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Operator spaces as 'quantized' Banach spaces

Abstract: In the beginning it appeared that linear spaces of operators would have a theory much like that for Banach spaces. This misperception grew out of a series of remarkable discoveries, such as Arveson's version of the Hahn-Banach Theorem, Ruan's axiomatization of the operator spaces, and the theory of projective and injective tensor products. The problems of using Banach space theory as one's sole guide became apparent when one considered such classical notions as local reflexivity. Owing to the availability of modern operator algebra theory, researchers have made great strides in understanding the beautiful and unexpected nature of these spaces.