

HOUSING IN RELATION TO HEALTH

MARION TALBOT

There is much confusion in the use of the term "housing." It is often taken to mean, not merely the structure of the house itself, but its equipment, plumbing, furnishing and the like, and its immediate surroundings, such as streets and alleys. It may also include the way in which the house is used or maintained on its physical side, which is more properly housekeeping, or even the way in which the lives of those who occupy the house are ordered, such as overcrowding, which is more properly homemaking. Moreover, much of what is said and written in regard to unhealthful housing is concerned more with the aesthetic standards of decency and order than with health. A scrutiny of many of the pictures which are supposed to represent bad housing shows that these distinctions are frequently not closely drawn. For example, a room may be light, large, well ventilated and yet be a menace to health, because of the unduly large number of people who occupy it or their uncleanly habits. On the contrary, it is possible for a small room with a meagre supply of light and air to be kept so neat and clean as to be quite fit for habitation. Again, many kinds of construction, like back stairways or broken fences, may be ugly but not unhealthful. Higher standards of order or of beauty should be developed to meet this difficulty. A street or alley may be unpaved or even disfigured with rubbish. The aid of the street department, not of the board of health, is needed here. A room may show a disordered bed, a cluttered table, or clothes hanging on a line. Better instruction in homes and schools as to what is good housekeeping should be the remedy sought.

So it is impossible to discuss or criticize housing without a clear understanding of the many problems involved. Many well intentioned efforts to secure proper conditions for living fail because of this confusion in terms.

Taking now the more limited view of housing, i. e., the house and its mechanical equipment, we find that there is much difference of opinion as to the steps to be taken to secure healthful housing. The reason is that sanitary science is undergoing radical and most interesting changes, owing to the development of the sciences on which it largely depends, viz., bacteriology and physiology. Many opinions and practices based on outgrown theories are still deeply rooted and find expression in views concerning housing.

In the interest of efficiency and progress, it behooves those who work for the well-being of social groups to take measures to correct popular misapprehensions and urge the development of engineering and building methods which shall conform to our new knowledge. We need, moreover, not to cumber further our statutes and ordinances with measures which are not only incapable of enforcement but futile and costly if put in practice. In illustration, some of these new views may be enumerated and some conclusions drawn from them, although within the limits of this paper hardly more than a sketch is possible.

In the first place

(a) The quantity of carbon dioxide is not a measure of unhealthfulness of air.

(b) Ordinary variations in the normal gaseous constituents of air produce no apparent ill effects on people.

(c) The discomfort ordinarily attributed to so-called "bad-air" is due to high humidity combined with high temperature and these conditions derange the health.

Long after the toxicity of carbon dioxide had been disproved, its presence in air was taken as a measure of the defilement of air in other ways, but it is manifestly absurd to assume any constant relation between carbon dioxide and carbon monoxide, which is the only really harmful gas which is likely to be found in houses, or between carbon dioxide and pathogenic organisms, which may be in the air of houses occupied by diseased persons. It is clear, therefore, that any attempt to keep the carbon dioxide down to a fixed limit by renewal of the air supply or in any other way may be ineffective in securing healthful conditions. Consequently, laws requiring the supply of a given amount of air per person or a given cubic space per person fall wide of the mark. The real aim should be toward securing movement of air, since thereby the warm moist blanket of air which gradually accumulates about the bodies of people in inhabited rooms may be removed. In other words, it has been adequately proved that people do not need a large supply of air providing what they have is kept

in a state of motion. This fact probably explains the value of living and sleeping out of doors. Moving air, not stagnant air, is what we need. An increased amount of oxygen does not in itself bring relief. The ill effects of over-heated air of low humidity may be noted in passing, although they present a different problem.

It has recently been suggested that the high rate of mortality among infants in city slums is not chiefly due to the poor quality of their food, but may be in part explained by the fact that they are often so housed that there is no relief from the effects of combined high temperature and moisture. A German scientist points out (Gemund, *Wohnungshygiene und Hochsommerklima*, *Zeitschrift für Socialwissenschaft*, Vol. III, Nos. 7, 8 and 9,) that in small cottage houses on paved, treeless streets there is often no escape from excessive heat. If the people remain indoors seeking shelter, the increased humidity due to evaporation from their bodies adds to the difficulty. Large buildings, planned so that there may be movement of air within and with shaded porches and yards or small parks near by in which there are trees and grass, is a method of caring for as many people in a given area as by the cottage plan, so highly praised from the point of view of so-called ventilation. It is impossible at this time to elaborate this point. I can merely suggest that the findings of the sanitarian should be taken by the architect, engineer, and social student and an effort made to work out methods by which an automatic movement of air may be secured in dwellings without sacrificing other important interests.

In the second place, we know that

(a) Air from properly constructed sewers is not harmful.

(b) Simple plumbing fixtures are an aid rather than a menace to health.

These facts mean that we should greatly simplify our plumbing laws and do everything possible to have plumbing fixtures installed at so little cost that they will be within the reach of everybody. They should be as essential a part of every house as its walls and doors.

Modern sanitation is placing more and more emphasis on personal cleanliness. When those who are used to an ample supply of water, both hot and cold, realize the difficulty of maintaining high standards of cleanliness, it is not hard to understand what results when three or four families and their lodgers have to share one fixture. We often hear that poor people will not use plumbing fixtures, if they have them. The popular illustration is the bath tub in the model tenement

which is used as a coal bin. Few of us would indulge in much bathing, if the bath meant starting a fire and going through the tedious and costly operation of heating a water supply. Better and cheaper methods of distributing both hot and cold water are a genuine necessity in healthful housing.

In the third place, sunlight cannot be depended on for disinfection or as a substitute for cleanliness. Much emphasis has been placed on the importance of securing sunlight in rooms and it has been vigorously urged by those who are combatting tuberculosis. There is danger of placing false reliance upon it. The true value of an abundant supply of light is that it is an aid in revealing uncleanly conditions and serves moral and physical rather than bactericidal ends. Many cities in their ordinances take the position that, if the window space stands in a sufficiently high relation to the floor area, all will be well. This does not necessarily follow, as the window may be so curtained within or so obstructed by nearby walls without as to fail to furnish needed illumination. The natural lighting of every room should be determined by other tests than size of window, such as ability to read ordinary type at a given distance from the window during certain hours of the day. It is of interest as bearing on the construction of houses from the aspect of lighting to note that a recent investigation made in Philadelphia (F. A. Craig, Deaths from Tuberculosis, American Journal of Public Health, Vol. III, No. 1) indicates that there is no relation between the width of the street and the number of deaths from tuberculosis.

In expressing my appreciation of the honor of addressing the members of the Academy, I beg the privilege of asking them to remember that, in so brief a treatment of so large a topic as was assigned to me, it is difficult to keep a due sense of proportion and to present views in such a way that they will escape misconstruction. I trust, however, that I have made perfectly clear my main thesis, which is that, if housing is to bear the relation it should to the maintenance of a high degree of health, it would be well to do away with some of the extravagant and sentimental views which obstruct the way and to develop the effective use of our present knowledge and resources through more active cooperation between sanitarians, architects, engineers, social workers, law makers, house keepers and even owners than now exists.