Introduction: A Second Paradigm

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For the architect or student who looks to research for a better understanding of buildings, nothing is more striking than that architectural research comes in two kinds: the kind concerned with *architectural form* and the kind concerned with *behaviour*. The former, born out of an alliance between architecture and mathematics, pursues the mathematical principles of building form at the expense of behavioural variables; the latter, born out of an alliance of architecture with social science, pursues an understanding of behaviour at the expense of architectural variables. Each tends to simplify the other in the pursuit of particular objectives.

Yet it seems clear that research can only be of real service to design if it pursues both objectives in parallel. It must investigate architectural variables in a way that reflects the precision with which these variables are handled in design; and it must investigate behavioural variables at the level at which they can be shown to be affected by design. This means that research must, almost before it can begin, solve two problems of description: how can buildings and urban areas be described with enough accuracy and consistency to "control" the architectural variables in research; and how can behaviour be described in order to be related to these descriptions.

It is because research has not, in general, tried to tackle these two problems together, that the designer turning to research for help, still tends to look in vain for the answers to his questions: what is the likely effect of different architectural decisions *on* behaviour, if any exist? And what ought to be the consequences for design imagination of an understanding *of* behaviour. These are the fundamental questions which justify architectural research, since, if there are no such effects, and no such consequences, then design decisions may be, from a social point of view, arbitrary.

The reason for the comparative neglect of these central questions is not, we believe, disciplinary or institutional, but *paradigmatic*. The dominant paradigm in architectural research has always set out from the assumption that the relation between architecture and behaviour had to be seen as a relation between *physical* architectural variables - building form, style or spatial organisation - and *non-physical* behavioural variables - response, meaning, experience, and so on. Like all paradigmatic statements, it appears at first sight to have all the empty force of a truism: self-evident, but otiose. It demands not disagreement, but elaboration.

But however obvious it might seem, the assumption leads straight to a paradox. It leads us to expect that buildings are *merely* physical objects, until they impinge upon experiencing subjects. This cannot be so, since it is clear that buildings are already - especially in a historically accumulative sense - the *products* of human behaviour. The existence of architecture as a social phenomenon in a society implies that architecture already bears the imprint of that society. We cannot hope to understand how architecture affects behaviour until we understand how human behaviour is

already built into architectural objets themselves. The human and social are not the monopoly of the experiencing and behaving subject. They belong also to the structured and culturally imbued architectural object.

Conversely, it is equally clear that human social behaviour has evolved in parallel with the evolution of material culture in general, and of architectural culture in particular. It follows, therefore, that we should not expect to understand the forms of social behaviour that relate to architecture, without considering the possibility that they may have been affected by the development of architecture itself. The most obvious case of such a connection is also the broadest: the apparent link between the evolution of towns and cities as physical objects and the parallel evolution of the social forms and lifestyles that we associate with these spatially dense and complex modes of co-existence.

If this is the case, then the first task of a second paradigm in architectural research is to discover exactly what it is about architecture that can carry the imprint of society. In our view, this can only begin by acknowledging that buildings and towns have a fundamental property that distinguishes them from all other artefacts: that they *organise space*. All artefacts - bridges, surgical instruments, vases, and so on - mould physical material for a practical purpose, and then use this as a basis for transmitting cultural information of some kind through "style", thus achieving a social purpose. Buildings and towns are no exceptions. But over and above this, they organise space for social purposes, and the consequence is that in the case of architecture - and so far as we can see only in the case of architecture - *social and cultural information resides in the physical form and structure of the artefact* . Through spatial organisation, buildings *constitute* as well as *represent* aspects of social reality. The very purpose of architecture is to organise space for human purposes. Space is the end to which construction is the means, and style the outward expression.

But it is not enough to say that space is the key to the *social* nature of architecture. Architecture does not simply create space, but patterns of *related* spaces. Architecture is an art of related spaces. If social relations are to be in any way expressed through architecture, then it ought to be through the description and analysis of spatial relations - the morphological structure of architecture - that we should find them.

It is these reflections that underlie the attempt by the Unit for Architectural Studies to develop a "second paradigm" for architectural research, one which *begins* by trying to describe spatial configuration in buildings and cities with sufficient precision to turn questions about the social nature, origins and consequences of these configurations into well-formed questions.

The first paper in this issue, therefore, looks at the academic and philosophical history of the "syntactic" approach to architectural research, within the framework of the gradual development of a "morphological" approach to architectural and urban research in the UK, in which many centres and research styles have played a role.

The second paper outlines the "space syntax" methodology we have developed for identifying, structurally and parametrically, the varying "genotypes" of urban spatial structure. This tries to show that, if descriptions are precise enough, then the problem of interpreting the social origins of different "genotypes" can be at least systematically argued.

The third paper "Creating life: or, does architecture determine anything?" shows how space syntax may be used to capture structures that society has already imprinted onto urban forms and also to analyse the effects of spatial layout on how people move

around in them, drawing on recent empirical research by the Unit for Architectural Studies.

The final paper on "The Architecture of Community" takes a more critical look at the more sociological concepts that have been applied to the study of space and suggests a critical framework within which the sociology of space might be enriched, in order to complement the growing ability to analyse and understand spatial patterns.