

Nothing even remotely similar to the negative laws of thermodynamics has been discovered which would forbid the existence of a large but simply describable mechanism, perhaps realizable within the means of present or future technology, which would be as intelligent as an animal or man.}

The book is very well written. Its clear compact and very engaging style and its large number of ideas and open problems make it perfect material for study in seminars, and it should have a strong influence on future writers in this subject. It is also the first purely mathematical monograph about certain aspects of learning and perception, and this subject may become the most important theory of 20th century mathematics.

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Methods of Hilbert Spaces, by Krzysztof Maurin. PWN-Polish Scientific Publishers, 1967. Vol. 45 in the series *Monografie Matematyczne of Polska Akademia Nauk*. 554 pp. and *General Eigenfunction Expansions and Unitary Representations of Topological Groups*, by Krzysztof Maurin. PWN-Polish Scientific Publishers, 1968. Vol. 48 in the series *Monografie Matematyczne of Polska Akademia Nauk*. 367 pp.

Each of these books has a strong allure for the modern analyst, for Maurin has assembled unique collections of interesting topics. *Methods of Hilbert spaces* (hereafter MHS) begins with nine chapters which provide an introduction to the abstract theory, including the basic definitions and geometry of Hilbert spaces and locally convex spaces, the spectral theory of selfadjoint, unitary and compact operators, and the general spectral theory of commutative C^* -algebras via the Gelfand theory for commutative Banach algebras. In the next fourteen chapters this general theory is applied to one parameter semigroups, elliptic partial differential equations, the orthogonal projection method, Bochner's theorem on the existence of