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## **The global crisis lesson: going beyond the bounds of economic theories**

**Abstract:** This paper gives an overview of criticisms of the foundations of mainstream theories. The fundamental flaws making these theories inefficient in present-day conditions are shown, such as distortion (reduction) of the subject of study, of the principles of equilibrium and representative agent economics on which such theories are built, along with mathematical methods of modeling macroeconomic processes. It is argued that an adequate response to the challenges of the day is impossible without going beyond the bounds of economic theories into a new paradigm of action-based approaches and economic engineering methods. In this paradigm, there is no such thing as "economics"; there is complex organized activity of humans as a source of all material wealth available for the mankind. Therefore, the basic flaw of mainstream theories is that they describe only the secondary effects of human activity and ignore the action itself .

**Keywords:** economic theory, predictive power, praxeology, economic engineering

### **1. Introduction**

Several years have passed since the global financial (economic) crisis broke out in 2008. Since then, a lot of research has been done in an attempt to assess its causes, dynamics, and the possibility of its recurrence (Khazin 2008; Ariely 2009; Berezkin 2009; A. & D. Tatarkin 2009; Nizhegorodtsev 2009, 2012; Bochko 2012; *inter alia*). Along with a massive literature on the crisis itself, there has been a recent growth of publications of a more reflective character, in which economics as a science, with its "mainstream" theories that have prevailed over the last few decades, have come under close scrutiny. Researchers attempt to answer some very difficult questions: Why was such a destructive crisis so unexpected, practically, to everybody – mainstream economists themselves, politicians, bankers, and households alike – and where was economics as a science? Why none of the officially and almost universally acknowledged economic theories of the mainstream, whose developers have been awarded quite a few Nobel Prizes, were able not only to predict the impending crisis, but even to offer some cautious hints? Why neither economic science as a whole, nor politicians in the world

leading countries paid heed to the few researchers and experts<sup>1</sup> with a vision who had warned about the impending crisis of a heretofore unseen magnitude? Finally, why do those from the political beau monde in the USA (as well as in many other countries of the world, including Russia), who proclaim support of economists adhering to theories of the mainstream, in the praxis of macroeconomic policies avoid "any announcement of a policy rule, valuing flexibility over commitment" (Mankiw 2006: 41)?

Answers to these and similar questions may vary but, with rare exceptions, they all seem to agree on one point: modern mainstream economic theories have been totally discredited, and economics is in need of a radical paradigm shift. In what follows, some arguments in support of this claim will be given.

## **2. A critique of mainstream fundamentals**

Analyzing the fundamentals of the mainstream economic theories, many authors stress their outdated character. Because of that, they don't allow for an objective analysis of contemporary socio-economic problems the world is facing, nor do they provide satisfactory theoretical or practical decisions as a response to the challenges of the day (Bochko 2012). First of all, *the subject matter of economics as a science is defined inadequately*. As argued by Colander et al. (2009: 3), "[t]he often heard definition of economics—that it is concerned with the ‘allocation of scarce resources’—is short-sighted and misleading". We should agree – without diminishing the importance of allocation of scarce resources, however – that such definition is an undue oversimplification of the subject of economic science, and this is, in fact, what many researchers do agree upon.

For example, the modern management guru Peter Drucker, criticizing enthusiasm with which economists search for stable natural states, observes that, while a natural science deals with the behavior of objects determined by natural laws,

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<sup>1</sup> For example, Grigoriev, Kobiakov & Khazin (2008) long before had written about the growth of structural imbalances in the USA economy fraught with an impending crisis. The crisis had also been predicted by representatives of the Austrian school of economic thought, or praxeology (P. Shchedrovitsky 2011), as well as other researchers (Colander et al. 2009).

a social discipline such as management deals with the behavior of PEOPLE and HUMAN INSTITUTIONS. The social universe has no 'natural laws' of this kind. It is thus subject to continuous change; and this means that assumptions that were valid yesterday can become invalid and, indeed, totally misleading in no time at all (Drucker 1999: 1ff)

Perhaps the most radical criticism of the mainstream theories with their distorted conception of the subject of economic science may be found in the works by researchers belonging to the Austrian school of economic thought (von Mises 1996) and the Russian school of action-based methodology<sup>2</sup> (G. Shchedrovitsky 1997). According to von Mises, there isn't any economics; there is praxeology describing the diverse goal-oriented human activity which is the ultimate source of all the wealth used by humans. The notion of "economics" is a very crude oversimplification, a conceptual reduction of human action and its objective (von Mises 1996; P. Shchedrovitsky 2011). As an advocate of action-based approach to social, including economic, phenomena (Berezkin 2012), I would add that the core problem with how the subject of study is defined in modern economic theories is "naturalism". These theories are based on an assumption that the world of economics exists in its own right, as *sui generis* – not unlike the natural world – irrespective of the acting human subjects. It is not the action of humans that becomes the primary object of theoretical study and economic measurement (it is simply ignored by the mainstream theories), but its aftereffects (consequences). In other words, economic theories describe what "pours out" of human action or, conversely, what is drawn into its domain, such as products, resources, cash meters and everything else economists usually deal with.

The irreducible naturalism of the mainstream theories comes to the fore in their ignoring the action functionality of economic concepts. That is, they treat everything as just "things" (in the Aristotelian sense): "resource" is always a resource, and "product" is always a product, period. However, in the domain of human action it is not like that at all. Roughly speaking, in human action anything can be everything. Depending on the situation of action use, the "product" of one action process (structure) becomes

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<sup>2</sup> This school is often referred to as the "tradition of the Moscow Methodological Circle" which worked in the mid-1950s – mid-1990s under the leadership of G. Shchedrovitsky.

a "resource", a "commodity", a "supply", or "moneys" in other situations. As acting humans, we take such re-functionalization of things in our routine life and work as quite trivial, and the action metamorphosis of the things around us doesn't come as a surprise at all. Yet the contemporary mainstream theories are totally blind to all such crucial features of the subject of economics. This makes them *a priori* bad tools for describing what has already irrevocably happened in human action. It also explains their hopelessly low prognostic ability pointed out by many researchers (Mankiw 2006; Colander et al. 2009; Bochko 2012; Nizhegorodtsev 2012).

*Second of all, theories of the mainstream are based on two fundamental principles: the principle of economic equilibrium and the principle of economic (representative) agent.* Linking theoretical models of the mainstream to stable states of economic growth that are, at times, "perturbed by limited external shocks" (Colander et al. 2009: 2), makes the very range of crisis (management) problems, as well as the problem of internal economic instability, appear as something external, from "beyond" the mainstream theories. One cannot but agree with Colander et al. (2009) that such situation is really weird. Ariely (2009) is quite explicit on the point:

The global economic crisis has shattered two articles of faith in standard economic theory: that human beings usually make rational decisions and that the market's invisible hand serves as a trustworthy corrective to imbalance. We need to replace these and other assumptions and adopt a new approach (p. 80).

These two fundamental principles of the mainstream theories have been criticized by many thoughtful researchers (Drucker 1999; Khazin 2008; Ariely 2009; Grigoriev & Ivashchenko 2010; Bochko 2012). But perhaps the most uncompromising (and quite convincing) criticisms of the equilibrium principle in economic models have come from George Soros<sup>3</sup>. In his famous book *The Alchemy of Finance* he wrote that the unsatisfactory situation in economics was a result of

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<sup>3</sup> George Soros was, in his time, a follower of F. von Hayek, the 1974 Nobel Prize winner who, in his turn, was a disciple of L. von Mises.

a theoretical construction of great elegance that resembles natural science but does not resemble reality. It relates to an ideal world in which participants act on the basis of perfect knowledge and it produces a theoretical equilibrium in which the allocation of resources is at an optimum. It has little relevance to the real world in which people act on the basis of imperfect understanding and equilibrium is beyond reach (Soros 1994: 12).

And a few years later, he was even more definitive in his statements on the point:

Classical economists were inspired by Newtonian physics <...>. A pendulum comes to rest at the same point <...>; it is this “ergodic” principle that allowed theorists to establish timelessly valid rules about the equilibrating role of markets <...> The concept of equilibrium <...> can be <...> very deceptive. It has the aura of something empirical. That is not the case. (Soros 1998: 36).

I believe Soros is well justified in speaking of slavish imitation of natural science in those domains where it is quite inappropriate.

The second fundamental of all mainstream theories – the principle of individualism (or "representative agent") has, likewise, been in the focus of discussion and caused a lot of criticisms. There are several points that seem to be the main targets for criticisms. Thus, the mainstream theories don't study the diverse goal-oriented actions of great numbers of people in their complex organized activity; instead, they study the behavior of the fictitious *homo oeconomicus*<sup>4</sup>, aka the "representative agent" of economics with his ‘rational expectations’ (Colander et al. 2009: 7). This leads to dire consequences. First, complexly organized economics becomes sort of a "Robinson approach with ‘rational expectations’". Second, inferences made from a theoretically construed behavior of a single representative agent are extrapolated – without any justifi-

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<sup>4</sup> Lidwig von Mises (1996) wrote: "It was a fundamental mistake of the Historical School of *Wirtschaftliche Staatswissenschaften* in Germany and of Institutionalism in America to interpret economics as the characterization of the behavior of an ideal type, the *homo oeconomicus*. According to this doctrine traditional or orthodox economics does not deal with the behavior of man as he really is and acts, but with a fictitious or hypothetical image. It pictures a being driven exclusively by “economic” motives, i.e., solely by the intention of making the greatest possible material or monetary profit. Such a being, say these critics, does not have and never did have a counterpart in reality; it is a phantom of a spurious armchair philosophy. No man is exclusively motivated by the desire to become as rich as possible; many are not at all influenced by this mean craving" (Mises 1996: 62).

cation – to the whole of macroeconomics as a system far more complex than Robinson's individual household and which is characterized by a number of emergent phenomena. Third, there is a hidden presumption that only one economic model exists, which is, obviously, not true. Fourth, the principle of representative agent rational expectations is not a specification based on "empirical observation of the expectations formation process of human actors" (Colander et al. 2009: 8). It is nothing more than a suitable (for the construction of a theoretical model) extrinsic assumption which has nothing to do with how economic agents arrive at decisions in real life:

Rather, agents display various forms of 'bounded rationality' using heuristic decision rules and displaying inertia in their reaction to new information. They have also been shown in financial markets to be strongly influenced by emotional and hormonal reactions (Colander et al. 2009: 9)

*Third of all, the method used by the mainstream theories has been the object of severe criticism.* In point of fact, economic theories of the mainstream have lost – or, rather, never had – their own method of research. Extreme physicalism and naturalism inherent in the fundamentals of such theories resulted in an unwarranted use of mathematical models in their explanation. As Bochko (2012) observes, "the method of economic research <...> "strays" into mathematical modeling; this allows for more precise analyses and models, yet its connection with the object of study gets severed" (p. 12). Mankiw (2006) emphasizes this shortcoming of the mainstream, even though in a more politically correct style: "From the standpoint of science, the greater rigor that the new classicals offered has much appeal. But <...> the cost of this added rigor seems too much to bear" (p. 38). Similar attitudes to the role of mathematics in economics have been expressed by many researchers who realize the untenability of the current economic mainstream because of its blind infatuation with mathematics (Allais 1989; Blaug 2002; Skidelsky 2008; Colander et al. 2009; Krugman 2009 *inter alia*).

### **3. Economics as human action**

If one accepts the logical basis of praxeology of the Austrian school or its more elaborated version represented by the Russian action-based methodology, one has to admit that the very use (even when it is not extensive) of mathematical methods in economic models is indicative – in quite a straightforward manner – of the lack of understanding, on the part of mainstream economists, of the ontology of human action. The point is that action cannot, in principle, be described by using mathematical methods (at least, by the methods that have been, heretofore, developed by mathematicians). I make this claim as someone with an educational background in the "mathematics of economics" and 20 years of academic experience in the field of mathematical models in economics, who, eventually, has come to the realization that their practical utility is nil. Von Mises (1996), for example, is quite unequivocal on the point:

It is not appropriate for the physicist to search for final causes because there is no indication that the events which are the subject matter of physics are to be interpreted as the outcome of actions of a being, aiming at ends in a human way. Nor is it appropriate for the praxeologist to disregard the operation of the acting being's volition and intention; they are undoubtedly given facts. If he were to disregard it, he would cease to study human action (p. 26).

And further:

... the sciences of human action differ radically from the natural sciences. All authors eager to construct an epistemological system of the sciences of human action according to the pattern of the natural sciences err lamentably (p. 39).

Mathematical (quantitative) methods are not applicable to human action, because

[h]ere we are faced with one of the main differences between physics and chemistry on the one hand and the sciences of human action on the other. In the realm of physical and chemical events there exist (or, at least, it is generally assumed that there exist) constant relations between magnitudes, and man is capable of discovering these constants with a reasonable degree of precision by means of laboratory experiments. No such constant relations exist

in the field of human action outside of physical and chemical technology and therapeutics.

<...>

The impracticability of measurement is not due to the lack of technical methods for the establishment of measure. <...> If it were only caused by technical insufficiency, at least an approximate estimation would be possible in some cases. But the main fact is that there are no constant relations. Economics is not, as ignorant positivists repeat again and again, backward because it is not "quantitative." It is not quantitative and does not measure because there are no constants. Statistical figures referring to economic events are historical data (ibidem, p. 55-56).

To some, such statements might sound confusing, for, obviously, economists have always been busy measuring something – moneys, production capacities, etc. – using quantitative methods. So, what does von Mises mean?

True, economists have always been measuring – but what? They have been – and still are – measuring material secondary effects, or "traces" of human action. The object of measurement is that which has come out of some action. But the action itself cannot be measured. Its scientific description calls for essentially new, non-mathematical methods. Such methods must be able to grasp the structure of action and the ways of its organization, as well as its re-organization and development. With this in view, the blame laid with mainstream theoreticians is that there is no point in building mathematical models of optimal distribution of scarce resources, if such models don't take into account or neglect the logically paramount questions: What in the organization of human action resulted in the scarcity of resources? How is action of other humans, who are going to use these resources, to be organized? Without answers to such questions, the game of mathematical models of macroeconomics is not unlike a séance held by a medium – with precisely the same degree of common good coming out of it. As for the ready answer from mainstream theoreticians that "the market will organize everything on its own", after the 2008 economic collapse it doesn't sound convincing even to the many adepts of economic liberalism.

#### **4. What is there to replace the mathematicized economic theory?**

Quite naturally, a question arises: If economic theories of the mainstream, based on assumptions that are out of sync with the present economic reality, and on inadequate (from the point of view of the subject matter of economics, which is *human action*) mathematical modeling methods, have utterly compromised themselves and must be discarded, what is there to replace them?

In the literature, the number of possible answers to this question, so vital in the post-crisis period, is hardly less than the number of critics of the mainstream, and their plausibility varies considerably. There are very simple ones – as offered by Gabdullin (2013), who suggests that a "new theory" should be worked out which would synthesize practically all known methodological approaches, from social philosophy and political economy to systems theory and macroeconomic theory. Unfortunately, it remains unclear how this may be at all possible, especially in view of the fact that, as is well known, scientific knowledge of different subjects resists "crossbreeding". However, if scientists attempt to build knowledge at the juncture of different subjects of research, what they get as a result is not a synthesis of knowledge of different subjects, but, rather, another (new) subject. This is how, at the time, physical chemistry, biochemistry, social psychology, and other "hybrid" subjects of research came into being (cf. G. Shchedrovitsky 1997). So, from the point of view of practicality, it's hardly worth discussing the kind of suggestion made by Gabdullin.

Another extreme to be found in the literature may be characterized as "exotic suggestions". One example is a suggestion made by Kuznetsov (2012), who argues for rejecting the "existing economic propositions (hypotheses, doctrines, theories)"; instead, scientists should develop "metaeconomics" that would "consist of meanings, economic claims and definitions formulated on the basis of how economic activity on Earth is seen from outer space" (p. 5). Looking for support, Kuznetsov refers to Keynes' observation that if traditional science, brought to rational perfection, finds itself in a cul-de-sac, one should look for a possible cause not in the science itself, but in those assumptions on which it is built, Keynes could hardly have meant that in order to solve the plaguing problems of the day one ought to take the position of "an observer in

space". Keynes seems to have meant something quite different, namely, that if a scientific theory after a long process of its perfection stopped working, one should ponder over its initial assumptions and, perhaps, change them altogether. This is, in fact, what Keynes did: he dropped the theoretical assumptions, worked out an engineering approach, and became the first economic engineer. As argued by Mankiw (2006), who calls himself a practical economic (financial) engineer,

the field has evolved through the efforts of two types of macroeconomists—those who understand the field as a type of engineering and those who would like it to be more of a science. Engineers are, first and foremost, problem solvers. By contrast, the goal of scientists is to understand how the world works. The research emphasis of macroeconomists has varied over time between these two motives. While the early macroeconomists were engineers trying to solve practical problems, the macroeconomists of the past several decades have been more interested in developing analytic tools and establishing theoretical principles. <...> The substantial disconnect between the science and engineering of macroeconomics should be a humbling fact for all of us working in the field. (p. 29ff).

To a large extent, Keynes and the Keynesian model builders had the perspective of engineers. (p. 33)

As for the position of an observer, especially from space, it still remains a theoretical construct<sup>5</sup> without any applicability.

As a matter of fact, many critically minded researchers write about the necessity to work out a new macroeconomic theory (model) that would be interdisciplinary, more adequate in describing the new reality of post-crisis global economy, predictive, allowing for heterogeneous interaction of economic agents, empirically more sound and making up for other shortcomings of the mainstream theories. Yet, even though some authors do seem to be, rationally, on the right track for overcoming the ‘slavish imitation of natural science’, they still remain ensnared by "theoretism". For example, Bochko (2012) makes a very sound observation when he writes:

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<sup>5</sup> In Ancient Greek, θεωρία meant ‘viewing, contemplating’, and θεωρητικός – ‘contemplative, attentive’. In Greece, *theoreticians* referred to spectators in a theater, who watched the play without interfering with it. Any scientific theory is built on the same principle – watching and describing without interfering.

The crucial feature of the dynamic development of today's economics as a combination of non-homogeneous factors is moving away from their spontaneous recombination to *man-made* – that is, conscious and goal-oriented – action. <...> Not only positive economic transformations are man-made ... but negative changes as well, for example, economic crises, collapses of currencies or factories, bankruptcies of industries and whole territories (p. 9).

It would seem that the next step to take is to say that there is no point in trying to improve bankrupt economic theories (which, after the crisis, even the blind can see), that the focus of attention should be on this very '*man-made* – that is, conscious and goal-oriented – action'. And human action is a quite different matter. There may be no conceptual-theoretic grasp on it, nor can it be described by a scientific theory. Yet, two pages later Bochko speaks about the "necessity for a new theory" which must be "interdisciplinary", at that (p. 11). As they say, "no comments".

Some methodological clarification is in place here. In published research on the methodology of science, which is by no means represented by the few works given in "References" (Kopylov 1996; G. Shchedrovitsky 1997; Berezkin 2012), prerequisites for building scientific theories within the scope of sciences of the New Era, which began to take shape in XVII c., have long been analyzed and described. First, it has been shown that any scientific theory<sup>6</sup> is always *subject-specific* and, therefore, limited, because it gives a one-faceted description of the world predetermined by its subject; there may be no cross-subject theories in principle. Second, to build a scientific theory one needs to construe an ideal object of research<sup>7</sup>. Third, the crucial feature of an ideal object is its *invariance*, that is, unchanging stability of its state regardless of what a scientist does in the course of his research, and of the obtained knowledge as a result of such research. Fourth, there is an obligatory presupposition that the construed ideal

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<sup>6</sup> As social sciences (sociology, economics, and others) were founded later than natural sciences, and "in their likeness", that is, by borrowing the scientific criteria to be met by natural sciences – first and foremost, the science of physics – all that follows is equally applicable to economic theories.

<sup>7</sup> Not a single scientific theory relates directly to reality; it does so only via the medium of ideal objects. Examples of ideal objects in different sciences are "ideal pendulum", "absolutely solid body" in physics, "chemical element" in chemistry, "cell" in biology, "gene" in genetics, etc.

object may be found in reality – not empirically through natural experience – but under artificial, technically created *experimental conditions*.

The latter point is of particular importance here. Thus, according to Kopylov (1996),

[e]very science has its "technical satellite" – corresponding engineering... It is, typically understood as an assortment of knowledge and skills that... possesses constructive technical applicability (that is, it is used to answer the question – not "How is it organized?" – but: "What must be done in order to...? or "What happens, if...?") <...> Thus, along with the science of mechanics exists, under the same name, mechanics as engineering; for the biology of man, its engineering is medicine, for genetics – gene engineering, etc. Engineering knowledge is realized in factories and production technologies created on its basis <...>. Modern nuclear physics has described over two hundred of elementary particles, but all of them exist *only* inside special accelerating machines. <...> "Full-fledged" scientific world takes shape only on condition that its ontological propositions are verified with the help of engineering (p. 16-19; emphasis added. –YuB).

Now, if we look at the critique of mainstream economic theories through the "prism" of prerequisites for building and verifying a scientific theory, three things will become apparent. First, mainstream economic theoreticians are, largely, right, and their critics wrong. It is not hard to see that the mainstream has its own specific subject (optimal distribution of resources) and its own ideal object (*homo oeconomicus*, or representative agent); the latter is invariable and doesn't directly correlate with real economic agents. That is why -- and this is the second thing we see -- all the criticisms aimed at the lack of crisis causal factors in mainstream theories, or their neglect of living humans, or their empirical incompatibility with reality, entirely miss the point. Nothing like that should even be expected in the mainstream theories. They are no different from any other standard scientific theory, with a little exception: they don't provide for the fourth component -- experimental engineering verification of the mainstream scientific theories. And this is already where the mainstream theoreticians are wrong, with their belief that "Keynesian engineering was based on flawed science" (Mankiw 2006: 34). Engineering (including economic engineering) is not supposed to

be based on science. It is the other way around: it is precisely engineering with its specific techniques that allows (or disallows) for a science to be called Science, by experimentally verifying (or not verifying) conceptual-theoretic idealizations. But practically *no one* (!) among the critics of the mainstream economic theories – and this is what we see as third – points out this major drawback, which effectively makes such theories flawed.

So, the following observation by Mankiw (2006) comes as no surprise:

The fact that modern macroeconomic research is not widely used in practical policymaking is prima facie evidence that it is of little use for this purpose. The research may have been successful as a matter of science, but it has not contributed significantly to macroeconomic engineering. (p. 43)

And further:

John Maynard Keynes (1931) famously opined, "If economists could manage to get themselves thought of as humble, competent people on a level with dentists, that would be splendid." He was expressing a hope that the science of macroeconomics would evolve into a useful and routine type of engineering. In this future utopia, avoiding a recession would be as straightforward as filling a cavity. <...> From the standpoint of macroeconomic engineering, the work of the past several decades looks like an unfortunate wrong turn. (p. 45)

## **5. Conclusion**

Mankiw's conclusion doesn't sound particularly consoling. However, as economic (financial) engineering is already being taught in American universities, and "[e]xcept for the rare student who is considering graduate school and a career as an academic economist, the undergraduate has the perspective of an engineer, more than that of a scientist" (Mankiw 2006: 43), we may expect that, mainstream theories in the USA are soon going to be out of fashion. Things are a bit more complicated in Russia.

In Russian economic universities, in compliance with the Federal Education Standards, students continue to be "pumped up" with theories of economics, macro- and microeconomics; they are taught, on a mass scale, practically useless methods of

mathematical programming, but nowhere, with very rare exceptions (such as the Tol'yatti Academy of Administrative Management), are they trained in economic (financial) engineering. Although some researchers in Russia write about a dead end to which modern macroeconomic systems have been brought as a result of the failure of the liberal economic management doctrine, and from which the only way out is to use the Keynesian recipes in economic policy (cf. Nizhegorodtsev 2009), this can hardly be done in reality as there are no trained professionals in economic (financial) engineering. However, there are all the necessary prerequisites in Russia for such a profession to establish itself in a relatively short time (within two decades) – granted that educators realize its necessity. Unlike in the USA, where economic (financial) engineering is "groping" its way because of lack of methodological foundations, such foundations have been laid in the works of the Austrian school and elaborated in the numerous works of the Moscow Methodological Circle. Unfortunately, this fundamental research doesn't seem to be in demand in today's Russia because of the "market fever" and blind adherence to American recipes for economic reform.

Economic engineering methods are based on how action and reason are understood. According to von Mises (1996),

[a]ction and reason are congeneric and homogeneous; they may even be called two different aspects of the same thing. That reason has the power to make clear through pure ratiocination the essential features of action is a consequence of the fact that action is an offshoot of reason (p. 39).

A quarter century later, in 1966, Georgy Shchedrovitsky, formulating an agenda for his methodological research, wrote<sup>8</sup>: "...We say that our goal is to build a theory of reason and a theory of action as proper sciences, not as philosophical disciplines" (Shchedrovitsky 1997: 258). Over the next 30 years the Moscow Methodological Cir-

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<sup>8</sup> It is an established fact that von Mises' works were not known to the Moscow Methodological Circle at that time because of the "iron curtain", and methodological research into reason and action was carried out independently of the Austrian school. It became clear only later that they had a lot of points in common.

cle worked out – in much detail – first, an action-based, and then a reason-based approach. It was on this basis that Shchedrovitsky's followers developed methods of social engineering (cf. Kopylov 1996).

Drawing the line to this necessarily short discussion, I would like to stress that, to change the situation in which economic science finds itself after the 2008 financial crisis, economists should go beyond the bounds of economic theories (all of them!) and start using the methods of economic (financial) engineering developed within the framework of action-based methodology (cf. Berezkin 2001).

### References

1. Ariely, D. (2009). The end of rational economics. *Harvard Business Review*, July-August: 78—84.
2. Allais, M. (1989). Jedinstvenyj kriterij istiny – soglasije s dannymi opyta. *Mirovaja ekonomika i mezhdunarodnyje otnoshenija*, 11(26): 24—40.
3. Berezkin, Yu. (2001). *Problemy i sposoby organizatsii finansov*. Irkutsk: IGEA.
4. Berezkin, Yu. (2009). Prichiny finansovogo «krizisa» [What caused the financial "crisis"]. *Izvestija Uralskogo gosudarstvennogo ekonomicheskogo universiteta*, 2(24): 52-61.
5. Berezkin, Yu. (2012). *Osnovaniya dejatel'nostnoj metodologii*. Irkutsk: BGUEP.
6. Blaug, M. (2002). Ugly Currents in Modern Economics. In: U. Maki (ed.), *Facts and Fictions in Economics: Models, Realism and Social Construction*. Cambridge: Cambridge University Press: 35-56.
7. Bochko, V. (2012). Krizis osnovnogo techenija sovremennoj ekonomicheskoy teorii: sodержaniye i sledstvija. *Izvestija Uralskogo gosudarstvennogo ekonomicheskogo universiteta*, 2(40): 5-15.
8. Colander, D., Föllmer, H., Haas, A., Goldberg, M. D., Juselius, K., Kirman, A., Lux, Th., and Sloth, B. (2009). The Financial Crisis and the Systemic Failure of Academic Economics Univ. of Copenhagen, Dept. of Economics. Discussion Paper

No. 09-03. Available at SSRN: <http://ssrn.com/abstract=1355882> or <http://dx.doi.org/10.2139/ssrn.1355882>

9. Gabdullin, R. (2013). Upravljenje ekonomickimi sistemami v postkrizisnyj period: teorija i genezis metodologicheskikh podkhodov. *Izvestija Uralskogo gosudarstvennogo ekonomicheskogo universiteta*, 3/4(47/48): 14-21.

10. Grigoriev, L., Ivashchenko, A. (2010). Teorija tsikla pod udarom krizisa. *Voprosy ekonomiki*, 10: 31-55.

11. Drucker, P. (1999). *Management Challenges for 21<sup>st</sup> Century*. New York: Harper Business.

12. Kopylov, G. (1996). Nauchnoje znanije i inzhenernyje miry. *Kentavr: Metodologicheskij i igrotechnicheskij almanakh*, 1: 16-22.

13. Krugman, P. (2009). What went wrong with economics. *The Economist*. July 18<sup>th</sup>:11-12.

14. Kuznetsov, B. (2012). Metaekonomika: problemy ekonomicheskogo budushchego chelovechestva. *Izvestija Uralskogo gosudarstvennogo ekonomicheskogo universiteta*, 4(42): 4-10.

15. Mises, L. von (1996). *Human Action: A treatise on economics* (4<sup>th</sup> rev. ed.). San Francisco, CA: Fox & Wilkes.

16. Mankiw, N. G. (2006). The Macroeconomist as Scientist and Engineer. *Journal of Economic Perspectives*, 20(4): 29-46.

17. Nizhegorodtsev, R. (2009). Mirovoj finansovyj krizis: novyje ugrozy i novyje vozmozhnosti. *Izvestija Uralskogo gosudarstvennogo ekonomicheskogo universiteta*, 1(23): 4-12.

18. Nizhegorodtsev, R. (2012). Mirovoj finansovyj krizis: predchuvstvije vtoroj volny. *Izvestija Uralskogo gosudarstvennogo ekonomicheskogo universiteta*, 2(40): 16-24.

19. Skidelsky, R. (2008). Farewell to the neo-classical revolution. *Project Syndicate*. September 16.

20. Soros, G. (1994). *The Alchemy of Finance: Reading the mind of the market*. New York etc.: John Wiley and Sons.

21. Soros, G. (1998). *The Crisis of Global Capitalism: Open society endangered*. New York: Public Affairs.
22. Tatarin, A., Tatarin, D. (2009). Prichiny mirovogo finansovogo krizisa i vozmozhnyje stsenarii razvitija Rossii v uslovijakh globalisatsii. *Izvestija Uralskogo gosudarstvennogo ekonomicheskogo universiteta*, 1(23): 13-23.
23. Khazin, M. (2008). Teoria krizisa [A theory of crisis]. Paper presented at the conference “West-East: integration & development”), 9-10 July 2008, Modena, Italy. Available at: <http://design-for.net/page/teorija-krizisa-hazina>.
24. Shchedrovitsky, G. (1997). *Filosofija. Nauka. Metodologija*. Moskva: Shkola Kulturnoj Politiki.
25. Shchedrovitsky, P. (2011). Povestka dnya 2010-h. Tsikl leksij . 4-7 September. Irkutsk. Available at: <http://www.fondgp.ru/lib/mmk/180/>.