"Tell me not in mournful numbers, Houses are not what they seem, For the walls that look so solid, Once were poured from cans like cream."

The conservative instinct in some of us tends to strengthen our prejudices. And a fondness for hand work and the qualities of familiar building materials make one shy of the mystical concoctions that are more or less mingled with brains. Concrete seems one such that depends on conscience. The man that mixes the material must exercise his conscience, and who can measure the amount or tell its value? A brick seems more frankly to proclaim its qualities, and as with stone and timber, we know from past experience all that it can do for us. But concrete is an unknown quantity to many of us, except perhaps when used in its simplest form, as for foundations. Another element of my prejudice is due to the recollection that greed is gratified by the use of concrete construction. That is to say, the shopkeeper who is out to make money wants to seize every inch of space. He thinks the display of his wares is better for him the more vast it is. Beauty has no charm for him and quantity is of more value than quality. The shopkeeper little realizes how the mind and memory are debauched by vast crowds of articles jostling each other for attention. When a myriad of objects all shout at once, "Look at me!" we can carry away no lasting memory of anything but chaos. Concrete construction has helped in this direction. Meanness and greed I say are its parents. What can be expected from such an ancestry?

Besides the great difficulty experienced in making alterations to buildings so constructed, we find the greatly enhanced soundconducting quality often very troublesome. And lastly, the imitative instinct in man has found abundant scope for its expression when making use of this form of construction. Buildings are made to look like stone or brick, and even at times like half-timber work. Deception gains eloquent expression in this material.

We usually find, when any new inventions first appear (like the railway train or the motor), they are made in the form of that

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which they are destined to replace. The evolution of things is quite evident to us all, so we may look forward with confidence to the time when concrete construction will have a character of its own and will cease to be made to look like anything that it is not.

We shall all agree, that the finest examples of building throughout the wide world have been the result of the consideration and understanding of the requirements and conditions obtaining at the time of their creation, and of the moral, intellectual and spiritual character of the people of their time and place. When these considerations have been neglected, and partial knowledge of foreign examples has fascinated us, then our architecture has become corrupted and exotic.

Therefore it follows, as the best work grows out of requirements and conditions that the character of concrete construction

must be evolved.

As the conditions for concrete are quite different from those for stone, brick or timber, the mode of its expression must be different. Doors and windows are requirements, but the form they take must depend on conditions. Those conditions are chemical, substantial and functional. The ingredients of which concrete is made have their distinctive qualities, and any scientist could write a book full of facts concerning these things.

But beyond all this knowledge of conditions we have requirements equally innumerable and various. What do you want to build, is no more important a question than why do you want to build? After all the knowledge of material requirements and conditions has been gathered together and classified we shall find all this knowledge worse than useless, until we bring to bear upon it the moral, intellectual and spiritual sides of our nature.

Concrete, like our coat, may cover many useful appliances, but is useless without the soul within it. Someone said, "What is Mind-no matter; what is Matter-never mind." And yet I venture to say that there is mind of the utmost importance behind all matter, whether it be concrete or not. We cannot help conveying a spiritual something to everything we create.

The unseen is the glory of the seen. The cathedral speaks to us, and the heavens declare the glory of God. Man is born to be a creator; and as Nature is bursting with songs of praise, audible to all who will listen, so man must make his works shout with joy, and stimulate our higher nature through ministering to the spirit.

It is no use to tell me engineering is not an art. For I tell you

Art is only the manifestation of thought and feeling, and it is not only possible but essential to us all. We cannot live a day without it, though many know it not. There is in everything a spiritual something, that appeals to every human heart that will listen and look. So with your concrete or your marble, the heart of man may be made to rejoice.

Bad workmen find fault with their tools, and as concrete is in a sense one of our tools, we must not quarrel with it; though doubtless some will quarrel with my simile and say a tool is the instrument by which something is created, whereas concrete is the creation itself. Now this is a great fallacy. Concrete in itself is an ugly thing. But concrete construction considered as a servant and as means to an end can be made a ministering angel. It is a good servant, but a bad master. A good servant, only so long as it is kept in its place. There are many kinds of buildings which, it could be argued, would be made suitably constructed in concrete than in any other material. But there are other kinds for which concrete would be most unsuited. It is therefore necessary to admit the unique character of concrete in order to use it fittingly and artistically.

The choice of our material, when designing a building, is like the choice of words and phrases when we are writing or speaking. It is never an affair of the pocket only. The £.s.d. argument must be permitted to spread its poisoned gases over all aesthetic considerations, that is, if the world is to be made better.

We shall surely all agree that proportion is of vital importance to the subject in hand. The sense of relation is only another aspect of the sense of proportion. It enters into all the affairs of life and into all our calculations of fitness. It is the manifestation of personal character.

It is my firm conviction that the beauty of concrete construction must mainly consist in right proportion. What are right proportions? Each must ask and answer for himself. I refuse to have any formula forced upon me, either Greek, Roman or Gothic. It is a matter of feeling and is capable of refinement, for ever evolving and developing as we advance in spiritual, moral and intellectual culture. We want no dogmatic statements of what is in good proportion any more than we need a definition of truth and beauty. All are growths, for ever being purified and lifted higher.

It is quite true that the Greeks arrived at what we regard as perfect proportion, but it was perfection as applied to given objects. Definite groups of requirements and conditions were beautifully proportioned, but to copy these proportions in designing the portico of a public-house is like grasping at the shadow and forgetting the substance. It is like using Latin quotations to an audience of peasants; it serves well to glorify the speaker and suggest his superiority. But oh! what a contemptible vanity it is!

There is one thing for which we must be thankful to concrete construction, namely, that it has forced upon us the necessity for a revision of the building by-laws. These foolish and mischievous irritations must be revised, if not repealed altogether, for the stupidity of veneering concrete construction so as to give it the appearance of stone is fraudulent as well as foolish. Veneer, when frankly applied, is legitimate enough, but it is open to question as to whether a concrete building cannot be made beautiful and satisfying without veneering it all over. The texture of concrete might be made as pleasant as stucco. It is quite doubtful whether we should allow the expenditure on veneer, the purpose of which is purely and only to enhance appearances. True architectural beauty, to my mind, must be wedded to structural function. Therefore the form of your concrete and mode of its use must embody elements of beauty, and not depend for its charm entirely on superimposed material of quite another nature. This suggestion can only be applied in certain cases, and is not a principle of general application. It should not be used as an argument against mural painting or mosaic. It would surely be quite possible to put up a concrete building in good proportions with the concrete walls exposed to view in naked frankness and wedded to certain features of stone or native marble. The main entrance of such a building, having an heraldically carved surface above, richly colored and gilded, would surely be a quite legitimate treatment.

The most difficult branch of this subject would seem to be suggested by the question, How far may we, for the sake of calling

up association of ideas, use the arch form?

We cannot deny that the Gothic arch has a profound effect on our minds and hearts, and is structurally the practical outcome of small stones and bricks. The lintel would seem, structurally speaking, the most suitable form for concrete construction. The fourcentered arch of Tudor times can be easily made in concrete, but it is surely much more complex than the lintel. The slightly-pointed arch is so dear to me that I want to modify and limit all my principles to admit it. Like all weaklings, I wish to be sound and logical, but pure feeling, which enemies sneer at and call sentiment, gets possession of me and carries me off into the clouds. We love to appear intellectually great and scientifically sound, but not at the expense of all human emotion. This little touch of inconsistency, this human frailty that abandons itself to pure emotion, is one of the most human of all human charms, and thus it comes about that it is the unseen that is the glory of the seen. The emotion is buried beneath matter, not to rot, but to regenerate.

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