Theory and Applications of Categories, Vol. 6.

INTRODUCTION

This volume is dedicated to our friend, colleague, and teacher Joachim (Jim) Lambek.

On December 5, 1997, a small conference was held at McGill on the occasion of Jim Lambek's 75th birthday. Subsequently it was decided to publish two volumes of papers contributed in his honour to mark this occasion; this issue of *Theory and Applications of Categories* is one of the volumes, the other will appear in the journal *Mathematical Structures in Computer Science*. At the December 1997 conference, a brief biographical essay was presented by Michael Barr; that essay appears elsewhere in this volume, and serves as an extension of this introduction.

Jim Lambek has been a central figure in categorical proof theory from its beginning as an identifiable field of study. His 1958 paper on the syntactic calculus, while primarily dealing with an application to linguistics, laid out the essential basics for a categorical analysis of monoidal logics, such as linear logic. His 1966 text on rings and modules may be viewed as a study of the canonical example of a closed bicategory. His work on deductive systems, Cartesian closed categories and type theory was of course a main inspiration for most of the subsequent work on categorical proof theory done in the past three decades. More recently, his return to the study of bilinear logic (or noncommutative multiplicative linear logic) places his work in the center of ongoing research on applications of linear logic. Currently Jim has been studying higher-dimensional categorical models of bilinear logic, with particular applications to linguistics. The most striking feature of his work, at every point of his career from his thesis to his current research, has been the breadth of interests he has developed, with work of fundamental importance in so many subjects, from physics to philosophy, from logic to linguistics.

As friends, colleagues, and students of Jim's for many years, we are pleased to be able to present to him this collection of papers, whose span covers much (unfortunately not all) of the territory Jim's own work has influenced so profoundly. We join the authors of these papers in wishing him well, and hoping to derive further inspiration from his research for many years to come.

The Editors,
M. Barr, P.J. Scott, R.A.G. Seely

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