ALGEBRAS OF SYMMETRIC ANALYTIC FUNCTIONS (BIS).

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ABSTRACT. Let X be a complex Banach space with basis $\{e_n\}$ and open unit ball B. We also suppose that the basis is *symmetric,* that $\|\sum_n a_n e_n\| = \|\sum_n a_{\sigma n} e_n\|$ for every permutation σ on $\mathbb{N}$ and every $\sum_n a_{\sigma n} e_n \in X$. In a number of papers, we have-with colleagues-studied $\mathbb{C}-$valued holomorphic functions f on X that are symmetric; that is, $f(\sum_n a_n e_n) = f(\sum_n a_{\sigma n} e_n)$ for all convergent $\sum_n a_n e_n$ and all permutation σ.

In this talk, we will describe new, related work in two directions:
(i) Holomorphic functions $f : B \to B$ (or $f : X \to X$) having the property that for any element g in a group G of holomorphic mappings $B \to B$ (or $X \to X$), $f = f \circ g$;
(ii) Symmetric holomorphic functions on $\mathbb{D}^2$ or B_2 in $\mathbb{C}^2$. This second part can be regarded as a special case of (i), in which G is the two element group consisting of the identity and the map $(z_1, z_2) \rightsquigarrow (z_2, z_1)$. This part is also related to work of Agler and Young on the *symmetrized bidisc.*