Princeton University

Honors Faculty Members
Receiving Emeritus Status

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The biographical sketches were written by
colleagues in the departments of those honored.

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Faculty Members Receiving Emeritus Status

Philip Nicholas Johnson-Laird

Philip Johnson-Laird is retiring this year after 23 years on the faculty of the psychology department. A renowned expert on the psychology of language and thinking, Phil has been a pioneer in the development of the interdisciplinary field of cognitive science here at Princeton and around the globe.

Phil was born on October 12, 1936, in Rothwell, near Leeds, England. He did not start out to be a psychologist: After graduating from the Culford School in 1952, he attended the College of Estate Management in Kensington, London, passing the intermediate examination of the Royal Institution of Chartered Surveyors in 1959. He then spent a couple of years as a freelance jazz musician and music critic before attending University College London, where he received his B.A. in psychology (1964) and his Ph.D. in psychology (1967). He stayed at UCL for four years as a lecturer, and then moved to the University of Sussex, where he spent a decade as reader, professor and then chair.

Phil's intellectual odyssey began with the study of language and, in particular, how people understand logically complex sentences. In a departure from the conventional wisdom of the early 1970s, Phil proposed that the meaning of sentences depended less on grammatical and syntactical rules than on mental representations of the sentence's focus. Thus, for example, sentences written in the active and passive voice may have the same meaning by grammatical rule, but lead to very different mental representations. Accordingly, they will be understood differently. This was a variant of the argument Phil would continue to make throughout his career.

Phil's early work brought him to the attention of George Miller who, in the early 1970s, was at the Institute for Advanced Study.

George brought Phil to the institute, where the two collaborated on a book, "Language and Perception" (1976). The book put forth the view that lexical meanings could fruitfully be treated as elements of procedures executed in the process of understanding discourse. It was a major theoretical and empirical contribution. In particular, by focusing on how psychological processes produce meaning, it ushered in the cognitive revolution that would transform experimental psychology over the next several decades. Moreover, Phil pursued tests of the theory through a combination of computer modeling and experimentation, an interdisciplinary approach that would become a hallmark of the new field of cognitive science.

By the early 1980s, Phil was expanding his analyses from psycholinguistics to the more general question of semantic reasoning. In this arena too, he argued that people reason systematically, albeit in ways that depart from formal rules of inference. Specifically, he envisioned a three-step process by which people solve logical problems: 1) they imagine a state of affairs — construct a mental model — in which the premises are true; 2) they formulate an informative conclusion true in the model; and 3) they search for an alternative model of the premises in which the putative conclusion is false. If there is no such model, then the conclusion is a valid inference from the premises. This mental-model theory of deductive inference soon grew into a more general theory of reasoning across a variety of domains. Phil published the theory in a book, "Mental Models" (1983).

Around this time, the psychology department began trying in earnest to recruit Phil to come to Princeton. George had returned to the department from the institute, and there was no one he was more eager to have on the faculty than Phil. It was a complicated recruitment: Although severe budget cuts at English universities had disenfranchised Phil, like so many others, he had recently moved to Cambridge University and was settling in happily. The process took six years, during which time Phil came to Princeton for a month or two at a time on three separate occasions. He finally accepted a full faculty position in October of 1989, and in 1994 became the Stuart Professor of Psychology.

During his tenure at Princeton, Phil continued to develop and expand his theory of mental models to account for propositional reasoning, modal reasoning and informal argumentation in everyday life. He also developed a theory of emotions and, drawing on his lifelong interest in music, experimented with creative musical algorithms that generate novel tonal chord sequences, bass lines and melodies. He pursued these lines of research in collaboration with graduate students, postdocs and faculty colleagues here at Princeton and throughout Europe. Indeed, he had so many collaborators in Italy that he learned Italian to the level of fluency just so that he could be more comfortable communicating with them.

Phil received many honors and awards for his work, including being named a fellow of the British Academy (1986), a fellow of the Royal Society of London (1991), a recipient of the Fyssen Foundation International Prize (2003) and a member of the National Academy of Sciences (2007). He also received honorary doctorates from universities in Sweden, Italy, Ireland, Spain, Belgium and England.

Here on campus, Phil established a reputation as a master teacher and a valuable mentor. His courses on cognitive science, cognitive psychology, rationality, the psychology of thinking, the psychology of music and creativity drew students from a wide range of disciplines and received consistently rave reviews. Students praised the clarity and wit of Phil's lectures and his ability to engage students in rigorous and intellectually productive seminar discussions. In addition, Phil had great success as a mentor, with success measured both by his students' accomplishments and by their experiences. Indeed, he was such a popular mentor that he received the Graduate Mentoring Award in 2004. Students cited his infectious passion for teaching and research, his honesty, sincerity and humility, and his competitiveness in their weekly badminton games as among the qualities that made him an excellent adviser and role model.