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Scientific Realism and Some Russia

Introduction

Realism and Russia? Realism is a notion with multiple meanings, so options abound as to how the two might connect with one another. An old Russian proverb conveys a realist message about social properties: "An individual in Russia was composed of three parts: a body, a soul, and a passport." (Ruben 1985, 83) Having a passport signals the possession of a complex set of social properties, and if these are taken to be real in some appropriate sense, one is implying a realist view in social ontology.

In another sense of the word, realism is a live issue in the study of international relations. Political realism considers the behaviour of states by emphasizing the importance of national interest and the drive for power on the one hand, and the suppression of moral concerns on the other (e.g. Donnelly 2000). Russian realists hold diverse views about the newly emerged unipolar global power structure and Russia's proper strategy for adjusting to this structure (e.g. Shakleyina and Bogaturov 2004).

Realism is a family of viewpoints also in the arts (including painting, music and literature) and their study. Socialist realism is a version that used to be an official doctrine in Russia, gently requesting artists to optimistically represent society's march towards communism, glorifying the heroic role of the proletariat in driving the proc-

ess. Socialist realism was also well known elsewhere. So much so that in the 1970s, a philosophy professor at the University of Helsinki announced to give a lecture course on "scientific realism" but on its way to the university catalogue through the university administration, the title of the course was transformed into "socialist realism".

In the spirit of rectifying that old administrative mistake, the remarks to follow deal with scientific realism as a philosophy of science. The general issue to be addressed is how the social sciences relate to the social world, in both directions.

Standard formulations of scientific realism

Scientific realism is generally a pro-science philosophy. Science is our best way of finding out what the world is like. Scientific theories as we know them basically tell a roughly true story about the ways of the world. Or more modestly, scientific theories have a chance of being true of real things (but may turn out to be false as well). Very loosely, ontological realism claims that the things theorized by science really exist; semantic realism is the idea that those theories are about those things and are true or false about them; epistemological realism in a somewhat optimistic guise says that we are entitled to believe that (most, good, mature) scientific theories are by and large true; and axiological scientific realism suggests it is the task of science to pursue true theories about the real world. Typically, such formulations are phrased in terms of unobservability and mind-independence: the major objects of science (such as electrons and black holes) are unobservable and exist mind-independently. (See e.g. Psillos 1999; Niiniluoto 1999.)

The philosophical literature on scientific realism has paid insufficient attention to disciplinary diversity (Mäki 2005). Science is not perfectly uniform, and this should show in the formulations of realist philosophies of it. Experimental natural sciences are in the privileged position of being able to generate new evidence by intervening in nature's processes, and this enables them to be relatively assured about the truth of their theories. Contemporary public social sciences (economics, sociology, political science) have a potentially reflexive relationship to their target domains, and this makes their epistemic tasks particularly challenging. Historical sciences are different again in that they cannot intervene into their target domains and they have no reflexive relations with them; so they cannot generate new evidence while historical processes themselves keep destroying existing evidence. Different types of discipline

clearly meet different types of challenge in attempting to uncover the secrets of the real world.

The remarks to follow are mostly concerned with ontological realism and issues of existence in the social sciences. I will raise questions about mind-independence and unobservability. This is one way of beginning to sort out disciplinary diversity and its implications for scientific realism so as to accommodate the scientific study of society, among other things.

From unobservables to hard-to-access commonsensibles

The existence of unobservable entities and the role of "theoretical" concepts apparently denoting them used to be a major issue in the philosophy of science. Realists defended the view that electrons and ions can be real and that scientific theories can provide information about them even though they cannot be observed by the human senses.

While *kremloins* are observable, gremlins are not (the latter are tiny mysterious evil spirits that cause problems especially in machines). A radical empiricist would take *kremloins* to be real and gremlins not to be real, basing her distinction on observability. A realist would give gremlins a chance to be real (because unobservability is no obstacle to existence), but would probably have to conclude that they don't exist after all (while perhaps admitting that 'gremlin' could serve as a placeholder for some real, yet to be discovered defect in the structure of the machine).

Importantly for our purposes, paradigm examples of unobservables such as electrons and radio waves involve an ontological departure from the commonsense framework of pine trees and landslides. The world of scientific theories is occupied by entities very different from those familiar to us within our ordinary commonsense view of the world. The realist presumption is that the realm of electrons is no less real than that of pine trees. The move from machine structures to evil spirits likewise involves a radical ontological rupture, but it is a move from what is real to what is not.

By contrast, the bulk of social theorizing does not seem to involve a similar ontological departure from the commonsense realm of "commonsensibles" (see Mäki 1996; 2011). Instead of postulating entirely new kinds of entities, social theorizing is largely a matter of selecting and simplifying, aggregating and averaging, renam-

ing and rearranging items in the commonsense realm. Even the "underlying mechanisms" of social coordination are made of familiar commonsense stuff – whether those of political power structures or those of the invisible hand of the market. Human individuals and their various groupings, beliefs and emotions, strategies and norms, institutions and conventions, money and price, status and power, competition and collaboration – such familiar constituents of society are not like electrons and quarks that occupy the realm of an unfamiliar subatomic world.

What the unobservables of physics and the modified commonsensibles of the social sciences share is that they play important explanatory roles and that they are often hard to access. What realism implies is that the difficulties with the epistemic access to some item has nothing to do with whether that item is real and that our ways of accessing or measuring an item do not define its nature nor determine how causally powerful it is (while whatever we already know about the item should have consequences for how we go about measuring it). Consider two examples of such hard-accessibles in Russia.

A shadow economy is not easy to access empirically. The literature on the Russian shadow economy suggests that it consists of the tendency of people and firms to perform their economic activities without the involvement or intervention of the state, giving rise to activities that evade taxes; avoid regulatory requirements or ignore currency requirements; fail to appear in statistical reporting mechanisms; and are *per se* illegal (Eilat and Zinnes 2002, 1234). None of this suggests unobservables akin to quarks or photons. In their examination of the causes and consequences of the shadow economy in transition countries, Eilat and Zinnes define the very notion still more narrowly, saying they "define the shadow economy as those value-added activities that the official statistics do not register, even though they should. This definition is used because it is the closest to what our measurement method is equipped to capture, and not because we believe it reflects the only relevant considerations for shadow activity." (2002, 1235)

This manifests a realist attitude. Measurement methods are among our fallible ways of epistemically accessing the world, but they do not as such imply anything about the constitution of that world. The world has its own ways, and our attempts to access it are imperfect and distortive (but whether the imperfections of those methods are distortive in undesirable ways is to be determined using separate arguments.) Also, believing that a shadow economy has "causes and consequences" is to believe the shadow economy is real. Only real things are able to participate in causal interactions.

Consider then the striking increase of mortality in Russia in 1992-94. "This large and unexpected change seemed so hard to believe at first, that many suspected some kind of a bias in the statistical data. As time passed, however, it became clear that the registered changes were not a statistical artefact, but a tragic reality." (Shkolnikov et al. 1998, 1995) Again, difficulties with epistemic access via statistical measurement do not imply that a phenomenon like a rise in mortality is unobservable in the way some change in the subatomic configuration of an atom is. The phenomenon remains within the realm of commonsensibles.

Not only was the phenomenon itself hard to establish as real, but its causes have been difficult to trace. Among the candidate causes that have been suggested are absolute deprivation, collapse of the health system, and environmental pollution. Others argue against these causal attributions and cite instead "a mass psychological stress" generated by the shock of the rapid and radical economic transition, with these two things mediated partly by the harmful health effects of excessive alcohol consumption. "The stress could be a consequence of the fast and unexpected dismantling of the Soviet system of the state paternalism ... A sudden inability to adapt has left many people in a state of confusion, uncertainty and calamity." (Shkolnikov et al. 1998, 2008) It does not seem that electron-like unobservables are postulated here either. None of these causal factors, from inability to adapt to psychological stress to alcohol consumption, are unobservable in the sense of involving entities unfamiliar to the common sense (unlike the precise chemistry of dying). And the difficulties with measuring them do not imply that they are not real (or less real than easy to measure things).

Mind-dependence of society

Ontological realism makes claims that have the general form, 'X exists' or 'Z is the case' or some such. As to variables X and Z, one can hold a realist view about generalities such as relations and causal processes, natures and necessities, numbers and sets, parts and wholes, material states and moral values. One can be a realist about more specific matters such as electrons, molecules, cells, minds, human individuals, and social organizations. And one can be a realist about particular matters such as Russia and the causation of the Russian mortality crisis.

However, to qualify as a realist about some X or Z, it is not sufficient to believe

that they exist or obtain. One also needs to specify the meanings of 'exists' and 'is the case' in ways that satisfy some realist principles. No answer to 'what exists' – no list of things that are claimed to exist or to be the case – is alone sufficient for ontological realism. We also need to carefully answer the question, 'What is existence?' Philosophical realism typically answers this question in terms of some idea about independence. The traditional notion is that of mind-independence, but I find it obvious this must be revised if we want realism to be relevant to Russian studies and social sciences more generally.

Most of the universe exists mind-independently. Galaxies and gamma rays, genes and germs, geysers and gorillas, guano and gravitation, gold and glucose – they all exist independently of the human mind. Gardens, gossips and governments don't so exist. Nor do gusto and greed. Such things can be mind-dependent in many ways. Some things are themselves mental, such as guilt and glee. Some things are physical artifacts, depending on human minds and social rules for their production and use, such as gates and guillotines. Some things are human individuals with social properties, requiring certain formal or informal rule systems and attitudes and activities for their existence – such as governors and girlfriends and guardians.

This brings us to the Russian proverb cited in the beginning. A Russian individual, the proverb says, is composed of a body, a soul, and a passport. A passport is a physical artifact with institutional functions. The proverb suggests that it is a passport that indicates – or even constitutes – an individual's citizenship, her having Russian nationality. The passport represents its holder as a Russian citizen, and her being a Russian citizen depends on being so represented. Indeed, some social objects are representation-dependent in the strong sense that the existence of X is dependent on representations of X – on being represented as X. Many contracts between people only exist when linguistically represented. An anti-corruption law only obtains if it is being represented as such by appropriate steps in the process of legislation.

If representation-dependence in the above sense is rather direct, various invisible-hand mechanisms in society establish mind-dependence in a more mediated manner. Some things are claimed to be unintended or undesigned consequences of human action, such as the institution of money or the structures of residential segregation in urban space. Those who designed the "systemic change" for the Russian transition economy wanted to make it mind-dependent in this way.

Social reality is variously shaped by, and dependent on, people's beliefs and expectations, goals and wants, plans and impulses, emotions and reasonings, speech

acts such as promises and persuasions, agreements and disagreements, collaborations and rivalries, meanings and their interpretations, customs and conventions, and so on. None of this is a matter of mind-independence. From this we should not conclude that scientific realism is inappropriate for the social sciences.

Science-dependence of society

I find it curious that scientific realism is frequently formulated in terms of mind-independence. I have proposed that the appropriate notion of independence for scientific realism is that of *science-independence* (e.g. Mäki 2005). Galaxies and quarks are both mind-independent and science-independent – independent of physics and astronomy. Social things and facts are not mind-independent, but do they meet the criterion of being science-independent either? No, they don't. Indeed, much of what there is in society is dependent on science, natural science included. By shaping the world views and technologies prevalent in society, science – from physics and biochemistry to climatology and epidemiology -- has powerful consequences for people's activities and aspirations, beliefs and behaviour, society's norms and institutions.

Can we save the idea of science-independence by admitting that an X may be dependent on sciences of Y provided X is not dependent on sciences of X itself – that society is dependent on natural science, but not on the social sciences? No, we can't. Much of what is the case in society is dependent on the social sciences, by way of policy advice and practical application, roles played by social scientists and their ideas in political debates as well as popularization and dissemination of concepts and theories. Social reality clearly is not social-science-independent either.

In order to sustain the principle of science-independence, we need a distinction. It is a distinction between causal and constitutive (including conceptual) science-(in)dependence. Realism about the social sciences allows for causal science-dependence and only requires that their subject matter exists constitutively science-independently (e.g. Mäki 2002; 2011). In order to explain the idea, let us briefly discuss the fashionable notion of performativity.

Sociologists Michael Callon, Donald MacKenzie and others have argued that economics does not describe and explain a pre-existing economy, but rather shapes the social world by "performing" it. Paradigmatic examples include the structure of financial markets and the practice of finance being influenced by modern finance

theory (McKenzie 2006) and economists advising governments in Bolivia, Chile, Poland and Russia by way of designing markets and privatization policies (McKenzie et al 2007, 2).

Claiming that economics or economic theory is "performative" implies that the social world does not exist economics-independently. The question is whether the suggested economics-dependence of society is fatal for scientific realism. My answer is that were performativity here understood in its authentic sense, the implications would indeed be fatal, but that there is no real need to draw this conclusion. The conclusion rather should be that the recent performativity literature is conceptually confused (e.g. Mäki 2011).

I take J.L. Austin's speech act theory to have given the authentic sense of performativity (Austin 1962). One performs an action by uttering some string of words, a performative sentence. If I say "I promise to deliver the paper by the deadline" I am thereby promising to deliver the paper by the deadline. Saying "I apologize" constitutes the act of apologizing. Saying "I agree" constitutes the act of agreeing. To utter a performative sentence is not to describe a pre-existing action (e.g. that of promising), it is to perform that very action. Nor do those utterings *cause* those acts, rather those acts are *constituted* by those utterings. To utter those sentences is to take those actions. *Saying so makes it so.*

Might social facts be constitutively dependent on social sciences? A constitutive relationship would require that the mere uttering or writing down of an economic model for an audience (that understands the model and perceives the uttering as genuine) establishes what is the case in the model world as part of the real world. This is clearly not what happens. Even in McKenzie's formulations, the connection between economics and the economy is implemented by the "use" of economics by economic actors. But using an economic model goes well beyond just recognizing it uttered or written down and understanding its meaning. Use involves taking further action. This undermines the idea that saying so non-causally makes it so.

Indeed, the consequences of economics for the economy largely flow through indirect causal rather than direct constitutive connections. The popular phrase used is that the economy is "shaped" by economics. Literally speaking, economic theories do not shape the economy. Nor does economic inquiry. People do. In their various roles (as policymakers, students, investors, entrepreneurs, workers, consumers) people are exposed to the results of economic inquiry and they learn, directly or indirectly, about the contents of economic theories, explanations and predictions,

and are inspired by them, perhaps by being persuaded by the proponents, so as to modify their beliefs and perhaps their motives. These modified beliefs and motives make a difference for their behaviour, and this has consequences for the economy. The flow of these influences is a matter of indirect causal connection rather than direct constitution.

This also applies to economist advisors pressing on the rapid transition towards the market economy in Russia, regardless of whether this was a matter of Western economists imposing their favourite market models upon Russian decision-makers or whether there was a long tradition of transnational dialogue behind these events, preparing the economists in Russia and elsewhere in Eastern Europe for these radical changes (Bockman and Eyal 2002). In this and other such cases, the overall process is causal. The mediation is complex and involves all sorts of political and technical elements. It also involves genuine performative moments in that meetings were called, agreements were drawn, promises were made, and so on. Calling the overall process one of performativity obscures the difference between authentic constitutive performativity and causal connections.

Genuine performative speech acts bring new facts into existence (such as an agreement between two parties). So do causal connections between social science and social reality. But it is important to see the limits of social science in altering the social world. The paradigm example of the performativity literature is the finance theory and its particular models such as Black-Scholes-Merton for option pricing. Many of the idealizations of these models are not made true by becoming known or found inspiring or persuasive among market agents. They just cannot be made true. Agents won't become omniscient or hyper-rational even if they were to become increasingly calculative and self-seeking by being exposed to economic models in which agents are so portrayed. Transaction costs may diminish but not all the way to zero in consequence of using models that assume they are zero. The social world and its constituents have quite some robustness that assures us of the objective existence of their properties.

The transition in Russia that started some two decades ago confirms the point. There were attempts to design a new economic order on the blackboard, based on a narrow conception of the mechanisms of markets that supposedly operate similarly in all cultural and historical circumstances. Overoptimistic expectations were held about the capability of social sciences and economics in particular to make an impact on social reality by abruptly implementing such simple models of markets. The

proposed “shock therapy” and “systemic change” were attempted largely by way of deregulation and massive privatization alone, by unleashing self-interest but leaving it unconstrained by appropriate institutions. Such institutions involve a complex system of values, beliefs, traditions, and informal social norms, but the transition policy was not set to provide these. Thus, the radical reconstruction of Russian economy as a functioning market economy remained a “beautiful dream”, far removed from reality (Hedlund 2008).

Society is not malleable at will. This is bad news for “performativity” and good news for realism. Social reality has its own ways that cannot be arbitrarily molded just by imposing some imagined simple model world upon the complex real world. Such a robustness of the real world – its proper science-independence – contributes to the triumph of realism.

Conclusion

The recent reconstruction of Russia may have been based on an unrealistic dream, but what can we conclude about scientific realism and Russia? If Russia has survived realism, then realism has survived Russia.

References

- Austin, J.L. (1962) *How to Do Things with Words*. Cambridge MA: Harvard University Press.
- Donnelly, Jack (2000) *Realism and International Relations*. Cambridge: Cambridge University Press.
- Eilat, Yair and Clifford Zinnes (2002) “The shadow economy in transition countries: Friend or foe? A policy perspective”, *World Development*, 30 (7), 1233–1254.
- Hedlund, Stefan (2008) “Such a beautiful dream: How Russia did *not* become a market economy”, *The Russian Review* 67, 187–208.
- Mackenzie, Donald (2006) *An Engine, Not a Camera. How Financial Models Shape Markets*. Cambridge MA: MIT Press.
- Mackenzie, Donald, Fabian Muniesa and Lucia Siu, ed. (2007) *Do Economists Make Markets? On the Performativity of Economics*. Princeton: Princeton University Press.
- Mäki, Uskali (1996) “Scientific realism and some peculiarities of economics”, in *Boston Studies in the Philosophy of Science*, Vol. 169. Dordrecht: Kluwer. Pp. 425–445.
- Mäki, Uskali (2002) “Some non-reasons for non-realism about economics”, in *Fact and Fiction*

- in *Economics. Realism, Models, and Social Construction*, ed. U. Mäki. Cambridge University Press. Pp. 90–104.
- Mäki, Uskali (2005) “Reglobalising realism by going local, or (how) should our formulations of scientific realism be informed about the sciences” *Erkenntnis*, 63, 231–251.
- Mäki, Uskali (2011) “Realism and antirealism about economics” in *Handbook of the Philosophy of Economics*, ed U. Mäki. Elsevier.
- Niiniluoto, Ilkka (1999) *Critical Scientific Realism*. Oxford: Clarendon Press.
- Psillos, Stathis (1999) *Scientific Realism. How Science Tracks Truth*. London: Routledge.
- Rubén, David-Hillel (1985) *The Metaphysics of the Social World*. London: Routledge & Kegan Paul.
- Shakleyina, Tatyana A. and Aleksei D. Bogaturov (2004) “The Russian realist school of international relations”, *Communist and Post-Communist Studies* 37, 37–51.
- Shkolnikov, Vladimir M., Giovanni A. Cornia, David E. Leon, and France Msle (1998) “Causes of the Russian mortality crisis: Evidence and interpretations”, *World Development* 26, 1995–2011.