

Repointing Mortar

by William Crosby

Consider the preservation axiom: the less changed, the better. Ironically, with the best intentions, we often spend far more than is necessary to solve a problem. With preservation treatments, the least expensive and best solution is almost always the one that respects the character of the building; it is the one that requires the least change.

Perhaps the main reason for inappropriate treatment of masonry is the aggressive marketing of treatments and products that promise the quick fix. For example, mortar deterioration is a common masonry problem that is often misunderstood. Truth to tell, weathering of mortar joints is just the way things ought to be. Mortar joints are not intended to be a permanent part of a masonry wall, but rather, an expendable component that does have to be replaced at intervals. Repointing is the process of removing deteriorated mortar from the joints of a masonry wall and replacing it with new mortar. Properly done, repointing (incorrectly called tuck-pointing) restores the visual and physical integrity of the masonry. Improperly done, repointing detracts from the visual appearance of the building and might even cause future physical damage. Generally speaking, masonry work is not something the inexperienced homeowner should take on. Still, he or she should be informed.



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It is unlikely that all the joints of a building will need repointing. As a general rule, if the pointing is firm, intact, and not eroded more than one-third inch, leave it alone. Only repoint those joints that are open or deeply eroded, cracked, or separated—the mortar and masonry do not adhere and there are gaps. Be aware that just because a mortar joint is soft does not mean it should be replaced; original lime mortars found in most old buildings should not be hard. Remember: smart practice calls for repointing only the part of a wall that needs it, not the entire wall.

Equally important is mortar composition, which can vary greatly. The three major components are cement, lime, and sand. With different proportions these components produce mortars of strikingly different qualities. Variations in the sand and in coloration of the sand and cement dramatically affect the appearance and the hardness. If possible, allow an architectural conservator to analyze the original mortar. If this is not possible, the mason should prepare several mortar samples, varying the color, cement, sand, and lime. Premixed bagged mortars should NOT be used. They are almost always too hard for historic masonry walls.

Again, most of us do not consider repointing a do-it-yourself job, but it is crucial to know a good deal about the subject when having it done by a masonry contractor. There is an excellent eight-page booklet on this subject that discusses identifying the problem, various joint types and bondings, materials, and a bibliography for additional reading. Ask for "Preservation Brief No. 2 – Repointing Mortar Joints in Historic Brick Buildings" available here at the department or by clicking [here](#).