

his receipt of the Nobel Prize in 1961, and his donation of his art collection to the Foundation in 1972.

Moore, B. C. J. (1997). *An introduction to the psychology of hearing* (4th ed.). New York: Academic Press. Discusses how, using new techniques, researchers since Békésy's time have been able to demonstrate that, even though his theory of the traveling wave in the basilar membrane is correct in general, the surgical techniques he used led him to underestimate the degree to which individual neurons responded specifically to individual frequencies.

Newman, E. B. (1973). Georg von Békésy: 1899-1972. *American Journal of Psychology*, 86, 855-857. Obituary by a psychologist who was a colleague of Békésy's during his Harvard years.

Ratliff, R. (1976). Georg von Békésy. June 3, 1899-June 13, 1972. *Biographical memoirs. National Academy of Sciences of the United States of America*, 48, 25-49. This biography is particularly useful for its discussion of Békésy's early research on telephone systems as well as his later research on hearing, and for a list of his academic honors; it also contains a complete bibliography.

Tonndorf, J. (1986). Georg von Békésy and his work. *Hearing Research*, 22, 3-10. This biography stresses Békésy's elegant experimental methods in the context of his contributions to auditory science.

David J. Murray

**BEKHTEREV, VLADIMIR MIKHAILOVICH** (1857-1927), Russian neuroanatomist, neuropathologist, psychiatrist, psychologist/reflexologist. Although he has received far less recognition than Ivan Pavlov, Bekhterev probably had more influence than Pavlov on the early, general acceptance of conditioning by psychologists. Bekhterev and his students introduced motor conditioning using animals and humans, which he believed provided a better methodological foundation for psychology than Pavlov's salivary conditioning. Bekhterev's "objective psychology," a sophisticated "behaviorism," influenced John B. Watson's development of behaviorism. Watson devoted his 1914-1915 winter seminar at Johns Hopkins to the 1913 French translation of Bekhterev's *Objective Psychology*, and before World War I prevented it, Watson's protégé, Karl Lashley who had participated in the seminar, was to have worked and studied with Bekhterev in Russia. Watson emphasized Bekhterev's methods, but instead of Bekhterev's term *association reflex* used Pavlov's term *conditioned reflex*, which stamped the latter into the vocabulary of behaviorism and obscured Bekhterev's influence. Further reducing Bekhterev's influence were the suppression of his views and those of his followers in the Soviet Union after his "mysterious" death (see below). However, with glasnost in the former Soviet Union, Bekhterev gained renewed international recog-

nition, especially in social psychology. His textbook in social psychology, *Collective Reflexology, Part I*, received its first English translation in 1994, only the second of Bekhterev's psychological texts ever to be translated into English.

Bekhterev earned a medical doctorate at age 24 from the Military Medical Academy in St. Petersburg. He then studied with leading European scientists such as Jean-Martin Charcot (psychiatry/hypnosis), Emil duBois-Reymond (neurophysiology), Paul Emil Flechsig (neuroanatomy/neuropsychiatry), and Wilhelm Wundt (psychology). Bekhterev accepted the chair in Psychiatry at the University of Kazan in 1885 where he founded Russia's first psychophysiological laboratory and first institute for brain research addressing mental diseases. During his career, he published significant work in neuroanatomy, neurology, and psychology, resulting in more than six hundred articles and books. Several neurological conditions or symptoms and several brain structures were given his name (e.g., "Bekhterev's disease," a spinal cord disability, and "Bekhterev's nucleus," now known as the superior vestibular nucleus). He also founded numerous laboratories, hospitals, clinics, academic institutes, and journals.

Basic research and clinical application were equally important to Bekhterev. His conditioning procedures were used to investigate behavioral and organic abnormalities. His knowledge of hypnosis and skill as a practitioner influenced his theoretical views about social behavior. For example, he compared social suggestion to "psychological infection" which he related to infectious disease, "every personality . . . inoculates others with the peculiarities of his own psychological nature, and . . . takes from them one or another kind of psychological trait" (see Jaan Valsiner's "Introductory Commentary" to *Collective Reflexology*, p. xx).

In 1893, Bekhterev accepted a position at the Military Medical Academy in St. Petersburg where in 1896, he founded the first journal with the term *experimental psychology* in its title, *Review of Psychiatry, Neuropathology, and Experimental Psychology*. In 1907, he founded the Psychoneurological Institute, an independent, highly progressive academic institution with a diverse faculty and a mission to study scientifically all aspects of being human. The institute was exceptionally successful in attracting students, and, notably, women and Jews were admitted, not a common practice at that time.

Bekhterev was in and out of favor with both the tsarist and the postrevolutionary governments. For example, his role in a tsarist-rigged, anti-Semitic trial (the Beilis case, 1911-1912) resulted in Beilis's acquittal but Bekhterev's loss of the Psychoneurological Institute. However, Bekhterev's importance and value were such that by 1917, he was allowed to found the Reflexological Institute for Brain Research. As an expert in neu-

ropathology, he served twice as medical consultant to Vladimir Lenin and once to Joseph Stalin. The latter consultation may have caused Bekhterev's death and the suppression of his influence in Russia (see below).

Like I. M. Sechenov, Russia's "father of physiology," who influenced him, Bekhterev believed that psychology must be methodologically objective and philosophically mechanistic and materialistic (e.g., "mind" reduced to actions of the brain). By 1912, Bekhterev replaced the term *psychology* with the term *reflexology*, because much of psychology was too subjective for him. However, the objectivity of reflexology did not mean a narrower scope. Reflexology was constructed with equal foundations in biology and sociology.

According to Alexander Schneirman ("Bekhterev's Reflexological School" in Murchison's *Psychologies of 1930*, Worcester, MA, 1930, p. 225.) the Reflexological Institute had five divisions, all addressing normal and abnormal behavior. To indicate the breadth of the institute, consider its five divisions: (1) *General reflexology* was the basic science division which was said to be almost physiological; (2) *Individual reflexology* addressed individual variations, personality types, etc.; (3) *Age reflexology* addressed physical and psychological abnormalities associated with child development; (4) *Collective reflexology* was social psychology from a standpoint that included the study of evolutionary and genetic influences; and (5) *Genetic reflexology* was developmental psychology considered from ontogenetic and phylogenetic perspectives.

With glasnost has emerged a strong but perhaps unprovable circumstantial case that Bekhterev's death resulted from poisoning at the direction of Stalin. Despite apparently excellent health, Bekhterev died late the same day he examined Stalin for neuropathology associated with stroke and a dysfunctional arm. Soon after the examination, Bekhterev was overheard to refer to Stalin as a "paranoic with a withered arm." That evening Bekhterev attended the Bolshoi Theater and later became ill. Accounts vary regarding food eaten and with whom he interacted at the Bolshoi, as well as how he was examined and treated by an attending government physician, but there is consensus that there was gastrointestinal involvement and that poisoning was possible. An autopsy hastily arranged by government authorities under highly suspicious circumstances examined only the brain and, then, without cutting it or taking tissue samples. The remainder of the body was cremated without examination.

[Many of the people mentioned in this article are the subjects of independent biographical entries.]

### Bibliography

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connecting Bekhterev's and Marxist-Leninist philosophies.

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Shereshevskii, A. M. (1991). The mystery of the death of V. M. Bekhterev. *The Bekhterev Review of Psychiatry and Medical Psychology*, 2, 102-111. Contains information possibly inconsistent with and details not seen in Moroz above. Shereshevskii, who is currently associated with the Bekhterev Psychoneurological Institute in St. Petersburg, acknowledged that the evidence is incomplete, suggested that more could be forthcoming, and offered his opinion that Bekhterev was poisoned.

Strickland, L. H. (1991). Russian and Soviet social psychology. *Canadian Psychology*, 32, 580-593. An examination of Russian and Soviet social psychology with considerable emphasis on Bekhterev by the leading contemporary Western authority. Strickland edited the translation of Bekhterev's *Collective reflexology*.

Roger K. Thomas

**BELGIUM.** From a European perspective, the Kingdom of Belgium is both a small and a young country. It was formed in 1830 when it separated from the Netherlands (after the battle of Waterloo in 1815 the two countries