living'. For her a city can never be the total work of art, nor can there ever be the statistically organised city. Indeed, to Mrs Jacobs, the planning of any kind of order seems to be inconsistent with the organic development of cities which she sees as a direct outcome of the activities of living. Planning is a restrictive imposition: the areas of cities 'in which people have lived are a natural growth … as natural as the beds of oysters'. Planning, she says, is essentially artificial.

It is of course just this opposition between 'organic' growth and the artificial nature of plans, between living and the preconceived system within which it might operate, that has been stressed so much in recent criticism. Christopher Alexander in a distinguished essay 'A city is not a tree' puts the point directly when he says:

> I want to call those cities that have arisen spontaneously over many many years 'natural cities'. And I shall call those cities or parts of cities that have been deliberately created by planners 'artificial cities'. Siena, Liverpool, Kyoto, Manhattan, are examples of natural cities. Levittown, Chandigarh and the British New Towns are examples of artificial cities. It is more and more widely recognised today that there is some essential ingredient missing in the artificial cities (Alexander 1966).

Let us consider this. First of all would it be true to say that all old towns are a kind of spontaneous growth and that there have never been 'artificial' or consciously planned towns in history? Leaving on one side ancient history, what about the four hundred extremely well documented cases of new towns (deliberately planted towns) that Professor Beresford has collected for the Middle Ages in England, Wales and Gascony alone (Beresford 1967)? What about the mediaeval towns such as those built in Gascony between 1250 and 1318 on a systematic gridiron plan? All these towns were highly artificial in Alexander's sense. The planted town, as Professor Beresford observes, 'is not a prisoner of an architectural past: it has no past'. In it the best use of land meant an orderly use, hence the grid plan. In siting it and building it estimates had to be made about its future, about its trade, its population, and the size and number of its building plots. This contributes a highly artificial procedure.

But it is of course by no means uncommon. Indeed it is the method by which towns have been created in any rapidly developing or colonial situation. A recent book by John Reps, *The Making of Urban America* (1965) is a massive compendium of the planting of new towns throughout America, practically all of them based on highly artificial gridiron plans. He points out that there is a sense in which not merely cities but the whole of Western America is developed within an artificial frame: 'the giant gridiron imposed upon the natural landscape by … the land ordinance of 1785'.

The coloniser knows that the natural wilderness has to be transformed: areas must be reserved for agriculture as well as plots for building. The man-made landscape is a single entity: cities and their dependant agricultural areas are not separate elements. All these things are matters of measure and quantity. They are interrelated between themselves and numbers of people. The process demands a quality of abstract thought: a geometry and a relationship of numbers worked out in advance and irrespective of site. The 20-mile square plan for the proposed colony of Azilia, the plans of Savannah and Georgetown, are typical examples of this kind of thought. William Penn's plan for Philadelphia, the plans of such towns as Louisville, Cincinnati, Cleveland, New York City itself, Chicago and San Francisco, are all built on the basis of a preconceived frame.

In the case of the mediaeval towns described by Beresford, whilst some failed, a high proportion succeeded in their time. In a large number of American cities, the artificial grid originally laid down remains the working frame within which vigorous modern cities have developed. It is quite clear then that an artificial frame of some kind does not exclude the possibility of an organic development. The artificial grid of streets that was laid down throughout Manhattan in 1811 has not prevented the growth of those overlapping patterns of human activity which caused Alexander to describe New York as an organic city. Life and living have filled it out but the grid is there.

And this brings us closer to the centre of Alexander's main argument What he is criticising in the extended content of his essay, is the notion that the activities of living can be parcelled out into separate entities and can be fixed for ever by a plan. The assumption is common in much post-war planning. Consider an example. Housing is thought of in terms of density: 75, 100, 150 people per acre. That will occupy an area of land. Housing requires schools and they need open space: that will occupy another specific area. These areas in turn may be thought to justify another need: an area for recreation. That is one kind of thought about planning. But alternatively an effort may be made to see the needs of a community as a whole. It may be discovered