

REWORKING THE WORKPLACE

URBAN DESIGN THEORY ESSAY, ARK 199

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INTRODUCTION

Within this research topic I will dispel the notion that virtual working communities are portrayed as an ideal means through which to conduct business. Instead I will advocate that a mix of a more traditional approach to be taken, with the exploitation of new technologies used as an effective tool and not just a means to an end.

I propose that as many of the traditional forms of employment within the medium to heavy industries are now in decline, reducing economic growth within the areas where they are located, a new form of catalyst for urban renewal and regeneration can be achieved within a new form of working environment. Areas of small and newly formed businesses brought together under the umbrella of the *Business Innovation Park*. Although it is beyond the scope of this essay to promote and research the effectiveness of specialist business parks as an aide to urban regeneration, it does nonetheless confirm my critique of the '*virtual working community*'.

Architecture derives its meaning from the circumstances of its creation; and this implies that what is external to architecture – what can broadly be called its set of functions – is of vital importance
(Alan Colquhoun, 1989, p.254).

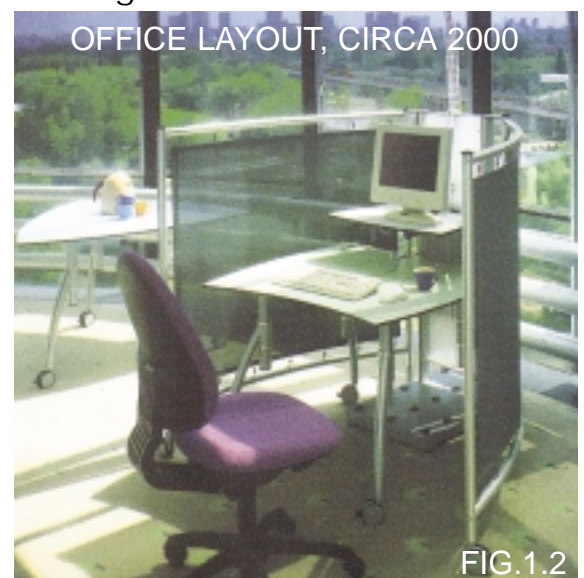
This research essay sets out to achieve the aims outlined on page 0 from a postmodern perspective. With reference to postmodern architectural theory I have set this paper in the context of the city as a cultural artefact, in which references to the working domain can be read. Also within this

framework, the demise of rigid hierarchal differences within the workplace have been replaced with a new work ethic, reflecting a more pluralistic and fluid postmodern society. This reinforces my own beliefs that a post-modern standpoint advocates the development of new post-industrial technologies, whilst changeling the "rules of the game", in this case the changing role of organization within the workplace.



To investigate this research topic I have undertaken a literature search of popular weekly and monthly architectural magazines, as well as searching the Internet for relevant information. I have favoured this method of research over the traditional use of published books on this subject due to the continuing introduction of new technologies and practices into the field of employment and the workplace. I do however make reference to a recently published book by the author William J. Mitchell, entitled '*e-topia, Urban Life, Jim – But Not As We Know It*' (2000), as I believe that it contains arguments relevant to this topic. The ever-changing body of knowledge contained within the Internet has proven to be an efficient forum for my research.

In advancing the argument regarding the effectiveness of modern technology within a new organizational environment, I will show that the pro-



posal of creating an effective workforce organized within the realm of '*virtual working communities*' is fundamentally flawed.

Through my investigative research I will advocate that with a return to traditional working values, by this I mean being situated within a shared, communal workspace rather than working from home, with the integration of new technology, can provide an effective and humane environment for working in.

ENDNOTES

Alan Colquhoun, 1989, Postmodernism and Structuralism in Modernity and the Classical Tradition, Cambridge MA, MIT Press, pg. 254.

William J. Mitchell, 2000, e-topia, "Urban Life, Jim – But Not As We Know It", Cambridge MA, MIT Press, pg. 1.

CHAPTER 1. VIRTUAL WORKING COMMUNITIES

Goods and services flow in new ways in an electronically networked and mediated world, one in which the traditional generators of wealth – land, labor, and capital – are joined and sometimes transcended by fast-flowing information. More flexible forms of production, marketing, and distribution emerge, eventually eliminating many traditional constraints on location of commerce and industry and enabling formation of new spatial patterns (William J. Mitchell, 2000(a), p.99).

Here Mitchell promotes the use of electronic commerce (e-commerce) as a means of working without having to be tied to one particular place to conduct a particular type of business. Mitchell, as well as others (Rheingold, 1993) have advocated the benefits offered by residing in a space they collectively define as a 'virtual community'. Although some ambiguity might be derived from this term, and indeed the debate continues as to what it actually means (Licklider and Taylor, 1968, and Critical Art Ensemble, 1995), its use within examining current working practices cannot be denied. Although an extensive and thorough investigation into this phrase alone would provide the content for an entirely new essay, I believe it is still important to highlight a few issues regarding its use in this context.

The distribution of people in dispersed social systems is not only spatial but also mental. Some people are in a planetary community; some are in a national community; still others are in a community bounded by their limited interests. The bodies of people might

be in one spatial area, but not their social worlds. The concept of locale has little meaning in this context. The concept of community was once proposed to refer to these locale-independent relationships. Now the implications for the community of the independence from locale as shown by these new kinds of relationships are becoming overwhelming (J. Bernard, 1973, p.183).

Here Bernard focuses on the issue of physical location in terms of its lack of importance in the formation of on-line communities. He highlights the degree to which the original concept of community has now been redefined, both in terms of the ability to defy the constraints of physical loca-



tion, as well as embracing new relationships offered through the use of new technologies. For some this argument highlights the extent to which technology can form 'new kinds of relationships' which

may render obsolete the physical environment as a medium through which to communicate, and ultimately to conduct business. Although new technology, in the context of the Internet as a communications medium, can provide instantaneous interaction, which is irrelevant of physical location, I believe it does not replicate and foster the close proximity of communication that is advantageous within the realm of the workplace.

Community is a collective of kinship networks, which share a common geographic territory, a common history, and a shared value system, one usually rooted in a common religion. Typically, communities are rather homogenous, and tend to exist in the historical context of a simple division of labor. Most importantly, communities embrace non-rational components of life and consciousness. Social action is not carried out by means of contract, but by understandings, and life is certainly not fully mediated by technology (Critical Art Ensemble, 1995, p.5).

Critical Art Ensemble consists of five artists of various specialisations, based in the United States, and are dedicated to exploring the interstices between art, technology, politics and critical theory. Here they offer a fairly complex and definitive definition of what constitutes a community,



and manages to highlight the sense of human contact that is needed to help sustain community spirit.

Relating the ideas of community and the experiences

of living life on-line seems to be separated by quite a divide in light of the above quotation.

In defining both the terms '*virtual*' and '*community*' together here I have highlighted the

fundamental differences between what is being promoted by some as an effective mode of '*virtual society*' and what is being highlighted by others as a return to the notion of community as a phenomena firmly situated in the context of the physical realm. It is the latter notion that I will develop



more fully in the following chapter, "*Reworking The Workplace*".

Having explored the notions of the virtual community, I will now concentrate on the phenomena of '*virtual working communities*'. Also known as '*tele-working*', this form of employment does not rely on its employees being based at only one main location, such as the business headquarters, but instead relies on modern communication technologies to conduct business through. These usually take the form of the (mobile) telephone (the most basic), the (mobile) computer, Internet access, printer, scanner, fax, and possibly remote video conferencing. Most of these technologies are widely available for not a great deal of investment, with many people already owning the basic requirements to join the '*virtual working community*', or to '*tele-work*'.

Although this situation may exist for many people, actually implementing these different technologies together as an effective tool to undertake the necessary workload and delivering the final product also depends a great deal on the type of work involved. Obviously some forms of employment have different demands on its workforce than others, with some jobs, mainly in the manufacturing industries, requiring their workforce to commit to traditional production methods and formal hierarchical employment structures. On the other hand the previous 20 years of industrial revolution has led to a situation in which the very nature of the industrial and commercial fabric has changed in response to advancements in technology, production methods, and a change in the cultural formation of today's workforce, a typical condition of the postmodern society. This fundamental change is highlighted in the table below.

TABLE 1. THE PAST 20 YEARS' INDUSTRIAL REVOLUTION IN THE UK

1967 STABLE AND CONFORMIST	1987 FLEXIBLE AND OPPORTUNIST
Job security, 2% unemployment	Job uncertainty, 13% unemployed
Full time, one job for life	Flexible employment, several jobs
Education to conform	Education for enterprise
44 Hour week	38 Hour week and flexitime
Manual, clerical and craft	Managerial, professional and technical
Corporate centralised organisations	Global decentralised organisations
Brawn power – nil robots	Brawn and brain power – 1000 robots
64 000 employed in office machinery sector	700 000 employed in office machinery and computer sector
Mass production – standard products	Batch production – customised products
Working population – 36% manufacturing 48% service	24% manufacturing 62% service

(Architects Journal, 17th. February 1988, p.40).

Large-scale networks, on-line transactions, and systems of electronic commerce have most obvious competitive advantages in the case of buying and selling intangible products such as insurance policies (William J. Mitchell, 2000(b), p.99).

Mitchell highlights an important factor in the development of virtual working communities, in their exploitation of manufacturing and distributing of intangible products, which may be more efficiently and economically dealt with over a dispersed network of connected contacts and agents. Although in theory this may seem like a reasonable assumption, I believe that by utilizing information technologies using a different approach, a more efficient and humane environment may be constructed within which any type of business may operate successfully.

Under this newer system, electronic exchange of information replaces the face-to-face purchase transaction, warehouse and retail space end up at very different locations, and direct, personalized delivery from warehouse to consumer substitutes for bulk transfer of items to an intermediate storage point (William J. Mitchell, 2000(c), p.104).

The basis for my critique of the suitability of virtual working communities as a forum for conducting an efficient and productive form of business stems from assumptions made by authors, like Mitchell, that by turning your back on traditional methods of conducting business, as well as in its organisational structure, and investing in an all-electronic network, then you can change the way in which humans interact socially. I believe that this form of reasoning is an over-simplification of the complex processes that take place in real world social interaction and as such does not provide a suitable alternative to a more traditional and sympathetic approach towards a successful business philosophy.

The following chapter, "*Reworking The Workplace*", will advocate and explore, with the help of real world examples, the way in which technology can be successfully and humanely be integrated into a physically interconnected arrangement of a new type of working environment, one which will reflect changes which are evident in today's postmodern society.

ENDNOTES

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Howard Rheingold, 1993, The Virtual Community: Homesteading On The Electronic Frontier, Reading MA, Addison-Wesley, available on-line: <http://www.well.com/user/hlr/vcbook.html> .

John Worthington, "Cambridge Innovation", Architects Journal, (17th. February, 1988), pg. 40.

CHAPTER 2. REWORKING THE WORKPLACE

Although it is beyond the scope of this essay to research the complete development of the office as a building type, I will highlight the main changes that have occurred since the middle of the 19th. Century. With reference to CR Cockerill's *Sun Insurance Building*, London, completed 1849, and Peter Ellis' *Oriel Chambers*, Liverpool, completed 1864, these two buildings were constructed around a standard framed structure and were regarded as a 'commercial palace' (Architects Journal, 2nd. November 2000(a), p.52), and the beginning of centralised capitalism.



Looking at Frank Lloyd Wright's *Larkin Building*, located in Buffalo, New York, completed 1904, and Adler and Sullivan's high-rise *Guaranty Building*, completed in the same year and city, we can see the beginnings



of the commercial importance of the high-rise building. Frank Lloyd Wright's *Larkin Building* "was an office purpose-built as a machine for getting business done", and the *Guaranty Building* was "a high-rise example of the office as a device for multiplying the value of land" (Architects Journal, 2nd. November 2000(b), p.52).

SEAGRAM BUILDING (1954)



FIG.3.3

Also of relevance here is Mies van der Rohe's *Seagram Building*, New York, completed 1954, and his *Ninoflax Building*, Nordhorn, Germany, completed 1963, both of which advocated "the office as an urban statement (as well as being a supremely elegant rent slab) compared with an office deliberately shaped, inside out, by a cybernetic study of internal communications" (Architects Journal, 2nd. November 2000(c), p.52).

GUARANTY BUILDING (1904)



FIG.3.4

Not only are the locations of work sites changing, so are their characters. Familiar types of workplaces are fragmenting and recombining into new patterns (William J. Mitchell, 2000(a), p.107).

Mitchell here is describing the changes that took place as a direct result of the adoption of the telephone within industries, which occurred in the early part of the 20th. Century. He goes on to describe how corporate offices no longer needed to be situated beside the factory anymore, as progress could be monitored anywhere that had a telephone connection. This resulted in a concentrated collection of head business offices, usually congregating around downtown financial institutions, which in turn could do business with each other (Mitchell, 2000(b), p.107). This was an altogether more productive and lucrative situation than existed previously.

Today another similar situation exists where a physical relocation of busi-

ness concerns has been initiated by the introduction of new technological advances. These have taken the form of *Centers of Innovation*, which are usually referred to as "*Business Innovation Parks*". Looking at the St.John's Innovation Centre, Cambridge, a phenomenon first introduced from the USA, this business park attempts to reflect the social, technical and economic climate of both its users and academic founders through the environment it creates. This has been in response to both new technological advances and a change in the working environment of today. A transition from the north-light, single storied factory units of the 1960's, with its large scale production line processes, to the new people intensive environment of highly footloose companies providing both small, specialised products and services (Architects Journal, 17th. February 1988(a), p.38).

An innovation centre is a single building or complex of buildings often closely related both physically and organisationally to its sponsoring university. It is aimed at the start-up firms that often grow out of the research initiatives within the confines of the academic establishment (Architects Journal, 17th. February 1988(b), p.38).



Although this type of development is still relatively new, and as such not as widespread as traditional business locations, it does however highlight the importance in which architectural forms and spaces plays in the creation of effective workplaces. Not only in terms of the physical layout, both internal and external, but also the degree to which advances in technology are exploited through its architectural language and sophisti-

cated environmental systems. It is the latter point, which lends to provide the majority of content in architectural reviews concerning the buildings and workspaces contained within these innovation parks.

Although I do acknowledge the importance that environmental control systems, in relation to *Building Management Systems* (BMS), contribute to the effectiveness of the internal workspace, I also believe similar attention should be directed to the make up of the internal spatial arrangements and integration and exploitation of new communication technologies to form a more effective and productive working environment.

Differences in the structure of the workforce over the past 40 years are reflected in statistical analysis of this phenomenon.

Well over half the working population in advanced economies such as the UK now works in offices. Information technology, having already made the office grow enormously, is now offering ubiquitous and reliable electronic access in ways that are certain to transform not just the physical landscape of cities but also the entire landscape of our temporal lives (Architects Journal, 2nd November 2000(d), p.52).

Another relevant statistic is that possibly 10% or more of those office workers mentioned above form a virtual working community, through teleworking. Although it would be naïve to suggest that these large numbers of workers are not working effectively or efficiently, it is my argument that using the term '*virtual community*' is a misleading one, as outlined previously. Indeed it could be just as practical to undertake some forms of work outside of the office environment, as would be within it, but as discussed earlier it is my aim to promote a new approach to office design,

that effectively uses these new technologies but within the context of an office building.

Boots the chemist Headquarters, Nottingham (1968), by SOM, was based upon ideas surrounding the open plan arrangement, and building structure that reflected the corporate structure of its organisation.



Herman Hertzberger's Centraal Beheer (1974) represents original concepts on the notion of organisational hierarchy, helping to create a culture of egalitarian, young, louche, anti-corporate, and semi-anarchic workers.

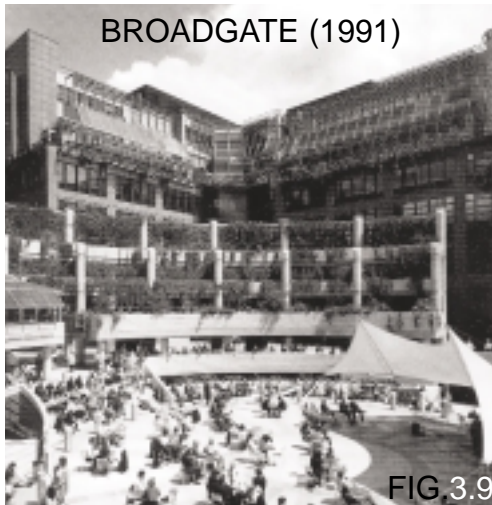


Richard Roger's Lloyds Building, London (1986), exemplifies the impact of technology on architectural form, which promoted access for networks of people as well as for networks of equipment.



(Architects Journal, 2nd. November 2000(e), p.52-53)

Taking a recent look at office developments over the past decade, there are a variety of new advances that have taken place, which helps strengthen my argument. This can be seen in Arup Associates and SOM City of London project constructed between 1985-1991, known as the Broadgate Project. Its main concerns were with the domestication of



scale, reversing the North American trend for the skyscraper, towards what they termed as the 'groundscraper'. Its main qualities were "their big floor plates, top-lit atria and generous servicing" (Architects Journal, 2nd. November, 2000(f), p.54).

Another major project that has advanced the design approach towards the office as a building type, is the recently completed (1998) BA Corporate Headquarters, Harmondsworth, by Niels Torp.

Waterside consists of six sub-buildings that together create a beautifully landscaped, extremely lively internal street, lined with coffee bars, meeting and training rooms, shops and restaurants. What really makes the building work is cordless telephony, which allows people to become much more mobile inside – as well as outside – the office, and to disengage themselves from fixed workplaces (Architects Journal, 2nd. November, 2000(g), p.54).

This new building type has quite self-consciously promoted itself as a blueprint for the future in thinking towards new office buildings, as well as to foster a new type of business culture. There are two main objectives that

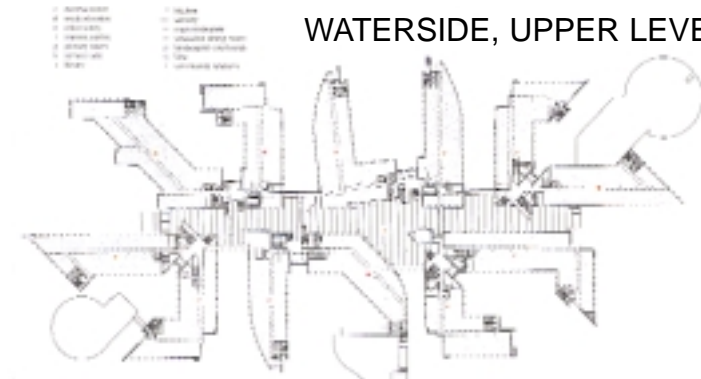


FIG.3.10

can be extracted from this scheme, which can form the basis for future design criterion. The first mainly deals with "*creating greater efficiency through driving down operating costs*", while the second, and most important within the context of this essay is, "*generating more effectiveness through stimulating already razor sharp office workers to even higher feats of creativity*" (Architectural Review, August 1998(a), p.44).



Using Waterside as an example, it is not just enough to simply re-organise the floor plans and internal layouts of an office environment in order to '*revolutionise*' the way in which workers respond to their environment. An altogether more inte-

grated approach is needed, which deals with every aspect and complexity of a modern organisations structure and working practices. Technology aside, the physical nature of an office environment needs just as much careful consideration, from the shape of meeting tables to the colour scheme used, as expressed through the interiors of the Waterside scheme,

The light beech furniture, the cool colour range, the neat glazing of the meeting room walls, the transparency of the open plan, the comfortable and supportive team spaces, the ready access for everyone to intimate gardens and to wider views of the reconstructed landscape, the textures, amenities and sounds of the busy stimulating street (Architectural Review, August 1998(b), p.44).



Although I do not wish to turn this essay into a design primer for new internal office fit-out's, I do want to highlight the still important factors which must be considered throughout the entire design process.

Another issue that has been highlighted in the above project is that of the consultation process which was undertaken with practically all of the buildings end users throughout the entire design process. This must be considered an essential element in the development of an office environment if it is to succeed in installing enthusiasm and creativity within its employees.

Returning to the technology issue, which shares its importance with the internal physical environment, what was shown to be essential throughout the design process was that "*at least as much weight must be given to the design of information technology and to organizational reinvention as to the design of the physical environment*" (Architectural Review, August 1998(c), p.44).

Having looked at various examples of the evolution of the office as a building type, from the self-consciously structured and hierarchical approach of Peter Ellis and CR Cockerill, to the open-plan and anti-corporate office design of Hertzberger, and more recently to Niels Torp's technology integrated innovations, it is clearly evident how this form of building type has closely reflected changes in attitudes and complexities within the society in which it was developed.



With societies changing infrastructure and cultural tastes, and also with its close relationship to embracing new technological developments, this postmodern condition clearly suggests and demands a revision in thinking behind what should constitute an effective office environment, which forms the basis of the following chapter, "*Tomorrows Working World*".

ENDNOTES

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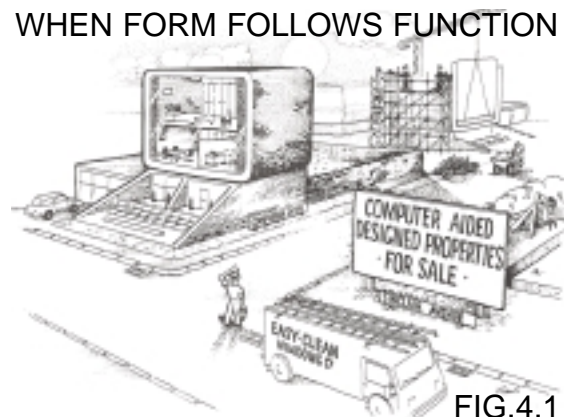
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CHAPTER 3. TOMORROWS WORKING WORLD

Today, if you visit the technology companies of Silicon Valley, or the media companies of Manhattan, you'll find that secluded private offices have been replaced by busy public spaces, open-plan areas without walls, executives next to the newest arrivals. The hush of the traditional office has been supplanted by something much closer to the noisy, bustling ballet of Hudson Street (Malcolm Gladwell, 2001(a), p.1).

Gladwell here compares the modern workplace to Hudson Street, where the author Jane Jacobs once lived and whose qualities are celebrated in her book, "*The Death And Life of Great American Cities*" (1961), which he advocates as a design primer in modern workplace design. He also cites the findings of research studies undertaken into how people interact within the workplace. One of these findings has highlighted the importance of the various casual contacts that occurs between different members within any large organisation as an essential and effective way to generate and share ideas regarding every aspect of how the product/service is constructed. This provides an excellent forum to gain feedback and learn from other members of the team, who would not otherwise necessarily meet outside of their specialist disciplines within a tightly structured hierarchical organisation.

Again here we see examples suggesting a more open and integrated workforce to aid productivity and foster close working relationships.



The catch is that getting people in an office to bump into people from another department is not that easy. As Thomas Allen, a researcher at MIT, concluded after a decade-long study, the likelihood of any two people communicating drops off dramatically as the distance between their desks increases: we are four times as likely to communicate with someone six feet away as with someone sixty feet away. And people seated more than seventy-five feet apart hardly talk at all (Malcolm Gladwell, 2001(b), p.1).

From these results it seems to be of vital importance that the main design influences regarding internal spatial organisation should revolve around a definite pattern of social interaction that encourages casual, random and friendly encounters of relative strangers within organisations. Exactly what was proposed by Jane Jacobs, with reference to Hudson Street as an ideal environment for chance social interaction.

FLOORPLAN FOR COMPLEX ORGANISATION

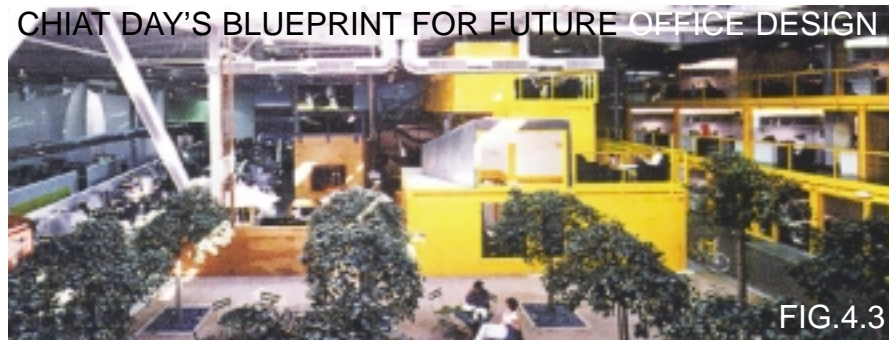


FIG.4.2

With reference to the research undertaken into different modes of office communication, it was discovered that the traditional form of high-rise office buildings, with its central core devoted to vertical circulation and mechanical building services, and surrounding the core can be found workers cubicles and interior offices, with managers offices situated around the periphery of the building, was in fact the worst way possible to organise an office layout. As previously discussed, this rigid arrangement does not allow for the chance meetings and encounters of different types of workers, as Gladwell advocates, and moreover, it seriously ignores

Thomas Allen's research findings regarding the critical sixty feet radius of communication. A simple and effective response to this situation would be to group together the areas in which people congregate and site this area within the centre of the office building, so as to encourage the social mixing of all different groups as possible within an organisation.

A good example of an office development, which embodies Jane Jacobs's principles of



community, is the advertising agency TBWA/Chiat/Day's new offices in Los Angeles, by Clive Wilkinson (1999). This project takes the form of a converted industrial warehouse, which is three stories high and the size of three football fields. Within this huge interior, Wilkinson has effectively created a "highly temporary working village", characterised by short-term spaces, such as meeting rooms in the form of cheap and cheerful containers piled on top of each other (Architects Journal, 2nd. November 2000, pg. 55).

The floor is bisected by a central corridor called Main Street, and in the centre of the room is an open space, with café tables and a stand of ficus trees, called Central Park. There's a basketball court, a games room and a bar. Most of the employees are in snug workstations known as nests, and the nests are grouped together in areas that radiate from Main Street like Paris arrondissements (Malcolm Gladwell, 2001(c), p.2).

- a personal area network that can be configured instantly anywhere (Architectural Journal, 5th. October 2000(b), p.43).

This new technology then opens up the possibilities of implementing new flexible and fluid spatial office environments, that not only promotes effective human contact and communication, but can only increase the efficiency and ultimately the growth of the company which adopts the ideas and new technologies advocated here.

ENDNOTES

Frank Duffy, "Forty years of office design", Architects Journal (2nd. November, 2000), pg.55.

Malcolm Gladwell (a), "Village People", The Guardian (6th. February, 2001), pg.1.

Malcolm Gladwell (b), "Village People", The Guardian (6th. February, 2001), pg.1.

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Philip Ross (a), "Workplaces fit for the future?", Architects Journal (5th. October, 2000), pg. 43.

CONCLUSION

At the start of the century, just as information technology is changing everything, when houses are becoming offices and offices are being turned into apartments, when short-life sheds can be as architecturally significant as Michael Hopkins' very long-term Portcullis House in London, we should consider whether the office building really is a stable building type. Whatever office buildings become, they will certainly have to transcend the time-bound formulae that have created the cities of the twentieth century (Architects Journal, 2nd. November 2000, p.55).

Having looked at the evolution of the office as a building type from the mid 19th. Century, with CR Cockerill's Sun Insurance Building, London, to the recent BA Headquarters, Harmondsworth, by Niels Torp, it is quite evident that, as highlighted in the above quote, the metamorphosis of the office is firmly directed by the changes found to influence the character of the city itself, that is the changing relationships present within today's society. As a direct consequence of the post-modern society within which we are firmly situated, the proposals that I expressed at the beginning of this essay concerning the formulation of new office design criterion and design concepts has been shown to be correct.



Through the research I have undertaken, I have identified the principle factors involved in the production of effective and humane working environments based around the ideas of promotion of social contact and interaction, made possible through the adoption and integration of new communication technologies.

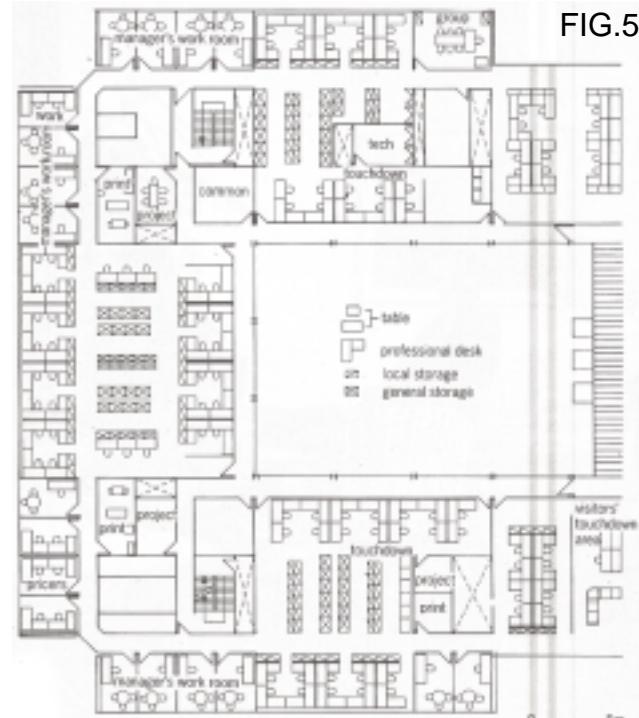


FIG.5.2

CHANGING DESIGN RULES, BEDFORD LAKES PLAN

From this I can relate these findings to reinforce my principle argument against the notion of the virtual working community as an ideal medium through which to conduct business, rather than through a more traditional approach complimented by the use of new communication technologies. I have shown that these virtual working communities, or network of teleworkers do not recreate all the complexities involved in real-world social interaction, and therefore cannot exploit the full potential of a company's most valued resource, its employees.

And so having examined both the arguments towards these two different modes of working, I have shown that my initial hypothesis was correct in



AN OFFICE FOR THE FUTURE

FIG.5.3

favouring the use of technology, not as a total replacement for existing systems and it becoming the message as well as the medium, but instead by exploiting the

new communications technologies to allow a flexible and fluid spatial internal environment which in fact increases face-to-face contact, rather than obliterating it altogether.



GIVING TECHNOLOGY A HUMAN TOUCH !

ENDNOTES

Frank Duffy, "Forty years of office design", Architects Journal (2nd.
November, 2000), pg. 55.

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