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Scholarly Comments on  
Academic Economics

## Leonid Vitaliyevich Kantorovich [**Ideological Profiles of the Economics Laureates**]

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*Econ Journal Watch* 10(3), September 2013: 385-388

### Abstract

Leonid Vitaliyevich Kantorovich is among the 71 individuals who were awarded the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel between 1969 and 2012. This ideological profile is part of the project called “The Ideological Migration of the Economics Laureates,” which fills the [September 2013 issue of \*Econ Journal Watch\*](#).

### Keywords

Classical liberalism, economists, Nobel Prize in economics, ideology, ideological migration, intellectual biography.

### JEL classification

A11, A13, B2, B3

### Link to this document

[http://econjwatch.org/file\\_download/734/KantorovichIPEL.pdf](http://econjwatch.org/file_download/734/KantorovichIPEL.pdf)

**Shea, Christopher.** 2011. Daniel Kahneman’s Politics. *Ideas Market, Wall Street Journal*, October 28. [Link](#)

**Thaler, Richard H., and Cass R. Sunstein.** 2008. *Nudge: Improving Decisions About Health, Wealth, and Happiness*. New Haven, Conn.: Yale University Press.

## Leonid Vitaliyevich Kantorovich

by Daniel B. Klein, Ryan Daza, and Hannah Mead

Leonid V. Kantorovich (1912–1986) was born in Tsarist Russia to an affluent Jewish family; when he was 12 years old, his native city was renamed Leningrad. Kantorovich had a talent for mathematics and finished high school early at age 14 to enter Leningrad University. He graduated in 1930, then received a professorship in 1934 and finally his doctorate in mathematics in 1935 (Kantorovich 1992/1976b)—all by the age of 23.

Kantorovich began his career as a mathematics professor, but forayed into economics in the late 1930s, when he began working on complex problems of resource allocation (Kantorovich 1992/1976b). Aron Katsenelinboigen says of Kantorovich: “In 1939–41, he realized that the socialist economy as a whole could be perceived as an optimization problem. The logic of the Soviet planned economy naturally impelled Kantorovich towards this notion. ... In investigating [optimization relations], he was also able to penetrate deeper into the role of prices than had Soviet economists before him” (Katsenelinboigen 1979, 136). In 1975, Kantorovich won the Nobel Prize, shared with Tjalling Koopmans, for “contributions to the theory of optimum allocation of resources.”

A new branch of economics emerged in the Soviet Union in the 1950s “where a majority of the active research workers were of course relatively younger people, many of whom had their background in subjects other than economics” (Johansen 1976, 62). The new approach rivaled the political economy of socialism based on the works of Marx and Lenin. Stanley Brue and Craig MacPhee explain:

Based on the work of Leonid Kantorovich and other prominent scholars, a new *kafederi* of mathematical economics—more specifically, the System of Optimally Functioning Socialist Economy (SOFE)—came to the fore. This new economics, called *economic cybernetics* by many Russians, focused on linear programming and related optimization techniques of production. ... [The Political Economy of Socialism] was historical and heavily ideological with

research consisting of papers loaded with citations of Marx, Lenin, and current leaders of the Communist Party. On the other hand SOFE was highly mathematical, aimed at developing methods for implementing the long-run plans and improving the operation of state enterprises. Because the methodologies of these approaches differ, much tension has arisen between adherents of the two subdisciplines. (Brue and MacPhee 1995, 183-184)

Katsenelinboigen writes: “The fact that Kantorovich, independently from Western economists, discovered the economizing properties of prices in a planned system is not his great feat: Western scientists had already expounded these relations. His real success was in proposing both a concrete procedure for compiling an optimal plan and ways of overseeing its implementation in price mechanics” (Katsenelinboigen 1979, 138).

Kantorovich developed recommendations for improving Soviet planning, but his criticisms were not well received by the authorities, according to Katsenelinboigen:

In 1939 or 1940, [Kantorovich] wrote a letter to Gosplan containing his recommendations. At this point, the inevitable clash between Kantorovich and the Soviet bureaucracy finally occurred; only by some miracle did Kantorovich manage to survive it. (Katsenelinboigen 1979, 139)

After figuring out how to improve efficiency at a train car plant, Kantorovich was charged with “complicity” and apparently was spared because of his integral role in research on atomic reactors (Katsenelinboigen 1979, 134).

In 1965 Kantorovich wrote:

Planning of the national economy and of individual branches within the framework of the state is only possible when private ownership of the means of production is replaced by common socialist ownership. Such planning becomes possible when capitalist relations of production have been eliminated and replaced by socialist ones. ... The genius of [V. I.] Lenin’s ideas about planning formed the basis for all plans for the development of the national economy of the U.S.S.R. ... The [Communist] Party has frequently emphasized that only with detailed and correct scientific planning is it possible to achieve full and balanced use of all existing resources and to demonstrate the general superiority of the socialist method of production which will guarantee

the victory of socialism in the world-wide contest with capitalism.  
(Kantorovich 1965, xxi)

Kantorovich did, however, recognize “substantial shortcomings” in Soviet economic performance: “[C]onsiderable losses take place even now—idleness of labour and equipment, and losses in raw materials and fuel, owing to unsuitable programmes, rush work towards the end of the plan period and delays in supply, the freezing of materials in surplus stocks and in protracted construction—these are also evidence of the lack of sufficiently rational planning.” He acknowledged methodological issues: “All these losses are basically due to imperfect production planning and economic accounting, caused by inadequate methods.” He complained about prices: “Prices reflect quite inadequately the importance of equipment.” He recognized deficiencies in distribution: “Frequently there appears to exist considerable disparity between the orders and requirements of individual firms for materials, equipment, electric power, transport, means of capital investment against existing possibilities.” Kantorovich prescribed better socialism: “Our main ultimate aim is to furnish the best optimal plan, i.e. a plan which would ensure the maximum output of the necessary products from given resources. Such an approach corresponding to the very nature of a socialist society is in accordance with the basic economic principles of socialism” (Kantorovich 1965, xxii-xxx).

In the wake of winning the Nobel, Kantorovich voiced the view that “Scientific and technical progress is the basic means of further increases in the efficiency of social production in the age of developed socialism. ... Science is a direct production force, a decisive factor in the development of the socialist economy. ... Therefore the development of the national economy depends to a large extent on the economics and management of scientific and technical progress” (Kantorovich 1976a, 521).

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## Lawrence R. Klein

by Daniel B. Klein and Ryan Daza

Lawrence Klein (1920–) was born in Omaha, Nebraska and experienced childhood during the Great Depression. He reflected on the events of his early life:

Although I was not aware of it at the time, the experience of growing up during the Great Depression was to have a profound impact on my intellectual and professional career. Collegiate life subsequently gave me a basis for understanding this experience and to develop some analytical skills for dealing with the important economic aspects of this era, as well as the exciting times that were to come—World War II, postwar reconstruction, and expansion. (Klein 1992a/1981)

He describes his direction in college:

When I entered university my interests began to take shape in the world of ideas. I specialized in both economics and mathematics. I could not see their eventual use together to deal with problems that the world faced. Also, I was not equal to the quick-witted star mathematicians at the university, but I kept being attracted by mathematical problems and their potential use in natural, physical, and social sciences—especially in economics. (Klein 2006, 31)

Klein started at Los Angeles City College for his undergraduate studies, earning his degree in economics at the University of California at Berkeley in 1942 and his Ph.D. at MIT in 1944. He moved to join the Cowles Commission, then at the University of Chicago, and later to the University of Michigan where, with Arthur Goldberg, he developed the Klein-Goldberger model. In 1954 he moved to Oxford to do studies on the British economy. In 1958 he moved to and has since been at the University of Pennsylvania, where he founded Wharton Econometric Forecasting Associates.