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RELATIONS BETWEEN CERTAIN THEORIES IN
FUNCTIONAL ANALYSIS AND GENERAL TOPOLOGY

by

Zbigniew SEMADENI

This survey of canonical functors acting between certain categories includes :

- a) duality between compact Saks spaces and Banach spaces,
- b) duality between compact convex sets and spaces of continuous affine functions,
- c) duality between compact spaces and spaces of continuous functions,
- d) duality between compact spaces with base points and spaces of continuous functions vanishing at base points,
- e) Stone's duality between 0-dimensional compact spaces and Boolean algebras,
- f) duality between compact ordered monotonically normal spaces and Bonsall semialgebras of type 1 .

In each case, we have 2 categories and 2 contravariant functors adjoint on the right and on the left. Thus, the above duality theories yield 12 categories and 12 contravariant functors ; the purpose of the talk was to describe covariant functors acting between those categories, their left (right) adjoints, and their preservation properties. In this setting we get a better insight into the mutual relations between the theories involved here.

The talk is essentially covered by the papers listed below.

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