As shape has to do with the meaning of individual things, scale has to do with their physical size, and therefore their importance and their meaning in relation to something else. No matter how unimportant or plain it may be, every part of every building has a size. And so scale, which involves arranging various sizes in some order, and choosing particular sizes when the option is available, is of great interest to all architects, and it is very much talked about.

But often it is nevertheless not entirely clear just what scale really is. We talk, for instance, of a large-scale housing development, and we usually mean just that it is big. In a different context, we say that an architectural drawing has a scale, meaning that so many units of measure on the drawing represent so many units of measure in the actual building. Then there are super scale, miniature scale, monumental scale, and—perhaps the most talked about of all—human scale.

People use all these terms presumably because they mean something. So the problem in talking about scale is not to exclude any of these possible meaning, but instead to find some common intent in them all. One common intent is this: whenever the word scale is used, something is being compared with something else. The large-scale housing development is large in comparison to an average housing development. The scale of the architectural drawing notes the size of the rendered building in comparison to the real thing. Super scale usually means something is much bigger than we might have expected, miniature scale that it is much smaller. Monumental scale presumably means that something is the size of a monument (whatever that may be), and human scale must mean something is the size of a person (whatever that may be).

The objects singled out for comparison are all different—a drawing, a building complex, a single building, or just a part. Different also are the things the objects are being compared to—another building complex, a single building, our expectations, the presumed size of a monument, and our own presumed size. What is consistent is that the size of something is always being compared to the size of something else, and a conclusion drawn from that. Thus scale is not the same thing as size; scale is relative size, the size of something relative to something else.

Relative to what else? There are many possibilities, which is precisely why the manipulation of scale is so useful a tool in architecture. Among the alternatives are these:

Relative to the Whole. Since buildings are made up of parts, the size of the parts relative to the whole can constitute a scale. The façade of a typical Georgian house, for instance, will have windows in it. No matter how big the façade, or how big the windows; they will have a scale that results from the relationship of the one to the other.

Relative to other parts. If one window of the same façade is larger or smaller than the others, no matter what the actual size of either, another scale results, and often this can be a signal that something particularly important is going on behind the differently-sized window.

Relative to the usual size. Most kind of things have, within certain rough limits, a usual size. Double-hung windows do, and so, for instance, do fireplaces and bricks, and standard pieces of wood, and plaster moldings. If any of these are very much bigger or smaller than usual, they have bigger or smaller scale on the basis of that relationship alone. This is one of the reasons why supergraphics seemed interesting to many people in the 1960s, because they were much bigger than graphics usually were. It is also why they no longer seem very interesting very often; they are no longer very unusual.

Relative to human size. Certain things that people use directly have certain approximate sizes. For purposes of human use these sizes may be constrained by minimum and maximum limits, like doorknobs, or by only a minimum one, like a door. Doorknobs, doors—and with them seats, counters, beds, stairs, and all the rest—have necessarily a ‘human’ scale. Their sizes are related to the dimensions of the human body; otherwise people can’t use them. Curiously, though it only in relation to these kinds of things that the term ‘human scale’ seems to have
Scale (continued)

a precise meaning. The problems in a more general use of the term begin, of course, with the obvious fact that, since people vary in size, it would be hard to dimension all the parts of a building to the size of a human body precisely.

Second, it is quite hard for a person to perceive the size of something relative to his or her size unless that something is fairly close to that size. Thus it is easy; to tell that a six-foot ceiling is near to human size, whereas it is not so easy to recognize that an eleven-foot ceiling is about twice human size. What is likely to have more immediate impact is the recognition that such a ceiling is usual for certain kinds of rooms, and that recognition may provide either an ironic or expected enforcement to the sense one has of the particular room one is in. Similarly, if you walk through a thirty-foot door, you are much likely to remark that the door is than five times your height as you are to notice that it is very big for a door.

Finally, it is also quite hard for a person to perceive the size of something relative to his or her size unless that something is fairly nearby. Otherwise the idea of usual scale is, again, much more likely to come into play. The size of a building in the distance, for example, is understandable mainly in terms of how big that kind of building and it identifiable parts are likely to be – though even that, as we shall see, can be a source of surprise.

The term ‘human scale’ does, nevertheless, have a broader meaning, and we clearly intend something when we use it. It seems, ironically, that this meaning lies more in the realm of shape than of scale, and in particular that it lies in the realm of shapes that have human meaning. A window in a wall, no matter its size, can be most memorable for the implication that there may be someone behind it to look out. This is a function of shape, not scale. In general, the building which uses shapes that bear human meaning is more likely to feel human that the building that merely tries to replicate the proportions of the human body. The former is what we mean by ’human scale’.

It is interesting to note, too, that the other difficult term ‘monumental scale,’ also has its meaning more in the realm of shape than of scale. Monuments can, after all, be very tiny indeed, and what seems to signal ‘monument’ may be a stark and simple shape (like an obelisk) or one with an even more specific cultural connotation (like a Latin cross).

One of the powers of architectural scale is that it is not confined to one set of relationships. Scale is an elaborate and complex coding system whereby things, by their sizes, can at one fell swoop be related to some whole, to each other, to other things like them, and to people. The result of all these computations can be a calm and clear message in which an ordered hierarchy of things is revealed with no surprises on any count. The message can also contain some obvious distortions. Most interesting, perhaps, is when the message seems choreography of both, offering a clearly perceptible order on some terms, and set of surprises and ambiguities on some others.

Then scale works in the service of the inclusivist attitude which, rather than presenting the observer with answers (‘This is what it is’), includes the observer by urging him or her to ask a question, (‘What is this?’). Scale can then be a device which helps achieve a quality that all good buildings possess: being at once ‘like’ something (and having a general meaning) while also being special (and having a particular meaning).

St. Peter’s in Rome is almost always mentioned in discussions of scale, and it is usually called an example of a ‘trick’ of scale. In fact, the reason why the manipulation of scale at St. Peter’s is so memorable is precisely that in some respects there is no trick at all. The relationship of each of the parts (windows, doors, columns, and all the rest) to each other and to the whole seems altogether normal on the basis of our experiences of similar buildings. What is not normal, of course, is that the size of each of these things in relationship to their usual size – and, we discover when we get close, their relationship to us – is wildly large. Here two kinds of scale are colliding with two other kinds, and the effect depends on much of the normality of one pair as on the eccentricity of the other. The collision is made clear during the time it takes us to approach the building.

Multiple scales can also be revealed all at once. One of the obvious places this can happen is on the façade of the building where two sets of similar elements are rendered at different sizes, and therefore in different relationships to the whole. The question then arises as to what the dominant system is, and what indeed is the whole that is made up of apparently disparate parts. The ways in which different kinds of scale can be combined are legion. Again, these combinations can be bought by the architect for free, since every part of a building has to have a size, and that size will automatically have some relationship to the whole thing, to the other parts, to the usual size of that particular part, and to people. The question naturally arises as to which of these relationships are worth emphasis. The solution to the problem of how the relative size of things (their scale) is treated is, ‘What relationships do you care to call attention to?’