

The NetWorkPlace™ Phenomenon: Connecting the Space of Place and the Space of Flows

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Abstract: *This paper presents an issue related to interior architectural environments, which is currently being investigated through an empirical research program entitled the NetWorkPlace™ study. It is delivered from a speculative standpoint which invites consideration and feedback. The radical structuralist conception of Castells' network society is adopted as the position from which to explore the experience of being-at-work in contemporary organisations. This brings into proximity the experience of the space of place and the space of flows as the new expression of sociability in networked organisations. This juxtapositioning, of what appear to be competing terms, provides the research space for investigating both a contemporary commercial phenomenon and in parallel, for postulating the ideological foundations of interior design. The speculative position, on which this discussion is based, anticipates that the proposed research framework and the experience of the investigative process are ones that also provide an ethical and rigorous foundation for establishing at least one perspective on the formulation of a design ethos.*

Keywords: *network; workplace design; place.*

Introduction

Changing social and economic conditions together with advances in information technology are enabling time and space to be utilised in more creative ways. The 21st century presents a new paradigm of work. As a consequence, the place of work, its location, duration, character, quality, and management are changing dramatically. The emergence of inter-organisational contexts has enabled the identification of a gap in the knowledge related to workplace design. The literature and research available indicate that there has always been a singular or mono-organisational focus in relation to the implementation of workplace design strategies. The exploration of workplace design across inter-organisational contexts has yet to be investigated and provides the point of departure for the NetWorkPlace™ study. This phenomenon is investigated through a case study approach, situated within a commercially functioning network enterprise in the form of a supply chain of collaborative strategic partner organisations. This presents an opportunity to study a case of interaction within and between networked inter-organisational communities. The aim is to extract an understanding of the resultant implications for a sense-of-place which social actors experience through the everyday activity of being-at-work within the duality of what Castells (1996; 2000a; 2001) termed the space of place and the space of flows.

The purpose in this paper is to briefly discuss the current status of workplace design, to identify the context within which many organisations now operate, to speculate on what implications this has for individual members' sense-of-place, and to describe the exploratory process by which this can become known. A conceptual framework is established and the parameters of accepted social science methodology extended in order to undertake this study. The study is a work in progress, and by metaphorically making a connection between the space of place and the space of flows, it is anticipated that a contribution towards the development of an ethos for workplace design can emerge.

The starting point: A duality of space

Lipnack and Stamps (1997) have confirmed that contemporary networked organisations are comprised of communities with their own specific social dynamics. These require new interpretations of place (permanent and temporary physical settings together with virtual venues) and the meaning these places take on depends on the interaction within the various networks. What has become a changing paradigm due to the inter-organisational context is a shift from the spatial boundary of physicality as the source of sociability to now include the spatial expanses of the network community as a new and additional expression of social organisation. 'Connection through cyberspace [however] does not relieve the need for people to be involved in some form of more tangible community' (Caruthers & Heath, 2001, p. 51). Human values and needs, interaction and familiarity with others, being connected to a physical place in a way that technology cannot accommodate, are all qualities that can be supported by the physical workplace environment.

The facilitator of ubiquitous communication and connectivity is the Internet or the world-wide-web. 'From an architect's viewpoint, electronically mediated places are not uniform, dimensionless nodes, as they rather misleadingly appear on the abstract network diagrams made by telecommunications engineers' (Mitchell, 1999a, p. 31). They each have particular physical contexts and they are inhabited and used by people who have their own local customs and cultures. Castells (2001) noted that the 'space of flows is a new form of space, characteristic of the information age, but it is not place-less, it links places by telecommunicated computer networks ... It redefines distance but does not cancel geography' (p. 207). Gustavo Cardoso claimed 'we are in the presence of a new notion of space, where physical and virtual influence each other' (Castells, 2001, p. 131). Within organisational settings, this redefines the intellectual and professional agenda of architects and designers (Mitchell, 1996). Network structures have created a duality of space. The challenge for architects and interior designers is the need to consider this hybrid of space – the 'space of place' and the 'space of flows'.

Spatial logic

From a social theory perspective, space is the material support of time-sharing, simultaneous social practices. This space was traditionally provided by territorial contiguity. 'Social practices can now be simultaneous without being physically contiguous ... this is the space of flows' (Castells, 1996, p. 200). What has emerged is a new spatial logic, embodied in a new organisation of power, contained within the space of flows. The essence of Castells' ideas provides a sound conceptual basis upon which the NetWorkPlace™ study can further investigate the phenomenon in context. One of the premises essential to Castells' (2000a) theory is that space is not a reflection of society, but an expression of society. More specifically, the social practices that organise the forces of production and the interests of the dominant classes also organise the realisation of built space in everyday life (Rauen, 2001).

Essentially, cyberspace is nothing but countless bits stored at the nodes of a worldwide computer network. At the user interface level however, it redefines the complex relationship between body and architecture, that which we call inhabitation. Lunenfeld (1999) discussed how the world-wide-web has supplanted place by reconfiguring the body's social and architectural contexts. Until recently, real estate had no real competition. 'With increasing subtlety and expressive power, and on a rapidly growing scale, virtual places now do much of real estate's traditional job' (Mitchell, 1999b, p. 127). But as Mitchell concluded, the power of physical place will still prevail with physical settings and virtual venues functioning interdependently.

The space of flows is built on a network of electronic circuits. These connect certain functions, which are concentrated spatially in physical places. The space of place and the space of flows are therefore mutually dependent on each other. Castells (1996; 2000a) argued that we are moving toward a form of social organisation expressed through this spatial process, in which the power of flows is substituting for the usual centers of power. By this he is inferring that power is embodied in the information and knowledge, which is processed and transferred through the space of flows.

The network enterprise

The global economy, characterised by an almost instantaneous flow and exchange of information and capital, is referred to in this discussion as a means of providing a view of society that represents the overall context of the NetWorkPlace™ study. Within this structure, firms and economic units of all kinds have undergone a metamorphic change, resulting in a new kind of organisation and management hierarchy termed the network

enterprise (Castells, 1997; 2000b; Rauen, 2001). This has transformed business management into networks of cooperation. Based on Castells (2000a) theories then, what is important today for workplace designers is not so much the independent corporations themselves, but rather that corporations are organised together through networks or alliances. The network society provides a description of the overall context within which the interpretations of participants are investigated. It is however, how the organisational actors in localised sites view their world and construct their own social order within this broader context which is the prime focus of the NetWorkPlaceTM© study.

A balanced view through paradigm interplay

Reliance on a solitary research paradigm can inhibit a full understanding of and appreciation for the multifaceted reality of today's world. This study suggests an alternative paradigmatic position as a way to move towards a more balanced research outcome. A growing number of scholars argue that the dominance of a single perspective results in a narrow view that does not fully reflect the multifaceted nature of social, organisational, and phenomenological reality. Proponents of this viewpoint (Goles & Hirschheim, 2000) argued that an exclusive view is always only a partial view. Methodological pluralism, multi-paradigm perspectives, and paradigm interplay, encompassing a diversity of methods, theories, and even philosophies, are suggested as ways to provide a more balanced understanding and such approaches are gaining greater acceptance across the research community. Giddens (1984) for one rejected the objective/subjective dichotomy, arguing that subjects (people) and objects (structure) do not constitute separate realities, but rather a duality within the same reality.

This dualistic reasoning can be justified if we are willing to acknowledge that the human activities of social construction, which help create organisational structure are in turn influenced by the objective characteristics of the very structure thus created. The belief that reality is multifaceted, and forged from the interpretations and interactions of individual actors has consolidated interpretivism as a valid research position. Thus, within the context described by the radical structuralist views of Castells in his descriptions of the network society and how the phenomenon of ubiquitous connectivity has influenced organisational relationships, interpretivism stands out as the appropriate research position for the NetWorkPlaceTM© study.

Paradigm interplay (Goles & Hirschheim, 2000) simultaneously acknowledges both differences and similarities between paradigms. It permits the researcher to take advantage of cross-fertilisation between paradigms by transposing contributions from studies in one paradigm into the theoretical frameworks of another. Such transposition allows the findings of one

paradigm to be recontextualised and reinterpreted in such a way that they inform the research conducted within a different paradigm (Schultz & Hatch, 1996). 'Paradigm interplay utilizes a mindset of *both-and* instead of *either-or* to produce a new state of awareness' (Goles & Hirschhiem, 2000, p.557).

Theorists such as Castells, located within the radical structuralist paradigm, whilst sharing an approach to science, which has many similarities with that of functionalist theory, advocate a sociology of radical change from an objectivist position. Common to this view is that 'contemporary society is characterized by fundamental conflicts which generate radical change, most often through political and economic crises' (Burrell & Morgan, 1979, p.34). This is the standpoint from which Castells has formulated his concepts of the network society. In mere pragmatic terms however, despite one's paradigmatic orientation, the existence of contemporary commercial enterprises dominated by their networked characteristics cannot be denied. It is proposed that adopting an interpretivist perspective to investigate this phenomenon further is an appropriate way for researchers to build upon previous work in an attempt to gain a richer understanding.

Positivism embraces a particular ontological position, postulating that the universe is comprised of objectively given, immutable objects and structures. It encompasses an epistemology, which seeks to explain and predict what happens in the social world by searching for regularities and causal relationships between its constituent elements. Based on Burrell and Morgan's (1979) notion of paradigms for the analysis of social and organisational theory, the interpretivist orientation seeks explanation within the realm of individual consciousness and subjectivity, framed by the perspective that 'social roles and institutions exist as an expression of the meanings which men [sic] attach to their world' (p. 134).

It is suggested that the strategies available in qualitative research, the first-hand encounters with or within a specific context, are most able to describe the experience of how people in their situations make sense of their environment and their actions. It acknowledges the role of interpretation in the lived experiences and also in the collection and presentation of research data. Qualitative methods applied in this way, seek to describe or explain social and physical phenomena within complex contexts, and seek to consider the relevant phenomena in a holistic manner (Miles & Huberman, 1994). Research and practice in this sense then become co-dependent, each being informed by users' experience of something uniquely inherent to them or their situation.

The vehicle: Workplace design

The future direction of workplace design is seen now as being focused much more on enabling business dynamics, in parallel with the traditional crafting of office aesthetics. The transition to a knowledge-based economy has resulted in the emergence of fundamentally different types of organisations. This phenomenon demands not only different types of workers but also different types of workplaces (Myerson & Ross, 1999; Henderson, 1998; Raymond & Cunliffe, 1997; Drucker, 1997). Business success in our changing world means transforming the way we work, where we work, and the environments we work in (Robertson, 2000). More and more people are becoming members of networks linked to each other through information technology. The approach to office design must be adapted to the way organisations are being transformed, towards the creation of strategic management and people friendly environments that support dynamic business performance (Worthington, 1997; Week, 2002).

Hartman's (2002) research highlighted that an organisation's physical environment is an often overlooked and under-utilised intangible asset. Buildings both set limits and offer opportunities for various behaviors to occur. Nevertheless, the pattern of relationships between workers and the characteristics of work settings is still not well understood (Brill et al, 2000; Ilozer et al, 2002). The linear world that many have found so comfortable is vanishing and fundamental beliefs about the way work is structured, including where and when it is done, are in the process of becoming irrelevant. Martins and Terblanche (2003) conceded that there is a need for more empirical research in relation to the office environment to support theoretical findings. Pugsley and Haynes (2002) reported the need to undertake detailed studies of individual workgroups to thoroughly understand their working methods, and their need for different workplace settings as an essential part of the design process. Further, they held that importing designs and standards from elsewhere is unlikely to be successful, and in larger organisations, different approaches are likely to be needed for each workgroup depending on their business and operational needs. This becomes even more critical where the network entity crosses organisational boundaries. Such a state of the art presents an opportunity and it has been suggested by Duffy (2000), a research need. He suggested that had architecture been a more research based profession, programmes of research using comparative data from cumulative case studies could have been initiated to demonstrate the effectiveness, as well as the efficiency, of using the design of the working environment to achieve strategic business purposes.

A major philosophical change in the approach to office design has been witnessed throughout the 1990's, illustrated most notably by design strategies aimed at achieving business goals through the application of a total organisation ecology framework to guide design decisions. These approaches have been restricted however to single organisational settings. An investigation of workplace design across inter-organisational contexts has yet to be explored. The NetWorkPlace™ study extends the singular or mono-organisational context to encompass the inter-organisational network phenomenon. This attempts to increase the level of empirical understanding in the field and to build upon the strategies and methodologies developed by Duffy (1997; Duffy et al, 1998) in the UK, Becker and Steele (1995) in the USA, and in Australia by David Week (2002).

The implication for a sense of place

The idyllic nature of a community as a tightly bounded, spatially defined, culturally supportive group has been expanded through the possibilities of network connections. Prior to the introduction of the digital era and the wide-spread use of new communication technologies wherein cyberspace is an accepted meeting place, it was taken for granted that all forms of community required some sort of articulation of a persistent sense of location. Such a sense of location, or sense of place, has previously been resolved by physical proximity. Spatial boundaries have traditionally supported and defined social interactions and the development of social networks. The notion of a space of place and a space of flows has introduced a significantly different dimension into the conception of spatial boundaries. 'Seemingly unconstrained by temporal or spatial limits, the rapid and continuing emergence of technologies, networks, and services brings with it entirely new dimensions of electronically mediated experience and communication' (Horan, 2000, p.5). In the past, designers have used space and physical layout to help both shape and reinforce social groups and conventions. The design dimensions of the new form of organisational entity stress the need for coherence between real and virtual worlds as well as the challenges of migrating social practices from the physical world to virtual worlds.

The importance of place

McIntosh (2001) discussed how some would-be forecasters predicted that the information revolution would make location of workplaces irrelevant because people would be working from home, or using their offices for tele-conferences. The emergent pattern of interaction however, indicates that physical and virtual meeting places share a codependence with each other. Mitchell (1999a) pointed out that the biggest paradox of the electronic communication revolution is that by enabling people to work almost anywhere, it has made places more important than ever. The outcome is that as long as people matter, place will too.

Hasell et al (1993) argued that the ordering of space in buildings is really about the ordering of relations between people. 'At its fundamental level architecture does not deal in abstractions, but with life as it is lived, and its fundamental power is to identify place' (Unwin, 1997, p.16). Sense of place connotes the myriad values, beliefs, feelings, hopes, and fears that human beings attach both individually and collectively to certain locations. Canter's (1977) theory of place proposed that three parameters: locality, activity, and assigned meaning frame the understanding of and provide the essence for a sense of place. Schneekloth and Shibley (1993) claimed that the designer's approach to placemaking must 'assume the legitimacy of every person's experience of living' (p. 123). This equates to what Heidegger (1962) would have termed, 'being-in-the-world'. Chastain (1999) suggested that 'the essence of a place resides not in the physical setting of the place but in the practices of producing and inhabiting it' (p. 6). The work of architects in this sense might best be understood as enabling and facilitating others in the various acts of placemaking. 'Norberg-Schulz ... advocates that architecture should aim to concretise economic, social, political and cultural intentions in a way that captures the 'genius loci' or 'sense of place' of an environment' (Franz, 1997, p. 80). Many people today spend more of their waking time in their offices, or 'being-at-work' wherever that may be, rather than in their homes. The processes of place-making in organisations then, presents special opportunities for collaboration between professional place-makers and professional place-users.

The journey towards a design ethos

The research paradigm

Architectural discourse has traditionally revolved around debates involving questions of style, form, and function but as Leach (1997) argued, 'architecture is the product of a way of thinking ... attention needs to be focused on the thinking and considerations that inform its production' (p. xv). At a fundamental level then, designers must commit to a philosophy that engages with the human condition. Phenomenology offers such insight by asserting the primacy of the lived-world of everyday experience (Dovey, 1993; 1999; Coates & Seamon, 1993). Within the phenomenological tradition, the interpretivist position in qualitative research dictates that explanation and understanding are sought through the realm of individual consciousness and subjectivity, with the frame of reference being that of the participant (Burrell & Morgan, 1979). The focus on subjective reality is one of understanding the way in which the individual creates, modifies or interprets the world in which they exist. The epistemological assumptions of this research strategy regard social scientific knowledge as only being able to be derived from the everyday concepts and meanings, from the socially constructed mutual knowledge of the members of the community under investigation.

An indication of the growing body of research, which has come to be known as 'workplace studies' is provided by Bolzoni and Heath's (1997) study, which focused on the socio-interactive organisation of workplace activities. They reported that much of this research draws in various ways from an ethnomethodological approach which places the in situ accomplished and socially organised character of practical action at the forefront of the analytical agenda. It is appropriate then that investigative and analytical techniques developed by theorists of the interaction order, principally Erving Goffman (1967; 1970; 1981) and Harold Garfinkel (1967; 1986), and consistent with an ethnomethodological orientation are being utilised to inform the NetWorkPlaceTM© study.

A multi-disciplinary approach

'An ever-increasing proportion of architectural practice involves unfamiliar circumstances beyond the experience of individual practitioners, and beyond the conventional wisdom of the profession as a whole' (Groat & Wang, 2002, p. 8). The NetWorkPlaceTM© study posits that no single disciplinary approach to either research or practice in the area of workplace design can suffice and strongly suggests that a multi-disciplinary, perhaps even a methodologically pluralist approach, is more appropriate. If it is accepted that the leading edge of workplace design practice is being driven by demand from a commercial world itself in the midst of rapid change, then the production of knowledge via research to underpin practice, must be closely tied to that of research in the field of business (Grimshaw & Cairns, 2000). The key feature of such a multi-disciplinary model is that research and practice need to be closely integrated and context specific (Tranfield & Starkey, 1998; Senge, 1997).

What is being proposed involves both the process and purpose of architecture. Thomsen (1996) suggested that 'we can be as creative about the process [of architecture] as we are taught to be creative about the product' (p. 88). Rowe (1996) reminded us that an education in architecture 'as much as anything ... concerns a way of thinking about the world and about architecture in an intellectual as well as a practical sense' (p. 242) and suggested the first step is to get architects and non-architects to work together. This approach is intended not to diffuse the sense of authorship or responsibility, but rather to realign the source of creativity (Reis, 2000; Duffy, 2001). The job of architecture thus stated, depends upon contributions from many.

The process, which has come to be known as collaborative design, does not simply constitute the participation of users in the act of design. Nor is it collaboration solely among designers and other professionals. Rather, it is a means through which designers and non-designers alike participate as partners in the design process, shaping not only the outcomes but

the aims of designing as well. It involves the process of people's experience, not physical objects alone, as the motive in design activity (Mitchell, 1993). In referring to design as a collaborative process, Groat (2002) proposed that the role of the designer is best understood by considering the architect-as-cultivator. This infers a shift away from the model of the architect as sole technician or artist towards a more interactive role.

The theoretical framework

As has been established, alliances between organisations are becoming increasingly important in the strategies through which supply chain cooperation attempts to secure competitive advantage within the knowledge economy. The NetWorkPlace™ study is embedded in a host project investigating this broader area of inter-organisational cooperation and collaboration. Research into supply chains over the past decade has shown a persistent bias in that there has been a distinct focus on the operational and technical aspects, the dominant research method employed has been overwhelmingly quantitative and positivist, and usually conducted from a single disciplinary perspective. Continuation of this research trend (Monczka & Morgan, 1997; Parker, 2000; Beckett et al, 2000; Bask, 2001; Kolluru & Meredith, 2001) is at odds with the findings that the approach has produced. Such findings make repeated reference to a need for better understanding of how human factors in a dynamic social system impact on supply chain performance. The host case study seeks to overcome identified biases by exploring a supply chain from a holistic perspective, utilising a multi-disciplinary perspective and adopting a qualitative approach. Importantly, this highlights the involvement of architects and interior designers in the overall research process, together with the relevance of the built environment as an organisational support system in the enabling of social practices.

The current research adopts a new theoretical model termed the STIIION which has been formulated by combining two well-established schools of theory, that of socio-technical systems and inter-organisational networks. The latter has been expanded to include intra-organisational networks in large organisations where the size and complexity of activities demonstrate numerous similarities to inter-organisational relationships. This is seen as the way to overcome present conceptual weaknesses in being able to frame the area of study, provide academic rigour to the findings, and provide a platform for conducting future work. Such an approach is well suited to support a variety of research methodologies. This provides a solid basis for expanding the range and richness of understanding of the factors that are shaping and defining the interactions across networked organisations necessary to inform the workplace design process.

One particular case: The NetWorkPlaceTM© Study

The role of organisations has changed substantially. Mergers, acquisitions, and globalisation have resulted in organisations that transcend regional and even national boundaries. Inter-organisational relationships and networks further blur the lines between traditional organisations and today's entities. The boundaries of the field and the phenomena of interest are shifting and expanding (Stern & Barley, 1996). This is further evidenced by the nature of this particular research effort. The host project for the NetWorkPlaceTM© study involves the investigation of a supply chain which extends across Australia and includes manufacturing, through transportation, to assembly and installation. The research is concerned primarily with the social interaction, which enables the operational aspects of the chain. It is being conducted over a two-year period by a multi-disciplinary team comprising a collaborative partnership between industry practitioners and academic researchers from four different universities. The NetWorkPlaceTM© study is concerned with the investigation of approaches to the practical resolution of workplace design across networked organisational settings. This is being pursued through an understanding of the interactions between people; between people and technology; and between people and the built environment; underpinned by an exploration of how a sense of place influences the experience of being-at-work. The study's ultimate intention is to provide a basis for effective workplace design practice in this context, and the grounding of a theoretical platform for further research in the area. Being embedded in a multi-disciplinary approach provides the opportunity for drawing upon multiple views when exploring the fundamental issues, and also the opportunity to triangulate on a set of facts from several explanatory positions to test the intellectual coherence of alternative perspectives. This is a work in progress and no substantial findings from the field investigations are yet available. It is however, the research approach and the underlying philosophy of the study, which are considered more relevant to the current discussion.

Not the end of the journey

This paper makes a particular point of not signalling the end of the journey towards the formulation of a design ethos by providing a specific answer; the reason not least of which has something to do with this particular author's scepticism that such a singular description can be arrived at and agreed upon even through the collaboration of a design collective. Thus, the brief speculative discussion contained herein, certainly makes no claim to be able to provide a conclusive and all encompassing definition of such a complex and emotive issue. Perhaps the significant, distinctive, and delineating feature of designers is that they are all different, and yet in many ways all similar. This paper then, more appropriately

presents through a sensitive and ethical approach to a particular design context, some considerations which can be added to the collective melting pot to stimulate thought and discussion, and in so doing make a contribution to the formulation of an ethos for design by each of us individually. This ethos or spirit must however, embody a philosophy which brings us all together as design professionals, and yet at the same time provide the flexibility to set us apart from each other in the execution of our work. From the NetWorkPlace™ experience so far, it is postulated that this ethos must at the very least be based on human needs, embody the values held by both ourselves and others involved in the process, and be intrinsically tied to context.

Conclusion

In the scenario developed throughout this paper, it is the connection between all the units in the network that takes on particular significance. But as we are reminded by Castells and Mitchell, this is not the only logic of space with which we are confronted. Physical places with their human inhabitants and embedded cultures do still exist. The dialectics between the space of flows organising power, and the space of place facilitating experience, is at the centre of the process of transformation involving corporate entities and the phenomenon with which designers must grapple. It has been proposed from Castells' theory that socio-spatial forms and processes are created and enacted within the dynamics of the overall structure provided by the network. Workplace design in the context proposed must therefore embody a social perspective, and thus space cannot be defined without reference to social practices and processes within case specific organisations and inter-organisational networks.

It remains to be seen how the members of networked organisations reconcile the historically rooted spatial organisation of our common experience, the space of place, with the space of flows, the dominant spatial manifestation of power and function. How this duality of space confronts the social tension and how it can be harmoniously integrated through the design process, also creates the context within which the development of a design ethos can be explored.

As designers this is a responsibility we have all accepted. 'Our job is to look at humanity, to look at the environment in which humanity finds itself, and to find ways of reconciling the two. By becoming architects we have chosen to affect this reconciliation between the needs of those people and the environment through the medium of making buildings' (Broadbent in Mitchell, 1993).

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