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A projection principle concerning biholomorphic automorphisms.

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The author is concerned with the problem of describing the group $\text{Aut}(M)$ of holomorphic automorphisms of complex Banach manifolds M . The projection principle, which is his main abstract result, provides a sufficient condition (in terms of the Carathéodory or of the Kobayashi metric) to reconstruct the group $\text{Aut}(M)$ from the groups $\text{Aut}(N)$ corresponding to certain submanifolds N of M . This principle is well suited for the above mentioned purpose when the manifold M is the open unit ball $B(E)$ of complex Banach spaces E that admit a sufficiently large family of contractive linear projections. By this method the author obtains the description of the group $\text{Aut } B(E)$ when E is the space $H_1 \otimes H_2 \otimes \cdots \otimes H_n$ of continuous n -linear functionals $f: H_1 \times H_2 \times \cdots \times H_n \rightarrow \mathbf{C}$ and the H_k are Hilbert spaces. In the same way he obtains the description of $\text{Aut } B(E)$ where E is any atomic Banach lattice. In these two cases the conclusions are hardly attainable with any other known method.

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