariacką lub narodową fizykę, chemię itd. Do politycznie potrzebnych, z góry przyjętych wyników dorobimy dowody. Zaprowadzimy planową gospodarkę myślową, biurokratyczne ośrodki zastąpią wolną twórczość, propaganda zastąpi autonomiczne przenikanie społeczeństwa. [...] Nieuk, czy

Krygier in the article *Time for the Slavic civilisation* states that the Slavic countries, especially Russia, still have a chance to play the messianic role in the history of the world in accordance with the principles developed through century-old thought collectives. However, it cannot be an idea that would damage the humanity, whereas the transhumanic code is considered in this way.

The scholar sees that the possibility to save the world in Russian-Slavic cosmism of Fedorov, Tsiolkovsky, Vernadsky and also Kozyrev, Laptiev, stating that the cosmism may become "the core of crystallization" of the new world view that would harmonize and transform the content of the civilisation developed in the West and in the East. This will result in the empowerment of the process of the creation of noosphere, described by Vernadsky and of the idea of the unity of the Universe and humanity, preached by others representatives of cosmism. The author of the article states:

The dominant globalisation, after closer investigation, can be best seen in the field of technology and finances. However, this is not the essence of the development of the society – it is not enough. It is far-reaching reductionism. Globalisation of the technology is the process involving some technical means. What is more, it is the globalisation of the consciousness, in the sense of the responsibility for the planet, in the sense of understanding of the moment of evolution in which we currently are, in the sense of comprehensiveness and understanding of the unity of a human with the Universe.

This is why holistic (broad) conception of a human and holistic image of the world is needed. After all it is a high time to understand and describe the wholeness. That is also the testament of Slavic philosophers (Krygier, transl. by BKK).¹⁸

Nikolay Danilevsky, a theorist of the ideology of "the new Slavophilia", the theory described in this paper, wrote in his work titled "Russia and Europe" (1871) that Slavs could and should create their original civilisation. He also believed that if the land of Slavs had not had noble sense, it would have had no sense.

The Eastern civilisation, with the Byzantine-Slavic (Russian) thought collective, has a chance to widen its thought collective with the use of Russian cosmism, which according to many scholars, is the top of Russian philosophical-social thought. Cosmism turns the attention to threats that derive from the separation of a human from the nature and to the spiritual aspect of the humanity and the world's existence. A human, according to the concept of the representatives of the cosmism, is *homo ecologicus universalis*; a being who looks on the world and the universe as a whole.

pólnieuk, który coś słyszał o wynikach sztucznej hodowli ras końskich, próbuje wyhodować konia ze skrzydłami..."

¹⁸ „Dominująca obecnie globalizacja, jeśli się jej przyjrzeć, przejawia się przede wszystkim w globalizacji technologii i finansów. Nie o to jednak chodzi w rozwoju człowieczeństwa - to nie wystarcza. Jest to daleko idący redukcjonizm. Globalizacja technologii - to globalizacja wybranych środków technicznych. A rzecz idzie o globalizację świadomości, w sensie odpowiedzialności za planetę, w sensie rozumienia momentu ewolucji w jakim się znajdujemy, w sensie całościowości i rozumienia współzależności człowieka z Kosmosem. Dlatego potrzebna jest holistyczna (całościowa) koncepcja człowieka i holistyczny obraz świata. Przyszła bowiem pora, żeby uświadomić sobie i opisać całość, całościowość. I to również jest testament słowiańskich filozofów.”

“Cosmic” human is the greatest creation of the Russian thought style, developed by a collective, and a given esoteric circle, on the basis of the missionary vision of Russia.

Krygier (*ibidem*) confirms the thesis put forward in this paper and turns attention not only to messianic aspirations of Russia, but also authentic pursuit to wholeness: “celnost”, “celostnost”, “vsejedinstvo”. According to the scholar, it corresponds perfectly with the contemporary holistic approach, that is holistic with regard to a human nature and his environment. Thanks to a cosmic thought style, Russia may have a chance to propagate its own thought styles and in the longer perspective make the presented collective wider.

Representatives of cosmism in the name of messianic idea, dreamt of the creation of one thought collective for the whole world. So it is worth to pose a question whether the homogeneous thought style for the whole humanity and creating one thought collective, directed by one model of thinking is possible. Logically, it seems to be beyond reach. However, there is no doubt that there are a few universal notions that are considered in the same or similar way in the whole world. For example, the way of perception, thinking about home, family is independent of the thought style and division into specific thought collectives.

However, the question does not refer to individual notions but to creating the common idea, according to which the thought style will be consistent or, that would be ideal for the whole human nation. In such a case, one thought collective would appear on the basis of global synergy, union of hearts and thoughts.

The issue of such a possibility was described by Fedorov. His project of ‘common task’ of all people assumed the reconstruction of the world’s fraternity and reconstruction of authentic kinship. Considering the fact that we all descend from one grandfather, we all should belong to one thought collective, that would focus on the fight with nothingness, death and destruction.

The philosopher states that people enter into intercultural dialogues through communication, so the dialogues are, in a way, the tools of interfusion of various thought styles. The more frequent is the interfusion of styles, the greater is the likelihood of interference and the greater is the chance for the unity of beliefs.

It is interesting that religion is regarded as a major threat against the dialogue between collectives, since it can become the bone of contention even between such consistent collective as a family (husband and wife). This is why the common denominator is the science and knowledge which lack the mystic character and therefore have greater chance for bringing people together. The scientific discovery that serves for the development of the humanity is, according to Fedorov (1995, p. 309), the chance for the change of the thought style. The identical concept was presented by Fleck.

Fedorov’s remark is even more interesting since he himself as the supporter of the Orthodox Church, separates from Byzantine-Russian thought model in a way. However, his departure is superficial and a threat that he sees in religious views does not harm the thought style about the messianic role of Russia. The philosopher proposes a new religion based on ecumenical principles of churches, under aegis of the Russian Orthodox Church, since according to him only in the Orthodox Church implementation of the principles of real fraternity and equality is possible. His attitude is typical for Byzantine-Slavic model.

It is unknown yet whether hopes for spreading Byzantine-Slavic (Russian) thought style and broadening of their thought collective can be put into practice. However, as Fleck states, we cannot take from anybody the right for such aspirations. According to Fleck:

[...] For every collective [...] there exist characteristic moments when it is believed that further verification isn't necessary. The idea became more shaped, systematic and limited, in other words: became mature and compatible with the thought style of a certain collective. Any further questions are not important, even unnecessary for the collective. Certain questions should not be asked to the members of religious, political or scholar collectives (cited after Sady, transl. by BKK).¹⁹

In other words, the members of a certain thought collective have a right to think according to their own style and are not expected to change constantly their thought styles in accordance with the expectations of our thought collective.

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¹⁹ “[...] Dla każdego kolektywu [...] istnieje charakterystyczny moment, w którym uznaje się, że dalszej weryfikacji już nie trzeba. Pogląd zaokrąglił się, usystematyzował, ograniczył, słowem: dojrzał, otrzymał swoją postać zgodną ze stylem myślowym danego kolektywu. Wszelkie dalsze pytania uznał kolektyw za zbędne, wręcz nieprzyzwoite. Nie wolno pytać o pewne rzeczy członków kolektywów religijnych, politycznych czy naukowych”.

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COGNITIVE STYLES IN FOREIGN LANGUAGE LEARNING

1. Learning

With the onset of life, learning comes as an imprinted ability of living beings co-inhabiting the Earth. However, different species have different capacities to learn. Amphibians and reptiles are genetically equipped with certain “skills” and do not learn much through association from the environment that they live in. As R.J. Gerrig & P.G. Zimbardo (2009, p. 203) explain, frogs have no need to learn how to catch flies. A frog hatches with “pre-installed” brain cells that serve as “fly detectors” which make it quickly put the tongue forth to catch the fly (*ibidem*). On the other hand, higher animals, such as human beings, are genetically predisposed to acquire new knowledge and skills and change them in response to their environment.

According to R.J. Gerrig & P.G. Zimbardo (*ibidem*, p. 168), human learning is a process with three major characteristics:

- it introduces the change in the behaviour,
- the change is relatively permanent,
- it is based on experience.

A. Longstaff (2000) adds that such a change in behaviour caused by experience takes place thanks to brain plasticity by “rewiring of neural pathways”. Some neural connections are hard-wired, which means they are specified and unlikely to be changed. On the other hand, there are neural pathways that are capable of constant rewiring, i.e. they are capable of “making adaptive (plastic) changes in response to the environment” (*ibidem*, p. 376). So acquired (learned) changes are stored in memory as traces or engrams. The previous information, however, is not lost and it is retrievable through cues. It is also common knowledge that brain plasticity is progressively reduced with age. This fact accounts for the increasing difficulty to change behaviour (i.e. to learn) when people grow older. It is generally accepted that the optimal conditions for learning exist before the time of puberty. Puberty, in overall terms, marks the completion of brain specialization (lateralization) and the beginning of greater strain to introduce a relatively permanent change.

A distinctive example of human learning is development of language. Language is a property that distinguishes human beings from other species as no other species can use language to communicate in the way people do.

First language is acquired subconsciously before the lateralization processes are complete. However, human beings never lose, apart from pathological instances, their capacity to develop new languages. Despite substantial reduction of brain plasticity after lateralization, the human brain retains a measure of plasticity throughout its entire life (Merzenich, Grajski, Jenkins, Recanzone, Peterson, 1991, p. 873–887). Thus, the internalization of new information or skills may be increasingly demanding with age,

but never totally impossible. This perspective helps to understand why it is easier to learn foreign languages (FL) at the young age rather than late adulthood.

2. Memory

Learning is inseparably connected to memory, and the two are mutually dependent. Memory is defined by A. Longstaff (2000) as “the storage of the altered behaviour over time”. The most common division branches memory into declarative and procedural (Gerrig et al., 2009). Declarative memory, also referred to as specific memory, is memory for facts. Declarative learning, for example learning a list of foreign words, requires repetition, conscious recall and as such may be relatively easily forgotten. Declarative memory is further divided into episodic memory, i.e. memory for items associated with specific episodes, and semantic memory which is memory for items unassociated with any particular events. On the other hand, procedural memory, also called motor or implicit, is memory concerned with how things are being done, i.e. how we remember the procedure of performing certain skills, such as reading a book or driving a car. Procedural memory may be nonassociative and associative with the latter one further divided into emotional and motor. Figure 1 shows the division of memory types and brain areas responsible for their processing.

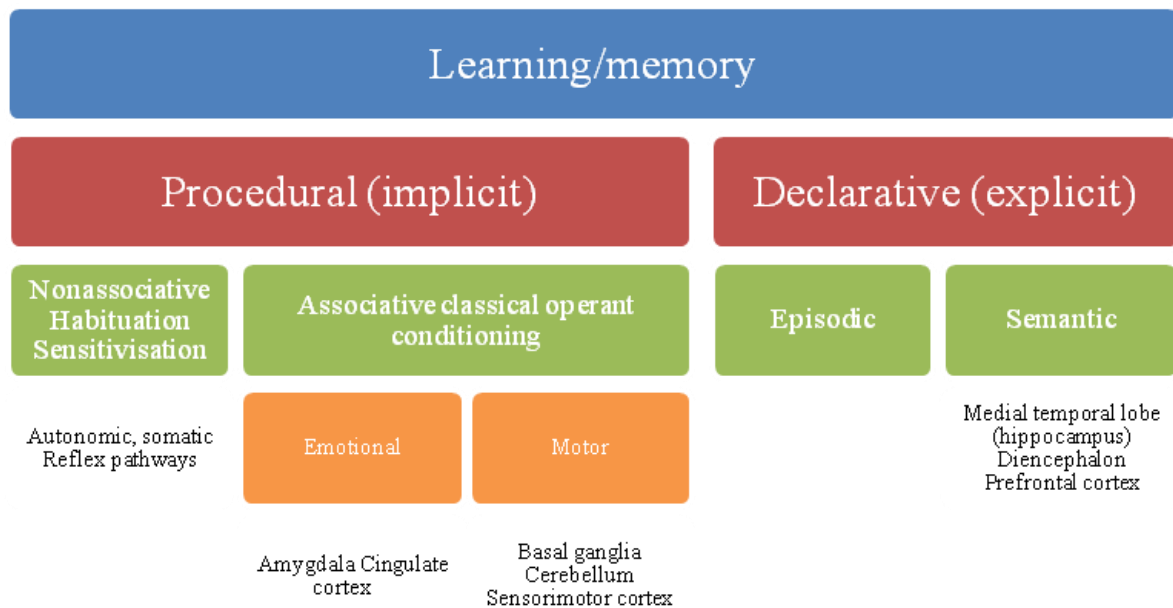


Fig. 1: Types of memory (Longstaff, 2000)

Procedural memory is much slower in comparison to declarative memory in the sense that it requires a lot of practice, and learning takes place gradually over time. However, once information is stored in the procedural memory, it does not require conscious recall and is available for a long time even without rehearsal (*ibidem*).

Learning is, in general, a combination of declarative and procedural processes. For example, learning to speak a foreign language requires declarative memory for vocabulary items and grammar rules and procedural memory for the sequence of tongue movements in the oral cavity to produce sounds.

3. Cognitive styles

The process of storing new knowledge, language knowledge included, in the form of engrams is a cognitive process, i.e. it deals with the way the brain processes new information. There are numerous definitions attempting to explain the term “cognition” and they are widely accessible on the Internet. One of them defines cognition as:

a term referring to the mental processes involved in gaining knowledge and comprehension. These processes include thinking, knowing, remembering, judging, and problem-solving. These are higher-level functions of the brain and encompass language, imagination, perception, and planning (http://psychology.about.com/od/cindex/g/def_cognition.htm).

It is clear that developing any language is connected to cognition and thus it is a cognitive process. Learners have permanent individual preferences to learn that interconnect cognition and individual psychological traits. These preferences are referred to as cognitive styles and they obviously have influence on how different people develop languages.

When cognitive styles are discussed in reference to educational contexts, they are usually described as learning styles (Brown, 2000). Learning in an educational setting, however, is never purely cognitive and it involves a range of affective factors, such as motivation, self-esteem and emotional states. Character and personality also influence style preferences. Cohen & Weaver (2006) grouped learning styles into three broad categories:

- 1) sensory/perceptual
- 2) cognitive
- 3) personality-related

In Cohen & Weaver’s (2006) typology, learner preferences within the sensory/perceptual domain determine the degree to which learners benefit from learning through senses, e.g. visual input or tactile activities. In the area of cognition, these preferences help to describe a learner as more global or more detail-oriented, better at analysis or synthesis, benefiting from inductive or deductive material. Finally, personality-related factors are concerned with the degree of self-confidence and help to categorize learners as either more introvert or extrovert, intuitive or more concrete oriented (*ibidem*, p. 163).

Depending on the combination of learning preferences, individual learners approach foreign language development in different ways. Out of a number of learning patterns, there are a few which are considered particularly relevant to the theory of foreign language development. They include brain specialization, auditory and visual preferences, field sensitivity, ambiguity tolerance, reflectivity and impulsivity (Brown, 2000).

- Brain specialization relates to the process of lateralization in which various bodily functions are located in either right or left brain hemisphere. As widely known, in the majority of cases, language centres are found in the left brain hemisphere. The left hemisphere is typically responsible for logical-mathematical skills whereas the right brain hemisphere processes

visual, auditory and tactile input (*ibidem*). The two hemispheres are joined together by corpus callosum which enables their communication and cooperation in learning contexts. Individual learner styles will depend on the right or left brain dominance. Right-brain-dominant learners are more holistic in their approach to language learning, they are more intuitive and they respond well to inductive learning and images. Learners with the left-brain-hemispheric dominance prefer deductive approaches, are better at analysis of individual language items, classification and reorganization.

- Auditory and visual preferences influence the degree to which learners benefit from either visual stimuli or auditory input. Some learners find it more attractive to analyze graphs and pictures. Others are more inclined to learn through listening to teachers and instructional material.
- Field independence/dependence categorizes learners in terms of how they perceive “a field” of various items. That “field” may refer to more concrete items in e.g. the picture/drawing or more abstract collection of thoughts and ideas. It is interesting that field dependence (also known as field sensitivity) or independence seem to become stable cognitive styles after puberty. Even more interestingly, H.D. Brown (*ibidem*) cites findings that suggest that the type of the “field” mode is connected to the cultural and social environment. For example, men in western cultures are more frequently field independent because of defining intelligence primarily in terms of the analytical dimension (and ignoring two other dimensions: verbal-comprehension and attention-concentration) (*ibidem*). At the social level, typically highly socialized agrarian and authoritarian upbringing of children produces adults with field dependent style in contrast to competitive democratic and industrialized societies which facilitate developing field independent styles (*ibidem*).

In a foreign language classroom, field independent style allows for picking only relevant items from the “field”. It helps to see the parts of the whole. It may also help to perceive details, deal with analytic tests, master pronunciation accuracy and benefit from deductive classes (*ibidem*, p. 116). Field dependent style, on the other hand, might prove useful in communicative aspects of language development.

- Ambiguity tolerance is a term describing the degree to which a learner is willing to accept information that contradicts their system of knowledge and views so far. People tolerant of ambiguity are open to accept contradictory ideas and facts. Ambiguity intolerance means rejecting items that are not compatible with the already established system of beliefs. In a foreign language learning context, there is a great deal of linguistic data and exceptions to the rules that are incongruent with either system of knowledge of one’s mother tongue or system of foreign language rules. From this perspective, it may be concluded that ambiguity tolerance may prove more useful in the foreign language learning context.
- Reflectivity and impulsivity is another dichotomy that draws a distinction between learners who rather intuitively jump into conclusion on the spur of the moment and those who need more time to weigh pros and cons before reaching the final verdict. Some past studies suggest that

reflectivity results in slower but more accurate and free of errors performance. Impulsive style, however, may help to exceed reflective learners in reading tasks (*ibidem*, p. 121-122).

4. Identifying learning styles

Identification of one’s learning styles involves primarily observation of own preferences when approaching various tasks. Certain tools, e.g. surveys, have been devised to help in the description of individual preferences. Cohen (2012, p. 161-178) presents an example of a survey in which a learner identifies general approaches to learning by evaluating responses on a five-point scale, where:

- 0 = Never
- 1 = Rarely
- 2 = Sometimes
- 3 = Often
- 4 = Always (*ibidem*, p. 177).

The survey is designed to help learners diagnose their styles. Among the preferences under investigation in the survey there are tactile preferences, analytic – synthetic styles and holistic vs detail-oriented styles. Table 1 shows the responses used in the survey to diagnose the areas of perception and cognition.

How I Use My Physical Senses	
I remember something better if I write it down.	0 1 2 3 4
I understand lectures better when they write on the board.	0 1 2 3 4
Charts, diagrams and maps help me understand what someone says	0 1 2 3 4
	Visual – Total
I remember things better if I discuss them with someone.	0 1 2 3 4
I prefer to learn by listening to a lecture rather than reading.	0 1 2 3 4
I like to listen to music when I study or work.	0 1 2 3 4
	Auditory – Total
I need frequent breaks when I work or study.	0 1 2 3 4
If I have a choice between sitting and standing, I’d rather stand.	0 1 2 3 4
I think better when I move around (for example, pacing or tapping my feet).	0 1 2 3 4
	Tactile – Total
How I deal with my ideas	
I can summarise information easily.	0 1 2 3 4
I enjoy tasks where I have to pull together ideas to form one large idea.	0 1 2 3 4
By looking at the whole situation, I can easily understand someone.	0 1 2 3 4
	Synthesizing – Total
I prefer to focus on grammar rules	0 1 2 3 4
I enjoy activities where I have to compare or contrast two things	0 1 2 3 4
I’m good at solving complicated mysteries and puzzles	0 1 2 3 4
	Analytic – Total

How I deal with Input	
It is easy for me to see the overall plan or big picture	0 1 2 3 4
I get the main idea, and that's enough for me	0 1 2 3 4
When I tell an old story, I tend to forget lots of specific details	0 1 2 3 4
	Global – Total
I need very specific examples in order to understand fully	0 1 2 3 4
I can easily break down big ideas into smaller parts	0 1 2 3 4
I pay attention to specific facts or information	0 1 2 3 4
	Particular - Total

Table 1. *Learning Style Survey* (*ibidem*, p. 177)

The maximum score for each set of responses helps to diagnose a particular style. Thus, learners with the visual dominant style get high scores on visual material, such as books, pictures and diagrams. Auditory learners prefer to listen to lectures, audio materials and discussions. Tactile learners need active involvement in group work, projects and tasks. Synthesizing learners are good at making comparisons, summarising and guessing meanings. Analytic learners perceive the details and are better at contrasting tasks. Finally, learners with global styles approach tasks more holistically and focus on main ideas. Detail-oriented learners focus on more specific aspects and are better at remembering them.

Identifying one's learning styles is an essential stage in the language learning process. It helps to understand why different individuals respond differently to various tasks and instructional materials. It also makes learners aware of individual differences and preferences and should prove useful in realizing one's strengths and making use of them in educational settings. As Cohen (*ibidem*) pinpoints "If learners are made aware of the importance of these individual difference variables, and are given tools for dealing with them, they are likely to take more responsibility of their own learning and will adopt those attitudes and techniques that characterize the good language learner" (*ibidem*, p. 174). Knowing one's preferences may also serve as a motivator to work on the least preferred styles and improve one's performance by conscious attention to them.

5. Implications for foreign language learning contexts

The ease with which people learn, i.e. change their behaviour and system of knowledge, depends on a number of variables, such as age, cognition, social and cultural factors. Also, foreign language development depends on an intricate network of cultural and social experiences as well as individual factors. Cognitive styles belong to such individual traits and they contribute to individual learner differences in educational settings.

There is no one set of cognitive styles that would guarantee successful progress in FL learning. It is usually claimed that in every typology of learning styles both styles play important roles. The degree to which the particular style is useful depends on the type of material and educational setting. For example, one may argue that field independence is more desired to meet the requirements of a traditional class with pen

and paper tests. However, the dependent type is useful for learning outside classroom in natural, face-to-face interactions. Left-brain-dominant learners are likely to benefit more from deductive teaching whereas right-brain-dominant learners - from inductive methods. What is more, brain dominance does not exclude participation of the less dominant brain hemisphere from cognitive processes such as FL learning. Although ambiguity tolerance helps to learn facts which are contradictory to one's own system of knowledge, some level of intolerance is essential to eliminate totally erroneous concepts. Reflective learners progress more slowly, more consistently and accurately, however, impulsivity is important in reading tasks and guessing. The auditory and visual preferences determine the channel of more efficient foreign language internalization. Thus, it is essential for educators to realize one's own cognitive styles in order not to limit teaching techniques to a set of individual preferences but consciously care for other learners' learning styles. It also vital for learners themselves to develop a measure of awareness of own cognitive styles and consciously facilitate language development by directing attention and effort at the kind of material conducive to learning according to the preferred learning styles. Cohen (2010, p. 161-178) claims that with time it might be possible to stretch styles. In the course of "style stretching" (*ibidem*, p. 162) it may be possible for learners to also learn non-dominant styles and by doing so benefit better from the learning context.

This article is one of many presentations of cognitive styles in educational settings, however, the need for it is dictated by the still insufficient effort to raise awareness on the complexity of individual learner differences and adjust teaching and learning procedures without making superstitious and ignorant assumptions about better and worse cognitive preferences.

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AMERICAN WRITERS' THINKING ABOUT WRITING

1. Introduction

Writing is a creative art and so is reading. Readers often find themselves immersed in a story, a novel or another literary work, being deeply moved by it. Sometimes they reach for more books written by the same author; sometimes they want to find more about the author and her/his craft of writing. In this article, based on interviews conducted with American writers, I will attempt to make generalizations about what American writers think about their process of writing prose.

2. Sources of inspiration

Writers are inspired by their own experience or the experience of someone they know, by a person they have met or read about, by a book, an article, a historical fact, a poem, or actually anything. For example, Elizabeth Cox admits that she uses real people and real experiences such as her own divorce in the novel, *The Ragged Way People Fall Out of Love*. She just changes some personal details. "Some of the things that the children said were from my own kids, but what happened in the book is not what happened to me. The pain of it is true, though. I wanted to put the pain in straight" (Johnson, 2004, p. 51). Maria Flook's sister consented to reveal her painful experiences after escaping home and her final triumph in the book, *My Sister Life*. Flook explains: "The book was a document of that bond that she [her sister- A.G] had never recognized fully, how her experience was embedded in me. (...) My remedy was to write, hers was to escape" (*ibidem*, p. 75). James Salter (2013, p. 5) writes in *Burning the Days* about the difficult times he had at West Point and, in *Hunters*, he uses his experiences as a pilot during the Korean war (*ibidem*, p. 1).

Anthony Doerr found inspiration in a book, *Snow Crystals* by Wilson Bentley, with 2500 pictures of snow crystals. Doerr became impressed with Bentley's dedication to beauty, for Bentley died of pneumonia after taking the photos and never saw the book published. In Doerr's book, *About Grace*, the main character David Winkler gets Bentley's the book and Doerr claims this was the beginning of the novel. Rebecca Lee (2013, p. 1) thinks of new books as derivatives of the previous ones, which is soothing and provocative at the same time. She states: "I mostly get inspired by books. When I'm working on a project I line up on my desk all the books I want to resemble. I have the opposite of 'anxiety of influence' - I guess I have the 'anxiety of no influence'".

Elizabeth Graver reads and collects interesting articles from newspapers and magazines. Her novel *Awake* was connected with the article in *People* magazine, "Children of the Dark," about children suffering from a genetic disease called

xeroderma pigmentosum (or XP), who are in risk of cancer if exposed to daylight (Burns, 2008, p. 32). Jonathan Lethem's novel, *Motherless Brooklyn*, was inspired by reading Oliver Sacks' essay, "An Anthropologist on Mars," and watching a documentary *Twitch and Shout*, by filmmaker Laurel Chiten. Both of them explored Tourette's Syndrome (Johnson, 2006, p. 26).

Some writers are inspired by historical facts or historical figures. Nora Okja Keller' wrote *Comfort Woman* after hearing Kim Ju Hwang, a former comfort woman, speak at a human rights symposium in Hawaii. It is a historical fact that women mainly from Korea but also from Philippines, Indonesia, and some Dutch women were kept in Japanese comfort camps (*ibidem*, p. 99-100). Kurt Vonnegut (1981, p. 93) connects historical facts with personal experience. He survived the bombing of Dresden and when asked: "One more question; do you still think about the fire-bombing of Dresden at all?", answers " I wrote a book about it, called *Slaughterhouse-Five*". Mary Yukari Waters' collection of short stories, *The Laws of Evening*, is set in post-World War II in Japan. The author reveals:

The fact that World War II provided such an appropriate metaphorical backdrop was either fantastic luck (which does play an important part in writing) or else one of those wonderful subconscious connections of which you're unaware until after the fact (Johnson, 2006, p. 196).

She felt drawn to this part of history because she came from family who lost a lot during the war, grew up listening to Japanese grandparents and old Japanese neighbours, and experienced death and loss in her own life. These were the sources of her inspiration for writing *The Laws of Evening* (*ibidem*, p. 196-197).

Marie Arana is convinced that those who are predisposed to be writers are outsiders, people who are "odd-balls" (Arana in Burns 2008, p. 16). They find stories in every person they meet; windows they look at. These people are given "a third eye somehow" (Burns, 2008, p. 16). Marie Arana claims that her being born of a Peruvian father and an American mother, and torn by the two heritages with the sense of alienation and her anxieties, became a writing gift. "There is nothing like trouble to get you writing" (*ibidem*, p. 17). Chitra Banerjee Divakaruni openly admits that immigration made her into a writer. By moving away from her native culture, she had to deal with the conflicts caused by it and writing was " a way to revisit, reconnect, to reunderstand" her home country (Johnson, 2006, p. 59-60). This inspired her book, *The Unknown Errors of Our Lives*.

Some fiction writers are inspired by their poetry. When a poet writes a poem, he may not know how to finish it and expands it into a short story. Stuart Dybek describes this process:

Characters start appearing, and something happens that makes me realize that now I'll never control this poem. I would like to think that when that happens accidentally, that it kind of puts poetry DNA in a story's genes, but it's only by accident that it happens. But I'm all for accident (Burns, 2008, p. 161).

Alice Mattison also notices similar transformations of her poems. She wrote dialogues and had characters in her poems, but also wanted to introduce more complex elements

in her poetry. Fiction opened for Mattison the possibility to include “intersection of two or three things going on in life” (Johnson, 2006, p. 145). Similarly, after finishing *Between Silences*, Ha Jin “realized that some of the poems in the book could be more effective if they were put into fiction” (*ibidem*, p. 56). Aimee Bender changed some of her good lines, in bad poems she was writing, into stories. Her story “Flammable” was inspired by the line from her poem about a man who returned from war without lips (*ibidem*, p. 19).

When Amy Bloom looks for inspiration, she is paying attention to what is going on outside her window, walks around the house and talks to her friends, goes shopping, or watches TV. She finds inspiration everywhere and is convinced that being a good observer and listener is the key.

Everybody’s lives are full and mysterious and unexpected. It’s just a question of whether or not you’re paying attention, whether or not you want to stand around long enough to let them tell it to you, or imagine it (*ibidem*, p. 29).

Tobias Wolff sits at his desk in order “to receive the gift” of inspiration. Michael Cunningham also does this and writes having good or bad days. He says: “I’ve come to believe that the inspiration is always there, like an electric current, and what varies is our access to it” (Burns, 2008, p. 159-160). To keep the current running, according to him, requires determination and diligent work. While Cunningham is writing on bad days a sentence or two, Edward P. Johns does not wait. When he gets up and the inspiration is there he writes, if it isn’t, he does something else hoping that the inspiration will come back tomorrow (Johnson, 2006, p. 84).

3. The beginnings and the endings

Authors begin writing in many different ways. Many of them start with characters. Michael Cunningham starts this way because a character generates emotions, situations, and conflicts (Burns, 2008, p. 27). Edwidge Danticat remembers that at the beginning of writing *The Dew Breaker*, about a Brooklyn barber’s violent past, she got interested in characters: first the father, then the mother, and finally the daughter. While writing, she gets into the characters’ minds to show what they hide and what they show (Johnson, 2006, p. 26). Myla Goldberg admits openly: “I’m a psychologically driven writer. I want to get inside a person’s head and walk around in there” (*ibidem*, p. 46). Paul Auster claims that the stories where the characters’ thoughts and ideas are crucial come from his unconscious mind (Burns, 2008, p. 29). Maria Flook, on the other hand, begins writing about a character that she finds intriguing. She believes that the character requests her to create a world surrounding him. It seems to her that the character comes from her “demons” and takes a form of its own, and becomes a man, but as she confesses: “he’s that edgy, relentless anxiety made flesh again” (Johnson, 2006, p. 72).

Other writers begin with a feeling, an image, a voice, or a sentence. Marie Arana explains that while beginning *Cellophane*, she felt in love and “emotionally naked” (Burns, 2008, p. 27). When Ha Jin sits down to write, he feels bothered “by an event or something” and by writing about it, he is able to “let the feeling out” (Johnson, 2006, p. 57). Richard Bausch begins with a surprising image or voice, which he

“dreams up” (Burns, 2008, p. 28). The novel *Mary Gatsby* was working on began with an “image of weather as people” (Johnson, 2006, p. 32). Sena Jeter Naslund recalls the idea for *Ahab’s Wife*, which came to her while driving in a car feeling good about the publication of *Sherlock in Love*.

Suddenly, I had a vision and heard a voice. The vision was of a woman on a widow’s walk at night, looking out to sea, waiting for her husband’s whaling ship to come home. As she was looking she realized he wasn’t going to come home, and her gaze shifted into the night sky. She began to ask, “Who am I in the face of all of this glory of the stars? What’s my place in the cosmos?” With that she began her spiritual quest, rather than waiting for someone to come home and define her. As I had this vision, a voice said, “Captain Ahab was neither my first husband nor my last” (Johnson, 2004, p. 157-158).

Elizabeth McCracken insists on beginnings that tell “something about the writer and the book from the first sentence” (*ibidem*, p. 134). A good example comes from the beginning of her novel, *The Giant’s House*, when Peggy Court the librarian says: “I do not love mankind” (*ibidem*). Bret Anthony Johnson starts “In the Tall Grass” with the sentence: “My father is removing his rings.” He removes them in order to fight. This is an example of a beginning that lures the readers and catches their attention. The readers may continue to read the next sentence, which is “He hasn’t been arrested yet” (Johnson, 2006, p. 70-71). Mary Yukari Waters stresses the importance of using a beginning that will not “alienate the reader” (*ibidem*, p. 198). Since the tastes of readers differ greatly, some may feel alienated while others will be attracted. She resolves the problem: “So it’s a matter of understanding the sensibility of your audience and being able to draw them into the world of your characters as efficiently and as honestly as possible” (*ibidem*).

For some writers the ending is unknown. They keep on writing and are trying to discover it. Others know the ending or know both, the beginning and the ending. Lois-Ann Yamanaka admits that when she has the beginning of the story she also knows the end and is able to arrive at it, as planned (Johnson, 2004, p. 219).

Joyce Carol Oates chooses the ending from a variety of endings she comes up with, after pondering which one is the best (Burns, 2008, p. 135). John Irving told Marie Arana, that “He cannot begin a book until he has the last sentence”, so he has to know the end first. (*ibidem*, p. 137). Writers express various opinions on what makes a good, strong, memorable ending. Some seem to follow some rules or procedures, others find the process of ending almost impossible to analyze rationally: they just feel it is right to put the final dot at the end of the sentence.

Mary Gatsby thinks a good ending is the one in which “the story is cracked open” (Johnson, 2006, p. 33). The characters may realize the discrepancy between what they are saying and doing, and how they really feel. They may also break out not being able to keep the emotions inside, or behave in a way that reveals who they really are. “There is a huge outpouring of emotion and dark mystery that’s an intense contrast to the repetition and rigidity that went before” (*ibidem*). Gatsby also thinks that a good ending may be dramatically changed, so the readers understand that there is

a different world which may replace the story (*ibidem*). Bret Anthony Johnson proposes revealing the character at the end. He says:

Finally, I want the end of the story (regardless of length) to be intimated in the beginning. Sometimes it will be overt, and sometimes it will be subtle, nothing more than a whisper that the reader doesn't yet know to listen for; it depends on the character (*ibidem*, p. 72).

Nora Okja Keller stresses that the novel may end with the character's internal realization, but it may also give her, as a writer, a possibility of writing a sequel. In ending is "hope for the new beginning" (Johnson, 2004, p. 109).

Some writers know what they like or dislike about the endings. Jill McCorkle states: "I don't like endings that feel like they've got a great big bow or a THE END sign. What I really like in an ending is to feel satisfied that there's been a completion within, and yet in some way it's still open" (*ibidem*, p. 123). Like Keller, Corkle likes the open ending. The ending for Amy Bloom is neither ambiguous nor tied up. She says: "But for me a good ending hangs in the air like a musical note. It's just done" (*ibidem*, p. 36).

Chang-rae Lee explains that when he is approaching the end, the pressure connected with the ideas in the work, language and emotion build up. This pressure indicates the ending, "a certain feeling at the end, whether it's explosive or quiet" (Johnson, 2006, p. 113). For Elizabeth Cox, the ending sometimes comes as an image. She recalls that in *Night talk*, it took the form of a mute, suffering character moving around two women, one black and the other white (Johnson, 2004, p. 49).

Some writers describe difficulties of expressing the final words. Alice Mattison confesses that even when the character comes to a certain realization, it is arduous to decide on the last sentence. She says: "That's different, finding the gesture or the moment that's going to get you out of the story and free from it. It's hard. I have to do it over and over again" (Johnson, 2006, p. 154). Mary Yukari Waters, despite the years of experience, experiences the same hardship admitting " (...) I keep beating my head against the wall until eventually I come up with something that feels right" (*ibidem*, p. 198).

Verdelle points to the importance of balance between the beginning and the ending. She explains:

I am not talking about rectangular or square balance. It can be triangular. You could even make the decision to have it be off balance. But you have to make the decision. You have to observe how you've handled the beginning, which you many want to refer to nimbly in the end or resolve fairly bluntly (Johnson, 2004, p. 207).

She stresses that even though the narrative indicates the ending, it also points back to the beginning. The important fact for her is: "Beginnings and endings create the frame for the book, so it makes sense to work on them together" (*ibidem*). Following this rule, Verdelle decides on her beginning after finishing the book. She is not the only writer who does this. For Joyce Carol Oates, writing an intriguing ending seems crucial,

because she often rewrites and changes the beginning, according to where she arrived at the end (Burns, 2008, p. 35).

4. Outlining, structuring and revising

Many writers have an idea of the shape of a story or a novel. They know where they are going, and how they will end. Ha Jin works this way, creating a draft of the whole work and then revising it, adding and deleting fragments, until he comes to “the stage where you can’t do anything more to improve it” (Johnson, 2006, p. 58). Similarly to Ha Jin, Ann Patchett outlines her entire work, but does it in her head, thinking intensively about it, and getting the entire work planned out. Afterwards, she just puts it on paper, revising each chapter as she goes along. Her novels are created in one draft (Johnson, 2004, p. 170-171).

Bret Anthony Johnson also outlines his work in his head, but changes it, following what the characters are finding out, and not what he is thinking. He has a tendency of doing many projects at the same time. When he is not making progress with one, he goes to another one. He extensively revises his originally bad drafts (Johnson, 2006, p. 71-72). Jayne Anne Phillips, on the other hand, notices that her book *Shelter* started with writing one paragraph, which then developed into the complete book (Johnson, 2004, p. 196). She works “starting with language” (*ibidem*, p. 198), which means keeping the voice and progressing. She says “I know what to write next by reading what I’ve written” (*ibidem*). Because she works slowly and continuously reads what she has written, she does not make a lot of revisions, making slight changes when she wants to achieve “a big effect” (*ibidem*). This way, Phillips does not discard a lot of material. For Joanna Scott, there are many ideas and writing is like improvising, where the end result is unknown, because she follows the independent, strong voices of the characters (Burns, 2008, p. 33). She also pursues the ideas that inspire her to write, claiming that her writing contains some improvisation, as if the project acquires a future of its own without a guarantee that it will work (*ibidem*, p. 32). Verdelle goes even further. Her first draft is done with passion and extended as much as her imagination allows. Then she looks at it and tries to make sense of it. When she finds mistakes, she expands them rather than deleting them. She says: “My strategy is very time-consuming and requires a high tolerance for chaos. (...) Order is an imposition” (Johnson, 2004, p. 205). Russell Banks takes an in-between approach to writing, neither following a spur of inspiration, following where the story or voice lead, nor planning it out very rigorously. She explains:

And I generally work with a very loose, big, and infinitely changeable outline for the overall narrative arc of the novel and at the same time a more detailed and refined outline that covers the next chapter or perhaps twenty or thirty pages (Burns, 2008, p. 35).

5. Characters, setting and research

Most of the writers pay special attention to characters in their works. They often begin with them, as is mentioned above, concentrate on their development, and try to make them alive in their fiction.

Michael Cunningham claims that “the characters must not only be fully developed people with minds of their own but must carry out a plot” (Johnson, 2006, p. 7). Edwidge Danticat, in order to give her fiction a sense of reality, includes some real, recognizable people next to fictitious characters (*ibidem*, p. 19). She also thinks that writing fiction gives her a possibility of putting all the characters there. This way she “can look through everyone’s eyes” (*ibidem*, p. 24). Even if the character is a torturer, there is a need to listen to him. She says:

You have to live your character’s lives with them. They have to be sympathetic in some way. Understanding the complexity of a difficult character’s life is most appealing to me as a writer” (*ibidem*).

Myla Goldberg had no problem capturing each character’s voice on the pages of *Bee Season*, because she thinks they were partly her voice or her friends’, people she loved or hated. She thinks that novelists who use their childhood experiences had time to accumulate observations and thoughts, as she did, and it was easy to write about these characters (*ibidem*, p. 47). Marisha Pessl’s characters are not people from her personal life, but invented ones. She has a habit of observing people and gets inspirations from strangers. She says: “Not knowing them allows me to invent their histories, their joys and sorrows” (Butrns, 2008, p. 38). She considers writing an acting exercise, where the writer diminishes or changes aspects of himself and sees the world thorough the characters’ eyes. He also uses their “moral compass” in judging the world (*ibidem*).

Bret Anthony Johnson writes about characters who surprise him. He is interested in how they deal with situations he knows the answers to. The characters are telling their stories (Johnson, 2006, p. 67-69). He explains:

(...) I don’t write to find out what I’m thinking, I write to find out what the characters are thinking. So, my initial drafts are, not surprisingly, dominated by my thoughts. During the writing process, though, I come to know the characters, come to imagine them more deeply, so the completed narrative is something I’ve discovered (*ibidem*, p. 71-72).

Elizabeth Cox shares Johnson’s opinion, explaining that at first her characters are flat and speak in voices that seem directed by the author. She stays with them long enough and they begin to use their own voices and act like themselves. At this point, they may surprise the author and show who they are, not following the author’s idea. The writer takes them to many places to better understand their behaviour. She creates situations that will make the characters’ personalities real. If the character is too good to be credible, she will make him more human by confronting him with his fear and see how he reacts. Cox is curious about the characters’ secrets and tries to reveal them (Johnson, 2004, p. 43).

Richard Ford thinks of the characters he creates as “entirely mutable instruments” for the writer, but just the opposite for the reader: “not mutable and quite specific”. Ford explains:

He isn’t a person at all. As a piece of artifice, he’s an instrument whereby I can as a writer get as much as I know, and can make up, and imagine, and that

seems as pertinent to what I think my book is about, as possible (Burns, 2008, p. 39).

Ford's idea about writing resembles what Amy Bloom believes: "Writing is a narcissistic event". She also claims that the writer produces a story he/she wants to write by creating a character, making him alive, and getting into his soul. Bloom thinks a writer must get into "somebody else's shoes" in order to write about a character (Johnson, 2004, p. 29).

Writers are generally able to make the characters real and believable to the readers, communicating their thoughts and feelings, showing complexity and flaws. The authors make the characters change, take action, develop, and uncover. They also put the characters in a particular situation, a place and time, anchoring them to some extent in reality. Doing this usually requires some kind of research from writers. Sometimes they find out more about the lives of people they want to portray as characters, the place of the action, and the time when the event took place. In almost every interview, the writers mention some kind of research.

Michael Cunningham did a lot of research when writing *The Hours*, keeping the facts from Virginia Woolf's life true to the reality of life in the early 1920's. At the same time, he made sure not to copy Woolf's voice in his novel. The novel, *Specimen Days*, also required some research about New York City in 1865, but Cunningham allowed himself more freedom, e.g., including a factory fire that happened in 1911, and changing the name of the company. He explains: "It was a violation of strict chronology but not a violation of the spirit of the times – it's not as if the Triangle Shirtwaist fire was the first accident in which workers were killed" (Johnson, 2006, p. 5). Ha Jin explains that his novel *War Trash* is set a Korean prison camp, so he had do intensive research, reading books about and looking at pictures of these camps. Finding details such as prisoners' clothing, food, and others items made him understand the characters better. He says: "Wherever I come across a good detail, I feel pleased" (*ibidem*, p. 57). Andrea Barret finds material necessary for her writing by reading books, diaries, memoirs, or letters, looking at photographs and paintings, and listening to the music from the period she is writing about. This gives her a general feeling of the culture, the period, the place, and the way people were thinking then. While writing, when she comes across a historical fact she does not know, she checks it for accuracy, so as she says: "The research lurches along stepwise" (Johnson, 2004, p. 5). Maria Flook interrupts writing to do the necessary checking, but what she underlines is another dimension the research opens to her as a writer:

In my research about the *Andrea Doria*, it was very compelling to learn more about the two girls who were in the disaster that my sister and I survived. If I hadn't retrieved every tidbit about the actual shipwreck, I couldn't have *felt* all the layers of my reaction to it, that I have now. In this way, research can help direct impulse, but usually it enriches and deepens levels of information (*ibidem*, p. 34).

Some writers use others as sources of information. When writing *While I Was Gone*, Sue Miller consulted her brother - a veterinarian, and interviewed policemen at the

Cambridge Police Station to find out about police investigative procedures. This information helped her to develop the episodes of her novel (*ibidem*, p. 145).

While writing *The Son*, Philipp Meyer did extensive research, not only reading history books, but also experiencing some things personally. He claims: “If you’re writing about a person living on the frontier, you better know your animal tracks. And not just from a book. You better be able to look at a track and take a solid guess at what it is” (Meyer, 2013, p. 2). But Meyer also admits that the research, even if sometimes fun because of “the experimental stuff - learning to track animals, identify native plants, shoot bows,” (*ibidem*) kept him from writing. Researching and writing the novel took him five years. According to him, “writing is not researching” (*ibidem*), so there seem to be the conflict of balance between these two that the writers must resolve. While some writers are rigorously researching before or while writing, others like Amy Bloom just want to have certain details truthful, such as a street, a café, or a garden courtyard that really exist (Johnson, 2004, p. 34). Still other authors can just make things up. Michael Cunningham explains that when you fabricate things, you need to stick to the principles:

You want to choose a detail, or two or three, that conveys the whole, and ideally those details should be both accurate and unexpected so the place or person in question feels both well and newly observed (Johnson, 2006, p. 12).

There are writers that do not do much research, using in their novels or stories the places they know, because they lived there. Elizabeth Cox now lives in Massachusetts, but writes about North Carolina or Tennessee because “the air, the sounds, the smells, everything is familiar” to her (Johnson, 2004, p. 41). Johnathan Lethem calls his research about 1970’s Brooklyn for his novel *Fortress of Solitude*, “internal excavation” (Johnson, 2006, p. 127). He was trying to recall as many details about the time and place by reading newspapers from that time and talking with family members and old friends (“interpersonal research”) (*ibidem*).

6. Narration and points of view

Making the characters alive and anchoring a novel or a story in a particular time and place, writers still face the problem of narration. Who is to speak? In what way? They also need to find a point of view. How much freedom will the characters have to talk? Whose voices will be dominant? Who needs to be silent? Creating the narrator is another aspect of the writing process.

Writers explore and experiment with different kinds of narratives. Edwidge Danticat uses two voices in “Children of the Sea” to show the experience of being a refugee from the perspectives of a girlfriend who stayed in Hawaii and her boyfriend who escaped. This way she is able to “tell two stories in one” (*ibidem*, p. 23).

Chitra Banerjee Divakaruni also faces the challenge of using dual voices in *Sister of My Heart*. The two narrators are equally important to her and they alternate giving “ironically different perspectives” (Johnson, 2004, p. 58). Bloom, in the section “Three Stories” of *Come to Me*, uses the point of view of a few characters: David, Galen, Violet, and Rose. They tell stories during a different time in the family’s life. Bloom claims that using those different points of view makes her understand each

person, and life is different because it is observed by different people: the mother, a single child, and two twins. Bloom confesses:

One of the great pleasures of writing for me is to be God, to look at everybody as they stand there cupped in your hand. (...) I love the fact that you can hold up anybody's family to the light and turn it around and see it differently (*ibidem*, p. 30).

Mary Gaitskill explains that when writing *Because They Wanted To* from the father's point of view, who has complex relationship with his lesbian daughter, she followed the general rule for writers: "In general, I think it can give a story a very interesting energy if you write from a point of view that you're not naturally sympathetic with or that's somewhat foreign to you" (Johnson, 2006, p. 33).

In narrating *The Voyage of the Narwhal*, Andrea Barrett employs journal entries and letters. She does it for two reasons. Firstly, because these forms were popular during the time she is writing about and novelists also used them at that time. Secondly, because the first-person letter or diary breaks into the third-person narrative, giving some contrast and making the narrative more interesting (Johnson, 2004, p. 12). Some narrators are unreliable. Amy Bloom claims that:

On some level, of course, any narrator is unreliable because they're made up! Somebody made them say those things and wrote it down to make you feel like it was really true, which is fun (*ibidem*, p. 35).

Tod Goldberg wrote his two novels, *Fake Liar Cheat* and *Living Dead Girl*, from the point of unreliable narrators. He explains that the reason for this is to see "things first through the eyes of a person" and additionally confesses to having "an enormous ego" (Burns, 2008, p. 95-96). After writing the story, "Rise John Wayne and Rebuke Them", in the third-person narrative, he discovered the freedom of using it. Goldberg compares the speed and safety of using the third-person narrative to driving a BMW, instead of using the first- person narrative that felt like driving a slower, compact car like a Toyota Tercel (*ibidem*, p. 88). He thinks he will be using both the first and the third person narrations. Maureen Howard uses a number of different voices, among them an authorial voice. She does not consider it to be old-fashioned, but rather giving her a lot of freedom (*ibidem*, p. 93).

7. Style of writing and homage to other writers

All writers have their own unique style of writing. Many admit being influenced by the style of writers whose works they have read and admired. For many authors, the way they manage the words on the pages is a unique talent they were born with. At the same time, they keep developing their writing skills. All writers experiment with the language.

Aimee Bender mentions the influence of "the Permission People", such as Roald Dahl, Anne Sexton, Flannery O'Connor, Haruki Murakami, Lynda Barry, Donald Barthelme, Angela Carter, and Gertrude Stein. These are imaginative writers who "brought weirdnesses into the worries of the adult world" (Johnson, 2004, p. 17).

Bender says: “All are such big givers of permission, and are so incredible with language and deeply playful while still being very heartfelt and emotionally full” (*ibidem*). She admires some writers “intuitive structure”, “sense of voice”, “freedom, and funniness and joy”, “no-nonsense feeling about nonsensical stuff”, and “velvet sentences” (*ibidem*). Her style of writing falls into the category of Magic Realism, which combines details of everyday world with some elements that are magical, bizarre from another world (*ibidem*). She maintains a balance between fantastic elements and reality. “With all fantastical stuff, it’s just keeping the rules of the universe believable. If one thing has changed, then everything relating to that’ll change but the rest is the same, needs to be the same” (*ibidem*, p. 23). The beautiful metaphors that appear in her works come to her naturally, when she is not thinking. They just happen to her and “feel lighter, more like treats” (*ibidem*, p. 24). When she starts to ponder on a metaphor, “it feels like a piece of lead on the page” (*ibidem*).

Edward P. Jones admires James Joyce for writing about plain people in *The Dubliners*. He points to the fact that these people had “extraordinarily complicated lives“, and admits that this was the main inspiration for his short story collection, *Lost in the City*. Edward P. Jones also uses elements of magic, but these are connected with Black people’s beliefs that he learned from them and respects, even if he does not share those beliefs. For example, a cow that stopped giving milk was sold, but because the cow started to give milk again, the seller wanted to renegotiate the deal (Johnson, 2006, p. 89-90).

Michael Cunningham looks up to Virginia Woolf as a writer. The way he wrote his novel, *The Hours*, was inspired by Virginia Woolf’s style in *Mrs. Dalloway*.

The way it reads [*Mrs. Dalloway*- A.G.] is almost like a jazz musician playing improvisations. It has loose ends, it has stray threads. And I decided it would be more appropriate, it would be a better tribute to *Mrs. Dalloway*, if I loosened up my own book, if I didn’t insist on such strict parallels, if I injected into *The Hours* a rough correspondence to *Mrs. Dalloway* and didn’t insist upon making it so precise (Burns, 2008, p. 88).

For Lê Thị Diễm Thúy²⁰, English is not her native language, but she is trying to experiment with it. “I am trying to do things in English that I haven’t seen. (...) There’s a kind of urgency in me to see all the ways I can work in English, partly because I arrived at it with such a great amount of tension” (Johnson, 2006, p. 95). She thinks that besides polishing her language, she needs to create open “space for silences” (*ibidem*, p. 93). for the reader to enter, “spaces around the experiences of characters” (*ibidem*). Because of an insufficient range of language, people cannot fully understand their own experiences. She explains: “I talk about the slipperiness of language, I think experience itself is difficult to grasp directly” (*ibidem*, p. 94). In *The Gangster We Are All Looking For*, she uses a nonlinear structure consisting of vignettes. There are images appearing and reappearing across time (i.e. a swimming pool with cement, a drowned boy) and sound images reintroduced in the book (a girl becomes silent and then gradually starts speaking, a mechanical bird). She says: “I worked with the book

²⁰Her pen name is *lê thi diem thúy*.

as with an entire body; even though it's woven of bits, they're of a piece" (*ibidem*, p. 99).

For Ha Jin, English is also a second language, so he uses it with caution. This makes it difficult for him to write with "natural spontaneity," but at the same time, it gives him the advantage of writing with "a different kind of sensibility and a slightly different kind of syntax, idiom, and style" (*ibidem*, p. 57).

Jin, in *Crazed*, uses songs and poems, because they relate to Mr. Yang, the novel's character who is a professor of poetry. As far as great writers he admires, he mentions great Russian writers and the contemporary ones, Alice Munro and Tracy Kidder (*ibidem*).

Bret Anthony Johnson, who strongly advocates writing about characters, thinks that the characters' ordinary stories should be told "in exceptional or extraordinary ways" (*ibidem*, p. 71). He tried to write fiction based on his autobiography, but it was lacking an element of discovery, a surprise. Johnson admits: "I have been far more successful in writing an autobiography of empathy, of emotion, and I think that will always be my style" (*ibidem*, p. 74). He is a very diligent writer, checking every adverb, writing with a dictionary next to him. He tries to use as much humor in dialogues of his prose as he can (*ibidem*, p. 77). Gish Jen, on the other hand, tries to get rid of humor, which seems her innate trait. When editing, she keeps it under control, so that it does not overwhelm other tones of her work (Burns, 2008, p. 97). Paul Auster advocates juxtaposing tragic moments with hilarious moments, claiming that such is life, a mixture of both. He expresses his opinion: "Styles of humor change over the years, but to say that humor in general would die would be like saying the human race is going to die" (*ibidem*, p. 97-98).

Maureen Howard stresses the freedom of using unlinear narrative and different voices, including her own. She mentions George Eliot, Javier Marias, and Naipaul using authorial voices, and likes this technique herself (*ibidem*, p. 92-93).

Richard Ford tries to redefine the word "voice," calling it "a music of a story's intelligence". He lists what that "music" consists of – the rhythms and the lengths the sentences and the whole book, the number of adverbs, adjectives, and active verbs. He pays attention to how much the sentences stretch the reader's intelligence (*ibidem*, p. 89).

Some writers like changing styles, not only to fit what they are writing about, but also following the urge for change. They want to try something different. Joanna Scott says: "Even as I'm learning from what I'm writing, I have to leave the work behind and start from scratch. I want to keep trying out new things, new forms, learn something I didn't know before" (Burns, 2008, p. 92).

Stuart Dudek notices that, for 20th and 21st Century writers, "hybrid forms become their own forms", with seminal works like *Winesburg, Ohio* by Sherwood Anderson or *Dubliners* by James Joyce. He considers them the most important books in his life, adding what he calls "concepts books": *Kind of Blue*, *Sketches of Spain*, and *Sgt. Pepper's Lonely Hearts Club Band*. He admits he is able to write a concept book. "What it invites is an enormous collaboration between the writer and the reader. You're asking the reader to participate, but you're telling the reader there are all

sorts of clues here” (*ibidem*, p. 99). So, the reader follows the clues created by the writer.

8. Themes

Characterization, setting, narration, point of view, details of the plot, and writing style lead to the theme of the written work. The theme (a general idea or insight) may be stated as a moral judgment, when the writer suggests what is right or wrong in the characters’ behavior. More often, writers seem to hold off their moral judgment, showing the complexity of human experience. They may suggest the themes or let the readers discover them.

Maureen Howard, in *The Silver Screen*, points to a moral decision of Bel, a silent movies actress, not to lead the Hollywood life. She is able to make this moral choice, even though others may see it as a lost chance and ask her: “Why did you give up when you were about to be a star? When the big thing was there for you?” (*ibidem*, p. 59). Bret Anthony Johnson underlines that he is lured by the situations when a character is convinced that he is doing what is definitely right, when in reality he isn’t. The popular themes he likes to explore are dealing with loss of someone or something (Johnson, 2006, p. 67), and love in all forms with all the contradictions, as portrayed in *Corpus Christi* (*ibidem*, p. 75). Similarly to Johnson, Russell Banks admits that that the main theme of his book, *The Sweet Hereafter*, is how one deals with a loss of a child or a loved one and who is to blame. He notices the connection between the two themes. When something tragic happens, instead of what was intended, we often look for who is to be blamed for it (Burns, 2008, p. 52). Another theme that interests Banks is the “unintended consequence of good intentions,” as shown in *The Darling*, *Cloudsplitter*, *Continental Drift*, or *Affliction* (Burns, 2008, p. 52). Even though Banks explores the themes mentioned above, he says: “ (...) Race is central to my understanding of myself. Therefore, I feel obliged to make race central to my work” (*ibidem*). He touches on the theme of race in *The Darling*, writing about Liberia, pointing to political issues connected with it. Slavery, freedom, love and “family” life of slaves are the themes of Nancy Rawles’ novel, *My Jim*. Rawles explains the difference between love and slavery: “I came to the conclusion that you can’t possess what you don’t love (you can only use it) and when you seek to love, you seek not to possess but to liberate” (Johnson, 2006, p. 176-177).

Rick Moody proposes a remedy for racism where the characters in literature “can be African or Anglo- European and it’s just one feature among other features” (*ibidem*, P. 164). The characters in his book, *The Diviners* are Black, Chinese, and Indian, but as Moody explains “ (...) we are all more alike than we are different. (...) My concentration is on a set of problems” (*ibidem*, p. 165). Nancy Rawles explores the difficult theme of being different in *Love Like Gumbo*, where Grace the protagonist is a lesbian. Rawles points to the fact that families, religious groups, and cultural communities share identity with the same traits including beliefs, values, race, culture, and language. She notices:

Homosexuality spins identity on its head. No matter how natural and normal, gender and sexuality differences – homosexual, bisexual, and transgender identities, celibacy, cross-dressing, you name it – all of these ways of being

different, place a person outside of recognition, outside of familiarity. And the group has to deal. The burden can't all be on the individuals. But groups change more slowly than individuals. It takes them awhile to see the gifts of difference. Sometimes, they never do (*ibidem*, p. 173).

This is why Rawles writes about Grace's exile from the groups she belongs to.

Alice Mattison is interested in secrets that are visible in *In Case We're Separated*, but she also explains that the main focus there is on "making connections to other people or remaining solitary" (*ibidem*, p. 150). Besides being interested in love relationships, she is also fascinated by the theme of friendship - its varieties, problems, and complexity. *The Book Borrower* is a good example portraying this theme.

Other writers are fascinated by the nature of memory. For Mary Yukari Waters it is blurring, changing, and elusive, which she portrays in *Laws of Evening* (*ibidem*, p. 67). Jonathan Lethem probes the theme of amnesia, and the extent to which people remember or forget (*ibidem*, p. 139). Donna Tartt is drawn to the theme of murder (*The Little Friend, The Secret History*) and she explains that murder has been a popular theme since people were telling stories and is present in the Bible, in Greek tragedy, and in Shakespeare. She says: "I'm not so interested in the mechanics of detection or even in the act of murder itself as in the echoes and repercussions of the act and how they play out over time" (*ibidem*, p. 189). Mary Gaitskill, in *Veronica*, explores the themes of beauty, ugliness, and falseness in the modeling industry. She sees a potential danger when young girls are lured to focus on their fleeting physical appearance instead of their personality (*ibidem*, p. 37). Some writers talk about asking themselves a question or questions, and in this way arriving at a theme or themes. The questions that Mary Kay Zuravleff lists while writing the *The Bowl Is Already Broken* as "a love letter to museums, warts and all" were:

How do things become valuable? What sacrifices are we willing to make to preserve the things we've deemed valuable? And what if you make extraordinary sacrifices, and whatever you've put up on a pedestal falls and is destroyed? (Burns, 2008, p. 55).

Joyce Carol Oates thinks that people attempt to achieve goals in life and this depends "upon 'a quarrel' with reality" in science, philosophy, politics, or aesthetics. She does not fight with reality herself, but considers herself "as an observer, both admiring and skeptical" of the people and nature (*ibidem*, p. 53). This is what leads to the themes of her works and may generally explain the multiple themes chosen or suggested by writers.

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THINKING AND WRITING IN THE DISCIPLINE: THOUGHT STYLES IN SPECIALISED COMMUNICATION

1. Thought styles – Theoretical framework and basic considerations

In the 1970s linguistics was turning away from the traditional problems of the language system and instead focusing on the social aspects of communication perceived as activity. In regard to the social perspective, communicative and pragmatic aspects (e.g. communication situation, actions between communication partners and knowledge requirements) as well as socio-cultural aspects (e.g. conventions and expectations of communication) of language played a significant role (Kalverkämper, 1998, p. 48).

This paradigm shift found its continuation in the cognitive and communicative perspective of the research on Languages for Special Purposes. The main attention was focused on describing the actions in the context of specialised communication (Schubert, 2007, p. 151f.). Subsequently, a new perspective in the scope of the research on Languages for Special Purposes was presented allowing more research opportunities in this area to emerge. One of the key research objectives was to capture the relation between thought styles typical for a particular discipline and Languages for Special Purposes (Klammer, 2010, p. 5). This unique combination of both social and cognitive aspects of communication can be derived from the theory of thought styles by Ludwik Fleck.

1.1. The concept of thought styles by Ludwik Fleck

Ludwik Fleck (1896-1961) was a Polish microbiologist and philosopher of science. His main work entitled *Entstehung und Entwicklung einer wissenschaftlichen Tatsache* (*The Genesis and Development of a Scientific Fact*²¹) was published in 1935. It was Thomas S. Kuhn, the deeply influential American philosopher of science, who first paid attention to Fleck's work by mentioning it in the preface to his book *The Structure of Scientific Revolutions*. By referring to Fleck's monograph Kuhn admitted that numerous of his own ideas had already been anticipated by the Polish philosopher of science (Kuhn, 1990). As a result, this sparked a wider discussion about Fleck's main work in the philosophy of science.

Fleck's concept is based upon the notion of *thought styles* which he defines as "gerichtetes Wahrnehmen, mit entsprechendem gedanklichen und sachlichen Verarbeiten des Wahrgenommenen" (Fleck, 1993, p. 130) (directed perception with appropriate cognitive and factual processing of the perceived – transl. by MK). His

²¹First published in English in 1979.

concept incorporates specific problems of interest for a scientific community as well as methods which are applied in order to solve those problems (*ibidem*). According to Fleck, the foundation of each discipline is formed by an individual thought style which has in impact on certain ways of perceiving. It also determines intra-disciplinary activities as well as the process of communication. Various thought styles can lead to various solutions of the same problem which mirrors various key research problems and approaches to those problems between individual disciplines (*ibidem*, p. 137f.).

A thought style requires a scientific community for its existence. Fleck describes it as a *thought collective* and defines it as a „Gemeinschaft der Menschen, die im Gedankenaustausch oder in gedanklicher Wechselwirkung stehen“ (*ibidem*, p. 54) (collective of people who interchange ideas or intellectually interact with each other – transl. by MK). Thus, a thought collective can be classified neither as a fixed group of people nor as a social class (*ibidem*, p. 135). A thought collective, which requires

a minimum of two people for its existence, is bounded by mutual knowledge defining each new finding (*ibidem*, 53f.).

The differences between individual thought styles and thought collectives can be of bigger or smaller nature depending on how close the relation between disciplines is. For instance, the thought style of a physicist is related closer to the thought style of a mathematician than the one of a linguist. In accordance with Fleck, differences between thought styles can manifest themselves in divergent perspectives of perception which are specific to individual disciplines. Fleck elaborates on those differences as follows:

Die Prinzipien eines fremden Kollektivs empfindet man – wenn man sie überhaupt bemerkt – als willkürlich [...]. Der fremde Gedankenstil mutet als Mystik an, die von ihm verworfenen Fragen werden oft als eben die wichtigsten betrachtet, die Erklärungen als nicht beweisend oder danebengreifend, die Probleme oft als unwichtige oder sinnlose Spielerei (*ibidem*, p. 143).

(The principles of other collectives are perceived – if one can notice them at all – as arbitrary [...]. An unknown style of thoughts appears mystical. The questions neglected by it are often seen as the most important ones, the explanations as not argumentative enough or simply wrong, the problems often as insignificant or a waste of time – transl. by MK)

In his concept, Fleck differentiates between *momentary* and *stable* thought collectives. The momentary thought collective arises by chance and mostly in a spontaneous manner. Even if it lasts shortly, a thought style is formed therein which returns as soon as the thought collective begins to exchange ideas again. In contrast, the stable thought collective is formed around organised, continuously existing social groups. Its mutual thought style becomes more consolidated the longer the group lasts. Stable thought collectives are characterised by their formal and organised nature which, in opposition to momentary thought collectives, facilitates the possibility of analysis of their inner structures and correlations (*ibidem*, p. 135).

The members of a thought collective are not necessarily aware of the existence of the thought style. According to Fleck, it can be described as a *Denkzwang* (compulsion of thought – transl. by B. Wolniewicz) being dictated by the social

environment and discipline-specific activities. Due to the compulsion of thought, it is hardly conceivable to apply a different thought style than the one that is conventional for the given discipline (*ibidem*, p. 130f.). As a result, entire epochs can be influenced by a specific thought style and be constrained by it. A thought style “instructs” an individual to think in a *specific* way (*ibidem*).

As previously mentioned, a thought style can be a source of influence for entire epochs. Yet, there still are smaller communities (Flecks cites astrologers and magicians as prime examples) which consciously dismiss a particular thought style and retain the “old” one unchanged (*ibidem*). Thought styles are subject to constant change so that each of them is a manifestation of other (older) thought styles. In other words, thought styles must be seen in a historical and developmental context.

The continuity in the historical development of thought styles can be recognised as the main difference between Fleck’s concept and the concept of scientific revolutions by Kuhn (1990). Kuhn’s revolutions describe a process of transition towards a new scientific paradigm. They occur abruptly and thus influence the entire scientific horizon by irrevocably replacing existing paradigms with new ones (Vogler, 2008, p. 63). Fleck, however, illustrates the development of each thought style as a continuous and additive process. Therefore, each empirical finding can be interpreted as a “Denkstilergänzung, Denkstilentwicklung oder Denkstilumwandlung” (Fleck, 1993, p. 122) (addition, development and transformation to/of a thought style – transl. by MK). Scientific revolutions conceptualised by Kuhn appear to correspond to a sudden state of change (e.g. Albert Einstein’s theory of relativity). Fleck speaks in this context rather of a mutation of the specific thought style.

When discussing his considerations on philosophy of science Fleck raises a question about how significant the thought style in the process of perception is. He stresses that it has an impact on the perceiving person and changes their process of perception. Even „das einfachste Beobachten [ist] denkstilbedingt, also an eine Denkgemeinschaft gebunden“ (*ibidem*, p. 129) (the simplest observation is dependent upon a thought style, in other words bound by a thought collective – transl. by MK) and is determined by the predominant thought style of that particular thought collective. It appears from the foregoing that the thought style has a *supra-individual* character. In fact, it is the requirement and the result of collective perception and social activities. In order to offer a better understanding of this problem Fleck compares the functioning of a thought collective to an orchestra. The activities within a collective are not a result of the „Arbeitsinstrumente“ (*ibidem*) (the work of individual instruments – transl. by MK) but rather a result of co-operation followed by certain rules.

1.2. The thought style in specialised communication

As mentioned before, each discipline has its favoured methods of research and fixed habits of thinking. Those characteristics lead e.g. to the development of a common special language allowing for communicative activities in the discipline as well as intra-disciplinary communication processes. The special language can be described as a feature of affiliation to a thought collective. In other words, different research scopes and the implemented approach to it separate individual disciplines and therefore individual special languages. Considering that a shared special language is

the common ground for intra-disciplinary communication processes, the specific nature of communicative activities within a discipline and hence the correspondent specific thought style can be analysed with the help of systematic analyses of specialised texts (Baumann, 1992a, p. 145f.; Baumann, 1992b, p. 37).

Already in the 1970s and 1980s numerous text-linguistic studies confirmed that the information in a text is arranged according to certain logically coherent composition patterns (see e.g. Agricola, 1979; van Dijk, 1980). Those patterns reflect the train of thought of the author. As a result, a close relation between (discipline-specific) way of thinking and its linguistic realisation (specialised text) can be postulated. Assuming that the mental schemes shaped by a specific discipline become manifest in specialised texts as textual composition patterns, we can capture the features of individual thought styles of text authors by analyzing specialised texts.

In (specialised) texts, thought styles become apparent by the repeated usage of characteristic linguistic means and structures. They manifest themselves as certain linguistic regularities and textual composition patterns and can be located on several levels of the specialised text. Those regularities and patterns are first acquired by the members of different disciplines through experience and then incorporated into the text during the writing process. At the lexical level, the regularities occur as a result of using specific lexical means e.g. terminology as a reference to discipline-specific problems. At the textual and cognitive level, on the other hand, the mental schemes shaped by a specific discipline are represented by *strategies of textualisation* applied by the text author. Evidence for the existence of such regularities in specialised texts from across different disciplines is provided by comprehensive analyses (Baumann, 1987).

In this respect, Jahr identifies that the different methods of approach to problems between disciplines such as those of natural sciences which are based upon laws of nature compared to the humanities, are reflected in different strategies of textualisation of information (Jahr, 1996, p. 57). According to Jahr, this can be attributed to differing knowledge structures used by text authors arising from discipline-specific approaches and mental methods when tackling a problem.

By analysing individual mental strategies of several authors from the very same discipline and with the help of specialised texts, the supra-individual thought style can be eventually extracted. These findings may help us determine the specific nature of communicative activities in the given discipline.

2. Practical dimension of thought-style analysis

The following part will give insights into how the theoretical conceptions of thought styles can be made useful in the field of research on Language for Specific Purposes and how specialised communication can be analysed under the aspect of thought styles. Thought-style analyses carried out so far (Leicht-Rombouts, 2005; Vogler, 2008, 2006; Kühn, 2007; Klammer, 2010) show a common methodical process, which is also of interest for further research into discipline-specific thinking and writing. The process consists of three basic steps: Firstly, specific features of thinking and working in a discipline are examined. This is done by evaluating the relevant literature with special attention to the expert's reflections on these topics. Secondly, a linguistic analysis is carried out. Thirdly, the findings of step two are

evaluated and interpreted with regard to the findings of step one. In the following, those three basic steps will be further explained and the thought-style study carried out by Katja Klammer (2010) will be presented as a sample-study.

2.1. Reflections on discipline-specific ways of thinking and working

To acquaint oneself with a discipline at the beginning of the research process has both advantages and disadvantages. Knowing the expressively communicated specific ways of thinking in the discipline makes it possible to include them in the interpretation of its language use. In other words, one can examine whether the self-conception of a discipline (and its thought style) becomes apparent in the use of language. This would mean that the self-conception indeed forms a guideline for the author during the writing process. That course of action requires a careful handling of data, because the researcher's interpretation can otherwise be easily affected from the start. Furthermore, only such experts should be consulted that are real experts with the necessary degree of proficiency in the discipline to be studied. It can be helpful if the researcher is an expert in the given discipline because in this case he or she already has a deeper understanding of its thought style. The researcher, however, might then be affected by the thought style without being aware of it.

The sample thought-style analysis carried out by Klammer (*ibidem*) covers the thought style of engineering, in particular the field of audio engineering. In this scientific field, perception focuses on the object of technology. In the context of engineering, technology is defined by Verein Deutscher Ingenieure [Association of German Engineers] (VDI) as²²

- die Menge der nutzenorientierten, künstlichen, gegenständlichen Gebilde (Artefakte oder Sachsysteme);
- die Menge menschlicher Handlungen und Einrichtungen, in denen Sachsysteme entstehen;
- die Menge menschlicher Handlungen, in denen Sachsysteme verwendet werden (cit. in Ropohl, 2006, p. 44).

Therefore, the subject-matter of engineering comprises a) objects that form a system and are artificially made by humans in order to serve a certain purpose, b) the involved activities and c) according to Ropohl's supplement to the VDI standard, the necessary knowledge as prerequisite for activities (Ropohl, 2006, p. 46). Part of this knowledge are scientific findings such as physical principles because, as Kornwachs (2006, p. 71) states, it is impossible to construct against the laws of physics.

The objectives of engineers are, among others, to generate knowledge about the structure and function of existing and future possible technology (König, 2006, p. 90). Technical knowledge is to be transformed into practical applications. In other words, engineering is highly practice-oriented (*ibidem*, p. 86f.).

²² The VDI standard defines technology as “the amount of utility-oriented, artificial, concrete objects (artifacts or objects that form a system); the amount of human activities and facilities, in which objects that form a system are made; the amount of human activities using objects that form a system [...]” (translated by KK).

Technical activities usually start with a particular problem to be solved or objective to be achieved. Very often, these problems are formulated by external factors such as the society. As Gerhard Banse says, when a function or purpose is defined, there is still more than one way to provide a structure that meets the defined function. He also adds that as a consequence there are usually several different solutions (Banse, 2004, p. 121).

2.2. Corpus analysis

In order to study a thought style and answer the question how it finds expression in real technical language use, it is recommendable to analyse linguistic features with the help of a text corpus consisting of specialised texts. The studies conducted so far have only included written specialised texts. It would, however, also be possible to compose a corpus with oral specialised texts but this option will not be further discussed in this paper. The text corpus must be compiled carefully in order to obtain reliable results.

Firstly, the text corpus should consist of texts written by different authors to identify their common traits of language use, which then might be attributed to a discipline-specific thought style. As Fleck says, every thought style is a common feature of a thought collective and thus a supra-individual phenomenon. Therefore, it is the supra-individual language use that is of interest in thought-style analyses.

Secondly, the comparability of the texts must be ensured by paying attention to several text-external and text-internal factors like situational, social, functional, textual, and contextual factors. They should be the same in all texts.

The *situational factors* comprise, among others, the date of text publication. Here, one can decide to conduct a synchronic or diachronic study. The synchronic perspective can be found in the existing thought-style studies. The diachronic perspective, on the other hand, could show the development of thought styles and language use from the past through to the present clarifying in particular that the current ways of thinking should not at any moment be taken for granted. Thus, diachronic studies can help perceive the current thought style more clearly. Another situational factor is the place of text publication and socialisation of the author.

The author is a very important *social factor*. He or she should be an expert of a suitable level of proficiency²³ in the discipline to be studied. The author should be part of a thought collective and be consequently introduced to the thought style (Fleck, 1980, p. 137). Furthermore, the intended addressees must be taken into account because the author's anticipation of their needs can also influence text production (Baumann, 2008, p. 119; Rickheit, Weiss, Eikmeyer, 2010, p. 49).

The *functional dimension* of the corpus texts is closely related to the addressees. The texts should have the same function because the functional dimension influences text composition, as the comparison of primarily informative texts with primarily advertising texts shows.

²³ Hoffmann presents several levels of proficiency in his model of technical languages as sub-languages. In this model, he arranges levels of proficiency in a vertical way from A (theoretical sciences) to E (consumption level) (Hoffmann, 1987, p. 65-66). Current thought studies concentrate on the scientific levels. Lower levels are still to be analysed.

The *textual factor* is another important element. All corpus texts should be of the same text type, because text-type conventions affect text composition. In later analyses the findings for different text types could be compared to find out whether there are common features of language use that are present in all or most text types. The existing thought-style studies investigate the *scientific paper* (Leicht-Rombouts, 2005; Vogler, 2008), *non-fiction book* (Kühn, 2007), *handbook* (Klammer, 2010) and *academic textbook* (Vogler, 2006). According to Fleck (1980, p. 158f.), however, the handbook is particularly useful for thought-style analyses because it presents the established thought style in a well-ordered way.

The last factor to be discussed is the *contextual factor*. In general, disciplines²⁴ have several sub-domains. For the analysis, texts of the same sub-domain and the same topic should be chosen. After studying various sub-domains of a discipline, comparisons could be carried out to see whether a thought style is determining the entire discipline or whether a discipline is heterogeneous in this respect. So far, the small number of studies does not allow any respective statements. Fleck (*ibidem*, p. 141), however, says that the more specialised a thought collective is, the stronger its thought style is. This would mean that the degree of specialisation also determines the degree of (linguistic) heterogeneity.²⁵

In addition to contextual factors, the *volume of text corpora* is one of the much-discussed topics in the field of corpus analysis (Sanderson, 2008, p. 50; Trumpp, 1998, p. 5). There is no binding standard yet. The current thought-style studies use corpora of 100 to 300 pages in length.

One of the highly important basic questions in thought-style analysis concerns the *selection of appropriate analysis criteria*. Thought styles as a complex phenomenon can be reflected on various levels of language and thus requires a multi-layered and integrative language analysis. Each one of the existing thought-style studies chooses several analysis criteria, as the following picture shows (Fig. 1).

The analysis criteria are manifold but the picture also indicates that there is no uniform analysis scheme. Nevertheless, some criteria are included in all (macrostructure) or at least in most studies (stylistic devices, syntax, meta-communication, position of the author and technical pictures). The sample study by Klammer (2010) concentrates on the criteria *macrostructure*, *development of content/theme* and *technical picture*.

²⁴So far, the fields of theology, engineering (materials science, audio engineering) and science of history have been studied.

²⁵The sample study (Klammer, 2010) analyses the field of audio engineering and the specific field of sound conversion. The topic of all texts is the microphone as a type of sound converter.

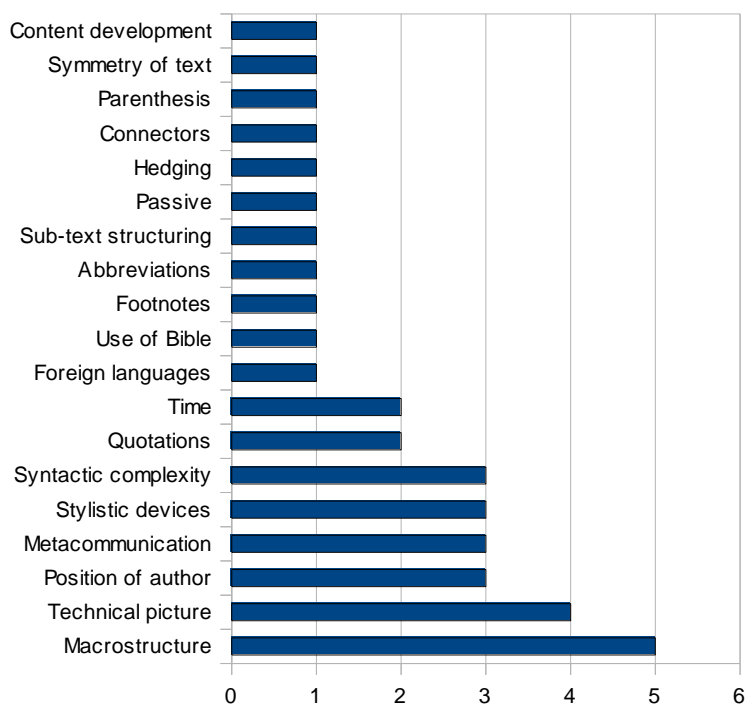


Fig. 1: Total frequency of analysis criteria in thought-style studies by Leicht-Rombouts (2005), Vogler (2006, 2008) and Klammer (2010)

2.3. Evaluation and interpretation of the findings

The results of the thought-style study carried out by Klammer (*ibidem*) show several discipline-specific communication strategies, some of which are presented in the following. One of the strategies is the strong structuring of the texts with many sub-texts marked by headlines. The linear as well as the hierarchical order of the sub-texts is clearly marked by using a great deal of nonverbal structuring signals, in particular typographic means and a numerical order of the headlines. Rosemarie Buhlmann and Anneliese Fearn (2000, p. 64) also consider this a typical feature of texts in natural sciences and engineering. In addition, it corresponds to the tendency of language economy and precision in these scientific fields.

The analysis of the development of content shows some non-linguistic structuring principles that in principle can be found in all analysed texts and are related to the subject-matter and the discipline. Sub-texts presenting audio devices are ordered chronologically by the time of invention of the devices which, at the same time, corresponds to an ordering by degree of device complexity. The microphone characteristics (directivity pattern) are always ordered according to the technical principle *from non-directional to directional*. At sub-text level, but also within several sub-texts, the theme “microphone” is developed using the contextual categories *structure* (structure of technical artefacts), *functionality* (function of artefact), *characteristic*, and *ways of use*. Presenting different types of microphones in the sub-texts also confirms that there is more than one way of solving a technical problem or goal (in this case: how to convert sound). Instead, several solutions with their respective advantages and disadvantages can be found.

The third analysis criterion is the technical picture. The analysed texts contain a high amount of technical pictures. This can be considered as discipline-specific as other disciplines make less use of technical pictures (see e.g. Kühn, 2007; Leicht-Rombouts, 2005). The important role of technical pictures is very clear in the texts investigated by Klammer (2010). Not only do they frequently occur (1.71 to 4.66 pictures per standard page), they are also strongly connected to the verbal texts in formal, contextual and functional respect. The analysis also shows a range of picture types with photography, schema, circuit diagram, line graph and polar diagram as the most frequent ones (*ibidem*, p. 96-135). The use of pictures can be seen as evidence for the importance of structure of artefacts in the thought style (and directed perception) of engineering because this is an important picture content. This is an example for the reflection of a thought style in specialised texts.

3. Applicability of thought-style studies

Results of thought-style studies are particularly interesting for the teaching of Languages for Special Purposes in the context of professional training (e.g. for future professionals, technical writers, translators, interpreters). In a thought-style oriented language course the respective ways of thinking can be made clear alongside the appropriate ways of communicating within the discipline. With the help of the concept of thought styles, specific language usage can not only be taught, but also explained. This again can contribute to a conscious use of language. It is important for professionals and for translators and interpreters whose daily work brings them into contact with different ways of thinking and communication styles. The concept and the methodical process found in the studies also forms a specific guideline for translators and interpreters when being introduced to new disciplines and topics.

In addition, the results of thought-style studies can be used to prepare interdisciplinary research processes and working groups which can then help improve the mutual understanding and therefore the cooperation. Misunderstandings between different science cultures are one of the main disturbing factors impeding the cooperation in an interdisciplinary group. As Charles P. Snow previously observed, potentials might than remain unused (Snow, 1993). Thought-style studies, however, can show and explain the different ways of thinking and communicating and thus contribute to a successful work.

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A LOOK AT LUDWIK FLECK'S PHILOSOPHY OF SCIENCE WITH A SPECIAL REFERENCE TO THOUGHT COLLECTIVES AND THOUGHT STYLES

1. Introduction

One of the most important reasons why Fleck has been paid attention to so much in recent years is his influence on the work of Thomas Kuhn. In *Genesis and Development of a Scientific Fact*,- Fleck explains the essence of the scientific fact in ways explored many years later by Kuhn, who also did research in the field of scientific communities and epistemology. The concept of paradigms is basic to Kuhn's theory:

[...] a paradigm is an accepted model or pattern... rarely an object for replication... it is an object for further articulation and specification under new or more stringent conditions (*ibidem*, p. 10).

The terms "thought collective" and "thought style" are of paramount importance in Fleck's epistemology. The first concept provides people with different perspectives and types of thinking in the event of making comparison and contrast (Fleck, 1979, p. 51). A thought collective may include numerous overlapping esoteric and exoteric circles, and the generation of knowledge can be seen as a continuous transformative process. According to Fleck (*ibid*, p.118):

Only through the socio-cognitive migration of fragments of personal knowledge within the esoteric circle, combined with the feedback from the exoteric circle, are these fragments altered so that additive, impersonal parts can arise from the non-additive personal ones".

Any person may be a member of a community in several exoteric circles, but a few in esoteric circles. It can be said that an indirect system is available between these two systems, but they are intertwined with each other. Personal knowledge feedback between esoteric and exoteric circles has been influential on epistemology since scientific facts are constructed out of sociological aspects in view of a democratic character, in which individuals act as interwoven links between certain types of knowledge or thought styles.

People can think and perceive certain things differently, but these differences are generally related to a community or group rather than individuals (Sady, 2012), for instance educators dealing with social sciences can approach a certain issue in a similar way while a physicist can approach the same issue from another point of

view. Hence, it can be said that there are various ways of speaking on certain issues considering the different perspectives which are formed through a gradually established cognitive background. Sady (ibidem) states that Immanuel Kant was the person who made us aware of the fact that in order to learn about nature from experience, we have to know something before experiencing anything. He also perceives cognition as a collective activity which can be considered to be frustrating just to say that an individual got to know a certain phenomenon, but the style in which it was acquired should also be taken into consideration.

Moges (2010) explains a statement proposed by Fleck about ‘thought-collective’ who defines it as “a community of persons mutually exchanging ideas” (as cited in Fleck, 1979, p. 22). According to Kant, a priori knowledge is unchangeable and plays a very important and active role in cognition: our picture of the world is formed as much as by our forms of perception and categories of thought, and we will never know whether and how that picture is similar to what exists independently of our cognitive acts. Fleck adopted Kant’s thesis on the active role of cognitive a priori: “an empty mind would neither perceive nor think.” Hence, before a mind starts to experience and so, starts to think, it has to have some initial knowledge beforehand (as cited in Sady, 2012).

In his *Cognition and Fact*, Fleck (1986) yields that a truly isolated investigator is impossible (...). An isolated investigator without bias and tradition, without forces of mental society acting upon him, and without the effect of the evolution of that society, would be blind and thoughtless. Thinking is a collective activity (...). Its product is a certain picture, which is visible only to anybody who takes part in this social activity, or a thought which is also clear to the members of the collective only. What we do think and how we do see depends on the thought-collective to which we belong (as cited in Cohen, Schnelle, 1986, p.77).

2. Fleck’s Theoretical Significance

The most significant and original contribution made by Fleck is to conceptualize the genesis of fact in terms of active and passive connections. Active connections are defined as properties of the system which are covered within a thought-style. Based on these assumptions, other properties of the system seem evident or inevitable, setting themselves upon the observer (Cohen, Schnelle, 1986). Active connections possess a haphazard character whereas passive ones appear necessary. For this reason, the objective of every research community is to increase the passive connections in its knowledge-claims while decreasing the active ones. This distinction leads to an important problem, that is, the rhetorical tactics which are most efficient in setting up knowledge-claims (Harwood, 1986).

Fleck’s most current contribution to scholarship, *Cognition and Fact*, is beneficial in many ways. It makes Fleck’s essays on epistemology and different comments on Fleck by historians, philosophers and sociologists obtainable to an English-speaking audience. Even though none of Fleck’s essays introduces a substantial theoretical advance over his monograph, one or two of them involve vivid illustrations of the constructed and context-dependent nature of perception and should prove useful for teaching (Cohen, Schnelle, 1986). The commentaries in *Cognition and Fact* consist of two categories. The first category is biographical in approach. These

essays are associated with Fleck's epistemological and scientific views on a variety of intellectual and social contexts: improvements in twentieth-century philosophy, interwar Polish philosophical traditions, the culture of Lwow, and schools of thought within interwar bacteriology and immunology. The second category mentions general problems of epistemology. The authors use Fleck's work in different ways. Some are critical whereas others appreciate it (Harwood, 1986).

3. The Scientific and Social Roots of Fleck's Philosophy of Science

Ludwik Fleck is known as a leader of the constructivist-relativist movement in the philosophy and sociology of science. Despite his effective period in philosophy in the late 1920s and the 1930s, he has been discovered after the complimentary recall of his name in Thomas S. Kuhn's *The Structure of Scientific Revolutions* (1962). As regards his training, Fleck was not a historian or a philosopher or a sociologist. Rather, he was a physician mastering in bacteriology, who worked as a clinical bacteriologist throughout his life. He firstly worked in routine laboratories, and then, after World War II, in an academic setting.

It can be alleged that Fleck's epistemological thought was structured and maintained both by his scientific background and by the social setting in which he found himself. Particularly, Fleck received training in the field of bacteriology and with the help of descriptive and classificatory nature of this discipline he initiated a constructivist epistemology. Furthermore, Fleck's personal scientific approach was inclined to have a small backward-looking minority and it alienated him from the mainstream of his discipline. As a scientist by vocation, Fleck could not confine himself to an extremely original position in the Polish scientific community, and hence looked for status and gratification in reference groups instead of scientific (Freudenthal, Löwy, 1988).

Fleck asserted in his epistemological works that scientific knowledge is constructed. In his point of view, self-acknowledged scientific facts do not exist out there in nature expecting to be found by objective and interchangeable observers. Instead, they become evident as a consequence of the genesis and development of a scientific fact. The observer's education, his previous ideas, and his expectations play a crucial role. Furthermore, for Fleck scientific facts are built up by means of distinct thought collectives, each consists of individuals who own a particular thought style (Löwy, 1988). As different and equally well-supported thought styles can co-exist in a given domain, Fleck's approach was hence at least partially relativist: scientific knowledge is constructed and additionally talking about truth and falsehood is meaningful only within a specific thought collective and with regard to a given thought style. However, Fleck was not really a relativist. He did not believe that observations are full of theories and he regarded science as strong enough for cumulative improvement (Toulmin, 1986).

4. Thought Collectives and Thought Styles

Ludwik Fleck defined “thought-collective” as “a community of persons mutually exchanging ideas” (Fleck, 1979, p. 22). Sady (2012) states that Fleck recognised cognition as a collective activity, since it is based on the body of knowledge which is gained from other people hence, a thought collective comes into being when people transfer knowledge and ideas from one another through understandings and misunderstandings, as a result a characterized thought style is developed. Sady (*ibidem*) mentions that a thought style is composed of active elements, which define the way the members of a collective see and think about the world, and passive elements, which in other words can be defined as the “objective reality”. Sady (*ibidem*) sees “facts”, as social constructs and defines them as being directly integrated with culture and nature and also sees thought styles as elements beyond comparison, for instance what is regarded to be right or true or more valid for one group can be seen as the opposite for another.

To make this definition more specific, we can give an example by comparing and contrasting two groups from two different scientific backgrounds such as physicists and theologians, who are likely to act against each other. Fleck defines a scientific fact as "For the time being we can define a scientific fact as a thought-stylized conceptual relation which can be investigated from the point of view of history and from that of psychology, both individual and collective, but which cannot be substantively reconstructed into simply from these points of view" (Fleck, 1979, p.83). According to Fleck (*ibidem*, p.91), scientific fact is triggered firstly by styled observation, characterized by amazement, looking for similarities, attempt at experimenting, hope as well as amazement.

Nikolas (2006) states that a fact is not something that comes into being all of a sudden but actually is formed through an initial ‘signal of resistance’ and is developed gradually into a concept on the basis of a particular thought collective.

Fleck points out that ‘thought collective’ can take place whenever two or more people are transferring ideas and states this through saying that: "If a large group exists long enough, the thought style becomes fixed and formal in structure. Practical performance then dominates over creative mood, which is reduced to a certain fixed level that is disciplined, uniform, and discreet. This is the situation in which contemporary science finds itself as a “specific, thought-collective structure” (Fleck, 1979, p.102).

Another important aspect of thought collective is the idea of becoming less able to realise and understand contradicting information when a learner becomes more and more specialized in a specific area of information. Fleck puts forward this idea through these words: "Direct perception of form [Gestaltsehen] requires being experienced in the relevant field of thought. The ability directly to perceive meaning, form, and self-contained unity is acquired only after much experience, perhaps with preliminary training. At the same time of course, we lose the ability to see something that contradicts the form. But it is just this readiness for directed perception that is the main constituent of thought style. Visual perception of form therefore becomes a definite function of thought style." (*ibidem*, p.92).

According to Fleck, a fact has three links with a thought collective. These are:

- 1) Since resistance is possible when a goal is tried to be achieved, every fact must be in relation with the interests of its thought collectives.
 - 2) The resistance should be effective within the thought collective. It must be brought home to each member as both a thought constraint and a form to be directly experienced.
 - 3) The fact must be expressed in the style of the thought collective (*ibidem*, p.101).
- Fleck (*ibidem*) defines a thought style as the readiness for directed perception, with corresponding mental and objective assimilation of what has been perceived, characterized by specific problems of interest, by judgements which the thought collective considers evident and by methods which are applied as a means of cognition. Also, Peine (2009) states that “thought collective is a group of individuals exchanging ideas and thus developing and nurturing a particular thought style, that is a crucial element of cognition” (Peine, 2009, p.9).

5. Fleck versus Kuhn

While reading Fleck, T.S. Kuhn, a modern writer, is often remembered. Both of them developed generalizable assumptions about scientific change in the event of detailed historical analysis rather than in the more abstract manner. Many writers have indicated the important similarities between Fleck's conception of science and Kuhn's normal science. The most striking ones are as follows (Harwood, 1986):

- According to Fleck, a scientist's work is defined by a tradition of shared assumptions which are mainly invisible to members and hence seldom questioned.
- He argues that these assumptions determine which questions are important and predict the appropriate answers.
- Using several vivid samples, Fleck yields that perception is an active and selective Gestalt process and it is conditioned by these assumptions.
- Challenges to the thought-style are commonly rejected or assimilated.
- Members of different research communities own different thought-styles and tend to talk past one another.

In addition to the similarities, the main difference between Fleck and Kuhn is apparently that Fleck embraced the sociological implications of his work. Repeatedly he attacked positivist philosophers of science for idealizing the process of knowledge-growth. An empirically adequate theory of knowledge, he insisted, must necessarily be sociological. However, Kuhn was slower to encourage the sociological extension of his work (Cohen, Schnelle, 1985).

Furthermore, in Fleck's theory the impact of the social issues is recognized to be more widespread because of the fact that thought styles are not only associated with the realm of science but also with ordinary life. Additionally, the development of a certain thought style emerges steadily from a pre-scientific to a mature scientific period (Mößner, 2011). If it is taken into consideration that thought styles are not restricted to the scientific world, this also means that facts in everyday life possess the same developmental history. “Knowledge exists in the collective and is continually being revised. The store of facts also changes” (Fleck, 1979). On the other hand, Kuhn's concept of a paradigm is dedicated to the natural sciences. Such a paradigm

goes through a change rapidly during a revolutionary stage. Considering this, it can be yielded that the constructive effect of the social issues on an individual's cognition is greater in Fleck's theory in comparison to Kuhn's.

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POLITENESS: SOME REMARKS ON THE CULTURAL DIFFERENCES BETWEEN ENGLISH AND POLISH

1. Introduction

Politeness is a complex culture-dependent phenomenon including not only appropriate language but also non-verbal behaviour, such as bowing, regulated by a variety of social factors. Linguistic politeness has many definitions (see e.g. Eelen, 2001, p. 30-86), all of which may be summarized as “a means of expressing consideration for others” (Holmes, 2006, p. 711), being thus an aspect of strategic interaction performed to achieve certain goals, such as avoiding conflict or win “effective social living” (Kasper, 1990, p. 193-218). The notion has been extensively studied by many researchers. Yet the nature of the phenomenon is still under debate.

Nowadays, thanks to technological advancement, communication is fast and practically unlimited. Tourists, students wishing to study in another country, workers travelling abroad to a new job, they all need to be aware of their native rules of politeness and to be able to deal with the rules that hold in the foreign country in which they are to stay. The purpose of this paper is to present some of the existing models of linguistic politeness and to draw attention to a number of differences in the politeness norms that can be found in Polish and English with the focus on address forms used in the two languages.

2. Early models of linguistic politeness

The earliest and most influential pragmatic models of linguistic politeness (e.g. by Lakoff 1973, 1989; Leech, 1987) relied heavily on the theory of conversational cooperation, namely, the Cooperative Principle (CP) formulated by Grice (1975). His main assumption was the claim that during a conversation interlocutors are trying to cooperate. The CP involves four maxims: Quality, Quantity, Relation and Manner. For communication to be effective, speakers and listeners must converse cooperatively and accept one another. Due to the assumption that interlocutors obey the CP, various conversational implicatures, resulting from flouting of the maxims, are understood. Moreover, speech errors tend to be ignored, as the listener concentrates on the meaning that the speaker is trying to convey. Grice assumed that the speaker and the listener are rational and always interpret utterances in a logical way.

The CP, though, did not consider an assumption “be polite” to be an independent maxim, since Grice saw it as an aesthetic, social or moral element of a conversation, but not really a part of the CP (Dynel, 2009). This is one of the weaknesses of the CP; namely, it failed to account for an important assumption that is typically made in a conversation.

One of the early models of linguistic politeness was constructed by Lakoff (1973, 1989) who saw Grice's Cooperation Principle as insufficient and proposed the Politeness Principle (PP) as complementary to Grice's CP. She claimed that the PP was a necessary addition to the CP, as it helped to "reduce friction in personal interaction" (Lakoff, 1989). The PP consists of the following rules of pragmatic competence.

1. Be clear.
 - a) Quantity: right amount of information.
 - b) Quality: speak truthfully.
 - c) Relation: make relevant contributions to the conversation.
 - d) Manner: speak without ambiguity.
2. Be polite.
 - a) Formality/Distance: do not impose or remain aloof.
 - b) Deference: give the interlocutor options.
 - c) Camaderie: make your addressee feel good; maintain equality.

It is not possible to maximize all three maxims of the "be polite" rule at the first time, which means that they may be in conflict, so speakers must reach a balance between them, otherwise the speaker is perceived as impolite. Depending on a situation, politeness may be shown either as a sign of solidarity or deference. Moreover, Lakoff stated that the "be polite" rule is more important than the "be clear" one: "it is more important in a conversation to avoid offense than to achieve clarity" (*ibidem*, p. 297). Therefore, if the speaker does not obey any of the Gricean maxims, the interlocutor assumes that the speaker means to be polite. Lakoff deems the Politeness Principle universal.

The PP poses several problems, though. The CP, on which Lakoff based her model, concentrates on maxim flouting and the subsequent implicatures, yet the implicatures need not be polite. What is more, politeness may be expressed by very clear utterances, not only those implicit ones.

The Politeness Principle devised by Leech (1983), later named the Grand Strategy of Politeness, was another model complementary to the CP. Leech's Politeness Principle was supposed to account for the phenomena that the CP failed to explain, namely, "why people are often so indirect in conveying what they mean" (*ibidem*, p. 80). The Principle, which parallels the Gricean model, consists of a number of maxims, including the following.

1. Tact: minimize the expression of beliefs which imply cost to other; maximize the expression of beliefs which imply benefits to other.
2. Generosity: minimize the expression of beliefs which express or imply benefit to self; maximize the expression of beliefs that express or imply cost to self.
3. Approbation: minimize the expression of beliefs which express dispraise of other; maximize the expression of beliefs which express approval of other.
4. Modesty: minimize the expression of praise of self; maximize the expression of dispraise of self.
5. Agreement: minimize the expression of disagreement between self and other; maximize the expression of agreement between self and other.
6. Sympathy: minimize antipathy between self and other; maximize sympathy between self and other.

According to Leech, politeness can be measured against various scales, such as cost benefit, social distance, authority or indirectness, depending on a situation. Moreover, the maxims of the Cooperative Principle may be disobeyed in order to follow a politeness-motivated intention: “In being polite one is often faced with a clash between the CP and the PP so that one has to choose how far to trade off one against the other” (*ibidem*, p. 83). He claims that while the CP aims at regulating the speaker’s utterances to achieve a certain illocutionary or discoursal goals, the PP has priority over the CP as it serves to maintain social stability and friendly relations and cooperation between interlocutors. However, as Dynel (2009) suggested, interlocutors do not have to be “friendly” and polite in order to remain cooperative and to obey the CP.

An influential model of linguistic politeness was proposed by Brown and Levinson (1987). They also relied on Gricean CP but saw its role in communication differently than Lakoff and Leech did. In their view, speakers assume that the CP operates all the time but politeness has to be overtly communicated. As they stated, the maxims are “guidelines for achieving maximally efficient communication”, but politeness is “a major source of deviation from such rational efficiency” (*ibidem*, p. 95).

Brown and Levinson incorporated a modified concept of face developed by Goffman (1967). They divided face into two components, that is, positive and negative one. The former was described as “the want of every member that his wants be desirable to at least some others... in particular, it includes the desire to be ratified, understood, approved of, liked or admired” Brown, Levinson, 1987, p. 62). The latter, on the other hand, as “the want of every competent adult member that his actions be unimpeded by others” (*ibidem*, p. 62). During an interaction all speakers try to maintain each other’s face, yet when a speech act, for instance constitutes a demand or intrusion on another speaker’s autonomy, it becomes a face-threatening act (FTA).

Politeness is seen as a rational and rule-governed element of social interaction. Politeness has priority over efficiency of communication, since its role is to maintain social cohesion by maintaining the speaker’s public face (self-image). Thus the choice of a particular politeness strategy, such as solidarity, restraint, avoidance of unequivocal impositions, is motivated by the individual’s public face: the more serious the FTA is, the more polite the speaker should be. Politeness, as a redressive action mitigating the effects of FTAs, involves 5 super-strategies (*ibidem*, p. 91), ordered from the least serious to the most extreme FTA:

1. Bold on record (performing the FTA directly without any redressive action).
2. On record with redressive action: negative politeness strategies (attending to the hearer’s negative face wants, for instance by hedging or apologizing).
3. On record with redressive action: positive politeness strategies (attending to the hearer’s positive face wants by, for example, making offers, joking or giving sympathy).
4. Off record politeness strategies (avoiding responsibility for performing the FTA, for instance, by means of conversational implicatures).
5. Do not do the FTA (because it is too intense).

The weight of the FTA and, consequently, the choice of an appropriate politeness strategy depend on such sociocultural variables as social distance (D)

between the interlocutors, the power (P) that the hearer holds over the speaker and the ranking of the imposition (R).

Brown and Levinson's approach to politeness has attracted considerable criticism (e.g. Eelen, 2001; Watts, 2003; Dynel, 2009). Firstly, they found politeness and Gricean CP contradictory, for which counterarguments can be given. In particular, the off-record super-strategies may involve maxim flouting. Moreover, the authors described politeness in terms of speakers' wants, which indicates their rationality. The choice of the appropriate super-strategy is rational too. Secondly, the ordering of superstrategies is debatable. As Dynel (2009) observed, only one of them, that is, going off-record, seems to actually involve maxim flouting and implicitness which communicates politeness. Yet the other strategies are also means of expressing politeness, which is contradictory to the previous assumption. Thirdly, they claimed the universality of their model of politeness providing sample conversations from various languages, such as South Indian Tamil, Tzeltal, as well as British and American English, as illustration of the strategies. However, the examples are presented without context which would allow judging whether the utterances are really FTAs. Another springs from the theoretical basis of Brown and Levinson's model, which is based on the speech act theory. The theory concentrates on utterances which are supposed to provide a measure for degrees of politeness; however, FTAs are expressions typically larger than a single utterance. Finally, the model has been criticized, especially by Asian linguists, as culturally limited and too Anglo-centric, and thus not as universal as the authors claimed (Holmes, 2006, p. 711-723).

3. Postmodernist models: the discursive approach

More recent, postmodernist approaches (e.g. Eelen, 2004; Mills, 2003; Watts, 2003; Watts, Ide, Ehlich, 2005) to politeness emphasise a dynamic nature of social interaction arguing that the meaning of an utterance, and hence politeness, is co-constructed, that is, results from the negotiation between the participants of a conversation. This means that judging a particular behaviour as polite or not is subjective and its interpretation may vary. This view of politeness can be described as a discursive approach (Locher, 2004; Watts, 2003; Watts et al., 2005).

Eelen's model of linguistic politeness (2004, p. 30) differentiates between the "first-order (im)politeness", namely, common sense and folk understanding of (im)politeness; and "second-order (im)politeness" which defines (im)politeness in terms of sociolinguistic theory. Another notion that he introduces is "expressive politeness" which refers to the purposeful production of polite language, such as *I beg your pardon* or *please*. The model was further developed by, among others, Watts who claimed that a study of politeness should concentrate on first-order politeness, in particular, "how participants in social interaction perceive politeness" (Watts, 2005, xix), "how people use the terms that are available to them in their own languages" and how they negotiate these terms in a discourse (*ibidem*, xxii). He believes that second-order politeness should not become the focus of research, since theoretical conceptualizations of the notion lack utility.

The definition of politeness emerging from the discursive approach is "linguistic behaviour that carries a value in an emergent network in excess of what is required by the politic behaviour of the overall interaction" (Watts, 2003, p. 162). The

definition introduces an important notion of politic behaviour which is indispensable to understand politeness within this model and which is described as “linguistic behaviour which is perceived to be appropriate to the social constraints of the ongoing interaction” (*ibidem*, p. 19).

4. Impoliteness

Although impoliteness has received less attention from researchers, it is surely as complex as politeness. Moreover, providing its definition, just as the one of politeness, is far from being simple. For instance, Lakoff (1989, p. 103) defined the notion as rude behaviour which “does not utilize politeness strategies where they would be expected, in such a way that the utterance can almost plausibly be interpreted as intentionally and negatively confrontational.” Austin (1990, p. 277-293) presented impoliteness as intentionally rude behaviour being the “dark side of politeness”. The behaviour emerges in such speech acts, called Face Attack Acts, which are deliberately intended to insult the interlocutor. Watts (2003) claimed that since politeness is salient and unmarked, obeying its norms tends to be unnoticed. Impoliteness, by contrast, would be more noticeable by participants. Bousfield and Locher (2008, p. 72) understand impoliteness as behaviour that constitutes an “intentionally gratuitous and conflicting verbal face-threatening acts”.

Surprisingly, swearing is not always perceived as impolite, as a number of studies revealed that it may serve various purposes depending on the situation, for instance positive politeness solidarity function (Holmes, 2006).

5. Linguistic politeness rules in Polish

Societies can be roughly divided into two types: (1) societies in which interactions between strangers are more deferential, that is, ones in which more attention is paid to negative face wants, and (2) societies in which interactions between strangers are more friendly, namely ones which concentrate primarily on positive face wants. In the former, ignoring the social distance between interlocutors is perceived as impolite, while in the latter, emphasizing social distance is rude (Brown, Levinson, 1987). If this distinction represents a scale and the two types of societies two extremes, Polish would approximate the negative-face-wants extreme, whereas English (especially American English) would be closer to the positive-face-wants one. Thus politeness strategies employed by Polish and English speakers will reflect the division.

Poland and its social norms remain under the influence of the Western culture; however, the influences from the East are easily detectable. These factors also have impact on language and the expressions of linguistic politeness. While one may claim that no significant cultural differences between the Poles and the English exist, certain patterns of polite behavior will be traced in one culture but not in the other, which will be expressed in the two languages. This section aims at describing the most conspicuous aspects of linguistic politeness in Polish and English.

The principles of politeness present in Polish were discussed by, for example, Marcjanik (1992, 1997, 2001, 2008) and Ożóg (2001). Ożóg specified two fundamental rules of Polish politeness:

1. The rule of a person's autonomy and dignity.
2. The rule of kindness.

They are complemented by a set of maxims, namely: showing modesty, expressing requests politely, showing gratitude, willingness to help, expressing penitence for a gaffe, expressing empathy towards the participant, and showing respect towards women, the elderly, parents and the superiors.

Marcjanik's model of Polish politeness (1992, 1997) also involves two principles. They are as follows:

1. Showing respect towards the participant, especially the elderly, women, the superior and people with prestigious functions; minimizing the role of the speaker.
2. Showing interest in the matters important for the participant and his or her family, especially the spouse (in such matters as health, career, or current family events).

The principles are accompanied by more specific maxims, in particular:

- a) The maxim of empathy (either in the case of the participant's success or failure).
- b) The maxim of acceptance and kindness towards the actions of the participant.
- c) Showing willingness to remain in the participant's company.
- d) The maxim of offering help to the participant.
- e) The maxim of expressing evidence of memory (especially when the distance between the participants is great).
- f) The maxim of respecting the participant's autonomy, including the maxim of discretion (with regard to his or her illnesses, love life, family conflicts, earnings or illegal business).

The two models of linguistic politeness may be summarized in the following way: Polish politeness is based on communicative asymmetry, in which the hearer is always superior to the speaker. In this way, a culture of respect and distance is created.

6. Forms of address in Polish and English

The relative status between interlocutors is expressed in a variety of ways in various languages, for instance by honorifics in Japanese or *tu/vous* forms in French. The status relations that are expressed by second-person pronouns which indicate different levels of politeness, social distance, courtesy, familiarity, age or insult towards the addressee are often referred to as a T-V distinction.

In Polish the relation between speakers may be of two kinds; namely, a deferential, formal one involving greater distance, expressed by the *pan/pani* (pl *państwo*) forms, and an informal one with greater familiarity, expressed by the second-person personal pronoun *ty* (pl *wy*). These two types of relations influence not only the way speakers address each other but also indicate the degree to which the speaker can invade the interlocutor's privacy. The *pan/pani* forms are perceived as polite in both symmetric relations, in which the speaker and hearer are pragmatically equal, and in asymmetric ones, characterized by pragmatic inequality. The *ty* form is polite in symmetric relations, but not in asymmetric ones, in which it may indicate disrespect (Skudzyk, 2007; Marcjanik, 2008).

The *ty* form is acceptable when addressing friends and close family members: (grand)parents, the spouse, (grand)children, siblings and cousins. The form are

avoided, though, if age difference is big, in which case *pan/pani* is perceived as more appropriate. Family members who are not so closely related tend to be addressed as *pan/pani* or *ciociu/wujku* (vocative; ‘aunt’/‘uncle’) (Marcjanik, 2008). Recently, the *ciociu/wujku* forms are frequently used by small children in reference to kindergarten teachers or other adults.

The *ty*-relation is obligatory when the interlocutors are children (symmetric relation) or when the hearer only is a child (asymmetric relation). When the interlocutors who are young adults address each other with the *ty* form, they demonstrate generational solidarity. A police officer addresses a criminal as *ty* to emphasize his or her power. Interestingly, the *ty* form is used in prayers to refer to God or Jesus; even if the invocation contains the *pan* form (*Panie Boże, Panie Jezu*; vocative), the remaining part of the prayer is formulated in accordance with the *ty*-relation (*ibidem*).

The *pan/pani* form is typical in asymmetric relations, in which the speaker uses the *ty* form but the hearer is obliged to respond with the *pan/pani* one, for example in relations between an adult and a child, teacher and student, or those situated higher and lower in the social structure. Using the *ty* form instead is always perceived impolite. The more powerful interlocutor is typically addressed with a neutral *proszę pana/proszę pani/proszę państwa* form (*ibidem*).

Certain professional environments with clear hierarchical structures where using functional titles is required, such as the army, universities or parliament, *pan/pani* is followed by the name of the function, for instance, *panie ministrze* (vocative; ‘Minister’), *pani profesor* (vocative; ‘Professor’). The *proszę pana/proszę pani* forms are considered inappropriate (*ibidem*).

A separate issue concerns the use of *pan/pani* with surnames and names. The forms *pan/pani/państwo* followed by a surname are polite only when they refer to third parties (e.g. *Jutro przyjeżdża pani Nowak*, ‘Mrs Nowak is arriving tomorrow’). With reference to the hearer directly, such forms are considered rather impolite; however, there exist two exceptions. Firstly, the forms are acceptable (but not elegant) if the speaker wants to call someone out from a group of other people, for example, when addressing a student (e.g. *Panie Nowak, proszę odpowiedzieć na pytanie*, ‘Mr Nowak, please answer the question’). Secondly, an acceptable usage of the *pan/pani* followed by a surname is observable in small towns and villages where inhabitants know each other. There such forms are polite, since they distinguish the addressee from the other people (*ibidem*).

Recently, one may observe a tendency to expressing oneself freely and directly, yet in Polish the distance between interlocutors in the *ty*-relation differs considerably from the one in the *pan/pani* relation. It is not surprising then that there have been attempts to create such forms of address which would refer to intermediate relations: not as intimate as the *ty*-relation and not as distant as the *pan/pani* one. Marcjanik (*ibidem*, p. 47) named this phenomenon a *pani Ewo* relation (a ‘Mrs Eve’ relation). This form of address tends to be used in less official but not entirely informal contexts, for instance by sales representatives, who are not acquainted with their clients (hence the use of *pan/pani*) but want to shorten the distance (by using the first name of the client). However, employing such forms may irritate some more traditional interlocutors, especially those middle-aged ones.

Present-day English does not have any syntactic markers for the T-V distinction, which is quite unusual for an Indo-European language. However, there exist certain semantic analogues allowing to recognize the degree of respect paid to the interlocutor and to express the various levels of politeness. In both symmetric and asymmetric relations *you* appears and corresponds to Polish *ty* and *pan/pani* forms. *You* is thus a neutral term which, because it may refer to any interlocutor, does not express intimacy, informality, solidarity or respect and power. These relations are expressed by other means, that is, nominal address forms (Biel, 2004).

Nominal address forms include first names, surnames and titles, yet they do not mark the differences of relations between interlocutors as clearly as in Polish. The greater orientation towards positive face wants typical for English can be observed in the frequent use of first names, also in professional contexts.

First names are typically used to refer to friends and contemporaries, indicating familiarity between interlocutors, especially if they are young people. Before the Second World War, however, the usage of first names was a sign of intimacy or liking. Nowadays, it is acceptable to call social equals, such as colleagues at work, with their first names, “even though they may not like each other” (Wardhaugh, 1986, p. 260). The changing norms of politeness are also reflected in the relations between employees and their bosses, and between students and their professors, who tend to address each other using first names, especially in the US. Earlier, such forms would be considered impolite. Yet for some people first-naming their superiors remains uncomfortable, for which reason they may choose the neutral *you* as a form of address. Moreover, many speakers may find first names unacceptable when the age distance is large (Biel, 2004).

As in Poland, a tendency to decrease the formality of communication influencing politeness norms can be observed. In the past, first names indicated that the interlocutors were on intimate terms, while titles marked lack of intimacy. Both types of forms indicated status similarities or differences. At present, since English first names have become so widespread, they signal a lesser degree of intimacy than the Polish ones.

Formal titles, such as *Sir/Madam* and *Mr/Mrs/Ms/Miss* followed by a surname, are used in more formal contexts and indicate speaker’s respect towards the hearer. They are employed to address seniors and superiors. Titles can be used alone when the speaker does not know the hearer’s name and then they are “the least intimate form of address (...). They are devoid of ‘personal’ content” (Wardhaugh, 1986, p. 259). Unlike in Polish, titles are not used with first names. English also uses a small set of professional titles, such as *Captain, Doctor, Senator* or *Professor*, which indicate the hearer’s respectable profession. These titles, though, are not normally combined with *Mr/Mrs* forms, except for such terms as *Mr Speaker, Mr Chairman, Mr Justice, Mr President* (Biel, 2004, p. 170).

People belonging to higher social classes, that is, the nobility, bishops or judges, are addressed by honorific titles, such as *My Lord/Lady, Your (His) Lordship, Your (His) Honour, Your (His) Grace, and Your Excellency*. Royal titles include *Your Majesty* and *Your Royal Highness*. The third person possessive pronoun indicates greater distance than the second person possessive one. Interestingly, present-day Polish virtually lacks honorific forms of address. The few ones which are still in use

include forms referring to church hierarchy, for example, *Jego Świątobliwość* ('His Holiness').

Surnames as forms of address appear in very informal contexts, for example in sports or in the army, indicating camaraderie, yet without intimacy. When used in a different context, they may be perceived as an impolite marker of power (*ibidem*).

7. Final remarks

Globalization has facilitated contacts between people of various cultural backgrounds, making it essential to communicate effectively and without misunderstandings. It appears, though, that being perceived as a polite person may be harder than one could expect. Communication across social and linguistic boundaries has become an important issue for many researchers and politeness has been an essential part of their studies. This paper presented a comparative study of one of the aspects of politeness in Polish and English, concentrating on the forms of address which, when translated literally to the other language, may lose its politeness. Changes in the rules of politeness in both languages were briefly described, which are conspicuous especially in Polish.

The data reveal that while interacting with others, people cannot depend on their cultural knowledge on the rules of politeness, because they may be quite different in another society or country. Moreover, the knowledge of the differences may help to avoid possible conflicts: people will remember that the linguistic behavior of the interlocutor sounds impolite, but his or her intentions do not have to be bad; the interlocutor may simply be unaware of the politeness strategies that should be observed in the particular society.

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