The Russian tradition of mathematics: philosophical, religious and cultural roots of the Moscow school of mathematics through the last century

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Abstract: We want to analyze from the point of view of history of culture and of ideas the birth of the Moscow school of mathematics in Russia at the beginning of the twentieth century, and the original characters it maintained through the whole twentieth century up until the recent events that destroyed the Moscow school of mathematics.

We already considered the origins in our book with Loren Graham: Naming Infinity (Religious mysticism and mathematical creativity), Harvard University Press, 2009. There the emphasis was on the religious influence of an orthodox sect, the Nameworshippers (Imiaslavie) on the creators of the Moscow school of mathematics. Here, we want to broaden the study of the Russian culture in general on the Moscow and Petersburg school through the century, relying on our previous work and on testimonies from the best Russian mathematicians (Arnold, Gelfand, Manin, among others).

Some of the questions we ask are the following:

- Is there a way to distinguish a cultural difference in French-Russian reactions to the paradoxes of infinity as they occurred in set theory?
- What about later differences at the time of the Bourbaki school in France and the modern math movement in education all over the world?
- Can one compare other cultural influences on the proper schools in Germany or Poland with Russia? We have a very interesting case with S. Sierpinski who worked in Russia and later became one of the founders of the Polish school of mathematics.
- Finally: The specific role of Luzin, his case for intuition in mathematical research as well as in education, with a long lasting influence of the Luzin’s school. Is there a connection, and of what kind with a cultural Russian specificity?