ARCHITECTURE AS THE PRACTICE OF DESIGN AND THE ORGANISATION OF PRACTICE

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Two dissertations, based on qualitative research, from the MSc in Construction Project Management at University of Central England, UK on the management of architectural practices and the management of design are summarised and related to each other through a focus on design as a strategic competence for architectural practices. The research is placed in the context of Thatcherism interpreted as an assault of private sector professionals on their public sector and liberal counterparts. The managerialisation of architecture is demonstrated but design is shown to have been insulated from this by its intrinsic creativity which, now, has to be managed as a learning process. The future of architectural practices as knowledge organisations is reviewed. It is shown that the confidence of the profession has recovered sufficiently for architects to consider: contesting some of the managerial ground from which they have been driven by other professional groups and the diversification of practices and the services offered in the market. The appropriate organisation culture and key skills for architectural practices are considered in the present context of construction. It is concluded that architectural firms are as well equipped as any construction organisation to cope with the new uncertainties.

Keywords: .Architecture, culture, learning, managerialisation, organisation.

INTRODUCTION

This paper explores the evolving context of architectural practices in order to report and analyse the effects of managerialisation resulting from the free market policies of Conservative Governments 1979-1997. It is based on two dissertations focusing on architecture submitted for the MSc in Construction Project Management at the University of Central England. Danks (1996) focuses on the management requirements of architectural practices and Shephard (1997) on the practice of design. The impact on the organisation of practices and the design process are reviewed. Managing the design process more effectively has become necessary and the key to this lies in viewing design as a paradox, a handling of the tensions between opposing principles. However, again as a paradox, architecture is both the practice and organisation of design simultaneously. The profile of organisational issues has been raised over recent years by the changing ideological context.

Methodology

Both dissertations are qualitative (Easterby-Smith *et al.* 1991). They seek to elicit the views of architects about their practices and professional self-image when the professional model is contested strongly by managerialised groupings around the construction process, especially project managers, quantity surveyors and design and build organisations.

Danks, S, Shephard, A and Wild, A (1998) Architecture as the practice of design and the organization of practice. *In:* Hughes, W (Ed.), *14th Annual ARCOM Conference*, 9-11 September 1998, University of Reading. Association of Researchers in Construction Management, Vol. 2, 652-61.

Danks' research consists of semi-structured interviews with senior partners of six practices of varying sizes other than the largest multi-disciplinary practices. These might be considered stronger survivors of recent history. Shepherd's research covers seven interviews and two case-studies which are broadly representative of design settings in different practices. The two case-studies were linked to his professional role as a local authority architect and involved reflection upon his own assumptions and practice.

THE WIDER CONTEXT: THATCHERISM AND ITS AFTERMATH

A broad range of economic, social and political changes created an environment of turbulence for the profession including the boom and recession of the late 1980s and early 1990s. As consequential unemployment and closures receded, those left confronted the loss of institutional professional defences. The management of practices has begun to catch up with the profession's far greater exposure to a new configuration of competitive and other pressures.

In the 1960s and 1970s, architects had been attacked from the left for their stewardship of post-war urban redevelopment. This was repudiated as creating for others a built environment that they declined to live in. The profession had abandoned an ethic of responsibility (Dawe 1971) for a fantasy culture of formal design. The profession has long been in internal conflict over the diverging self-images of art-architect and professional-architect. The 1980s saw them condemned for failure in both the aesthetic and service aspects of their role.

Thatcherism, in relation to the architectural profession, had a particular coherence. The design capability of the public sector was stripped away as part of an attack on public service values including abolition of the GLC and Metropolitan County Councils, the design and engineering departments of the Regional Health Authorities in 1989 and the Property Services Agency in 1992. The construction project capability of the public sector was transferred to the private sector or reinvented there. This exposed private architectural practices to ideological and economic assault as new configurations of clients and private sector organisations emerged in relation to major projects and public sector developments and used novel procurement methods. Project management in construction attacked the profession's claim to a special expertise in the management of construction derived from design. Architects were undermined from two directions. As a profession spanning both the public and private sector they were more vulnerable to deconstruction than most corporate groups. The abolition of the Mandatory Fee Scale in 1986 increased the profession's exposure to the market.

Perkin (1990) suggests that Thatcherism was an attack of free market professionals on their liberal and public sector counterparts. The long association of the Building Employers' Confederation (BEC) with free market ideology; their campaign to casualise the labour market in construction through subcontracting, de-recognition of the unions and the abolition of Local Authority Direct Labour (Direct Labour Collective 1978); the large construction firms' alliance with quantity surveyors as the construction industry entered the age of accountancy (Lait 1993, Matthews *et al.* 1997) confirm this argument. The BEC had a ready-made strategy for a competitive order (Hayek 1947) which become the Conservative agenda.

The boom and recession have confirmed Winch's argument (1989) that construction is in a condition of market failure. At a more practical level those who have to construct have found the industry's competitive order destructive of the collaborative values necessary to build under conditions of complexity - hence Latham: but as a corporatist framework of institutions.

Perkin argues that, under Thatcherism, corporatism "…reverted to its natural, informal mode in which … business interests were automatically more influential…". In the institutions that have been established since Latham (1994) the trade unions are excluded, the National Joint Council, long a talking shop for old men, has been abolished and the architects are one professional interest among many. Employer and large stakeholder corporatism (Cole 1989) has replaced the competitive order aspired to by large construction firms from the late 1960s. An emerging theory of construction (Drucker 1990) oriented to collaborating (Gray 1989) is apparent but the market in managerial skills for construction has become more open.

What Thatcherism, recession and the civil war of the middle classes failed to achieve was completed by legal changes relating to liability on latent defects, more stringent Building Regulations and increasing technological and ecological change. The profession has undergone significant organisational restructuring but is exposed to unprecedented external conditions, expectations and accountabilities.

RESEARCH FINDINGS: DANKS

Danks reports two dominant processes: the commercialisation and the managerialisation of practices. The current expansion of work for construction has stabilised organisational forms and processes for the time being. Architectural practices have evolved a new configuration of high level skills. These focus on the application of financial models, an approach to the needs of clients and projects as explicitly requiring a knowledge-based service and the qualitative management of design including the use of IT and CAD. These are strategic and justify the attention of partners and senior professionals. Successful practice management involves a shift away from patronage and influence towards the conscious steering of the organisation. The architectural practice as gentlemanly ad-hocracy has collapsed. This forcible intrusion of alternative values is an example of the new institutionalism in organisation theory (Di Maggio et.al 1991). However the changing outer context has also offered opportunities to develop new services and an aspiration to recover the lost role of project leadership through learning the skills of project management (Rogers 1995). The assertive managerial groups find their position contested by their former victim.

Finance and the client focus are linked. Partners and senior professionals commit time and attention to the financial planning of practices with financial advisers and to the allocation of staff time to specific projects. The sentimental squirreling away of reserves from boom times to cover recessions has been killed off. Relationships with existing clients are closely cultivated through the shared ownership of problems and speedy response to all project matters. There is market segmentation with a strategic focus on "… particular specialisms or project types …". This is understood across practices and matched to in-house skills and knowledge. A focus on present and future markets has evolved to sustain continuity of work through a professional reputation for quality. Design now reflects this focus. Employing "…the right quality of people…" is seen as critical, as are CAD/CAM and IT. Such skills are recruited

externally. A new team is created for each project, which is the main source of staff development. He concludes: "… the six independent and successful practices interviewed had a clear understanding of why they were successful at what they were about and why they were able to do it well" (Danks 1996). Professional architectural values and the RIBA Code of Conduct are viewed as central to practice. All these practices search the market on the basis of design and professionally oriented values.

The emergence of specialist services offered to clients reflects the struggle of these practices to cope with external complexities and uncertainties. Having learned for themselves the derived expertise is now on offer, although practice size is a key indicator of their availability. The larger practices have the resources for such specialisation. However there is no aspiration to compete with larger multi-disciplinary practices. Networking with carefully selected consultancies is the preferred approach. The two outstanding examples of such specialist services are: the management of project finance and client uncertainty about money through relationships with preferred financial institutions and advising on new regulations surrounding construction and the life-cycle of buildings such as the CDM Regulations. These offer the opportunity to sell on a time charged basis. Such specialisms are carefully managed and diversification is related to the selected client sectors although "…the approach to diversification…is seen as a way of reducing the areas of uncertainty which continue to exist post-recession within most market sectors" (Danks 1996).

The three larger practices have attained a great degree of formalisation of systems including treating all offices as cost centres. Using the RIBA recommendations (Cox and Hamilton 1991) as a benchmark they have gone furthest towards a systematic approach to strategy and structure. All the practices have accurate computerised time and cost recording procedures, which they monitor weekly. Financial relationships with clients are actively managed to ensure cash flow. Larger practices use accumulated financial information for bids. In smaller practices marketing is more ad hoc. Different practices reflect personalities and organisational histories. Beyond the hard systems there is a commitment to understand the new context: "Managers...spend something like 80% of their reflective time in trying to perceive and understand the uncertainties which surround their work" (Danks 1996).

As far as the future is concerned there is continuity and development of these themes. IT and CAD/CAM capability are important because of the IT awareness of clients. Apart from this IT offers a powerful process for integrating practices. Knowing the market and the type of buildings needed in the future implies an increase in the use of market research to explore the client base. IT is used to retain knowledge about clients, especially financial knowledge. The financial context is viewed as important especially due to the changing role of Lottery money and PFI. Design is a means to an end but is treated as a domain of creativity within the practice. Planning the future of practices is important but architects are thinking in a long-term way which is exemplary for the future of construction as a whole. This reflects a re-emerging professional confidence and identity and a willingness to diversify practices into areas such as project management, facilities management and specialist consultancy and services. These are partly financially driven since the core competence of design is less well rewarded than in the past. Staff are central to these developments and recruitment is a matter of concern although there is under-investment in continuing professional development.

RESEARCH FINDINGS: SHEPHARD

Shephard's study confirms the correlation of size and informality, the smallest practices revealing the greatest informality and the strongest espousal of aesthetic values in design. However all the practices interviewed by him were committed to a philosophy of design. Hence the findings of the two studies are complementary. The preoccupation with design as a value is their common ground. How then has managerialism affected the design process itself other than the effects of IT and finance?

Shephard's views on the management of design amounted to a Scientific Management prescription intended to "…eliminate the upsets that come from human beings…" (O'Neill 1991) through the use of procedures. However, in the two case-studies, both of which were under his professional control, this proved impossible. The interviews with the practices established that formal procedures, design objectives and design reviews are little used. He concludes, regardless of the size of practice, "….that architects actually do generally design intuitively and that hard prescriptive briefs and procedures may suppress this design process…". Thus, design has remained insulated from the effects of managerialism. However, if design is to be managed, how is this to occur? Danks argues that design has become more focussed and this is achieved qualitatively. Therefore which qualitative approaches might be developed to manage the design process? To answer this Shephard's research on the design process will be reported.

His inquiry used a two-dimensional model evolved from the work of Schneider (1992) and Schneider and Winch (1993) of the architect as technician/artist and manager/professional to allow the respondents to identify their own roles in the design process. Consistently the complementary roles of technician/manager and professional/artist were recognised. The larger the practice the more explicit and formally separated they became with formal systems for the management and allocation of time to projects evident, confirming Danks' findings. Management of the design process is "…explicitly differentiated from the management of the design itself…the latter being the preserve of the architect-partner" (Shephard 1997).

Managerialisation and internal specialisation in the larger practices has resulted not in the control of design but in surfacing its intrinsically paradoxical character. Design stands out as a creative figure on a managerial ground, although constrained by new formal systems. This may represent the present limits of bounded rationality (Simon 1969) in a creative context.

The literature search reviews a number of studies of design and its management. These suggest that design is a complex process learning process, which cannot be dis-aggregated, but do not explore the characteristics of the learning identified. Design involves a visual organisation of the space of the building, a technical specification of how that space may be contained structurally and a statement of aesthetic values in relation to the intentions of the various stakeholders in the building. It is a process of creating knowledge which takes place in perceptually and symbolically complex learning environments (Kolb and Fry 1976), and is comparable to research and development (Carlsson 1976). It is a social process (Stuart 1976) which results in a segmentation of learning (Juch 1982), a splitting of the knowledge created (Morris 1986; Boyd and Wild 1994). This split has to be coped with in construction by people who have not been a party to the design process itself and are required for practical

reasons to infer the significance of the design for the discharge of their function. For these and other reasons there is requirement for the process to be managed.

A design emerges iteratively with awareness of the needs of various stakeholders in the building. It may be viewed as a type of grounded theory (Glaser and Strauss 1967), a negotiated visual order involving complex judgements to reconcile the uncertainty of clients and value conflict amongst stakeholders as the brief and design evolve interactively to clarify the scope of the design and reach a point of closure.

Managing design as learning has the advantage of engaging with the intrinsic character of the process. Carlsson *et al.* (1976) achieve this by relating R&D to experiential learning (Kolb and Fry 1976). Kolb's cyclical model of learning is segmented into four quadrants. Kolb (1984) argues for recognition of the Learning Cycle as dialectical, involving the unity of opposites. Carlsson *et al.* ground a sequence of methods within each quadrant. Managing R&D consists of ensuring that all phases of the cycle are completed. In architectural design this allows orchestration of the paradoxes by actively managing the tensions within the learning process. The sequence of methods offered ensures that the potential weaknesses in the stages of divergence, assimilation, convergence and execution are compensated for. Management's role is to intervene appropriately and in good time: "The manager must take care not to move too far ahead of the project team, as he may then lose sensitivity to their current problem and also confuse them with regard to the path they should be taking. The manager must avoid pulling the team across the model instead of around it. He must also contrive to ensure that the design team do progress around the model, and do not miss out stages" (Shephard 1997)

The process involves steering i.e. giving direction (Garrett 1987) to the learning of relatively highly qualified staff with complex work and personal motives. It is worth noting that knowledge and intellectual property rights as strategic assets in the information age impinge upon this as a wider context (Garrett 1987). Schneider and Winch's view of architectural practices as knowledge organisations is confirmed.

ARCHITECTURAL PRACTICES AND ORGANISATIONAL CULTURE

The nature of organisational culture is important to the evolving quality of relationships implicit in a process of steering learning. Architecture requires the support of creativity as an end in itself and as a precondition of creative acts themselves. Recently culture has been employed as a catch-all category of explanation and aspiration with discussion of the need for a particular culture to sustain some desirable change. Harrison (1995) established that the classification of organisational cultures as Power, Role, Task and Person explains their outcomes in terms of the use of power, the quality of service and performance and the quality of relationships generated. Task culture, for example, implies the sharing of power within a focus upon the organisation.

Harrison has also established the importance of motivational levels within culture. He links the four cultures to Maslow's (1986) motivational hierarchy of needs. At the level of survival organisations fragment into power driven competition for scarce resources likely to render the design process difficult unless other emotional resources are available to support movement upwards to a higher cultural level at which conflicting personal constructs (Boyd and Wild 1996) can be aligned and attuned (Harrison 1995). There is recognition of the pressures of managing creativity in the

aspirations expressed to Danks to avoid destructive competitive bidding at low fee levels. Management of paradox is rendered difficult under these conditions. This requires the motivational level offered by social needs for affection, belonging and intimacy. Such relationships are arrived at effortfully (Boyd and Foss 1997). In these architectural practices this is a result of struggling with the recession and its aftermath.

While design organisations may be power cultures (Allinson 1993) the aircraft industry yields an example of the difficulties created. Garside (1994) shows how British Aerospace evolved a history of the influence of charismatic designers such as Camm, Mitchell and Page lingering on into an era when complexity had long since subdivided design into a wide range of specialisms. These remain as private fiefs whose functional loyalties inhibit the effectiveness of projects and the adoption of new methodologies.

Design, then, is a type of practice characterised by intimacy in the context of a Task culture. The organisations reviewed by Danks have weaknesses, not least that continuing professional development is too focussed on the immediate project, but they meet the cultural criteria argued for by Shephard as a precondition for managing the paradox of design. It is from the character of the organisation as a system with processes rather than a functional structure that design is managed. On the research evidence summarised here architectural practices, as loosely coupled, complex (Perrow 1984) collegial organisations, are well equipped to cope with the reality of construction as a whole with its demands for iterative learning through cycles of uncertainty bolstered by a renewed professional confidence and ambition.

CONSTRUCTION IN THE FUTURE: A NEW CHARACTERISATION AND A CONCLUSION

The future of construction involves: the slow emergence of a collaborative ethos from the new corporate institutions resulting from Latham; the new expectations and accountabilities emerging from aesthetic, ecological, safety and quality ; and the performance expectations associated with the new financial environment and PFI. These affect all parties to the construction process through the ‘contractual envelope’ (Danks 1996).

Groák (1994) argues that construction is a population of projects for “technology fusion” which creates a “demand chain” spanning the boundaries of industries. His emphasis on the project shifts the construal of appropriate skills and good practice; technology, the origins of productivity improvements, research and development and management. The so-called problems of construction are its special characteristics, a technological paradigm, through which response to uncertainty and turbulence evolve into “…unpredictable (but inventable) configurations of supply industries and technical skills”. He comments: “It all gives renewed significance to Hillebrandt’s potent and fundamental question: what do we mean by the capacity of construction ?”

Construction projects are shifting figures upon a shifting sociological ground (Trist 1974). Technological complexity in buildings and construction, their reciprocal interdependence and value conflicts over efficiency, ecology and aesthetics in the wider built environment and at various stages of construction create this. That a structure, standing amongst others, results from the process is the source of a delusion about the stability of the built environment and the projects through which it is ‘developed’, especially among outsiders who are unaware of the many situations (Schön 1983) embedded in structures and their construction. Construction, especially

in large, complex and controversial projects teeters on the brink of under-boundedness (Alderfer 1979), of becoming caught up in the turbulence of its own environment. As far as project management is concerned, Harrison (1995) defines this in terms of coping with the experience of discontinuity, a world of start-up and task uncertainty requiring special skills in "…the care and feeding of infant systems…".

Here the focus is on the capacity of architecture to cope with such conditions. Danks reports the handling of complex collaboration within projects and the evolution of important networks. These are held together by effort, experience and real-time learning. Hence a new collaborative order is likely to be a highly complex inter-organisational domain to be put together below the level of new coordinating institutions. Beyond projects there are uncertainties created by the new financial context, the new regulatory regime and aesthetic and ecological value conflicts focussed on the contractual envelope of the project. These pressures imply requirements for skills of people as adaptive planners (Trist 1974): the ability to steer through complexity; to work simultaneously in left and right brain modes; to span boundaries; to hold and share power as a resource (Lovell 1993), and to work with procedures as diagnostic devices. Here architects reveal renewed aspirations and confidence and this is likely to be realised as long as the evolution of practices from recession along the lines suggested in the research is continued.

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