

Architecture: the Modern Movement as time bomb

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THE twentieth century has seen several prolonged crises that impose heavy human and financial costs: (a) problem housing; (b) educational decline; (c) rising crime; (d) increased calls upon social services; and (e) overloaded health services. Some or all of these occur together in many countries. If we could understand how they are linked and trace them back to a common cause, we could tackle that cause directly and reverse the trends more efficiently and economically than our present piecemeal policies are able to do.

The necessary research has been done, the desired insight has been won, and the recommendations successfully tested. There is hope on the horizon, provided that we can overcome a certain reactionary resistance. As will be shown this is not just a British solution but one capable of application worldwide.

IT IS WELL established that a child's nature is largely moulded during the first five to seven years of life. British teachers report that some five-year-old school starters are already violent enough to attack them with scissors and chairs. In China, where all children begin nursery school at three years of age, teachers can even then distinguish those from houses and those from flats; the latter need extra training to offset their deficiencies. Yet in Britain our present "criminal prevention" policy identifies children at risk when they are seven years old. This is too late. It has already allowed their criminal tendencies to develop and costs money that would not be needed if we started earlier and prevented such tendencies.

This directs attention to the home, where we seem confronted by vast numbers of problem parents rearing problem children. A large army of social workers employed to help them has not prevented the situation from worsening, with escalating demands upon the welfare system. It has not always been like this and we have to ask what new and widespread conditions have had such a mass demoralising effect upon family life. If those can be changed, then there could be a mass reversal of the demoralisation without the effort and expense of dealing with each family separately. This has proved to be the case.

As a geographer, I explored where the problems occurred and which areas were problem free. Oscar Newman, working in New York, had already shown that eight different design features of apartment buildings attracted criminals more than alternative designs. I followed this idea up in London and Oxford. Modern estates, despite being designed with Utopian aspirations, proved to be vastly inferior to unplanned older areas, as they made community formation very difficult. They not only attracted existing criminals but also bred new ones, as there was no local community to help socialise the children and parents had a much more difficult task raising their families.

Mapping the designs of over 4,000 blocks of flats and 4,000 single-family houses revealed 38 design variables that could make child-rearing difficult. These included 16 in blocks of flats, 12 in houses and a further 10 general features such as parking locations and refuse

collection arrangements. Each design variable included a range of different types, or values, of features.

Test measures were applied to establish which values (if any) were harmless and which were harmful. The criteria consisted of certain aspects of environmental degradation (litter, graffiti, vandalism and excrement), nine types of crime, and family breakdown sufficient to cause children to be put into care. All these diverse forms of evidence pointed to similar threshold levels separating harmless and harmful values of each design.

For example, it proved fairly harmless if each entrance led to no more than six flats but harmful if there were seven or more. More than three storeys was harmful; so was even a single overhead walkway from one block into the next. Unsupervised play areas caused acute problems for nearby blocks. Surprisingly, the most powerful attractant of a high volume of crime was open green space shared by all, while the most potent antidote was an individual enclosed front and back garden for each ground-floor flat. Their fences prevented children from crossing common greens right up to the dwelling windows, to peer in, or perhaps break in.

THESE findings made it possible to measure just how bad any block or house was, by means of a disadvantage score. This was a simple count of the number of design variables that breached their safe thresholds, and could therefore range from 0 to 16 for flats and from

0 to 12 for houses. The higher the disadvantage score the higher the cost of managing the estates, and the differential could be enormous. For example, one modern Westminster estate with an average disadvantage score of 12.6 cost thirteen times as much per dwelling as the century-old cottages just across the road with a score of zero.

A few smaller studies showed that physical and mental health could also be adversely affected

by poor design, while the lack of a community spirit prevented self-help and neighbour help and promoted a dependency culture. These conditions created further costs, and schools nearby also found teaching more difficult. In a study of 789 schools in the county of Kent, A. E. Smith found that the proximity of a badly designed modern estate was a strong factor in the incidence and cost of burglary, theft, criminal damage and fire, while even stronger influences were 17 harmful school design variables, most of which paralleled the defective features of housing.

In *Utopia on Trial* I reasoned that if the deleterious housing features could be redesigned to convert them to harmless counterparts, the various associated social problems might also be easier to remedy. In fact, where one or two such changes had been made, perhaps incidentally, they had been followed by rapid spontaneous improvements, and about 30 architects, housing officers, etc., wrote to give information about such cases. This stimulated the concept of changing as many harmful designs as possible, i.e. reducing the disadvantage score to as close to zero as possible.

When the then Prime Minister, Margaret Thatcher, read *Utopia on*

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'In China, where all children begin nursery school at three years of age, teachers can even then distinguish those from houses and those from flats.'

Trial, she set up the DICE Project, which I was appointed to head at King's College, London. DICE is the acronym for Design Improvement Controlled Experiment, and £50m of Department of Environment (DoE) funding was made available to local authorities who would redesign problem estates. The DICE team surveyed the estates to identify each building's disadvantage score, prepared an improvement plan which would reduce the score to a minimum and supervised the architects and builders responsible for carrying out the work.

To quote just one example: the Bennett Street Estate in Manchester was so bad that the tenants were about to march on the city hall to demand to be evacuated *en masse* out of such an appalling area. Its blocks had an average score of 13.8 but after the DICE scheme was completed the average was only 1.4. The changes included creating individual gardens for the ground floor flats and dividing the upper floors into smaller sub-blocks with no more than six dwellings each.

On each DICE estate the tenants were delighted with the results and frequently commented that the new design and layout had converted the area into a community. The housing authorities were delighted because their black spots were transformed into areas of contentment rather than complaint. The police were delighted by the massive decline in crime which affected not only the estates themselves but also the surrounding areas (thus proving that relevant design changes do not merely displace crime but actually change basic attitudes). One headmistress wrote to say that her children became much calmer and easier to teach. One set of tenants said they had thrown their sleeping tablets away and did not need to go to the psychiatrist any more.

AS WE anticipated, the housing improvement had beneficial repercussions upon other types of late 20th century problem: education, crime, health, and welfare. The thesis that Modern Movement housing design is the common cause and can be made to create a common cure seems borne out by the facts.

All the ongoing crises seemed to be linked to this well-meaning but completely untested type of housing design. Of course, there are other factors at work but they seem to be just multiplier effects of this basic cause.

Modern Movement architecture spread to so many countries throughout the world that it also came to be known as the International Movement. But wherever it occurs, it seems to react on human nature in the same way. DICE has studied housing in several Commonwealth countries. Although there are differences, these are quite minor as compared with the basic variables and their universally deleterious effect.

At the two extremes are Britain where comprehensive planning has maximised the spread of Modernism, and the Falkland Islands where an absence of flats is accompanied by a virtual absence of crime.

Tours of problem housing in four Australian states revealed close parallels with the UK. Brisbane has only a few relatively small public estates and their problems, though real, are much less serious than in the more numerous and massive developments in Sydney. Similarly in South Africa, the crime rate has risen much more in cities such as Pretoria, Johannesburg and Durban, where there are numerous blocks of flats with disadvantage scores of about 9, than in Capetown where there are fewer and less defective apartment buildings.

In Canada, where five estates were surveyed, sub-zero winter temperatures had one good effect: all the blocks had doors instead of the open apertures that have proved harmful in Britain. But heat conservation also led to a preference for the more harmful internal corridor with dwellings on both sides in place of the less harmful external corridor with dwellings on one side only. The Metro-Toronto housing authority and Cityhome Housing Association both said that the DICE recommendations for their estates seemed to be of practical help.

The Indian situation was most interesting, as squatters' settlements with their individual huts had an ethos of self-help, community spirit and safety, whereas local comments on large blocks of flats showed that they were having the same adverse effect upon children there as they do elsewhere. It would be a large financial economy as well as preventing multiple problems, to give a little help (e.g. clean water) to squatters trying to upgrade their environment, instead of

investing large sums in big blocks that experience elsewhere predicts will become housing time-bombs.

Hong Kong was interesting because concentration on apartment blocks had produced much less housing crime than elsewhere. One reason seemed to be that the buildings were part of the street frontage without the shared green space that exacerbates crime elsewhere. However, a visit to some new estates 10 years ago revealed that a change in policy to create more complex landscaping was already sparking off graffiti and complaints about burglaries.

The detrimental effect of Modernist housing design is well proven as also is the beneficial effect of design improvement directed to reducing disadvantage scores. All five of the major ongoing problems are quickly and spontaneously alleviated.

However, a warning must be issued. Civil servants and others have invested so much of their prestige in the design guides that created the problems that they seem prepared to go to great self-protective lengths to cast unjustified doubts on the value of DICE design improvement and to advocate different kinds of action instead.

Seoul □ Land Economics

Search for source of Asia's crisis

KOREAN academics are studying land economics in the quest for a solution to the country's crisis.

In Taigu, South Korea's third largest city with a population of about 3m, professors from five universities meet regularly to discuss the reform policies proposed by Henry George, the American author of *Progress & Poverty* (1879). Two of them, Gang-Soo Jun and Dong-Geun Han, are writing a paper about the influence of land speculation on Korea's current economic problems.

A US professor, Dr Nicolaus Tideman, travelled to Korea in August to run seminars and lectures at Yeungnam University, Kyungpook National University and Seoul National University.

CORRECTION

In the report from Stuttgart (L&L, Spring '98, p.6), Dr Mason Gaffney was incorrectly identified as the speaker at a Liberal Club meeting in Zurich. The speaker was Dr. R.V. Andelson, Professor of Philosophy at Auburn University, Alabama.

Henry George Foundation of GB moves on

October '98 will mark the opening of a new chapter in the British Georgist movement. Redevelopment in London's Vauxhall Bridge Road means the demolition of 177 Vauxhall Bridge Road. The Henry George Foundation will re-open in new premises in October in the heart of the City:

Henry George Foundation
Suite 427
London Fruit and Wool Exchange
Brushfield Street
London E1 6EX

New telephone numbers have not yet been assigned.
The e-mail address remains: HGF_IGU@compuserve.com
The nearby Liverpool Street Underground Station is on the Circle, Metropolitan and Hammersmith & City lines.