The Application of Acoustically Coupled Spaces in Concert Hall Design

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At mid twentieth century, a hall having a reverberation decay curve with a late arriving extended second slope was considered an acoustical failure. It was assumed that that the level of the extended reverberation in the hall would interfere with the ongoing running music of the ensemble and reduce orchestral clarity, definition and transparency. To my knowledge, only two practitioners pioneered the utilization of physical acoustic coupling in concert shell and concert hall design during those early years. One was Russell Johnson, when he was with Bolt Beranek and Newman and later with his own firm Artec. The other was me with both my firms Stagecraft Corporation and Jaffe Acoustics. This paper discusses how the need to improve the concert hall environment of American multi-use theatres led to the application of coupling techniques in these halls and how both Mr. Johnson and I later applied physical acoustic coupling in single room concert spaces.