P2P Peer 2 Peer

Shhh... Whats that Noise?

CONTROLLING SOUND THROUGH DESIGN

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Have you ever sat in that restaurant where the volume is ever increasing as the patrons all talk over each other? At the beginning of the evening that restaurant was a quiet place where one could hear the subtle music coming from the speakers, but as the room started to fill with people, the volume got louder and louder until it seemed like they had to yell to be heard. Why does this happen? The short answer, acoustics, and it can be accounted for in the design stage of any room, not just restaurants.

Sound is vibration. Some of that vibration is traveling through air and some of it is injected into the solid surfaces it can otherwise bounce from. When you hear muffled speech from someone in the room next to you, enough of the wall is vibrating to bring that sound across into your room. We have two methods and several tools at our disposal for the proper treatment of unwanted sound, isolation and absorption.

Isolation is the act of keeping outside sound from getting in and/ or inside sound from getting out. The best examples are the ability to keep road noise from getting into our homes with products like concrete walls, brick, and thick glass panes. These common materials used in construction today help combat the issues of unwanted noise in our homes and businesses because of their density. Products exist for the prevention of sound traveling from one room to another as well. Specific examples will include the use of double sheet rock, or even double sheet rock with a layer of isolation material in between. After all, sound is vibration, and if we can stop enough of the vibration from traveling, the sound will become imperceptible.

Let's first consider that restaurant I mentioned earlier. If the problem of consistently rising volume level is present, it is also very likely that there are a lot of hard surfaces in the room. Let's go back to that "sound is vibration" idea, and imagine a concrete floor, wooden table tops, and hard sheet rock walls and ceilings. As the number of patrons and voices increases; sound just continues to bounce off these hard surfaces. Only the friction provided by the air that the sound is traveling within keep it from reverberating forever. Another example of this is when you walk into a completely empty room and shout "ECHO!!!" Just to hear "Echo!!... Echo!... Echo..." We've all done it. It's fun., right? Well, we want all the hard surfaces for isolation, but now that we've kept the sound waves from leaving the room, how do we get them quiet?

Absorption gets a little trickier. We combat the echo by softening the room. Soft surfaces like fabric, carpeting, foams, and acoustical absorptive materials are our arsenal of tools to get around the issues. One might consider tapestry art work, draperies, rugs, table cloths or acoustical ceiling tiles. There is also an entire industry behind manufacturing acoustical absorptive materials that can be pleasant to look at and match almost any style.

In short, acoustics of a room are an important part of the design process. In our search for comfort for our clients within our design we should always think of the unpleasant experience of a room that is too loud or ringing with echo. A proactive design approach is always the key to a beautifully designed space, both in aesthetics and acoustics.

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