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The Endurance of Professional Ties: A Tribute to S. A. Kugel'

I met Samuil Aronovich Kugel' in Leningrad forty years ago. My introduction to his work took place earlier, however, when I came across *Novoe v izuchenii sotsial'noi struktury obshchestva* (1968) at the U.S. Library of Congress during my research on Soviet scholarship in the social studies of science. I was interested in the history of this field in the Soviet Union from both a theoretical and practical perspective. The theoretical paradigm of scientific socialism was already being challenged by Russian sociologists who were examining a wide range of social problems and whose results contradicted some of the regime's underlying claims regarding social conditions in the USSR. From a practical point of view, given the restrictions that Soviet authorities placed on field research by foreign scholars, the work of Soviet sociologists provided empirical data that would otherwise not have been available to us.

I saw Kugel's *Novoe v izuchenii sotsial'noi struktury obshchestva* in the context of changes taking place within Soviet sociological research. In my review of the volume I commented:

In his distinction between 'socio-professional groups' and class divisions, [Kugel'] maintains that the defining characteristic of the socio-professional structure is the nature of the work, specifically its complexity and degree of creativity, whereas classes are defined in terms of their relationship to the means of production. Differences in professional fields are tied to differences in qualifications and education which, in turn, may be based on class differences, but the two types of social division do not necessarily correspond...

Kugel' is actually superimposing an alternative view of social structure upon the Marxian one. He justifies this approach by noting that a study of the 'socio-professional grouping of the population' has practical significance for scientific progress and national economic growth. According to the class division of society and the distinction between mental and physical labor, scientists are part of the stratum of intelligentsia. But, as a professional group, they can be analyzed in greater detail, that is, in terms of their social origins, the quality of their work, and their educational training (Lubrano, 1976: 47).

The growing complexity of society resulted in upward social mobility for those with scientific and technical expertise, thereby changing relationships within and among professional groups. From this vantage point, Kugel' studied the mobility of scientific workers and their relationship to the larger society. After discussing his work, I went on to say: "Kugel's monograph thereby serves as a useful introduction to the kinds of research questions he considers important, and it represents a serious attempt to place the study of scientists within the context of a general theory of social structure (Lubrano, 1976: 48)".

With this theoretical foundation in place, Kugel' was positioned to advocate the need for, and the interpretation of, empirical data on scientists within the broader context of

society. As we know, he went on to play a significant role in the advancement of a sociological perspective in Soviet studies of science. He was not alone, of course, as evident by the many colleagues who published with him as co-authors, co-editors, or contributors. But he was a key organizer of these activities and largely responsible for promoting the development of the field in Leningrad/St. Petersburg after its initial sponsorship by historians and philosophers of science, such as S. R. Mikulinsky and V. Zh. Kelle. Of course, the early legacy of the field in Russia goes back at least to the 1920s, but the notable resurgence of social research in the 1960s breathed new life into the *social* studies of science, and that was very important.

In keeping with the intellectual and methodological shift toward sociology of science, for example, Mikulinsky and Kelle supervised a survey of 1,400 scientific workers in Leningrad and Riga in 1968–1969. Kugel' reported the results of this research in *Voprosy filosofii* in 1969, where he noted that a large number of scientists were conducting research outside their postgraduate specialty. I found this to be an interesting observation, because it suggested a greater degree of flexibility in the social structure of Soviet scientific activities than scholars outside the USSR had previously thought:

Although... professional mobility refers primarily to the intellectual movement of scientists from one field to another, it is often accompanied by social movement as well. Changes in the content of one's work may necessitate movement to a different laboratory (collective) or scientific institute. The result can be a completely new social and psychological climate for research, as well as changes in social status and prestige (Lubrano, 1980: 118).

The work of Mikulinsky, Kelle, Kugel', and others led to a range of questions regarding the socio-psychological reasons for career change, economic and institutional pressures for change, and the social dynamics surrounding the emergence of new scientific fields in Russia.

Since these questions were closely related to my own research on the career patterns of Soviet scientists and to my research on *naukovedenie* as an academic field, I decided to use the first opportunity I could to meet Kugel' and his colleagues. In 1974 I was accompanying a group of students on a study program that included a week in Leningrad. I arranged to have some free time so that I could go to the Leningrad Affiliate of the USSR Academy of Sciences Institute for the History of Science and Technology. I arrived at the institute without the official *propusk* and no formal appointment. I simply told the *kontrol'* that I wanted to meet S. A. Kugel'. Fortunately for me, Kugel' was there, and so was Semyon Romanovich Mikulinsky, Director of the Institute in Moscow. I had the pleasure of meeting both of them, and that was the beginning of a collaboration that continued for many years. In my subsequent trips to Russia S. A. Kugel' hosted me at the Leningrad Affiliate and S. R. Mikulinsky hosted me at the Institute in Moscow.

During our initial meeting Kugel' gave me a copy of *Nauchnye kadry Leningrada*, which he had co-edited with B. D. Lebin and Iu. S. Meleshchenko in 1973. This volume drew upon a survey of 2,000 scientific workers in academic, machine-building, and industrial establishments between 1968 and 1971 in order to investigate the reasons why scientists and technical workers in Leningrad changed their professional fields. The study provided useful insights into issues of job (dis)satisfaction and social relationships inside research collectives. This project was important, in my view, because it began to probe the motivations and complaints of scientists as they went about their work – in sharp contrast to the ideologically driven claims of so many other books being printed in the USSR at that time. *Nauchnye kadry Leningrada* was filled with data that had not been previously published and thereby served as the most extensive “mapping” of scientific workers in the city thus far.

My interest in Kugel's work was initially part of my investigation into the sociology of scientific research and the broader academic field of *naukovedenie* in the Soviet Union. However, I was also pursuing a study of the social dynamics inside scientific collectives, especially the career patterns and informal networks of scientists in Academy research institutes. Professional mobility and job satisfaction were definitely salient to such a study. Therefore, I looked at the education and employment trends documented in *Nauchnye kadry Leningrada* as part of the larger puzzle of social, economic, and psychological issues facing scientists throughout the USSR. I also found it extremely useful to consider the Leningrad data together with results of other studies carried out in scientific research institutes of Moscow, Novosibirsk, and Kiev. The specificity and breadth of Kugel's research changed the way we looked at scientific personnel in Russia. It allowed for the possibility of comparative assessments across different regions and time frames. This was very valuable for the building of hypotheses and empirically based science policy.

Professional mobility continued to be a main theme role in Kugel's research. One of his landmark publications, in my view, was *Professional'naia mobil'nost' v nauke* in 1983. His delineation of scientific activities in terms of the social division of labor in the process of knowledge production drew upon Russian and non-Russian scholarship on the sociology of labor (Zaslavskaiia), for example, the history of science (Kuhn), the sociology of knowledge (Mulkay), and science as a social system (Maizel'). From this broad theoretical positioning, Kugel' was able to assess the mobility of scientific workers in a more meaningful way. He developed empirical indicators consistent with concepts of professional mobility and stability that were no longer defined solely by institutional parameters. Most notably, his concept of *maiatnikovaia mobil'nost'* showed how shifts in scientists' thematic and intellectual interests serve not only to satisfy individual needs, but also to expand the frontiers of science. This broadly theoretical work was substantiated by empirical research that grounded the theoretical arguments and contributed significantly to the sociology of science in Russia.

Kugel' was also interested in the work of international scholars and in empirical data on scientific personnel in other countries. An important part of our collaboration, therefore, was the direct exchange of publications from the United States and the Soviet Union that were not readily available. There was no Internet in the 1970s and 1980s, and international postal service was often unreliable. It was common in those days for me to carry American publications on science studies with me when I travelled to Russia and to be sure that Kugel' would receive the latest issue of *Science and Engineering Indicators* published by the National Science Foundation. Sometimes Kugel' would send his publications to me through a colleague who was travelling between Leningrad and Washington, D.C. or seeing me at an international conference. The exchange of professional information is, of course, a normal part of any international community of scholars, but it required more work and commitment at that time.

Another remarkable characteristic of Kugel's career is the longevity of his productivity. He maintained a consistent trajectory in his projects, which allowed him to incorporate new data against the backdrop of his earlier work. The co-authored volume *Nauchnye kadry SSSR* (co-editor, 1991), for example, provides a broad sweep of data on changes in the demographic structure, training, and employment of Russian scientific personnel under *perestroika* and the early transition to a market economy. In a similar vein, his collaboration in *Kadry i kadrovaia politika v vysshei shkole* (co-author, 1991) was important for the attention given to science education and scientific research in higher schools during the same period.

Of course, there are several later volumes that could be highlighted, such as *Uchenye Leningrada—Sankt-peterburga* (1998), which is a useful collection of articles he wrote from the 1960s to the 1990s, and *Sotsial'nye i politicheskie orientatsii Sankt-Peterburgskoi elity* (editor, 1998), which expanded upon his previous studies of scientific elites in Leningrad.

By the late 1990s I had shifted my primary research focus to the politics of medical practice and the theoretical insights of Michel Foucault (Lubrano, 1998; 2011). I still maintain an archive of materials on *naukovedenie*, however, and continue to refer to Kugel's writings in my research on the sociology of Russian science. When I reflect on the history of our professional relationship and the importance of scholarship transcending national boundaries, I remember how pleased I was to host his visit to the United States in 1990. O. I. Ivanov traveled with him, and together they conducted interviews at the National Institutes of Health, the National Science Foundation, and other research establishments in Washington, D.C. Such personal experiences are important, in my view, because they allow us to see very different research environments first hand. My trips to Russia and his to the USA strengthened what was already an enduring camaraderie and interest in science as a social process.

Samuil Aronovich Kugel' has had an immense impact on the field of sociology of science in Russia—not only through his publications and collaborative projects, but also in the role that he has played in the institutionalization of sociological research practices in *naukovedenie*. His use of survey data and field interviews, for example, opened the way for more empirical research on the social realities of scientific collectives. Publications, such as the well-known series *Problemy deiatel'nosti uchenogo i nauchnykh kollektivov* gave scholars a venue where they could interpret and disseminate their research data. The first five volumes (1968–1973) established the agenda for future issues, with each one moving into greater empirical detail—from the social-psychological conditions in scientific collectives to the training and distribution of scientific personnel. The practical significance of this information for the administrative management of science was clearly present, especially with regard to scientific institutes in Leningrad. The inclusion of methodological discussions helped to elucidate the limits of these studies, largely a result of the research environment in the Soviet Union at the time. Methodological discussions were also a reflection of changing intellectual agendas from institutional and historical studies to ones that were rooted in applied sociology.

The twenty-ninth issue of *Problemy* was published in 2013 – a testament to its legacy as a key source of ongoing research in the field. Professor Kugel' has been Editor-in-Chief for most issues since 1968—a testament to the centrality of his leadership for the success of the series. When Kugel' introduced the new journal *Sotsiologiya nauki i tekhnologii* in 2010, he showed his resolve once more to address “the link between sociological-science-studies research and reality, scientific everyday life (p. 14).” This was in keeping with the time-honored tradition of applied social research characteristic of the field as it developed in Russia. Kugel's editorial reflected a professional field of study that was fully institutionalized, with a legitimate social role and with intellectual tools to assist in the solution of social problems. However, it also reflected the reality of apparently intransigent issues that still hamper the implementation of knowledge into practice.

It is well known that continuity of a professional field benefits substantially from resources within formal organizational structures. For most of the past fifty years Kugel' has been coordinating, hosting, and promoting activities associated with sociology of science in Russia primarily from his post at the Leningrad/St. Petersburg Branch of the Institute for

the History of Science and Technology, USSR/Russian Academy of Sciences. This was not an uninterrupted path, given the economic and political changes that took place. Fortunately, Kugel's informal science school remained active in Russia and abroad even when there were temporary institutional disruptions at the Leningrad/St. Petersburg Branch. An important turning point was the creation of the Center for Sociological and *Naukovedcheskikh* Research in 1995 under Kugel's direction (until 2007). This became the key institutional base for sociological research on science in St Petersburg, directed by N. A. Asheulova (2007–2013) and since 2013 by S. A. Dushina.

Institution-building through scholarship, research practices, publications, and organizational structures would not be enough, however, without the education and training of young professionals to carry on the work. One of Kugel's outstanding achievements has been his teaching of the sociological tradition in science studies, his mentorship of younger scholars, and the way he has brought them into research projects. Many of them have benefited from Kugel's informal "science school" and from the International School for Sociology of Science and Technology, which he launched in 1992. The longevity of Kugel's career has ensured a multi-generational science school, represented in part by researchers at the Center. This becomes an intellectual and organizational legacy as well. Indeed, one of Professor Kugel's most significant contributions to the "social institution" of sociological research on science in Russia is the community of younger scholars who will surely advance the field through their own creative endeavors in the years ahead.

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