Abstract

Question runs as follows: is an inquiry a preliminary step to a theory, or does a theory (evidently, found by chance, or by luck) give rise to an inquiry? This is a logical circle, or maybe an ellipsis. Or maybe this circle/ellipsis is a hermeneutical one. In this case it is hard to distinguish between a source of scientific thought and its aim, or the fruits of it. Be it a logical or hermeneutical circle of the current of human thought and activity, in both cases it is an important problem for science and for a philosophy of science reflecting it. I argue that, among all sciences, social sciences and humanities, making use of interpretation rather than of demonstration, have better chance to have the circle/ellipsis torn in order to solve the problem of passing from theory/inquiry to practice. It is decades-long positivistic tradition to think of a scientific theory as of a physical theory considered as an etalon for all scientific knowledge. Even epistemology, social it itself, tends to be constructed as a physical theory. The same could be said about philosophy of science. Recently, however, in Russian philosophy of science there appeared a philosophy of post-theoretical thinking. Its author is V.I. Przhilenskiy. It can well be treated as an inquiry following and negating a modern theory of knowledge (i.e., epistemology and analytical philosophy as its branch) – which in its turn had its origin in general gnoseology as an inquiry. Following and negating general gnoseology as something non-theoretical in the positivistic view, theory of knowledge is now being replaced in philosophy of social sciences by an inquiry in a form of post-theoretical thinking. This, indeed, is not merely a circle, but a spiral – a Hegelian emblem of development.

Keywords: theory, inquiry, philosophy of science, philosophy of social science, post-theoretical thinking
1. Introduction

It has been a long tradition, to regard observation to be prior to experiment, and both to be led by inquiry, the deepest drive for life that we have. And the highest form of inquiry is – and still remains – philosophy, and science as daughter to philosophy. At the same time inquiry in the form of curiosity is not only the highest, but also the first and fundamental step in the process of cognition, which for us human beings corresponds to living itself. So, this is sort of a circle... As it was investigated by great many participants of the XXIII World Congress of Philosophy held in August, 2013, in Athens, Greece, motherland to all our philosophizing, – philosophy is an inquiry and way of life. I should have put it as “inquiry is way of life first, – and in the crowning point, philosophy”, which for Ancient Greeks, pioneer European philosophers, was theory, or skepsis, meaning observation (θεωρέω, to look, to observe; θεωρία, looking, watching, contemplation, or, Anschauung [Germ.]). Keeping in mind that for Ancient Greek thinkers philosophy and way of life coincided, as well as looking, meditating, and contemplating, we might recon that theory and inquiry, observation and reasoning, social laws and social practice were the same then. Theorizing was not different from the way of scholar’s living, and this was public life and communication.

Nowadays, this syncretism is gone. Theory is regarded very different from observation and even from experiment, which are only necessary first steps leading to the top. In science, empirical level is the ground floor for theoretical one. A Russian epistemologist L.A. Mikeshina has a plausible definition of what a theory is in general: it is “a set of beliefs, notions, ideas, aimed at explanation [and] interpretation of knowledge and cognitive activities”. (Mikeshina 2002, p.32). The more so, theory, immanently taken as a physical theory, richly decorated with mathematics and logically coherent, where there is isomorphism reached between the scientific object and its reflection, is considered as an etalon for all scientific knowledge. It is decades-long positivistic tradition to think of a scientific theory as of a physical theory. It is remarkable, though, that the “first” form of positivism was sociology, and only the “second” one was new physics of the end of the 19th and the beginning of the 20th centuries. Even epistemology, social it itself as is every branch of philosophy, first tended to be constructed as a physical theory. Such theory is sometimes very far from social life and practice. It may be also worth mentioning that Ernst Mach and some other empiriocritics were social democrats in their worldview. And, by the way, Mach came to his own epistemic theory through inquiry in optics and acoustics.

Nowadays, though, the views have changed. E.g., one of the first Russian philosophers of science, V.S. Stepin, wrote recently, that in the beginning of research in this field, the main material for him was history of natural science. But now there is need in broad involving of the materials from social sciences and humanities. “In contemporary philosophy of science there is a central setting for the study of patterns of scientific knowledge in the context of the historical development of society and culture”. (Stepin 2012, p.3)

In this paper it's our purpose to show how the modern look upon the interdependence of inquiry, investigation, theory, natural science, humanities, and practice was transformed into a post-modern one which proves to be a result of (post-positivistic) socio-humanitarian turn in philosophy of science.

2. The Moebius band in cognition

Is an inquiry a preliminary step to a theory, or does a theory (evidently, and inevitably, found by luck) give rise to an inquiry?

This is a logical circle (prohibited in formal logic); in grammatical terms, and in rhetoric, it might be called an ellipsis, – or even a chiasm.

Chiasms are not thought of as answers where there is need for explanations and definitions. We might remember, though, that they abide in writings of the last metaphysician of the 20th century, Martin Heidegger (c.f.: “Das Wesen der Sprach ist die die Sprache des Wesens”. “Der Grund des Satzes ist die der Satz des Grundes”. And, maybe the most intricate, “Das Wesen der Wahrheit ist die Wahrheit des Wesens” [the essence of truth is the truth of the essence]). So, maybe this circle/ellipsis/chiasm between a theory and an inquiry is a hermeneutical one, and a language game. In this case it is hard or next to impossible to distinguish between a source of scientific thought – and its aim, same as between a source of scientific thought and the social, practically useful fruits of it. As Heidegger once put it, language is an ocean which we are so deeply plunged in that it is impossible to discern
between the top and the bottom.

Be it a logical or hermeneutical circle of the current of human thought and activity, in both cases it is an important problem for science and philosophy.

Here comes a question: how does the real process of passing from inquiry to theory – and back again, from theory to inquiry, is embedded in philosophy of science, which is going through social-humanitarian turn nowadays.

The moments of turns changing direction of a knowledge currant, or a ligature, can be found, and these moments, the points-in-time, can be grasped. The demonstration or the picture of received transitions is analogous to Moiré Ribbon, and the transitions are made in the form of the curve of a Moebius band, or strip. The process of cognition is like a journey by this famous strip, the one-sided plane. A Moebius league instead of a chiasm. This term is taken due to the absence of a better one, and we do not insist on it. Still, it is a new and, most probably, useful understanding of the linguistic-mental morphism in terms of objective description. Moebius leagues, transition lines or turns mark the points of transition of one concept into another one, and that allows demonstrating a technique of approximation of the physical, metaphysical, linguistic and logical picture of the world to the world itself.

The greater number of “Moebius transitions” are found in the format of the theory of knowledge, the more trajectories of “ways” of knowledge turning from observation to artificial mental constructions, from inquiry to theory and back again, are seen approaching the sphere, the universality of absolute knowledge about the universality of being.

I state, then, that the true relationship between the indivisibility and nonconfluence of the forms of cognition under study, although slightly banked recently together with the general theory of knowledge, is a dialectical unity, which does not cancel but implies the difference between them reaching counter-positions in due time and a synthesis in the end. Dialectics, if it is not by Hegel himself, appears mostly in a logically sublated or even didactic form, as syntagmatics. Syntagmas are conventionally linear segments of arc-wise, curvilinear motion of the cognitive process; its development (“development” in the original sense of the word: as “de-envelopment”, or “unfolding, untwist of a thread”, and also as twisting, twining, kinking after the manner of the Moebius strip) leads to gradual approximation of the sphere of knowledge to the sphere of being, and their congruent alignment.

Our main concern remains the following: “What is it – which is called knowledge”.

3. “There – and back again”

Inquiry aims at discovery and interpretation. Theory is a result of designing ability of mind aiming at explanation, definition and classification. Discovery and invention, these doctrinal poles of existence and activity of consciousness, differ in a degree of freedom being the means of development of the “first” (inquiry) and the “second” (theory) nature in the domain of human, with experiment in between. At the same time, they fit together or coincide; and the novelty found or constructed is an “assemblage” point or zone.

Does discovery mean a discovery of something new (New? Or already existing?) Or is it a re-discovery (of something objectively new being revealed already as something subjectively new?) Does invention mean an invention of something new (out of present and existing?) And, above all, do we have today a strong need in a new knowledge? Or maybe contemporary society abides in openings and findings, and the strongest need is to make it all useful, at last?

Working mainly in gnoseology, I would have answered “yes” to the first and “no” to the last question. I could have reminded about Francis Bacon’s division between sciences that produce fruits and sciences (actually, one science, philosophy) giving light. There is usefulness and there is truth. There is applied science – even applied social epistemology! – and there is fundamental science, be it physics or linguistics… But it is widely presumed today, that a “society of knowledge” and sociology of knowledge investigating it have taken a strong stand for the second point of view; accents are put on practice, not theory. Utility, not discovery. “It doesn’t matter what you know, it only matters what you can do”.
3.1. Here comes a representative example of such recursive movement in the field of social science.

From Ancient Greece a general theory of knowledge traditionally called gnoseology has been an Inquiry about the sources, forms and stages of cognition in general (perception, emotions, conceptual knowledge, intuition, volition, subject/object relationship, problem of truth and its criteria, etc.) – not only in science, but also in humanities, literature and poetry, art and aesthetics, religion, morals, politics, ordinary life, common-sense, traditional worldview, etc. In gnoseology there was a topic of (dialectical) interdependence of sensations and ideas, of perception and abstract thinking as of two main stages or forms in the current of human consciousness. These two were well-known from the time of Parmenides. In the 19th century, with the blossom of sciences, a new topic was born from and within the theme of two principle stages in cognition, and it was the topic of two different levels of scientific knowledge, i.e., empirical and theoretical. When logic and methodology of science became a theory in positivist thought, leaving all metaphysics behind with all its ontological and moral imperatives, then epistemology sprang up – a definitely theoretical branch of philosophy. Then in a while, almost insensibly for epistemology, a new discipline sprang up, philosophy of science... The birth of it did not mean a total refusal from epistemology. Philosophy of science at first was definitely theoretical, too; but it was characterized by historicism from the very start.

What is to be accentuated here: epistemology was not born as a general theory of knowledge (which was gnoseology); it is a theory of scientific knowledge (which is rational, coherent, logically structured, limited by certain justifications, etc.) Besides, it is remarkable that in the form of analytical philosophy, epistemology is a theory of propositional knowledge exclusively. Its emblem is: “S knows that p”: “the earth is round; Paris is the capital of France; two plus two is equal to four; all bachelors are unmarried men; it is wrong to hurt people just for fun; the Godfather is a wonderful film; water has the chemical structure H2O…” These are examples given by a contemporary English epistemologist Duncan Pritchard. He begins his significant book “What Is This Thing Called Knowledge” by discussing various types of knowledge and then giving sort of a definition: “What ties these cases together is studied by epistemology, which is the theory of knowledge”. (Pritchard, 2010, p. 3).

According to English-speaking epistemology, metaphysics in all its forms had to be exterminated. It is not so for the general gnoseology which takes into consideration not only science as a way of cognition, but ordinary knowledge, will and intuition, art, religion, ethical discourse, political rhetoric, traditional behaviour, and all other socio-cultural forms of life and thinking. (In Marxism, even social practice is regarded as part of gnoseology, playing numerous roles, as the basis, the purpose, the source of cognition, etc., including the role of criterion of truth). Nowadays the pendulum went backwards: epistemology assumes today the right to act in the role of a general theory of knowledge, i.e., of former gnoseology, tending to inquire about virtues, values, morals... metaphors… sources of knowledge…, etc. It is true about the so-called virtue epistemology (Greko, 2010; Pritchard, 2010). C.f.: D. Pritchard’s second edition of his “What is this thing called knowledge?” [2010] contains a chapter on moral knowledge, which in the first edition [2006] he didn’t offer.

3.2. One diversion here.

As in life and being in general, no further step in a developing (not ebbing and dying or destroyed) organism or system is a complete demolition of the previous one, so in society, the new and the newest do not annihilate the past completely. The anaerobic bacteria of the non-oxygen atmosphere of the very first millennium still live in the volcanos vents. The blue-green algae neighbour apes, humans, and computers. Nothing capable of surviving dies... As Alfred Tennyson once put it, “Nothing was born. Noting will die. All things will change”. (And maybe it was not only Tennyson).

The idea is that in science and culture in general all progressive development reminds of a Hegelian triad. Ancient culture – Medieval culture – Renaissance. Or: Medieval culture – Modernity – Post-modernity, which is a New Middle Age. Or: epistemology – analytical philosophy – “virtue” epistemology. Then, indeed, we can call the interlacing of theory and inquiry not merely a circle, but a spiral, a Hegelian symbol of development, where the third stage of a triad “thesis – antithesis – synthesis” proves to be of a higher and more complicated level, and, at the same time, a resemblance of and an heir to the first one; it is not the extermination of the previous, but – negation of
the negation, “die Aufhebung”. There are three stages in cognition theory. For it the “trip” takes the following shape: Primary inquiry: sense-data, observation, measurement, experiment… – Theory (epistemology) – Secondary inquiry (philosophy of science).

As one of the contemporary Russian philosophers of science, Vladimir Przhilenskiy, puts it in his recent work, “Philosophy of Science and Post-theoretical Life-World” (Przhilenskiy 2013)

*Philosophy of science has arisen as alternative to epistemology, because scientific development wanted another kind of explanation than traditional epistemological one. The latter kind of explanation is theoretically loaded and based on latent ontological assumptions. Epistemology offers science a “road map” for researcher’s thinking. Thus epistemology knows what science should be, and philosophy of science takes science for granted—existing as an empirical fact. Philosophy of science had always been a reflective and critical discipline that didn’t want any a-priory knowledge. The main distinction between these fields of knowledge is as follows: epistemology is theoretical and projective kind of knowledge whereas philosophy of science is a non-theoretical, or better, a “post-theoretical” discipline. <...> (p. 706)*

Passing from theoretical scheme of Hegelian triad back to the stage of inquiry in our own investigation, it is possible to comment upon the abstract quoted in the following way.

Gnoseology has always been an inquiry. Epistemology as air sublimation refined from the general theory of knowledge has always been a theory – a theory of science. And philosophy of science, in one of its versions, came to avant scène as a post-theoretical knowledge, a result of a turn from theorizing to social practice.

As V. Przhilenskiy views it, philosophy of science arose as the reaction to dissatisfaction with theory of science (2013, p. 708).

Awareness of the reality of the social and cultural context of any science, brought about at the backcloth of postmodern thought, caused a socio-humanitarian bias in the theoretical kingdom of nature science. A theory consists of categories, and it is constructed as a deductively-axiomatic system, a set of methodological tools, and disciplinary norms of activity. But Reality appears a heterogeneous space, where no abstract scheme is of help. Everyday life, routine usage of ordinary language, common sense and pre-scientific as well as non-scientific life-world became main objects of the interest of post-theoretical philosophy. A picture of science changed from clarity and isomorphism of austere theory to richness and uncertainty of human pragmatics: inquiry into the newly-found reality made its way… It didn’t want defining and classification; it had to be interpreted from the point of view of the knower, the collective human agent, which is society.

Science is a human affair. The more so; it is a certain enterprise with its own plans and projects, and also with alive experiments serving to bring the corrections to the plans where necessary. Scientific inquiry should not refuse the methodological standards, but the latter is deprived now of its deontic, restricting and demanding, status which was proclaimed in early positivism. To understand this or that theory and to interpret this or that discipline, a historical scientific reconstruction has to be performed. During this process, we rarely speak about the logic norms or rational reasoning. We speak, after Michael Polanyi, about “personal”, or “tacit”, knowledge, i.e., about motives and interests, former experience, biographies and predispositions of the scientists as individuals, about morals and aesthetical canons, received world-view, and even prejudices of the epoch. It is of interest that philosophy of science is now often related to science fiction, memoirs, and books of prominent scholars’ reflections. And many philosophers declared they refused searching the last foundations of the world and cognition… A trait of postmodern thought.

Scientific knowledge is a product of scientific activities, but not exclusive. There are also instruments of research and technical devices; and the new style of rationality; and great social values among them. Adepts of sociology of knowledge count in not only adequate reality reflexing in the mind, proved by practice and reasoning, but also axiological senses, logic, and the whole scope of information (as well as disinformation). Scientific activity cannot be defined by solely an epistemological doctrine. It is a reciprocal movement from inquiry to theory – and back again. “Reality as super-sense is present in life-world… The meaning-forming function of the concept, as mentioned above, is realized in full, when it is necessary to transfer from the existential world to the space of pure theory and backwards”. (Przhilenskiy 2013, p.712)

Comparing of a doctrinal scheme or *project* to reality, i.e., of the a priori theory to practical embodiment, gave birth to a new criticism and a specific refusal to consider rules and norms instead of “robust reality”. In contrast to
such terms as space or time, quantity or quality, substance or idea, the concept of reality did not exist in the pre-theoretical thinking as a word of everyday language. (Kohanovskiy, Przilenskiy, Sergodeeva, 2006, p. 312-13). Nevertheless, sure, it did exist as the realm of things, qualities, and relations, both of physical and social worlds. In time, the concept of reality and the term itself became the basis of all the new-European philosophy. Indeed, what is more important for the scientific research: ideal or real, the epistemic “truth of a norm” or actual “truth of a fact”? The divergence of the former and the latter is perceived by analytical philosophers, too; but instead of dropping the scheme and turning to inquiry into the reality, epistemology tries to polish the theory to perfection. And philosophy of science ventures a new cycle of inquiry. Evidently, to reach the balance, the research of the pre-theoretical life-world was suggested to be accomplished by the research of the post-theoretical life-world as it came in to the scholars’ observation. If we remember the work of the XXII philosophical World Congress which took place in Seoul, South Korea, 2008, – it was all about rethinking philosophy, science, and culture. Scholars like Przhilenskiy call to turn to thorough inquire about the post-scientific and post-theoretical life-world, “which is in line with the epoch of reviewing role, place and functions of scientific and theoretical knowledge”. He writes

The inevitable conservation and utilization of products of human thinking, doubled by the necessity to study the impact of theoretical thinking on social practices, is being realized. There springs up a qualitatively new task – to learn to live in the world, where the theoretical knowledge is redundant, and its influence on life of man and society is complex and multi-shaped. (p. 714)

The first steps of Russian scholars into this imported field of research were marked either by a wish to adjust it to the existing philosophy (Stepin 2012), or to counter-oppose philosophy of science to epistemology and methodology as its competitor that came to win (Kohanovskiy, Przilenskiy, Sergodeeva, 2006, p. 3). The latter is the point of view “according to which philosophy of science has arisen as the result of inability of epistemology to answer the important questions of scientific community in the end of the 19th century …” (Przhilenskiy 2013, p. 706). Post-theoretical philosophy considers its main purpose as “utilization of a considerable part of existing theoretical knowledge”. This should be performed under conditions of “increased safety” in operating with all trustworthy “theoretical knowledge left”. Besides, post-theoretical philosophy pretends to be capable of controlling the processes of new theoretical knowledge production. As V. Przhilenskiy claims,

Not long ago it seemed that the formula “from theory to practice,” in principle, describes all the variety of relations between science and life, knowledge, and action. Alongside with the discovery of new impacts, mutual determinations and interaction plans, it becomes obvious, that the constructions developed by philosophers and scientists, formulated ideas and conceptual characters, start leaving their independent life in various spaces and worlds, creating unexpected problems, imperceptibly impacting social practices, targeting, and sense formation. (p. 713)

The author of this paper is not an adept of the post-theoretical philosophy, and, indeed, the scholars are still discussing the content and aims of philosophy of science. My own view, in short, is the following.

Once philosophy had been “a science of sciences” and “a Queen of science”. Her first daughter with its own subject was physics of the Modern time. The accents switched from the “theory of the world” towards the theory of cognition, especially after Locke’s and Kant’s theories of knowledge. In the 19th century, in his “Anti-Dühring”, F. Engels declared that there remained only two parts left from classical philosophy: dialectics and gnoseology.

The development and divergence of both natural and social sciences in the 19th and 20th centuries – centuries that gave birth to dozens of thousands of disciplines, as well as to the so-called “big science”, all were pretending to draw the picture of the world not asking for philosophical help. As for the general theory of knowledge, gnoseology, it was seriously “minused”, or, diseconomised, by development of philosophy of science and epistemology, a theory of scientific knowledge, which, together with analytical philosophy, undermined the corrdium of a classical theory of knowledge, namely, the correspondence theory of truth. In frame of positivistic philosophy of science, all worldview themes and topics were cut away from the theory of knowledge; what remained was methodology. It took the place of what had been a theory… After methodological discourse was criticized both by post-positivism and existentialism with all its derivatives, the restrictions of method gave way. As one of the reactions to the doubt in methodology there was the appearance of post-theoretical philosophy.
In my opinion, another, and better, way is the development of gnoseology on the basis of its own self-criticism. Without any loss of best classical traditions and fundamental philosophical categories, i.e., the study of main subject-object relationship, the research of basic stages of cognition, the treating of the problem of truth and its criterion, a new gnoseology should answer the challenge to itself: not from outside, by natural or social science, or humanities, but from the depth of philosophical thought should come a set of ideas and scenarios of redefining the theory of truth… As M. Epstein rightly puts it, “We need to look more critically at our own methods in order to see what is wrong with the self-proclaimed intentions to keep the moral and liberal spirit of humanity alive”. (Epstein 2014). But this was not the aim of the paper, to present our own cognition theory here.

4. Conclusion

After restricting the classical gnoseology and sometimes somewhere even abolishing it, the science being in need of a meta-science, has created both theory of scientific knowledge – epistemology with analytical philosophy as its branch, and sociology of science; after the “Aufhebung” of epistemology, a new philosophy of science appeared, with its strong pragmatic bias and dislike towards abstract theorizing of any kind.

Nowadays philosophy of science and epistemology follow their own ways. Of course they have a strong influence upon each other, as the doctrine which is prescribing the due and the picture which reflects the social reality. Philosophy of science does righteously take into account not only the content, the structure and language of science, intellect or logic but also the spiritual life as a whole that makes it favourably different from the epistemological theory. Reason, then, appears not only as an instrument of mind.

On the other hand, in contemporary era, ordinary language and “everyday life” came considerably close to the scientific consciousness and functional style of science. So, scientific reason, in its development, “had reached the stage when it became necessary… to exercise certain self-restriction. This reason has “to draw the line of demarcation which would recognize and protect the “poor neighbors” rights, but preserve its own dominating position forcing them to serve for the blessing of itself”. (Przilenskyi 2013, p. 709) Nowadays, main problem on the agenda is not to produce and accumulate the new knowledge, but to effectively and safely use the knowledge already available.

Social science and humanities helped to soften the rigour of positivistic theory of science. In return, it is serving well back. The author is paying homage to the “theory” of post-theoretical thought contribution to modern philosophy of science as one of the significant contributions of postmodernism, and, though not an adept of it, believes it to be one of the factors assisting rethinking, critical reconsideration, and renewal of social science and humanities in contemporary era. It really demonstrates the current of scholars’ thought from inquiry to theory – and back to inquiry. Thus the main scope of the article is the demonstration of the famous Hegelian triad multiplied by the none-the-less famous Moebius ribbon in action – in the field of cognition.

References
Stepin, Vyacheslav, Semyonovich (2012). History and Philosophy of Science. Moscow: Academic Project; Trixta Publishers. [In Russian].

* For those readers who might be interested in this project, see: Taysina, Emiliya (2013).