

for the reason that their use has been of insufficient duration to create universal confidence. The reinforced concrete viaduct shown in Fig. 13, a structure recently built at Port Arthur, Ont., illustrates a too rapid adoption of unfamiliar construction, for to most people the viaduct posts will appear too slender and spindling in the light of past experience. There is no reason why this should always be the case, however, for if a material performs perfectly the service required of it, and is employed in a structure of scientifically correct lines and proportions, it undoubtedly satisfies one of the first and most important principles of artistic construction. The idea that structures of steel and reinforced concrete must forever be debarred from the realm of the aesthetically meritorious is fortunately being foregone very largely as the use of these materials becomes more general. As we become accustomed to a material, and come to realize its strength, safety, and permanence, we develop a liking for it, and according as certain constructional forms have exhibited its greatest possibilities and its more efficient employment, we formulate canons governing its artistic use. Already there is a concrete architecture growing up in which the suggestion of a poured material is conveyed by long curves and absence of joints, and the time does not appear far distant when a construction as artistic as that of stone may be secured by the use of materials quite different from it. Steel being more remote aesthetically from stone than concrete, is likely to be much slower than concrete in being recognized as possessing aesthetic value in construction. The establishment of standards depends to such a large extent upon environment and training that we cannot say how much of our disapproval of new materials such as steel, and to some extent concrete also, is due to the age-long association with stone as our chief material of construction in permanent works.

It might be urged that, in order to secure a structure which would be most generally approved by the people, new materials should not be employed. The mind regards as aesthetically defective any new departure or any new feature which does not correspond to accepted and time-honoured usage. New things are seldom regarded as beautiful, and, therefore, in order to build artistic bridges, dare we break away from past standards? The answer to this is that all progress would be arrested if no new materials and the peculiar features of construction attending their employment might be introduced. The period of disapproval is, however, fortunately limited. As soon as the people become accustomed to the new material and form of construction, and are satisfied that it possesses ample strength and fitness to discharge the duties required of it, it no longer appears ugly, but beautiful.