

# **Constructing Internet Access: the emergence and use of ICTs in new social spaces**

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## **Abstract**

### **Constructing Internet Access: the emergence and use of ICTs in new social spaces**

This thesis examines the introduction of new Information and Communication Technologies (ICTs) into new social spaces. These new social spaces have been called the 'middle ground' (MG). They are found not in the workplace nor in the home but are located elsewhere in community centres, libraries and Internet cafés. The MG is used for education, communication and information retrieval. This thesis draws upon two case studies to explore the institutional, sociological and cultural development and use of such MG spaces.

Theoretically, this thesis draws upon the Sociology of Science & Technology, specifically Actor Network Theory (ANT). According to ANT, to understand just how a technology becomes (or fails to become) a success we must follow and observe various innovators as they attempt to enrol others into their 'networks'. The utility of ANT is twofold. Firstly, it enables me to study 'innovation' and secondly to move beyond overarching general notions (such as technological determinism) to understand the complex ways new ICTs are being utilised in the 'middle ground'.

The first case study examines the development of a 'virtual university' project 'Televersity'. Here I examine the relationship that develops between the key actors involved with the project, the strategic co-operation between the actors and the use of representations of the Local Learning Centres (LLCs) and identity of the users. The second case study examines the establishment and use of an Internet café. I explore the representational resources that the founders utilise in their attempts to stabilise the identity of the Internet café and its users. I then proceed to compare these with accounts of use, derived through a series of interviews with (and observations of) the users.

The thesis thus aims to illuminate the heterogeneous and complex nature of the MG and the cooperation and flexibility needed at a policy level for such places to be sustained. Furthermore, by using an approach like ANT, we can begin to understand the micro-level shaping of the MG and the relation between these local processes and the wider dynamics within which they are embedded.

# Contents

## PART 1 Introduction, Theory and Methodology

<i>Acknowledgements</i>	<b>viii</b>
<b>Chapter 1 Introduction</b>	<b>1</b>
1.1 Personal Introduction	1
1.2 Further Introduction	4
1.2.1 Grand Metaphors: The Information Society	7
1.2.2 Home-Based Futures	13
1.2.3 The ‘Middle Ground’ (MG) Approach	18
1.3 Thesis Structure	23
<b>Chapter 2 Theoretical and Methodological Issues</b>	<b>27</b>
2.1 The Sociology of Technology	28
2.1.1 Technological and Social Determinism	29
2.2 Constructing Actor-Network Theory (ANT)	34
2.3 Critiques of ANT	42
2.4 Alternatives and Alterations to ANT	45
2.5 Methodology, Practicalities and Ethics	52
2.5.1 Relationship with BT	53
2.5.2 Empirical Methodology	55
2.5.3 Ethical Considerations	58
<b>PART 2 Empirical Examinations into the Middle Ground</b>	
<b>Chapter 3 Constructing the Virtual: The Televersity Project</b>	<b>60</b>
3.1 Reflecting upon my Televersity	60
3.1.1 Encountering the Televersity Project	61
3.2 History and Periodization	70
3.2.1 A Guide to the Actors	71
3.2.1.1 Suffolk College	71
3.2.1.2 BT plc.	74
3.2.1.3 Eric McCoy	75
3.2.1.4 Suffolk Training and Enterprise Council (TEC)	76
3.2.1.5 Others	77
3.3 Actors’ Televersity Stories	78
3.3.1 Suffolk College	79
3.3.2 BT plc.	86

3.3.3	Eric McCoy	94
3.3.4	Suffolk TEC	97
3.4	Boundary Identities and Objects	101
3.4.1	Boundary Objects; Star and Griesemar	102
3.4.2	Actors' Boundary Objects	104
3.4.2.1	The Televersity Project	104
3.4.2.2	The County of Suffolk	108
3.4.2.3	Future Information Societies	110
3.5	Conclusion: The Task Group and Local Learning Centres (LLCs)	113
3.5.1	Affording Co-ordination and Collaboration	113
3.5.2	The Task Group	114
3.5.3	Using the Televersity: Local Learning Centres (LLCs)	115
<b>Chapter 4. Constructing Televersity Use: Local Learning Centres (LLCs)</b>		<b>117</b>
4.1	Introduction	117
4.2	Televersity Usage: Actors' Constructions	119
4.2.1	Suffolk College	120
4.2.2	BT plc	124
4.2.3	Eric McCoy	129
4.2.4	Suffolk TEC	131
4.2.5	Summary: User and Future Representations	132
4.3	Using the LLCs: Users, Futures and Trajectories	135
4.3.1	Attracting Users	136
4.3.2	Characterising the Users	138
4.3.3	Using the Centres	139
4.3.3.1	Users describing the Centres	140
4.3.3.2	Technology in the LLCs	142
4.3.4	Users' Future Representations	146
4.4	Conclusion: revision, comparison and actor user relationships	154
4.4.1	Actor Relationships, Objectives and the Task Group	154
4.4.2	Actors Representations and Users Experiences	155
4.4.2.1	Examining the Users	155
4.4.2.2	Examining the Centres	156
4.4.2.3	Examining Futures	157
4.5	The Actor User Relationship	159
4.6	Theoretical Considerations	160
4.6.1	ANT and Televersity	161
4.6.2	Shortcomings of ANT	166
4.6.3	Further Theoretical Issues: Fluidity	176
<b>Chapter 5. Internet Cafés: Another 'Middle Ground'?</b>		<b>180</b>



5.1	Introduction	180
5.2	History and Cyberculture	182
5.2.1	Internet Café History	183
5.2.2	Cyberculture	185
5.3	Constructing an Internet Café	191
5.3.1	Translation within the Internet Café	191
5.3.2	Defining the Actors	196
5.3.3	Interessement: Obligatory Passage Points (OPPs)	199
5.3.4	Displacement	201
5.4	Constructing Users and Usage	202
5.4.1	Representations of Internet Café Users	202
5.4.1.1	Collating Key Representations of Cyberia Users	205
5.4.2	Representations of Internet Café Activity	206
5.4.2.1	Representations of Internet Café Usage	207
5.4.2.2	Representations of Activities in Cyberia	211
5.5	The Media, Enrolment and Success	216
5.5.1	Interessement and the media	217
5.6	Conclusion: Moving into the Café	221
<b>Chapter 6. Constructing Internet Café Use: Cyberia</b>		<b>223</b>
6.1	Introducing Cyberia	225
6.1.1	Cyberia: Description and Experience	225
6.1.2	Routines and practices	228
6.2	Users' Accounts: Cyberia in Focus	232
6.2.1	Finding Cyberia	233
6.2.2	The Cyberia Experience	234
6.2.2.1	Café Use and Communication	235
6.2.2.2	Searching Online for Information, Goods and Services	238
6.2.2.3	Other Café Activities	240
6.3	Disruptions in the Café: Comparisons	243
6.3.1	Privacy	244
6.3.2	Reliability and Immediacy	246
6.4	Theoretical Considerations	251
6.4.1	ANT and Cyberia	252
6.4.2	Thinking through ANT	254
6.4.2.1	Multiple Narratives	255
6.4.2.2	Privileging Science and Technology	257
6.4.2.3	Collaboration and Personal Relations	259
6.4.2.4	Multiple and Fluid Cyberia	263

## **PART 3 Concluding Elements**

<b>Chapter 7. Conclusion</b>	<b>266</b>	
7.1	Summary of Findings	266
7.1.1	Examination of the new MG spaces: Televersity	266
7.1.2	Examination of the new MG spaces: Cyberia	268
7.1.3	The Inadequacies of Actor-Network Theory	268
7.1.4	The Importance of Friendship	269
7.1.5	The Introduction of ‘side-stepping’	269
7.1.6	Multiple Performances and Fractionality	270
7.2	Directions for Future Research	271
7.2.1	Research Limitations	271
7.2.2	Future Directions	269
<b>APPENDICES</b>		
Appendix A	Televersity Interview list and sample questions	278
Appendix B	Focus Group Details	282
Appendix C	Internet café interview list and sample questions	285
Appendix D	Cyberia Media Sources	288
<b><i>References</i></b>	<b>290</b>	

## Tables

Table 3.1 A Timetable of Televersity Events	71
Table 4.1 Actors ‘User’, ‘LLC’ and ‘Future’ Representations	133
Table 4.2 The Task group Representations of the User, the LLCs and the Future	134

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## **PART 1 Introduction, Theory and Methodology**

### **Chapter 1. INTRODUCTION**

#### **1.1 Personal Introduction**

In this chapter I intend to explain my personal motivations for undertaking this thesis, as well as considering the theoretical basis and importance of the thesis. Furthermore as way of marking the territory that I will cover in the later chapters I will outline the contents of each of the chapters. So let me begin, and as in all good stories, I will start (quite wrongly perhaps) at the beginning and trace out the early inklings and recollections of how I first encountered what became this body of research and what influenced me to be in the position that I now find myself now.

I have always had an interest in what would conventionally be considered computer technology. I remember quite vividly playing with my father on one of the first simple paddle operated games systems which mimicked (in the most basic fashion) a game of tennis. Whether it was the early personal computers orientated towards game playing such as the Spectrum or the Commodore, or the later Archimedes and Macintosh computers that could perform a more varied array of tasks, computers have always held a fascination for me. Such computers during the 1980's were in limited supply and I was only able to use them for short periods of time at school. When I did have the chance to use these machines I often wondered how such inanimate and seemingly inactive objects were able, according to my teachers, to determine and calculate the outcome of the most complex of problems.

I maintained a keen interest in computers, although when it came to selecting my degree I decided to study Environmental Science at the University of East Anglia (UEA). This choice enabled me to combine my growing interest in the natural sciences with an approach that valued the importance of adopting a holistic approach to environmental problems. As my degree progressed my computer interest began to re-emerge (but in a slightly different form) I became particularly interested in the contribution that computer systems could make towards understanding complex environmental and social problems. In particular East Anglia, with the Climatic

Research Unit and the Centre for Social and Economic Research on the Global Environment were at the cutting edge of using advanced modelling techniques to explore and examine the implications of anthropogenic climate change. It was not only an interest in the modelling possibilities of computers which drew my attention, but also the possibilities that were emerging from the increasing connectivity between computers, which was beginning to crystallise in the form of the Internet. The Internet in its fledgling form enabled me to keep in contact with friends and a limited number of family members who had access to the Internet (at this time the Internet was predominantly the preserve of the academic and business community), and, of course, to search for a variety of academic material.

One particular task that I achieved via the Internet and which amazed me at that time, gave users the ability to control a small vehicle, which was physically located in the Nevada desert. The vehicle was fully equipped with a grabbing hand to enable you to pick things up, an air jet, to blow off the sand and additionally, the position of the vehicle was indicated on a map which was displayed on the computer screen. This map facility gave users of the vehicle the ability to let other users, when their turn came, to know of the location of interesting objects, thus accumulating a body of interesting locations and mysterious objects that were a 'must' visit or find. For me, this example, and the growing connectivity possibilities of the Internet, began to illuminate the huge potential that the combination of computers and telecommunication networks would have upon all areas of everyday life. The Internet was allowing a disparate group of individuals from around the world to control a vehicle on the other side of the world, and build through this collaboration a 'group mind' or 'body' of knowledge that could be utilised by other users.

It was at this stage in my education that I grasped the opportunity to study the growing potential of these new technologies and technological systems. I was offered the opportunity to study for a PhD in this exact area, at Lancaster University where I was awarded a CASE studentship in partnership with BT. The studentship title was the 'Social and Cultural Impacts on the Individual of the Digital Superhighway' and within this brief I was given the flexibility to focus upon virtually any area of everyday life which had a connection to the 'Digital Superhighway'. What was a 'Digital Superhighway' was in fact extremely ambiguous, and led to me exploring a

number of possible research areas, which all had a connection to the idea of a 'Digital Superhighway'. In short the idea of a 'Digital Superhighway' was, for all practical purposes, just a blanket phrase that encompassed the use of new information and communication technologies (ICTs) in all areas of everyday life. In the CASE award structure I had to work closely with my supervisors, both at Lancaster University and BT, to agree upon a suitable area for research. BT were keen for me to avoid concentrating on the educational and work implications of new ICTs as they felt that sufficient research was already being conducted in these areas, instead they were enthusiastic for me to focus on the cultural context of the use of new ICTs. I also intended to avoid a rigid examination of the use of ICTs either for education or in business; rather I was interested in the practicalities and cultural context that surrounded the use of new ICTs. It was through negotiation and discussion with BT that I decided upon the focus and the form of my research, this will be expanded upon in the methodology and practicalities section (2.5) in the next chapter.

It was from this position that I identified a lacuna which existed in terms of BT and academic research, that is a need to explore how these new ICTs were actually being used in a number of new social spaces. Rather than concentrating my attention on the use of ICTs in spaces where they had been important for a number of years, instead I wanted to explore the new spaces that were emerging. Furthermore I wanted to examine how such spaces related to the grandiose claims that were circulating concerning the 'Information Superhighway' and the Internet, what new spaces were actually emerging, what was the character of these spaces and how and why were they being developed.

To explore these and other questions I began to research the numerous projects with which BT was associated, and discovered a development called 'Televersity'. This project involved using the latest ICTs in the county of Suffolk to provide remote training and education courses at decentralised Local Learning Centres (LLCs). The project had a grand vision of university level courses being offered to the local community via a network of LLCs; the centres would offer education and the prospect of university education for a county (it is only one of three in England) that does not have a university. This project seemed to fit my criteria as it relied upon

new spaces in which ICTs were pivotal and also had a grand vision which was critical to the success of the project.

The second case study that I intended to explore was located in a less institutionalised context, it involved the establishment and everyday activity of an Internet café in London. I chose this new social space primarily because of the more relaxed approach to the use of ICTs which characterised the space, and because personally, I have spent a vast amount of time in such establishments. Furthermore, unlike Televersity, such spaces have a greater flow of users through the space and thus perhaps a more varied array of users. The café, unlike Televersity, allows users to decide for themselves, to a certain degree the tasks which they undertake in the space. The space also has commonalities with the Televersity project, in that this space again utilises new ICTs for original and exciting possibilities (accessing the Internet) and likewise has a vision that suggests that this space is of growing importance for all members of society. Within the examination of the Internet café space I also hoped to explore the necessary identities and routines that were essential for the functioning, of the café, and through this to trace out the multiple manifestations of the café.

It is my intention, now, to move away from tracing my personal motivations for this study to examine the wider popular and theoretical basis on which this thesis draws and in which it is located. As such I now outline the academic and social context of the thesis.

## **1.2 Further Introduction**

This thesis then will explore the emergence and use of new ICTs in innovative social spaces. Pursuant to this aim, I intend to investigate the growth of Information and Communication Technologies (ICT), primarily the use of the Internet, and the use of this in its associated spaces. This thesis will examine the motivations of the many co-founders of these new spaces and will detail the complex negotiations that surround the development of these Internet access spaces. The Internet access spaces that I will focus on are characterised as non-institutional<sup>1</sup> spaces, where individuals

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<sup>1</sup> I will not be examining 'institutional' spaces by which I mean those spaces connected with individuals' workplaces, homes or educational spaces (which are dominated by schools, colleges and universities).



congregate to use the latest ICTs. It follows that the type of spaces which I shall be examining throughout this thesis are spaces which are of a more informal nature, such as Internet cafes, community centres, libraries, village halls.

An important feature of this thesis will be to examine the growth of ICTs in relation to the idea that this escalation is changing the fundamental structures and relationships of society. There is an increasing body of literature produced by academics, futurists, private companies and governments which suggest that the monumental changes and restructuring in society can be traced to the growth of technology and technological systems (Castells, 1996; BT, 1998; Bangeman, 1994). Our daily lives are becoming intertwined with, conveyed, captured by, monitored, recorded and controlled by a range of technologies and their associated technological networks. It is this overwhelming and accelerating integration of ICTs into our everyday lives that leads some authors to suggest that we are in the midst of a technological 'revolution', 'shock' or 'wave'. These revolutionary ideas reflect one tradition (amongst many); that the capitalist system is in the midst of a transformation towards an 'information society' (Lyon, 1988) or 'post-industrial society' (Bell, 1973) alternatively, that a more general 'communications revolution' (Williams, 1983) or 'third wave' (Toffler, 1981) is sweeping across society.

In this tradition the 'impacts' of ICTs and their utilisation are assumed to be the same, irrespective of location or individual circumstances. The 'impacts' will be homogeneous, linear and one-directional (Gokalp, 1988). One implication of such audacious claims is that the 'revolutionary' impacts of ICTs tend to remain assumed rather than being tested empirically.

Through this thesis I attach myself to a different analytical tradition, one that relies not upon assumed impacts but upon empirical studies of ICT use. Commentators, for example, have predicted that because ICTs allow instantaneous communications they will automatically undermine and dissolve the spatial 'glue' (that is the need for co-presence) that binds urban centres (see for example, Martin, 1978; Toffler, 1981). But these ambitious predictions remain just that, forecasts of some future state rather than empirical analyses of change. In fact, evidence points to a wide range of new experiences especially in urban-ICT relations, whereby a complex set of new

processes is leading to new spatial arrangements, and the development of a new 'telegeography' (Staple, 1992).

Such technological forecasting (with deterministic tendencies) does little to foster more sophisticated analyses of ICT use and impact. In this thesis I will show how the use of ICTs in new social spaces seems to be far more ambiguous and complex than many would have us believe. The impact of ICTs in these new social spaces is not always the same; they are not even in the same direction. In fact, when I begin to scrutinise the relationship between ICTs and their use, a wide range of complex relationships emerge. These relations then show the crude 'revolution', 'shock' or 'wave' labels to be extremely unhelpful.

I have highlighted some of the deterministic and simplistic literature that posits that a revolution may be the result of increasing use of new ICTs. However there are alternative approaches to the study of ICTs, many of which I will draw upon through the thesis. The alternatives which I utilise in this thesis draw upon the domestication of technologies by their users (Lie & Sorenson, 1996; Silverstone et al. 1992), the construction of Internet use and online identities (Miller&Slater, 2000), the role of mundane technologies in the construction of order and disorder (Michael, 2000), a plethora of research which has focused upon the individuals' online activities (Slater, 1998), the importance of distinct places in the utilisation of the latest ICTs (Pratt, 2000b; Liff, 1998) and the everyday usage of particular Internet access spaces, Internet cafés (Wakeford, 1998). In addition to examining the alternative approaches to the use of ICTs my thesis will also contain a theoretical component that will inform the stories and nuance the accounts I present. The theoretical basis of the thesis draws upon the sociology of technology, specifically a strand known as actor network theory (ANT). ANT draws upon an alternative vocabulary to suggest that neither the social nor the technological (nor the natural, nor the non-human) independently determine the outcome of technological innovation and implementation, but that they co-determine and co-constitute one another in a manner which forms complex and sometimes disorderly traces. In the next chapter I will expand in greater detail on the importance of ANT for tracing the activities that take place in and around such Internet access spaces.

From this position I now intend to return to the grand metaphors of future information based visions to illustrate three connected ideas. Firstly, a glimpse at some of the elements which are associated with the use of such grand metaphors, secondly to examine the theme of home-based future visions, and thirdly to use these to co-construct the idea that these new Internet access spaces function as ‘middle grounds’ (MGs) for future visions. This section will examine the idea that these MG spaces are posited as temporary and are mediating a pre-determined future that is co-constructed with home-based or mobile futures, from the necessary materiality in the MG new routines and identities will emerge.

### 1.2.1 Grand metaphors: the ‘information society’

The development and increased use of new ICTs has prompted theorising about their role in modern society. In what might be termed a deterministic fashion commentators and futurists have utilised a number of grand metaphors to encapsulate the complex and monumental changes that supposedly flow from increased ICT use. These changes can, as Lyon (1988) suggests, illuminate the metaphor that society is undergoing a transformation towards an ‘information society’, or as Bell (1973) suggests a ‘post-industrial society’. In such metaphors ICTs are perceived as one of the fundamental drivers in this new age (Moores, 1993; Giddens, 1990; Morley & Robins, 1990).

One particular grand metaphor, that of an ‘information society’, has resonance because it has multiple and malleable meanings which reinforce the ideas that revolutionary transformations are occurring in society. These broader meanings include the re-orientation of the economy towards the information sector<sup>2</sup>, the exponential growth of the Internet (Ogden, 1994, Cornford, 1999, NOP Research Group<sup>3</sup>), the decreasing cost of personal computers and telecommunication services (Volle, 1994), the growing circulation and consumption of ‘informational goods’ (Lash and Urry, 1994, Castells 1996-1997) and employment supported either directly

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<sup>2</sup> Specifically within the UK Government there is such concentration on ideas of an e-economy or an information economy by the e-Minister and the e-Envoy. In tandem with these developments, the UK government has been keen to allow access to information to be facilitated via the Internet, whether it be access to government departments, or more generally information on benefits, housing, health or lifestyles. For example see.

<http://www.ukonline.gov.uk>

<sup>3</sup> <http://www.nopres.co.uk>

or indirectly by telecommunications (Mulgan, 1991). Further in addition to these rigid and quantifiable indicators, there are a plethora of postmodern analyses which draw upon the increasing utilisation of ICTs and contribute to the idea of an 'information society'.

Postmodern stances question how current innovations in telecommunications support new types of rapid social interaction or cultural transmission across previously impossible distances. These new innovations can enable the 'spaces' of social and cultural interaction to become separated from the particularities of social and geographical 'place' (Giddens, 1990). Giddens argues that these technologies act as 'disembedding mechanisms' which 'lift our social activity from localised contexts, reorganizing social relations across large time and space distances' (Giddens, 1990, p. 53). The postmodern reflection on the effects of increasing ICT utilisation is characterised by the ideas of flows and scapes, it attempts to avoid the fixity and deterministic approaches taken by others towards the ideas of an information society (IS).

The concept of an IS is being extensively examined by a range of different organisations and institutions which range from the multinational, through to the national and local. With these explorations come multiple representations of a future IS. These institutions are attempting to analyse the changing relationships that emerge out of our increasing dependency on, and use of, ICTs. These representations of the IS are important for the exploration of the Internet access spaces because the developers and users of such spaces will perhaps utilise these to inform and resource their ideas concerning ICT use.

Of prominence at the multinational level are the initiatives by the European Commission who have for a number of years been promoting policies to develop a European IS. Reports from the early to mid-1990s viewed the idea of an IS as a powerful engine of employment growth and for the development of regions (European Commission 1993, 1994a, b). Perhaps the most important of these is the Europe and the Global Information Society report published in 1994 commonly known as 'The Bangeman Report'; it sets out a vision and orders the priorities for the creation of an IS in Europe. The Commission through a series of reports, outlined

that the processes which are involved with an IS. These reports are of historic importance and are directly related to the increasing use of ICTs:

We are living through a historic period of technological change, brought about by the development and the widening application of information and communication technologies (ICTs). This process is both different from, and faster than, anything we have seen before. It has a huge potential for wealth creation, higher standards of living and better services

(European Commission 1996, p. 5)

Thus as an important strand of its position, we see that the Commission equates the change in society directly to the development and application of new ICTs and presumes that the changes flow directly from the technologies as if they possess an internal logic. The examination of the use of ICTs and the rise of an IS was analysed in the mid-1990s by six working groups (European Commission 1996).

These working groups indicated (amongst many other findings) that ICT usage may not automatically lead to enhanced cohesion, but could lead to greater centralisation of employment and services, and to a 'fast' and 'slow' track IS, both in terms of marginalized individuals and peripheral, less-favoured regions (European Commission HLGE 1995, 1996). In the Commission's work there is a recognition that the IS is not purely a future vision but a future state which requires considerable investment in the telecommunications infrastructure (i.e. the idea that there is a necessary material component), the citizens and the institutions of Europe. To explore the ideas of the working groups, many pilot projects needed to be established and evaluated before a realistic understanding of an IS could be achieved. The Televersity project was in fact one of many thousands of projects partially funded through the EC to explore such questions which circulate around (and through) the idea of an IS.

In a similar vein to the detailed exploration under way by the European Commission, at a national level the UK government and numerous private companies were (and are still,) also exploring the ramifications of increasing ICTs in terms of an IS. The representations of a future IS are being utilised as an ideal future society to strive and

progress towards, afforded by the further integration of ICTs into society. In the UK the government has focused primarily upon the implications for the economy, that is, the structural changes that are occurring because of the introduction of ICTs. This focus on the economic elements of a future IS has led to a re-orientation of the inclusive IS ideal towards notions of the 'knowledge' or 'digital economy' and E-commerce. The ideas and motivations behind an IS are examined and explored through an exhaustive list of different approaches by the UK government. One of the most substantial being the UK Online Strategy<sup>4</sup> which draws together findings and recommendations of a number of reports, the aim being to ensure 'that the UK is a world-leader in the new knowledge economy'<sup>5</sup>. The UK Online Strategy is overseen by the e-minister and the e-Envoy<sup>6</sup> and at an official level the e-Minister and e-Envoy are supported by a group of 'e-Champions'. The e-Champions (formerly Information Age Government Champions) are a group of senior officials from each government department. Additionally the UK Online Strategy includes an annual report published by the e-minister and the e-Envoy to chart the progress of the UK Online Strategy and a UK Online Action Plan that includes 113 detailed recommendations covering 26 commitments to ensure that the UK is at the forefront of the knowledge economy revolution. Finally as a component of the UK Online Strategy the e-Minister and e-Envoy provide the Prime Minister with a monthly report<sup>7</sup>, setting out progress towards meeting the UK Online Strategy.

The initiatives by the UK Government not only contemplate the future IS in terms of large macro scale economic changes and programmes, but also consider the wider implications of increased ICT usage. The UK Government have reports and initiatives which consider the IS in terms of public services<sup>8</sup>, electronic government<sup>9</sup>, education<sup>10</sup>, health<sup>11</sup>, local government<sup>12</sup>, security<sup>13</sup> and transport<sup>14</sup>. Additionally

<sup>4</sup> [http://www.e-envoy.gov.uk/ukonline/ukonline\\_menu.htm](http://www.e-envoy.gov.uk/ukonline/ukonline_menu.htm)

<sup>5</sup> [http://www.e-envoy.gov.uk/ukonline/ukonline\\_menu.htm](http://www.e-envoy.gov.uk/ukonline/ukonline_menu.htm)

<sup>6</sup> <http://www.e-envoy.gov.uk/>

<sup>7</sup> <http://www.e-envoy.gov.uk/ukonline/progress/montprog.htm>

<sup>8</sup> e-citizen, e-business, e-government - a strategic framework for public service in the Information Age.

<http://loft.ccta.gov.uk/error/not-found.html>

<sup>9</sup> Electronic Government - the view from the queue

<http://loft.ccta.gov.uk/error/not-found.html>

<sup>10</sup> National Grid for Learning

<http://www.dfes.gov.uk/grid/consult/index.htm>

Superhighways for Education

<http://www.official-documents.co.uk/document/dfes/supered2/supered.htm>

<sup>11</sup> The New NHS: modern dependable

<http://www.archive.official-documents.co.uk/document/doh/newnhs/newnhs.htm>

Our Healthier Nation

<http://www.archive.official-documents.co.uk/document/doh/ohnation/title.htm>

there are a number of further initiatives and strategies which are specifically designed to promote the IS at a regional level, such as the Inter-regional Information Society Initiative (IRISI) and the Regional Information Society Initiative (RISI) both launched by the European Commission in 1995. IRISI and RISI aimed to establish strategies and actions plan for the development of a regional Information Society. The Televersity project that I will examine as part of the empirical investigation into the use of new Internet access spaces is one such regional project that has benefited from European funding.

So far what I have demonstrated is that through a popular body of literature being produced at a European and national level there are a multitude of representations and futures which are utilising the metaphor of the IS. These are being used to justify increased expenditure on a broad range of ICTs, which will produce a range of benefits from public services through to new cultural and democratic possibilities. Further to these endeavours, private companies are also actively pursuing research and initiatives which explore the metaphor of an IS. One such important private company in the UK is BT (which just happens to be my CASE partner).

BT is a very important company within the UK, despite increasing competition and de-regulation; it still provides the majority of the nations households with telephone services<sup>15</sup>. BT is actively pursuing the ideas which concern an IS; firstly through popular advertisements to its customers making them aware of the monumental changes which their products can make to their lives as part of a wider IS and secondly at a more strategic level; through adopting a critical examination of the complex relationship between ICTs and a future IS.

The focus has been on the ability of BT via its services to enable its' customers to communicate with others, be they 'friends and family' using the phone or customers via the Internet. The advertisements and promotions utilised by BT generally, do not focus on the strict ideas of an IS specifically but address complimentary ideas such

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<sup>12</sup> Delivering Local Government Online  
<http://www.socitm.gov.uk/egov/detrdeliver.htm>  
 Information Age Government: Targets for Local Government  
<http://www.local-regions.detr.gov.uk/consult/iag/index.htm>

<sup>13</sup> Security Requirements for Information Age Government Services  
<http://www.iagchampions.gov.uk/iagc/guidelines/security/security.htm>

<sup>14</sup> A New Deal for Transport - Better for Everyone  
<http://www.detr.gov.uk/itwp/paper/index.htm>

<sup>15</sup> According to OfTel, 78% of fixed line services are still supplied by BT.  
[www.oftel.gov.uk/publications/research/choice00.htm](http://www.oftel.gov.uk/publications/research/choice00.htm)

as the '24-hour society'. In such promotions BT links the growing 24-hour teleculture to a shift in the way society is demanding and using information and services. Individuals are now able to shop, bank and learn 24-hours a day because of the growth of the Internet and telephone enabled services (telephone banking etc.).

The critical examination of the impact of ICTs in a future IS, has been achieved firstly through collaborations with academics and researchers to produce policy documentation, secondly through funded projects, conferences and research centres which explore the practical facets of increasing ICT use (a la Televersity) and thirdly by research conducted by BT personnel (of note are the former BT futurist Peter Cochrane<sup>16</sup>, and the current BT futurist Ian Pearson<sup>17</sup>).

The content of BT's future visions<sup>18</sup> include specific ideas like Virtual vision; this uses a small display held close to the eye, but which gives the appearance of a full-size screen further away. The display itself can be worn around the head, or the wrist, or could be hand-held. Further future developments in data inputting devices include Dasher which uses eye movement; essentially the user moves a cursor to point at the next letter to be entered. The system uses a statistical model to predict which letters are most likely to be required next and make these letters appear larger on the screen. The cursor can be moved in a conventional way (e.g. with a mouse) but it can also be moved by tracking eye movement.

BT's visions also include predictions of a more generalised nature; here Ian Pearson muses over the future of the High Street:

In the future, we can expect even fewer banks, building societies, travel agents and furniture shops. The vacant properties are often filled by discount retailers, software and mobile phone shops, coffee bars and the occasional Internet café.

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<sup>16</sup> Peter Cochrane was Head of BT Research from 1993 - 99, in 1999 he was appointed Chief Technologist. In November 2000 Mr Cochrane retired from BT to join his own startup company - ConceptLabs - which he founded with a group from Apple Computers in 1998 at Campbell CA, in Silicon Valley. He has written extensively in his capacity at BT about the future use and development of all manner of technologies. His homepage and many writings can be found at: <http://www.petercochrane.com>

<sup>17</sup> Ian Pearson is the current futurologist at BT's working in C2G, BT's Communications Consultancy Group. He has written extensively on the development and use of new technologies and publishes the annual technology calendar, a document which predicts the likely appearance of new and innovative technological devices in the future. His homepage can be found at: <http://www.btexact.com/people/pearsonid/>

<sup>18</sup> Interfacing the Future: <http://www.btplc.com/Innovation%20and%20technology/Insights/paulwarren/index.htm>



In terms of infrastructure, the high street will change technologically, but almost invisibly. Phone boxes will evolve into mobile network hubs, and also may emit a positioning field, allowing triangulation down to centimetre accuracy. People will be able to find places and other people much more easily, and communicate with them using video or high speed messaging. Personality matching software in either the network or the mobile will be capable of finding other people with similar interests, acting as an electronic ice-breaker in many situations<sup>19</sup>

The multi-faceted and complex ideas which are entwined with the idea of an IS and employed by BT in numerous ways cannot be reduced to a few lines within this thesis. Importantly it should be noted that BT is a commercial company and that through its activities it has the purpose of maximising profit for its shareholders. Through the thesis I will outline some of, but by no means all, the small ways in which BT as a company has engaged in the processes of constructing what it considers to be viable representations and models of a future IS. The representations which BT utilises and with which I will engage concern the educational aspects of a future IS and how BT is active in developing a new learning paradigm and platform which is essential for the future of the Televersity project.

It is from the grandiose and practical ideas of a future IS that I now turn my attention to a range of different futures which explore the necessary spaces where a future IS may be performed. Possible future information societies will need, certainly in the foreseeable future, spaces that provide for relevant activities. The next section of this chapter explores the narratives that predict that the home is the node within which the vast ICT networks that will be of prominence in the years to come.

### 1.2.2 Home-based futures

In this second part of the introduction I intend to explore those narratives that have predicted that the home is a space of growing importance. Through this examination I will detail the idea that the home space is not only important in everyday life because of the routine activities we undertake within it such as sleeping, eating,

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<sup>19</sup> Here Ian Pearson confidently predicts 'The Changing Face of the High Street': <http://www.btplc.com/innovation%20and%20technology/insights/pearson/high-street.htm>

socialising, but also because of its important role as an access point to the vast array of information and services available via global telematic networks. I will chart how futurists and academics believe that the home functions as a domestic terminal connecting individuals to the outside world. This idea of the domestic terminal acts to undermine such ideas exposed by the likes of Helga Nowotny who thinks of the home as 'a social space of special significance which has come to signify for us the last sanctuary in a bewildering outside world' (Nowotny, 1982, 102). The approach that advocates the growing importance of specific spaces (e.g. the home or work place) is, to a certain extent, at odds with the much of the postmodern or late capitalist literature which advances the idea that the compression of time-space is resulting in a relationship characterised by flows, networks and mobility (Harvey, 1989; Castells, 1989). Giddens' advances the theory of 'time-space distancing', in which time and space 'empty out' and in which things and people become 'disembedded' from concrete space and time. This disembedding lifts social relations from the local context, and separates interactions from the particularities of locales. At odds with this we have the growing development of specific 'middle ground' spaces; reflecting the more individualised manner in which we live and offering alternative spaces for socialising as workplace regulations become more prohibitive. These practices illuminate the contrast between a future of rapidly circulating mobile objects and the de-differentiation of places in everyday life and the locale specific 'middle ground' spaces.

Firstly as part of this interrogation, I want to explore the notion that the home is become an increasingly important space as a locus for social and 'virtual' life. One of the most influential futuristic analyses of the effects of telecommunications on society appear in Alvin Toffler's book 'The Third Wave' (1981). In it he argues that advanced western societies are in the midst of a revolution based on their transformation into 'Third Wave' societies; as distinct from 'First Wave' agricultural societies and 'Second Wave' industrial societies. This revolution is based upon the new capabilities of ICTs for supporting a geographical, economic and political decentralisation of society. Central to such societies is the idea of the 'electronic cottage': a household which acts as the locus of employment, production, leisure and consumption through telecommunications based interactions with the outside world. Electronic cottages are liberated from the need to be located in cities, and so people

are freed to locate in the rural areas of their choice. Advanced telematics networks and services support the real-time contact opportunities needed to sustain social, economic and political life in the ‘Third Wave’ societies. The resulting home-centred society therefore escapes the environmental, social and political problems associated with modern urban life. Toffler expands upon the benefits of the ‘electronic cottage’ ideal:

If the electronic cottage were to spread, a chain of consequences of great importance would flow through society. Many of these consequences would please the most ardent environmentalist or techno-rebel, while at the same time opening new options for business entrepreneurship...

Work at home involving any sizeable fraction of the population could mean greater community stability – a goal that now seems beyond our reach in many high-change regions. If employees can perform some or all of their work tasks at home, they do not have to move every time they change jobs, as many are compelled to do today. They can simply plug into a different computer...

(Toffler, 1981; 210-223)

In a similar vein, James Martin, in his prediction of the oncoming ‘wired society’, suggests that the congested and polluted physical spaces of cities would in future be complemented by ‘virtual cities’ based on the use of ICTs to replace physical transport and the need for co-presence (Martin, 1981). These, he argues, ‘will allow specialised groups and activities to develop on networks linking a multitude of locations’. In his, very optimistic work, he predicted that ‘communities, campuses, laboratories, or corporate offices [will develop] scattered across the earth but connected electronically so that the chain reaction of human stimulation catches fire as it did in [the physical spaces of] Victorian London’ (Martin, 1978; 193). In Martin’s work he indicates that specific nodes within a vast global network will be of importance, similar to the work of Pratt (2000) who advances the notion of ‘sticky places’.

In the visions presented by Toffler and Martin, people spend an increasing amount of time at home working and consuming services via telematic networks. The ‘electronic cottage’ is seen to emerge as a centre for computerisation and automation comparable to the ‘computer home’ (Mason and Jennings, 1982), the ‘computer house’ (Mason, 1983) or the ‘smart home’ (Moran, 1993). Through the Tofflerian vision, homes will be reformulated to be physical access nodes for the ‘electronic spaces’ within telematics networks.

From these predictive futures, which idealise notions of the home as an increasingly important space for everyday life, the ideas have been expanded further. What has emerged are accounts that prosper on the linking together of electronic homes with ‘intelligent’ networks, to produce radical new systems, which will manage and organise everyday life. As a part of these new systems artificial intelligence (AI) and robotics encroach into transport, logistics, manufacturing, leisure, public administration and home life (Toth, 1990). Toth (1990; 37) predicts an extreme example of the pervasive diffusion of ‘Silicon-Magnetic Intelligence’ (SMI) units, linked via telecommunications, into all areas of everyday life will bring a workless society with ‘ease and abundance for all’. He predicts that ‘the new American social order will consist of 2 billion SMIs working, doing business, and generating taxes, 5 million people paid as government workers, and the rest of the population getting a salary to enjoy life’ (Toth, 1990; 37).

Although Toth’s latter example is extreme, many of the future visions predicted by the futurists have materialised. In many respects the futurists’ visions of work, education, healthcare, information retrieval and shopping facilitated by the growth of telematic networks have been realised. Presently we live in a world where the Internet is an ubiquitous resource<sup>20</sup> enabling individuals to access educational resources, an unimaginable amount of information, goods and services simply by logging on to the vast networks which encircle the world.

The visions are not without their problems, specifically there has been a tendency to practice ‘technological determinism’. That is, more often than not, ICTs are seen

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<sup>20</sup> That is Internet access is now easily found throughout the developed world, whereas the accessing in the developing world is strictly limited.

directly to cause societal change (Mansell, 1994). In their most simple form, technological determinist approaches tend to see the relationship between ICTs unproblematically as a relatively simple and linear set of technological causes and societal effects or impacts (this is further expanded upon in 2.1.1) Additionally as a second component of technological determinism, the forces that stem from new ICT innovations are seen to have some autonomy from social and political processes (Winner, 1978). In such an approach the social and the technical are cast as two different arenas, the former being shaped by the latter. I do not wish to dwell on the problems of the technological deterministic approach here, but rather would simply say at this stage that it is apparent that other influences are important in the shaping of the social and the technological and that they do so in a manner which results in disorderly and complex configurations. Further examination of these different approaches will be presented in the next chapter, which considers the theoretical and methodological issues pertinent to the thesis.

Returning to the idea of home-based futures, I want to briefly outline the idea that it is not only the home space where individuals can access information, goods and services; there are other important new social spaces, and additionally mobile access. The predictions of future ICT use that I have explored concentrates on the home as the important access space, but there are, as we know, others that exist. Currently, the other important access sites include work and educational spaces. That is, individuals are able to access the Internet and other networks using computers in their work and educational (school, college, university) places.

To understand the growth in home-based Internet access it is necessary to examine some of the recent history. It was in the mid 1990s when Internet use began to rapidly expand particularly in the academic and business environments, it was in the following years that Internet access began to penetrate the home space (with the advent of low cost PCs and Internet Service Providers (ISPs)). It was only during the late 1990s when home access began to increase at a much faster rate than access in the work place<sup>21</sup>. Also, as I have indicated, it is not only work and educational spaces that offer Internet access; its use has now been liberated from the need for specialist

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<sup>21</sup> Research by the NOP Research group ([www.nopres.co.uk](http://www.nopres.co.uk)) suggested that rates of home access increased by 109 per cent in 1999 compared to 1998 whereas the rate of use from the workplace increased by just 21 per cent over the same period.

spaces. Developments in mobile telephony now allow access either directly through a handset (firstly known as WAP (Wireless Applications Protocol) phones (we await the latest 3G<sup>22</sup> (Third Generation) phones), or by attaching a handset to a palm or laptop. What flows from this innovation are futures which predict the 'anywhere anytime' scenario<sup>23</sup>. This involves individuals whether using a desktop computer, a laptop computer, a wireless web-enabled phone or a handheld computer, to have access to their messages, their schedule and their files anywhere. Furthermore, the next level from this ability to connect to the Internet through multiple devices, is the prediction of a permanent personal network link.

What is emerging through exploring the different access possibilities is that there is also another collection of spaces that come under the concept of the 'middle ground' (MG). These MG spaces rely on the idea that specific spaces *are* important in the context of Internet access, this is where my focus now turns.

### 1.2.3 The 'middle ground' (MG)

The previous sections have outlined, firstly, the multiple ways in which the grand metaphor of the 'information society' is being utilised by a range of different organisations and institutions. These have included international organisations (EU), governments and private companies (BT) amongst important others. The second component of this introduction has introduced the idea that specific nodes or places will be of importance in a future society dominated by the utilisation of ICTs. The idea of home-based futures posits that it will be the home that will be one of the most important spaces for accessing the Internet and other electronic networks. Expanding from this position, I suggest that there may be other spaces and options that exist to facilitate access to the Internet, specifically MG spaces.

These are spaces found not at the home, or work place nor at educational organisations / facilities, but at other spaces which offer alternative access points to

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<sup>22</sup> The improved technology and high-speed abilities of 3G will offer enhanced services such as mobile multimedia, video telephony and video conferencing, high-speed Internet and intranet access and messaging, interactive m-commerce services (online banking, shopping, electronic wallets, etc), entertainment – music and video on demand, games, and information – news, shares, sport etc.  
<http://bt3g.tui.co.uk/>

<sup>23</sup>[http://news.bbc.co.uk/1/hi/english/business/newsid\\_570000/570721.stm](http://news.bbc.co.uk/1/hi/english/business/newsid_570000/570721.stm)

the Internet. These MG spaces often take the form of Internet cafés, libraries, community centres, telecentres and kiosks, all offering access to ICTs and the Internet. These MG spaces have been advocated as locales that mediate a future of universal Internet access:

Since it is not commercially viable to deploy optical fibres everywhere, a middle ground approach should be explored based on the deployment of ‘telecentres’ in each local community<sup>24</sup>

This MG approach is characterised by the ability of the spaces to simultaneously facilitate two sociological ideas.

Firstly what is noted is the idea that in technological terms that these spaces offer an interim or mediating phase in terms of the development of Internet access. The use of these new technologies result in new routines, practices and identities embedded in the context of their use. The MG acts to broker change between the past and future scenarios, that is, they mediate the inevitably perceived change towards a home-based future. This mediation is not as I have already stated purely in terms of the technical but in this component of the MG includes the mediation of new social and economic futures. This mediation in the MG (and the necessity of ICTs in the MG) may be conducive to the development of distinct identities which may find space in the MG to be performed (this resonates with the ideas of Oldenburg which are outlined in the next paragraph). The emergence of distinct identities that flow from the local context in which the technology of the MG is based upon Sorenson & Lie’s (1996) appreciation of understanding the local embedding of technology:

In practice, it [technology] is always appropriated and re-embedded in a local context when it is put to use, Many, if not most, technologies acquire meaning only when they interact with everyday life.

(Lie and Sorenson. 1996, p.17)

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<sup>24</sup> Networks for People and their Communities. Information Society Forum. Luxembourg: Office for Official Publications of the European Communities. 1996

With individuals acquiring new meanings of the new social spaces which they are utilising - new identities, routines and practices flow. Pratt outlines the importance of the social in these new media spaces, which I will revisit in the empirical chapters relating to the 'middle ground':

It was clear (in the spaces) that many aspects of human interaction, those that are important in untraded transactions, cannot be solely achieved by new technology (e-mail, webcasting, video links etc.). The need for physical interaction was identified in the practices of learning, innovating, contracting, employment, as well as in socialising, eating and relaxing.

(Pratt, 200a, p.434)

Secondly in terms of physical space, the MG spaces are actually located in between, or at least distanced, from the two spaces that dominate many peoples' lives, that is the home and work place. The character of these spaces importantly involves a material component, there is a necessary dependence on the physical, place and location are still important for such spaces to function effectively for the MG users. There has been an idea that the internet has resulted in a 'weightless economy' independent of space, but others suggest that place is still very important when connected with the use of new ICTs, Pratt, 'new spaces' (2000a) and Pratt, 'new media spaces' (2000b).

The MG may not need to serve coffee, but its material form must allow it to serve as a public place of sociability that provides access to networked computers. The MG is a type of social space with a structure which needs the material to function appropriately to offer ICT services to the users of the space. The social space that is the MG partly consists of a certain configuration of actual space in actual time, the MG also encompasses and includes physical objects that participate in discourse, thus social space is also a container of relationships (many of which we will see unfold in the later empirical chapters).



The work of the sociologist Ray Oldenburg outlines a complimentary idea, that of 'third places'<sup>25</sup> that has many sociological similarities with the properties of the MG. In Oldenburg's work on 'third places' (the other two being the home and workplace) he outlines them as characteristically places in which informal public life is found. They are places where people can meet old friends, make new acquaintances, relax and discuss the important issues of the day. Oldenburg offers a richer description of third places:

Third places exist on neutral ground and serve to level their guests to a condition of social equality. Within these places, conversation is the primary activity and the major vehicle for the display and appreciation of human personality and individuality. Third places are taken for granted and most have a low profile. Since the formal institutions of society make stronger claims upon the individual, third places are normally open in the off hours, as well as at other times. The character of a third place is determined most of all by its regular clientele and is marked by a playful mood, which contrasts with people's more serious involvement in other spheres. Though a radically different kind of setting for a home, the third place is remarkably similar to a good home in the psychological comfort and support that it extends.

(Oldenburg, 1991)

Oldenburg claims that involvement in informal public life has important psychological, social and political implications, and such involvement is made possible by the existence of third places. Oldenburg, echoing Mead, notes that 'In the absence of an informal public life, peoples' expectations towards work and family life have escalated beyond the capacity of those institutions to meet them' (p. 24). The loss of third places makes it harder to make acquaintances and develop friendship but the need to do so is clear, they have a vital role. Third places according to Oldenburg play a vital role in many parts of the world and different

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<sup>25</sup> Ian Pearson similarly outlines a future of increasing 'third places'. The growth of coffee bars, internet cafes, and store restaurants reflects the growing need for the so-called third places. Household size continues to fall, and people increasingly live apart, while the scope for socialising at work is decreasing. Many people telework, and politically correct workplace regulation often turns socialising at work into a career risk. Consequently, there is a growing demand for places to meet and socialise other than the home or office. Growing disposable income thus enables a significant 'third place' market that is being captured by coffee shops such as Starbucks, sushi bars and restaurants. We also see a generation of mall-rats who spend their days hanging around shopping malls doing nothing in particular. We don't yet have many day clubs (apart for Age Concern drop-in centres), but we should expect them the near future.  
<http://www.btplc.com/innovation%20and%20technology/insights/pearson/high-street.htm>

types of third places can be seen across the world: cafés in France, beer gardens in Germany, piazzas in Italy, pubs in England and Ireland, teahouses in Japan, are some well-known examples.

Another example that I intend to outline briefly, which reflects some of the characteristics of the MG and third places, is time-geography, which charts the 'rhythms' and 'choreography' of individuals through their daily lives in physical space (Hagerstrand, 1970). Through this approach individuals' daily lives can be charted through space-time, social interaction can then be understood as the 'coupling' of paths in social encounters, or what Hagerstrand (1973) calls 'activity bundles'. These 'activity bundles' occur at 'definite stations' ('middle grounds', 'third places') where the paths of two or more individuals coincide. As an addition to Hagerstrand time-geography those social groups with access to latest ICTs can now transcend these physical limits and rhythms because services, information and employment can be accessed in electronic space without (necessarily) moving in physical space (through teleworking, teleshopping, telebanking, etc.). What Hagerstrand called the 'time-space choreography' is no longer confined to physical spaces, for many, it also includes the use of mobile phones, faxes and email which are used to keep in touch.

I have outlined that the emergence of MG spaces (and the complementary ideas of third places and the use of time-geography) have multiple roles and enable individuals to perform a number of varied tasks. They afford individuals greater access to the Internet via the latest ICTs in informal spaces, they additionally offer a space where individuals can meet and socialise with others. Whilst they afford greater access there is still a reliance on the material, the case studies will chart this dependence and outline some of the problems associated with the necessary materiality in such spaces.

The social contact in such spaces does not have to be limited to the individuals that are present in the space, but may, via the Internet, be extended to contact with other individuals who are remote to that space. That is (as an extension to Hagerstrand's time-geography), individuals can utilise the latest chat and messaging services to communicate with remote individuals

By way of conclusion to these introductory ideas, I intend to summarise the fundamental qualities that are associated with the MG. The MG spaces are important sociologically because they facilitate and increase the access that individuals have to the latest ICTs and the Internet. This access will offer many individuals the possibility of conducting a wide range of activities via the Internet which they were previously unable to undertake, and offer the possibility for the performance of new identities and routines. A vital component of the MG is not only the ICT related possibilities that are afforded to individuals, but the social contact that such spaces offer. This social function that the MGs can perform draws on the idea that they can additionally be thought of as ‘third places’ that have an informal basis and congenial atmosphere. As a methodology for constructing how the MG can be located within everyday life, the time-geography of Hagerstrand can be useful in tracing the paths and social contact of individuals. It is in the empirical chapters (which will follow this introductory and the next theoretical chapter) where I will focus upon the actual functioning of the MG. In these chapters I will trace the activities that the many founders have to engage in, in order for the MGs to materialise. Additionally in the empirical chapter the importance of the material will be brought to bear by the account of users in the MG. Further I will explore the similitude that exists between the founders’ representations and the users’ experiences of such spaces. If there are discrepancies, I will explore both where these occur and the character that they take. Additionally in the case study chapters I will explore the ability of ANT to capture the complexity of such spaces and where appropriate, offer alternative theorisation. So now I leave these introductory themes to examine the contents of the forthcoming chapters in more detail and progress to map out the theoretical and methodological context.

### **1.3 Thesis Structure**

I now want to outline the fundamental elements that compose the chapters that will form the body of the thesis. The thesis has three parts, which are in total comprised of seven chapters. In the first part, of which this chapter is integral I have attempted to show how the idea of the ‘MG’ is being constructed and utilised by different actors who have an interest in the future use of ICTs. Further this chapter has

highlighted the need to move away from grand and simplistic conceptualisations of the relationship between ICTs and users, to explore case studies where their use is constructed and grounded in the 'MG'. What this approach, I hope, has begun to reveal, is that the 'MG' itself is a transitory and fluid idea that is not reliant on singular futures, but malleable and complex traces which co-determine its development and form. It is through exploring these co-determining and complex patterns, that simultaneously support and undermine the existence of the 'MG', that a richer sense of the 'MG' may be grasped.

The second chapter, which concludes the first part of the thesis, concentrates on the pertinent theoretical and methodological issues. This chapter includes a return to the debate concerning the positions associated with the dichotomies of social and technological determinism. From a position of dichotomy and determinism I proceed to explore the ideas of ANT and its ability to offer an alternative vocabulary and positioning to bypass the debates which have raged between the deterministic camps. ANT is not devoid of its critics, and as such it is only correct that I explore and respond to the arguments that are made against the employment of ANT. Finally in this chapter and concluding the first part of the thesis, I will consider the practicalities of the research that I have conducted. This will not only flesh out the contents of the present empirical enquiry, but also address my own interests and assumptions.

With my theoretical and methodological framework in place, I will proceed to the second and most substantial part of the thesis, that is the four empirical chapters which will detail the 'MG' case studies. In the first two chapters of this second part I will examine, the developments and use of a new educational institution, called Televersity. The first of the two Televersity chapters, Chapter three, will detail the early developments behind the 'vision' of the Televersity. This chapter will include interviews with the main actors that are embroiled with the birth of the vision, namely BT, Suffolk College, the local Training and Enterprise Council (TEC) and a prominent local businessman. These interviews will outline how actors' actions have constituted numerous local identities and roles that 'converge' and stabilise. Examples will be presented where actors have attempted to define, configure and stabilise 'other' actors' identities through their stories, with the goal of advancing

their particular Televersity model. It is from these stories that I will identify a number of important objects which are utilised flexibly by the different actors to advance their particular Televersity model. It is from these different 'models of use' that I proceed to the next Televersity Chapter 4 to examine how users of Televersity actually respond to these identities. In this chapter I concentrate on the practicalities of using the Local Learning Centres (the 'middle ground') and how they are contextualised within a broader social and political milieu. Through this examination of the users' particular models of Televersity I will be in a position to contrast these with the founders' representations of the Televersity and present multiple representations of the functionality and affordances that are associated with the LLCs. Additionally, and as a theoretical addition to this, the first case study, I will consider my own role as a conduit for information exchange and consider some of the current inadequacies of ANT in capturing the intricate complexities of a project, such as Televersity.

Chapter 5 mirrors the first Televersity chapter, as through this chapter I will present an account that details the developments which contributed to the establishment of another MG space, the Internet café. This chapter diverges from the rubric of the first Televersity chapter in its more detailed exploration of what I call 'cyberculture', which is at times directly and at other times more spuriously associated with the functioning of the café. Through an exploration of particular elements of 'cyberculture' and through an examination of the texts produced in order to promote the café I will produce multiple representations of typical 'Internet café users' and 'Internet café use'. It is these representations that will be interrogated in the proceeding Chapter 6. Finally, this chapter will consider the important role that the media performs in terms of attracting users to the café, and the ability of the founders of the café to control the articles produced in different media. This is important, in the context of the particular Internet café I have chosen, as it relies upon its media presence to reinforce the notion that the café is an essential component of a 'cyberculture'. In continuing the examination of this particular Internet café I progress in the next chapter, Chapter 6, to study the users of the MG, and examine how they are realising a particular model of MG (that is Internet café) use. This chapter aims to give a rich description of the MG, that is, this particular Internet café. Further, through an explication of the particular routines and practices which the

founders have attempted to impose upon the functioning café. I will outline identities which embody the idealised consumption of the café. To examine these idealised routines and identities I will concentrate on the actual use of the Internet as constructed by the users of the café, that is how the café ‘works’ for them. Additionally, by way of comparison I will re-examine some of the idealised and popular identities in the light of user accounts of how they utilise the café. Finally this chapter will contain a theoretical section to enable the ramifications that flow from adopting an ANT approach to the empirical research (in both case studies) to be considered.

The final part and Chapter 7 of this thesis considers the implications of the empirical research that has been conducted. In this conclusion I will revisit the research through which I will show how the MG exists in different and complex forms. These spaces are constructed in an intricate manner that results in a plethora of disorderly and fluid traces. Theoretically, I will suggest a number of important ways in which ANT (at times) needs to modify its approach to allow it to capture the complexities and ambiguities which exist in and through the MG. Further what this final chapter aims to achieve is not only to revisit the important empirical and theoretical ideas that have been examined through the thesis but also to consider the latest developments in ICT use. The field is changing with new technologies constantly being introduced into new areas of everyday life that consequently have implications for the ‘middle ground’. Importantly, I then consider, where the thesis is located within this changing field and its implication for further research in the area.

## **Chapter 2. THEORETICAL AND METHODOLOGICAL ISSUES**

As I outlined in chapter 1 there are a growing number of new social spaces which I call, for the purpose of my thesis, the 'Middle Ground' (MG). The theorisation of the MG draws heavily on the ideas of the Information Society Forum (1998), Oldenburg (1996) and others. Some of these social spaces are new, whilst others are older spaces that have adopted a new purpose by the introduction of not only new ICTs but also new humans into such spaces. I have suggested that these MGs are located physically between the home and the work place but, more importantly, rhetorically act to broker a present defined by limited remote Internet access and a future of unlimited connectivity associated with the home place, they may include new identities in such spaces and rely heavily on the material property of the MG. As a way of examining empirically the activities and workings of these spaces I will focus much of my attention on the practicalities and the necessary strategies needed to establish such spaces. Although the thesis will have a practical emphasis, it will be underpinned by a number of theoretical positions that will form the basis of this, theoretically orientated chapter. To aid the understanding of the theoretical relevance and basis of this thesis, at the end of each of the case studies I will present a concise theoretical section (which will appear at the ends of chapters 4 and 6), detailing the pertinent points which have arisen through the course of the empirical enquiry.

I will briefly expand upon the contents of this chapter that will consist of five sections. The first will return to the now rather worn debates concerning the spectrum of views associated with technological and social determinism. From this position of familiarity I will introduce a number of mediating theories drawn from the sociology of technology, which suggest that neither the social nor the technological (nor the natural, nor non-human) independently determine but that they co-determine and co-constitute one another in a manner which forms complex and disorderly traces. It is these complex traces that I seek to explore and map through the empirical chapters. The second section will focus on one of these theories, that of Actor Network Theory (ANT). ANT is a complex and 'slippery' theory, and through this section of the chapter I will seek to explicate its basic tenets. In addition to the basic ideas of ANT I will introduce the wider array of terms and activities that are now commonly associated with ANT, and examine how these will be useful to me in

my examination of the MG traces and stories. Any theory obscures as well as illuminates, as such in the third section I will consider the critiques that are aimed at ANT and its most famous (but not always acknowledged) theorists. Academics who conceived and utilised ANT never wanted the theory to become another grand meta-theory, and partly in response to its success and proliferation, the critique of ANT has been gathering momentum. It is in the fourth section of this chapter that I will examine a number of associated ideas and theories which whilst resonating with the basic pitch of ANT, differ in numerous ways. Such alternatives suggest remedies to some of the problematic issues of ANT; the privileged position which science holds in relation to knowledge discovery and proliferation (Martin – Citadels, 1998) and the ability of ANT to adequately capture the movement and changes which can be the basis of networks and objects (Mol & Law – Fluids, 1994).

It is in the final section that I turn my attention to the practicalities of the research. In this section I will consider the status and role of myself, that is the acknowledgement that I do not stand outside the subject-matter, but am better considered as part of it. In keeping with the reflexive motivations of this thesis I will detail the interaction and exchanges between myself and BT which led to the agreement that ANT provided a firm theoretical foundation upon which to proceed. I will examine the use of interviews, focus groups and periods of ethnography to trace out stories which are not only reliant on the bits and pieces that result from empirical enquiry, but also on my own interests and assumptions. Thus the following chapters will build upon this enquiry to consider the patterns that emerge out of this collision of empirical enquiry and personal ‘situatedness’.

## **2.1 The Sociology of Technology**

In seeking to address a number of the elements that circulate around and within the sociology of technology and the associated theoretical positions I firstly have to address the issue of selection, that is, why is the sociology of technology relevant to my case studies. The sociology of technology is particularly useful in examining the utilisation of ICTs in ‘middle ground’ spaces as it facilitates the capture of the complex intricacies that exist between people and technology in such spaces. It is not only the capture of complexity that makes the sociology of technology an essential



tool in this research but also because of the multiplicity and flexibility of the approaches which are included under its banner. Finally, I am convinced that the sociology of technology is appropriate for this research because of the modesty (Haraway, 1997) with which it is utilised, it avoids over simplification, and is utilised in a reflexive way, which recognises the uncertainties and contingencies of the everyday world that we live in.

From examining the background to the sociology of technology I will progress to considering the spectrum of views that encompass both technological and social deterministic positions. Within this spectrum are more contemporary positions that do not subscribe to determinism by one factor or element, but rather believe that the social and the technological (and the natural, the non-human etc.) co-determine and co-constitute one another in complex and sometimes ambiguous ways. These positions are firstly embodied by the ideas of the social shaping of technology, and I will exemplify these by examining the Social Construction of Technology (SCOT). In the last part of this section I will continue with the idea of co-constitution and its complexity by focusing on the systems approach, and finally proceeding into the next section with actor-network theory (ANT).

### 2.1.1 Technological and social determinism

I therefore begin to trace out the different positions that contribute to the understanding of how the technological, the social, the natural and other facets of everyday life relate to, and constitute one another. These positions are drawn broadly from the sociology of science, the sociology of technology and science and technology studies (STS), I will start by examining the rigid position within the spectrum, that which concerns the ideas of technological determinism.

The argument of technological determinism is well trodden and concerns the ability of technology to shape our future. Whether depicting a positive or negative image, technological determinism portrays technology as an exogenous and autonomous development that coerces and determines social relationships and organizations (Williams and Edge, 1996). Technology is treated as given, and it is assumed that it will provide an effective and reliable vehicle for social change, guided by an implicit

direction determined solely by the properties of the technology (for example, Negroponte, 1995). The ideas of technological determinism are particularly prevalent in the public rhetoric of government and industry, which assumes that paths of technological change are inevitable and by their very nature necessitate particular social changes (Edge 1994). The lack of sophistication offered by such a perspective fails to acknowledge the difficulties in implementation and frequent failure to deliver predicted and desired outcomes (Peltu et al. 1996).

The causal simplicity of technological determinism provides great clarity and as such provides immense appeal when discussing the social realities of ICT use. However, the lack of realism, which typifies such an approach, is problematic. It assumes that technology is ‘the primus mobile of change’ (Webster 1995, p. 219) while simultaneously assuming that technology is beyond the realm of values and beliefs. This perception is misleading, since it desocializes key elements of social change by separating technology from the social world within which it resides, while at the same time arguing this autonomous force is the mechanism for bringing about social change.

Emerging through a critique of the technological determinism tradition, and in recognition that technology comprises more than just machines, are the studies of the social shaping of technology, which, rather than assume that technological change develops according to an ‘inner technical logic,’ argues that it is patterned by the conditions surrounding its creation and use. The social shaping approach is a general label for approaches which are committed to opening the black box of technology for sociological enquiry (Bijker and Law 1992; MacKenzie and Wacjman 1985) and include forms of social determinism. It suggests that the capabilities of the technology are equivalent to the political and cultural circumstances of its production, the resulting material and symbolic form reflecting the circumstances of its development.

The idea that technologies and science are ‘socially shaped’ leaves open questions concerning the character and influence of the shaping forces. In attempting to understand these complexities, rather than a predetermined logic or single determinant, innovation is considered as a negotiable quality. The deterministic

ideas rely upon 'linear models' of innovation, that is a one-way flow of information, ideas and solutions from basic science, through Research and Development (R&D) to the production and distribution of relatively stable artefacts to consumers. The social shaping of technology has drawn attention to the close and reciprocal exchanges between these stages, and the differences which appear between their initial conception and their eventual application. It is from this understanding that the role of the user as well as the designer, scientist or technologist should be emphasised and examined.

Central to the social shaping of technology is the concept that there are options and choices that are inherent in both the design of artefacts and in the trajectory of the process of innovation. What is suggested is that different routes are available, leading to different technological outcomes and that the variety of different outcomes have differing implications for particular social groups. It is around this idea of flexible interpretation where the theoretical ideas of a more moderate co-determining sociology of technology, that of the Social Construction of Technology (SCOT), are found.

The SCOT theory relies principally on the notion of interpretative flexibility. This concept posits that the actors engaged with an artefact (in my thesis the 'Middle Grounds' and their associated technologies), and the users of the artefact, interpret and thus constitute the artefact in variable and alternative ways. This approach has elements that resonate with both the systems approach and ANT in that they all examine processes whereby options and choices diminish.

To understand in greater detail the processes involved with SCOT and to understand the synergy that exists between SCOT and ANT, Pinch and Bijker's (1984) classic analysis that charts the innovation that surrounds the establishment of the contemporary bicycle is useful. In the study, Pinch and Bijker, drawing upon the tenets of the strong programme and the empirical programme of relativism, stated, that the bicycle as it was constructed was a different object to all the different groups with which interaction took place. In the study there were a number of different and relevant social groups; racers who were concerned with the speed of the cycle, female cyclists who's use of high wheelers was viewed as inappropriate, safety

conscious elderly cyclists who had concerns over the high wheelers, anti-cyclists who opposed the development of bicycles. In a more specific example of interpretative flexibility the development of the air tire also was interpreted in a flexible manner; a solution to the vibration problems of the low wheeler, a means of increasing speed or an ugly compromise of safety (side slipping). What is being performed is interpretative flexibility. From this position of multiple interpretations Pinch and Bijker examine the case study of the contemporary bicycle, where the multiple interpretations were condensed and the flexibility significantly reduced. In achieving these aims Pinch and Bijker outline two connected processes of closure and stabilization.

In the process of closure the differences in the interpretation amongst relevant social groups is reduced through different mechanisms such as rhetorical closure. Rhetorical closure concerns a re-orientation towards the problem, in the bicycle case (Pinch and Bijker, 1984, p. 421), this concerned advertising the improved safety features. Stabilization on the other hand refers to the reduction in interpretation within the relevant social groups, in this case study, it is illuminated by the acceptance of the low wheeled, rear chain drive, diamond frame and tire cycle emerging as 'the' bicycle. After 1898 these details became, 'taken for granted' whilst other models became inferior, destined for the scrap heap or the museum. This stabilization is not a 'natural' process, but a social construction.

A recurring question with this analysis concerns both the tracing of the relevant social groups and the multiple interpretations that are available to such groups. Minority groups should not be ignored for political purposes, it is all too easy to shut out powerless groups a priori the analysis has even started. Their inclusion should be a matter of interpreting the relevancy of the groups in contributing towards the development of the artefact. Furthermore what groups should count as relevant, is it determined by the actions of the actors or the network analyst? Bijker approaches the issues with some sensitivity and caution. He asks for a fine line to be drawn between blindly adopting the categories by the actors, and the strict imposition of categories by the analyst in advocating a simplistic analysis.

The multiple interpretations that artefacts afford to the relevant social groups are limited according to Bijker, and patrolled by the technological frame in which the social groups are rooted. Bijker talks of the structures that have been built up in connection with the artefact, these structures are inherent in the relationship that exists amongst the individuals within a particular relevant social group. The orientation of a relevant social group towards an artefact can be transformed 'If existing interactions move members of an emerging relevant social group in the same direction, a technological frame will build up' (Bijker, 1995, p. 123).

The technological frame has similarities with Kuhn's notion of paradigm (1970) in that the frame is comprised by all the elements that influence the relationship which exists between the member of the social group and the processes whereby meaning is reduced and attributed. The frame according to Bijker enables two elements to be simultaneously captured. Firstly, meanings within the groups are reduced and agreement is achieved. Secondly, the artefacts are themselves stabilized semiotically, they become relevant and understandable to the relevant social groups. Through this conceptualisation the technological frame becomes a malleable conduit between the artefact and its social groups – as Bijker notes it is a method for escaping the 'irreconcilable differences between social determinism and technical determinism' (Bijker, 1995, p. 196).

A further note should be made about the utilisation by Bijker of the notion of relevant social groups, that is, in its use it is perhaps a little restrictive. The analysis considers social groups as unitary homogeneous groups, and negates the possibility that the individuals that comprise the groups may have multiple memberships of different groups, and the possible ramifications that may flow from this multiplicity. Thus to consider the groups as unitary and homogeneous simplifies the reality of multiple interests and intra-group exchanges. Furthermore the interaction between individuals not only reduces the meanings of artefacts, but can also allow new meanings and possibilities to flourish.

It is from this analysis of SCOT that I now turn my attention in the next section to the consideration of the actor-network theory (ANT) and its position of radical symmetry.

## 2.2 Constructing Actor-Network Theory

I noted in the previous section how the SCOT approach to explaining the role of technology in society relies heavily upon dualisms between people and objects. It distinguishes between people and societies (groups and artefacts) on the one hand and the world of artefacts (which includes the natural world) on the other. In terms of SCOT analysis this means that the social is distinguishable from the technological. SCOT illuminates the manner in which objects are shaped by humans, and a subsequent construction of a context within which people and such objects interact in a complex way. Within SCOT, people and objects interact, but they always remain divided into strict and fixed categories. Humans are humans and non-humans are non-humans, even if they live together<sup>26</sup>.

In stark contrast to this dualism, actor-network theory (ANT) relies on the dissolution and exploration of such boundaries and divisions. The historical basis of ANT relies heavily on enquires within science and technology studies (STS) and more specifically with the research conducted in the field of the sociology of scientific knowledge (SSK). In particular, within SSK, laboratory studies have illuminated the heterogeneous array of resources that scientists (and technologists) have marshalled in the construction and continual negotiation of ‘facts’.

The laboratory studies demonstrated that scientists (and technologists) far from simply observing objects (and nature) as they appeared, were in many complex ways, found to be active in constructing such entities utilising numerous social and technological tools. As Knorr-Cetina argues:

The study of laboratories has brought to the fore the full spectrum of activities involved in the production of knowledge. It showed that scientific objects are not only ‘technically’ manufactured in laboratories but also inextricably *symbolically* and *politically constructed* (emphasis in the original).

(1995: 143)

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<sup>26</sup> Wiebe Bijker, Thomas P. Hughes and Trevor Pinch (1987).

The laboratory studies further uncovered how ‘experimental outcomes are often opaque, murky, ambiguous and generally in need of interpretation and further experimentation’ (p. 152). In summary SSK in general and laboratory studies specifically, illuminated that scientists and technologists rely not only on their ability to conduct experimentation but also to utilise a number of other social and technological tools to ‘construct’ what are considered facts about the natural world.

Through these forays into the world of the laboratory as well as coming to understand the heterogeneous nature of scientists’ activities in the laboratory, sociologists also adhered to one of the primary tenets of SSK that of an applied ‘symmetrical’ approach (Bloor, 1976). What sociologists must strive to do in such domains is to explain not only what are considered ‘facts’ but also situations and experiments which are not constructed as ‘successful’ (in that they don’t contribute to the construction of ‘facts’) by utilising a common language and methodology. This commitment to a generalised symmetry, that is the commitment to explaining conflicting viewpoints in the same terms, forms one of the three principles of the sociology of translation (an early form of ANT).

In the realm of ANT, these ideas have been digested and expanded upon to extend their scope beyond the laboratory into the wider society. ANT has been described as having a ‘radical relationality’, in that it is a sensibility that has at its core a necessity to explore relations. In common with de Saussure’s linguistics, ANT (and other post-structuralist semiotics of materiality such as that developed by Michel Foucault) has extended this relationality beyond language to include all entities. Law has recently described this relationality:

All entities, it (ANT) says, achieve their significance by being in relation to other entities. This means that in ANT entities, things, people are not fixed. Nothing that enters into relations has fixed significance or attributes in and of itself. Instead, the attributes of any particular element in the system and

particular node in the network, are entirely defined in relation to other elements in the system, to other nodes in the network<sup>27</sup>.

It is from this position of ‘radical relationality’ that the analyst must, in part, explore and trace how these relations and in turn the entities, that they constitute, are performed. As we proceed to more fully begin to digest and consider this position it results in elements having no individual significance, but only in relation to neighbouring entities or to the network as a whole. The dissolution of categories and the fluidity of boundaries in this stance, mimics Hughes’ (1983) system-builders approach, where all that is solid does indeed melt into air. The divisions that exist in ANT can only be derived from an empirically based study of actors, when their activities are of consequence for what Latour (1987, p. 174) calls ‘technoscience’ which includes ‘all the elements tied to the scientific contents no matter how dirty, unexpected or foreign’. This idea of technoscience mirrors the divisions within an empirical ANT enquiry, in that technoscience also cannot be demarcated a priori to a study. This commitment to empirical study is closely associated with a second tenet of ANT that Callon (1986, p. 196) describes as ‘free association’ that is ‘the abandonment of all a priori distinctions between the natural and the social (and also the technological and non-human)’.

The final principle that ANT relies upon is that of agnosticism (Callon, 1986 p.196) that is an analytic impartiality to the actors themselves. The approach towards all actors and actants in so far as is possible should be consistent, there should be a regularity of approach and vocabulary regardless of the nature of the study. Latour further outlines the term ‘actor’ and ‘actant’ as follows:

Instead of starting with entities that are already components of the world, science studies focuses on the complex and controversial nature of what it is for an actor to come into existence. The key is to define the actor by what it does - its performance - under laboratory trials. Later its competence is deduced and made part of an institution. Since in English “actor” is often

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<sup>27</sup> John Law, 'Networks, Relations, Cyborgs: on the Social Study of Technology'. (draft) published by the Centre for Science Studies and the Department of Sociology, Lancaster University, at: <http://www.comp.lancs.ac.uk/sociology/soc042j1.html>. For an introduction to actor-network theory, see John Law (1992). For examples of the approach at work, see Bruno Latour (1987) and Michel Callon (1986).



limited to humans, the word “actant”, borrowed from semiotics, is sometimes used to include nonhumans in the definition.

(Latour, 1999. p. 303)

The approach that the analyst should have towards the actors and actants should not discriminate in terms of the nature and size of such actors, in fact in an ANT account such characteristics can only be considered in a relational manner.

It is with the three tenets of ANT in focus: generalized agnosticism (an analytic impartiality to the actors themselves); generalized symmetry (use of an abstract and neutral lexicon to describe conflicting viewpoints of actors); and free association (the repudiation of *a priori* distinctions between fields) that I want to proceed to examine a classical ANT analysis. The examination of Michel Callon’s (1986) now classic ANT analysis which charts the activities of ‘Electricite de France’ (EDF) to develop an electric vehicle will enable me to further expand upon the practicalities and vocabulary of ANT.

In the early 1970’s the EDF was developing the idea of an electric vehicle for the people of France. EDF developed a framework document that detailed the role and identities of a number of key actors whose co-operation would be essential for the success of the electric vehicle. The document represented the French public as becoming increasingly concerned with the urban implications of increased vehicle use (noise and air pollution) and the pivotal role that such vehicles played in a consumer dominated and driven society. The solution to these concerns, EDF argued, lay with the introduction of a liberating electric vehicle. What EDF had become engaged with at this stage was the process of problematisation, that is, raising problems and doubts about the status and role of others in the network. It proceeded further with this process by allocating roles to each of the pivotal actors: Renault (who would alone be responsible for the construction of the chassis); the Government (which would support the project through financial assistance and dedicated urban regulations); the French public (who desired an alternative to the combustion driven society) and the electric fuel cells and electrons (which would function in an efficient and unproblematic manner). The EDF collated and united not only human, but non-human actors in the development of an electric vehicle. The EDF as the

spokesperson for the project (and now all the other actors) had through this process constituted itself as an ‘obligatory passage point’ through which all the actors must pass if they were to achieve their ambitions (which had been recently ‘translated’ by the EDF during the problematisation). At the outset the project began smoothly, all the actor aligned themselves with the goals of EDF (which were also their ‘translated’ goals), they were ‘enrolled’ and through their relationality constituted the actor-network that EDF had so meticulously developed. At this point there was cohesion and consistency between the actors and the network, but disruptions were not far away. There were problems with the fuel cells that had been developed to power the vehicle and additionally their associated costs were spiralling. Renault was not content with merely building the chassis of the new vehicle, and contested the identity and role that the public were to adhere to. It is worthwhile to note that Renault was not content with its prescribed identity, and the reversion to its former identity, of car manufacturer, perhaps implies a history that impinges upon the network.

Callon’s account offers us a synergy with the laboratory studies of Latour and Woolgar, in that for the scientists of the EDF to successfully develop their network and realise their aim of a usable and desirable electric vehicle for French society they had to manipulate, persuade and cajole a collection of heterogeneous entities. The actor-network analyst constructs this account retrospectively and it is only through this that a careful enquiry into the relevancy of actors may be considered. The analyst should stay true to the tenets within which ANT demand that actors are not pre-judged. Callon’s EDF study suggests a possible basis for an implied history through the activities of Renault, this is an area for further research beyond this study.

So for ANT, there is exchange and weaving of humans and non-humans in the constitution of society; the illuminations of such interweaving and traces is of central importance to the analyst. This exchange of properties of affordances gives rise to the problematic issue of tracing a privileged trajectory or performance from unlimited possibilities<sup>28</sup>. The difficulty of tracing a trajectory also obscures the important activity of non-humans in structuring such trajectories and performances, which can take the form of material or semiotic intervention.

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<sup>28</sup> I will discuss further the problematic of singular trajectories and performances in the following sections.

For Latour ( 1991, 1992; Latour and Johnson, 1988; Strum and Latour 1988) it is impossible to conceive of human societies without the collaboration and inclusion of non-humans:

We are never faced with objects or social relations, we are faced with chains which are associations of humans (H) and nonhumans (NH). No one has ever seen a social relation by itself...nor a technical relation...Instead we are always faced with chains which look like this H-NH-H-NH-H-NH...

(Latour, 1991 p.110)

It must be remembered though that the networks which are composed of a collections and humans and non-humans are themselves (the humans and non-humans) the effect of heterogeneous (dis)orderings of networks. They are networks of networks. Latour has suggested that the delegation of particular roles and practices to non-humans can bring about efficiencies and benefits. Humans in such positions require monitoring and surveillance to ensure that a continued and efficient service is provided. Latour illustrates his ideas through his search for what he calls the ‘missing masses’ which examines the role of an automatic door closer known colloquially in French as a ‘groom’ by drawing analogies with the human groom or doorman.

In the account of the door groom Latour sets out to explore the potency of doors (and other technological artefacts) as actors. Latour charts how doors have as an invention solved the problem of entering and leaving building without the necessity to continually demolish and rebuild walls. The simple collaboration of hinges, springs, a hydraulic piston and a door has resulted with a self-closing device that allows passage through the wall (easily for the majority) whilst retaining the heat in the building and without the necessity of a human to enable such an activity. This simple device obviously requires less attention than a concierge or bellboy, but such an arrangement still has implications for the human users, which Latour attempts to sideline. The functioning of the door groom does impinge upon certain users as Latour acknowledges:

.... neither my little nephews nor my grandmother could get in unaided because our groom needed the force of an able-bodied person to accumulate enough energy to close the door later. To use Langdon Winner's classic motto (1980): Because of their prescriptions, these doors discriminate against very little and very old persons

(Latour, 1992, p. 234)

The door then is not available for everyone, it is selective, there are in built selections. The groom acts upon the capacities of humans to impose conditions of use upon the human body. There is disciplining necessary for the door to function. This could be traced out in a number of different ways; the using of different doors or the following of others through doors to utilise their energy etc. Latour calls this prescription:

What a device allows or forbids from actors – humans and nonhumans – that anticipates; it is the morality of setting both negative (what is prescribes) and positive (what it permits)

(Akrich and Latour, 1992, p. 261)

The use of such nonhuman entities embodies local conditions (routines and practices) which are necessary for the functioning of the groom. These conditions are normally invisible to humans, but still act to structure the behaviour of humans through their everyday lives. These structuring though are not permanent they are subject to change and refinement. The prescriptions of use can, in certain circumstances, be resisted, subverted or side-stepped by the users of the artifact. The process of subverting the arrangements of use do not have to be an all or nothing approach it can embody multiple reactions. This action does not necessarily have to be forceful, it can contain subtleties whereby users engage with the prescriptions up to a certain level and then decide not to participate, but to adopt an alternative approach or stance to the artifact.

The role of such non-humans can be as the intermediaries of their designers, scientists or technologists. Callon (1991, p.134) informs us that an intermediary can be: 'anything passing between actors which defines the relationship between them'

and this can include ‘scientific articles, computer software, disciplined human bodies, technical artefacts, instruments, contracts and money’. The intermediaries structure and compose the network which they describe, they have the role of distributing and defining identities for humans and non-humans. When the intermediaries function smoothly and efficiently (when all the actors are similarly aligned and committed) they are invisible components of the network, when they do not they are brought into sharp relief. The work of the intermediaries is exposed, the ‘black box’ falls gaping open. The fallacy is to consider technologies as simple intermediaries, they too are involved in process of mediation and alteration. They form obscure and unexpected relations with the prescriptions that they convey and propagate. The issues of multiplicity and disorder will be expanded upon in 2.4 (alternatives).

The final issue in relation to ANT that I wish to explicate in this section before I proceed to the critiques aimed at ANT, is the notion of the hybrid and hybridity, which Latour expanded upon at some length in his 1993 book ‘We Have Never Been Modern’. Latour’s basic premise stated that although we live with and now recognise the heterogeneity of the modern world, that is the interplay and exchanges between humans and non-humans, there are still attempts to strictly purify this world. Whilst we are content living in such a world, there have been attempts by the moderns to keep separate society and nature and to stop such multiplication of hybrids, and hybridity. We as moderns (according to Latour) have only recently become aware of the hybrids with which we share our world and are grappling with ways in which to understand their role and purpose<sup>29</sup>.

In explicating this position Latour (1993b) considers the hybrid that is the gun-person and the agency of such a hybrid. He posits that contrary to a modern consideration that ‘it is the gun that kills’ or ‘it is people that kill’, for Latour it is the ‘citizen-gun’ that kills. The attempt to prescribe characteristics to either the gun or the human singularly is resisted by Latour, for he believes that the composite hybrid embodies new goals, associations and relations that didn’t exist priori to its formation. The gun and the citizen enter into new translations and facilitate new actions. Latour encourages us to consider these hybrids, and states that attempts so

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<sup>29</sup> For a more comprehensive appreciation of the role of hybrids and mundane technology in society, see Michael (2000).

far, in spite of living in a hybrid-laden society, have been in the main incompetent and unimaginative.

In this overview of the development of ANT I have shown how the basic tenets of ANT are important in the formation of the basis of any empirical study. Furthermore, I have explained how ANT considers the important role that non-humans have in the (dis)ordering process and negotiation which is essential for network building. As stated in the beginning of this chapter any theory obscures and confuses as well as illuminates, and so I will now turn my attention to, a brief consideration of the critiques.

### **2.3 Critiques of ANT**

The theory of ANT has collected many admirers in its period of expansion, but has also agitated some other academics. It is those problematic elements of ANT that I now turn to. Any attempt to proliferate or to expand a theory inevitably results in the deletion of other alternatives and options, the illumination which ANT offers also obscures. In this section I want to consider some of the criticisms that have been aimed at ANT.

The illumination by SSK and the varied laboratory studies that scientists do indeed draw upon a wide and heterogeneous repertoire of tools and skills to substantiate their claims is hardly a controversial claim within STS. It is now widely accepted that in many important technoscience domains individuals are involved in what is categorised as 'heterogeneous engineering'. The more controversial claims surround the status of non-humans within network, and the agency that they impart, in Latour's account of the door groom the status of humans and non-humans is equalised, for Collins and Yearley (1992) this is not acceptable.

Collins and Yearley are critical of the suggestions made by Latour (1992) that the missing masses of the social and political order are to be found in things. They are doubtful of the actor status of such things. They believe that if agency is to be imputed to things, what is needed is an analysis of their potency. Such an analysis, of door closers for example, should include something of mechanical engineering.

something of materials science, and something of the more engineering-orientated examination of doors and some videotaping of people using doors. They argue that interpretation is no good, Latour is not an expert in any of the necessary fields of science, and rather than the missing masses, Collins and Yearley argue for the missing method.

Latour's treatment of the technological world has three problematic elements, according to Collins and Yearley; firstly that it enrolls the false ally of the counterfactual method; secondly it relies upon technologists' secondhand accounts – it is sociological prosaic; thirdly, SSK is actually adept in the consideration of the distinction between human action and the behaviour of things – yet Latour still passes this responsibility to others. Collins and Yearley comment that:

The consequences of the semiotic method (of Latour) amount to a backward step, leading us to embrace once more the very priority of technological, rule-bound description, adopted from scientists and technologists, that we once learned to ignore. This backward step has happened as a consequence of the misconceived extension of symmetry that takes humans out of their pivotal role. If nonhumans are actants, then we need a way of determining their power.

(Collins and Yearley, 1992,p.322)

They believe that ANT does not tell us why one actor rather than another is able to enforce their view of the world and the establishment of obligatory passage points. Callon and Latour's (1992) response to the claims centre on Collins and Yearley insistence that the examination of scientific activity should be explained either from a frame which relies upon either nature or society as the root cause. What Callon and Latour posit is the complete opposite:

It is the opposite in our frame, since the activity of scientists and engineers and of all human and nonhuman allies is the cause, of which various states of nature and societies are the consequences.

(Callon and Latour, 1992, p. 350)

For Callon and Latour the collections of humans and nonhumans are critical, determination cannot be traced back to the ‘last instance’ where the social is pivotal. Such claims can only be substantiated by empirical study and through the analyst construction rather than any a priori ontological basis.

Another oft-cited problem of ANT, concerns the heroic or managerial tendencies that it often performs. This managerial concern which appeared in the 1980’s was articulated in an important paper by Susan Leigh Star (1991). Although Star recognised that relations are indeed heterogeneous, she noted that ‘heterogeneous engineers’ come in different shapes and size – and that the relational ordering required by (say) a male manager is likely to be quite different to that demanded by a poor women. There are certain relational or network configurations which become standardised, and agents who do not happen to fit the pattern of the disadvantaged, whose voices may easily be marginalized. As such ANT may often portray privileged trajectories, by excluding or marginalising groups who do not appear to be captured by the theoretical enquiry of ANT. Similarly to the claims that configurations can become standardised, it is also the case, as I will reiterate later, that the position of the scientist and the technologist appears to hold a pre-eminent position in much of the ANT literature.

Feminist writers have also raised questions about the network metaphor itself. Vicky Singleton (1998; Singleton and Michael, 1993) although still working within the language of ANT, has observed that the relative stability of certain networks (her study concerned the UK Cervical Screening Programme) depended not upon coherence, but also incoherences and ambivalences. In being sensitive to the importance of metaphors Haraway’s (1994) work is important, Haraway talks of cat’s cradles and string games as alternative metaphors which do not necessarily maintain the flattening and centring ideas which are encompassed within the network metaphor. I will explore these metaphors in the next section (2.4) which explores alternatives and alterations to ANT.

Building upon the managerial complaints aimed at ANT, I wish to consider the troubling status of ‘Otherness’ which was raised some years ago by Nick Lee and Steve Brown (1994). In their work they raised the question of the status of



'Otherness' within ANT's relational approach and brought the issue of its spatiality to the fore. They suggested that ANT had absorbed and claimed to accept the poststructuralist critique of grand narratives within its idea through the all-encompassing notion of enfranchisement. ANT, they suggest, assumes that everything is capable of being part of the networked performance of agency – scallops, electrons, and door closers. In ANT it is not only marginalized humans whose voices need to be recognised but the 'voice' of things too. The approach, that orders that enfranchisement through the metaphor of the network, allows for no space outside. In effect, it leaves no room for alterity and allows for nothing to exist outside the relations that it orders through its description of the world (network). Lee and Brown suggested that ANT in its approach was colonial in its pretensions to inclusion and led to the creation of another grand narrative based on the issues of relation and difference – and the cost of such a position was the exclusion of Otherness and its less certain but equally important spatiality. It is from such a position that the examination of different topologies is necessitated and the basis of ANT is refined and reconfigured.

#### **2.4 Alternatives and Alterations to ANT**

In the previous section a number of criticisms have been raised about the use of ANT to trace out the heterogeneous ways in which humans and non-humans interact and constitute one another. In exploring these critiques I also alluded to a number of possibilities that are closely related to ANT that may be able to ameliorate some of the problematic elements. It is in this section that I will examine two such alternatives and alterations to ANT, firstly considering the ideas of fluidity (Mol & Law, 1994) and secondly exploring the role of culture through Martin's (1998) concept of the citadel, de Laet and Mol's (2000) bush pump and Michael's (2000) function-expressions.

Many of the criticisms aimed at ANT concern its rigidity, linearity and its managerial approach which the spokespeople are perceived to adopt in relation to the other actors.

Despite the introduction of concepts such as ambivalence (Michael & Singleton, 1993) I believe ANT still has difficulties with the movement of actors, by this I mean the manner in which actors connect and separate with actors which have multiple interests and goals. Additionally ANT has been criticised for simply maintaining or replicating existing identities or structures upon which it focuses.

What I aim to show through the alternative 'fluid' metaphor developed by Mol and Law (1994) is how actors and objects are granted greater movement and freedom, that is they do not have singular objectives but act to complete a plethora of complex tasks and objectives. The flexibility enabled through an alternative fluid language can, however, still constitute similar objects. What becomes apparent through this fluid approach is that objects can quite easily and logically co-exist with alternative meanings (often localised) and performances. What is being performed through the case studies is the idea of enabled continuity, despite, and in many cases because of, the difference and multiplicity that exists. So I now turn to explore two different case studies which explicate the metaphor of 'fluidity' and how such a concept has been empirically traced.

The first case study (Mol & Law, 1994) concerns the changing meanings of anaemia across a range of domains. Mol and Law chart the different methodologies and discourses that become intertwined with 'anaemia'. It is not the case, as in many ANT accounts, that the exact meaning of 'anaemia' is determined at a centre (laboratory, research institute) and proliferates to the periphery for dissemination and re-interpretation. Rather, 'anaemia' embodies and enables both continuities and differences.

The work by Mol and Law charts how anaemia can be considered to co-exist in and through three different (and perhaps more) types of space (topologies). Firstly anaemia is considered as existing in regional space, through the ability to demarcate boundaries between regions and countries. In the case study of anaemia variations were able to be recognised and calibrated so that in a general sense a distinction could be made between the 'low' and 'high' occurrence of anaemia in the Netherlands and Africa respectively.

In a consideration of a second type of space, that of network space, the case study illustrated the necessary co-ordination that was needed to establish a reliable haemoglobin measurement network that could operate in the Netherlands and Africa. This network relied upon a network of measurement machines and people who had the skill to use the machine. It is this network of measurement that makes the differentiation of regions possible. But the network does not always work, technicians in Africa are local people, and by European standards many of them are not sufficiently accurate, perhaps they are not disciplined enough. There are two ways to consider these disruptions. Firstly continue with an ANT analysis to examine the struggles that are ongoing over the network and its identity. Or secondly these disruptions could be considered by analysing the case of anaemia to ask whether there are other spaces in which these activities are located.

In another example of the breakdown of the network metaphor, the case study charts the importance of another method of diagnosing anaemia, through the clinical gaze. The clinical gaze makes use of experience rather than accuracy, which does not create exact numbers, tropical doctors rely upon their eyes rather than the laboratory. This network of the clinical gaze reaches places that the measurement network cannot, here the mobile doesn't simply move it mutates.

The case of anaemia illustrates the idea of the condition flowing between and through different countries. There is anaemia in the Netherlands and in Africa but they are not part of a single network, the relations do not stay constant they vary. It could be considered as two distinct regions, but there are no clear boundaries, where one variant stops and another begins:

We're witnessing something different, variation without boundaries and transformations without discontinuity. We're looking at flows. The space with which we're dealing is fluid.

(Mol & Law, 1994, p. 658)

From this recognition there is an outline of four features that make fluid space distinct. Firstly, that in fluid spaces there are no clear boundaries, and the objects generated within them are often blurred and not well structured. Identities and roles

are not strictly delineated and performed, there is a gradient of difference. Secondly a fluid world, is one in which things exist in a mixed state. Which can be separated at times but not at others, the fluid metaphor suggests cohesion between elements, but also a distinct and important difference to network spaces that forms the third feature. The third feature has to do with obduracy and the robust nature of objects in fluid space. There are no 'obligatory points of passage', no 'centres of translation' that have to be traversed, and because there is no single stronghold, objects don't collapse easily, they have the ability to transform to mutate. Finally the fourth point notes that fluid spaces don't exist in isolation, there are relations between the topologies.

The second case study again employs the 'fluid' metaphor to capture the simultaneous differences and continuities that co-exist. In this case de Laet and Mol (2000) explore a fluid form of spatiality in the case of the Zimbabwe bush pump. They consider the pump not as something that moves within a network, but as an other to the network. The pump within Zimbabwe is a success, it spreads far and wide in many different villages where a new pump is needed. The pump is a success because its shape changes. The elements which constitute the pump are mutable, nothing in particular necessarily holds in place. Elements break off and are replaced by alternatives that don't always seem to fit. It is not only the elements directly associated with the pump that are replaced, but also the social and village relations it is embedded within, which are also added to, new associations and components which were not included in the original conception.

As an object that changes shape, it looks and is used differently from village to village, one might consider it a failed network, unable to maintain its shape, its configuration. And yet it makes sense to consider that it is the same 'Zimbabwe bush pump' that moves from village to village undergoing slight alterations. The 'inventor' of the pump is content for the variations on his design to exist, and is delighted with the differing variations that co-exist. The variation, the mutability of the pump also includes what it is for the pump to work, but again the successful definition (that is the production of clean water) is also variable. The differences in what is acceptable as 'clean water' is determined by the lack of rigid water standards.

that are not enforced by the Zimbabwe government. thus again variations exist. The conclusion, then, is:

That it misses the point to think of the bush pump as an object constituted within a failing network. Instead it is more useful to think of it as a fluid object, one that flows, in different network configurations, into different Euclidean locations in (and beyond) Zimbabwe.

(Law and Mol, 2001, p. 5)

What we find in both case studies is a fluidity which enables difference and continuity to co-exist, and a flexibility of boundaries which can be malleable, as opposed to the problematic defining of strict roles within ANT. What fluidity presents is change that is not defined by boundaries, but by movement on a gradient of difference. The boundaries are not strictly defined but are drawn out of a heterogeneous mix that can be considered culture. The processes which are involved with change are not as aggressive, as antagonistic as in ANT, in fluids the processes of collaboration and change requires movement and reconfigurations from both (or many) parties. What is noted is that in a topology of fluidity continuity demands gradual change and difference. The inventor of the bush pump who sees different pumps here and then, patched up, re-appropriated, believes that the pump belongs to many different people and works in many places where it never would have if the originally conceived relations were rigidly imposed. This also means that ‘the ‘inventor’ performs fluidity himself. He contributes to enacting the fluid space within which the pump achieves shape constancy (de Laet and Mol, 2000). The bush pump is simultaneously drawn from and contributes to the culture in which it functions, the ‘inventor’ in recognising this is content with the heterogeneous forms and meanings that it performs.

What fluids expose is the ability of difference, continuity and multiplicity to be performed in a variety of settings and through a range of practices and discourses. One of the missing discourses, which prohibits multiplicity within ANT is addressed by the work of Emily Martin (1998) exposing the citadel-like functionality of ANT, and questions the neglect of the term, culture. Martin believes that ANT operates in a manner which mimics the metaphor of the citadel: knowledge is discovered.

negotiated and constructed within the walls, the knowledge then filters out from the centre to the periphery. In opposition to this, Martin regards 'both 'science' and 'society' as categories....produced inside the heterogeneous matrix of culture, the missing term in ANT' (1998, p. 30).

As an alternative to the citadel-like structure of ANT, Martin posits Deleuze and Guattari's idea of the rhizome and Haraway's inspired string figure. The rhizome for Martin is a system represented by numerous protrusions that increase the possibility of connectivity, they may solidify as bulbs or tubers, be torn apart and disturbed only for them to re-establish themselves. This rhizome claims to capture the disjointed, fractured and complex relationship that exists between science and different cultures. Thus, the linearity of ANT is countered by the Deleuzian ideal of the rhizome<sup>30</sup> where the controlling and strict role of the immutable mobile gives way to a more flexible and uncertain reception of the mobiles within and through culture.

Similarly Martin considers Haraway's (1994) use of the metaphor of the cat's cradle and string games as tropes for thinking about semiotic relationality which does not bring about the flattening and centring that has gone with certain uses of networks. Compared to the more gladiatorial and conflict orientated approaches of ANT, the cat's cradle is a more collaborative form for constructing complex patterns through a rotational approach. In passing of the cradle:

'one does not "win" at cat's cradle; the goal is more interesting and open ended than that. It is not always possible to repeat patterns, and figuring out what happened to result in intriguing patterns is an embodied skill....Cat's cradle is both local and global, distributed and knotted together'

(Haraway, 1994, p. 70)

I would add my own personal caveats, that with cat's cradle disaster and disruption can still occur whether it occurs when the string is unable to be unknotted, or the upset at the inevitable end of the game, when a pass is incomplete. The emphasis during the game is on the receiver of the cradle. if they are unable to successfully

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<sup>30</sup> For further Deleuzian ideas, see Lee and Brown, 1994; Wise, 1997

‘take on’ the cradle, they cause the breakdown, thus perhaps not a winner, but a loser may more easily be identified.

In exposing the ‘missing term’, Martin’s work on the importance of the heterogeneous matrix that is culture resonates with other important elements which are embroiled within Martin’s term of culture. These examples illustrate the manner in which the artefacts are constructed within a cultural matrix and the importance of this context for the constitution of the technology.

Similarly the account of the bush pump previously detailed, demonstrated the importance of the cultural matrix within which the pump is constituted. The pump is performed across different settings and is utilised in different forms in relation to, and constituted by the cultural matrix.

In a further example of the importance of the cultural matrix, the expressive dimensions of technologies are examined and illuminated. Michael (2000) illustrates this in the context of Latour’s groom, outlining that the door groom is not just an automated door closing and heat saving device – rather it allows individuals the ability of expression:

For users it enables the expression of who one is – it is fundamentally a manifestation of material culture. If one is muscle-bound, one can open the door, stiffened with a door groom, with a muscle-bound flourish or not. If one cannot open the door, one can discreetly recruit relatives or loudly complain to passers-by.

(Michael, 2000, p. 34)

Michael’s function-expressions are relational, that is, they are constituted and enabled also within the heterogeneous matrix of culture. He draws upon the idea articulated by, Bourdieu (1984), that is, technologies as artefacts of consumption and use, are ‘opportunities’ for the performance of taste and identity. The point that I wish to draw attention to is that such ‘opportunities’, such ‘function-expressions’ are bounded and constituted within and through the matrix of culture. That is the expressive elements which are enabled by the technologies are constituted through

the cultural practices and routines which are enabled and ratified by Martin's heterogeneous matrix of culture. It is through an exploration of the practices and routines (and a consideration of the problems) that occur in the 'middle ground' that we can appreciate not only the overlapping and fractal nature of the objects but also the culture of such spaces. In examining the MG I need to trace out a collection of different practices and routines to illuminate and verify that a form of multiplicity does indeed exist. That is, does the case study data illuminate distinct occasions when there appears to be multiple objects and organisations that are separate but still connected (as is suggested by the issue of fractionality). To explore the complex co-constitution of the cultures in which such spaces reside and are constituted I need now to turn my attention to the necessary methodologies to explore such relations in the 'middle ground'.

## **2.5 Methodology, Practicalities and Ethics**

In this final section I turn my attention to the practicalities of the research. In this section I will consider the status and role of myself including the negotiations and exchanges with BT that shaped the form of the research. Further I will consider the use of interviews, focus groups and periods of ethnography to trace out stories which are not only reliant on the bits and pieces that result from empirical enquiry, but also on my own interests and assumptions. Thus the following chapters will build upon this enquiry to consider the patterns which emerge out of this collision of empirical enquiry and personal commitments.

I will consider the techniques of empirical research which I employ in order to map out and trace the activities and experiences which occur in the 'middle ground'. In accordance with the commitments of the theoretical position taken in relation to this study, the research must be seen as a process in the making, not purely the application of techniques and methods to the subject-matter. The sources that I draw upon are various, which include interviews with actors involved with 'middle ground' spaces, focus groups with users of 'middle ground' spaces, participant observation at a 'middle ground' space and the examination of different texts<sup>31</sup> produced by a diffuse range of individuals and organisations. At a very practical

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<sup>31</sup> See Appendix D for a full list of Cyberia media sources



level the relevant data for the case studies was generated through interviews, focus groups and the fieldwork. For the educational case study (Televersity) I conducted in total 24 semi-structured interviews<sup>32</sup> with the important actors associated with the project and a series of eight, one and half to two hour focus groups<sup>33</sup> which took place at two of the Televersity's Local Learning Centres, further fieldwork included visits to technical laboratories, the 'middle ground' spaces and co-ordinating centre. For the Internet café research<sup>34</sup> in total 12 establishments were visited and at the selected café a total of 40 hours were spent observing the use of the café and informally interviewing and recording the views of 210 users of the café. Each semi-structured interview took from 10 to 20minutes, the interviews were recorded in a written form by myself and summarised just after the interview. The actual process of identifying and selecting interviewees was not totally controllable but largely dependent on selecting people who were waiting to use a computer. Interviews were also conducted at the café with 2 members of staff and further interview with 2 members of the corporate group.

### 2.5.1 Relationship with BT

As a student holding a CASE studentship I had certain obligations to my CASE body, in this case BT, which I had to adhere to and which ultimately influenced the direction and form of my research. CASE studentships provide funding for students to undertake research in areas which are of interest both to the CASE body and the recognised university department. The benefits for the CASE body as detailed by the ESRC<sup>35</sup> are as follows:

- The opportunity to access key expertise that may not exist within the company or which may not be cost effective to develop in-house.
- An opportunity to test the value of collaborative research for a relatively modest outlay.
- The ability to fund valuable but not necessarily the highest priority research, for which an economic case for doing the work in house would be difficult.

<sup>32</sup> See Appendix A for a full interview list and sample questions

<sup>33</sup> See Appendix B for further focus group details

<sup>34</sup> See Appendix C for an interview list, sample questions and demographics of interviewees

<sup>35</sup> <http://www.esresocietytoday.ac.uk/ESRCInfoCentre/opportunities/postgraduate/pgtrainingpolicy/index3.aspx>

- Providing future researchers/potential employees with 'real life' experience of situations outside academia whereby academics have a better understanding of the public/voluntary sector and employees have improved research skills.
- Developing the skills and careers of staff

As detailed in the introduction to this thesis I agreed the direction of my research through a number of meetings with both my academic (Mike Michael) and CASE supervisor (Chris Tuppen), further I had to produce quarterly reports for BT to keep them up-to-date with my research progress. I attended two meetings in London to discuss the direction of my research with both my supervisors. I also attended a BT CASE studentship workshop day where a number of BT students studying in a similar area (Digital Superhighways) were asked to present a summary of their intended research and their experiences of working with BT as a CASE body. This was an interesting event; many students highlighted the continual demands by BT to make sweeping generalisations, often at the initial stages of the research, which most of the students felt uncomfortable with. Personally I never felt any pressure to comment in a macro sense on the implications of my research; I was happy to talk about it with authority in context but when prompted to try and draw wider implications I always highlighted the uncertainties involved.

Through the meetings with my CASE supervisor it became apparent that the fieldwork components of my research were familiar to BT and as such they could understand the merits of a case work approach to my research. He agreed at an early stage that the combination of semi-structured interviews, participant observation and focus groups would give a rich insight into the development of the 'middle ground'.

However the theoretical basis, that is the utilisation of ANT, had to be explained in more detailed and with supporting evidence from both myself and my academic supervisor, Mike Michael. I had to produce documents outlining the benefits of using ANT as a theoretical approach to the subject matter. These documents charted its development through the science and technology studies (STS) and the sociology of scientific knowledge (SSK). I argued that ANT would enable me to trace out the heterogeneous networks which were being assembled to support the 'middle ground'

without the usual *á priori* judgements being made. BT liked the idea of supporting a theoretical framework which was flexible and didn't rely upon the old framing and structures, it was with these persuasive arguments that ANT emerged and developed as an appropriate theoretical basis for my research into the 'middle ground'.

### 2.5.2 Empirical Methodology

Actor-network theory and its associated variations and alternatives relies on the tracing of a collection of heterogeneous actors, artefacts and other entities to support its analysis, thus the use of a varied and eclectic mix of sources and resources would reflect this approach. We can safely assume that any methodology is limited, and that any appreciation of its value must lie in how it complements the narrative in which it is utilised. In the centre of these choices and limitations is the researcher whose task it must be to persuade, to be suggestive, and not to construct the narratives in a manner which excludes alternative, ironic or 'nuanced' readings.

This point naturally leads to the familiar path of our of position within the methodology, it is not that we stand outside of the 'methodology' and apart from the subject-matter, we are better seen as part of it. As I have stated, the research firstly relied upon the interviewing of connected actors in a 'semi-structured' manner. This division commonly made in the methodology section and chapters of papers and books between 'structured' and 'unstructured' is perhaps misleading in that even the most 'unstructured', interview is still structured in a number of sometimes subtle ways. The purpose of the interviews (there is one, which adds structure) is not a simplistic exercise in which objective interviewers extract objective facts from, presumably objective subjects, rather, the interview is an interactional situation (Denzin, 1978: p.112-113) and it is more useful to talk of data (narrative) generation rather than data collection (Mason, 1996: p. 35). This structuralist approach ignores the way in which people actually talk and obscures the processes by which language is socially constituted. My argument is that the production of language and the

construction of selves go hand in hand, and with this shift the interview metamorphoses from a thin to a thick methodology<sup>36</sup> (Geertz, 1993).

The manner in which Latour outlines the use of interviews within ANT is to rely upon ‘following the actors’, that is, not to make a priori judgements about who should be in or excluded from the analysis, nor about their status and role within the network. This is the exact manner in which I selected and traced the actors who I interviewed. I simply asked them who else I should speak to about the development of the particular ‘middle ground’ space that I was researching and why it would be important to speak to them, that is, they contextualised the relationship between themselves. Further, to research the use of these new ‘middle ground’ spaces I conducted a series of focus groups with some of the users of the spaces, this methodology has a long history in market research (Morgan, 1988), and more recently in medical research (Powell & Single, 1996), but under-used in wider social research. Powell et al (1996) define a focus group as:

...a group of individuals selected and assembled by researchers to discuss and comment on, from personal experience, the topic that is the subject of the research

(1996: 499)

The main purpose of focus group research is to draw upon participants’ attitudes, feelings, beliefs, experiences and reactions in a way in such a way that would not be possible in other settings. They can be used at the preliminary or exploratory stages of a study (Kreuger, 1988), during or after a study. The potential benefits of using focus groups include the ability to elicit information in a way that not only relaxes the groups members, but also finds out why an issue is salient, as well as what is salient about it (Morgan, 1988). If through the process multiple understandings and meanings are revealed by participant, multiple explanations of their behaviour and attitudes will be more readily articulated, and enable a more complex tracing to occur. Further, there are benefits for the participants that take part in the groups. in that they may be offered the opportunity to be involved in the decision-making

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<sup>36</sup> It should be noted however that my interpretation of Geertz’s thick methodology considers the methodology as offering analysis and is not just purely descriptive.

process, to be valued as experts and to be given the opportunity to collaborate with researchers. If the groups work well, trust may develop and the groups may explore solutions to a particular problem or issues as a unit (Kitzinger, 1995) rather than as individuals. As with all methods they have their limits, the stories and data which result from the groups, are generated within a specific context, within a specific culture, and so it may be difficult to clearly identify an individual (rather a group orientated) message. Additionally in a group scenario members may be discouraged from trusting others with sensitive or personal information, as they are not confidential or anonymous, in such cases personal interviews may be also used in parallel with the focus groups.

The final methodological process concerns an ethnographic study of the ‘middle ground’ spaces in use. The main data generation technique is participant observation, which involves actually taking part in the activity being studied for a prolonged period of time, which can be any period between a month and a number of years. Woolgar (1988) describes it as:

...a style of research in which the observer adopts the stance of an anthropologist coming upon the phenomenon for the first time. One takes the perspective of a stranger as a way of highlighting the taken-for-granted practices under study.

Importantly for my study, ethnography does not limit itself to the examination of predetermined phenomena, which is important for domains where the phenomena are not yet fully understood. In terms of the time spent at the observation site, this can vary as stated, and can be reduced if the researcher is familiar with the observation site which is reflected in Computer Supported Co-operative Work (CSCW) where there have been moves towards ‘quick and dirty ethnography’, where the fieldwork is of a briefer duration than the normal extended periods of immersion (Hughes et. al, 1994). Subsequently this decreased level of immersion in the field in this thesis take an approach based on the principles of ethnography, whilst hesitating to go so far as to call itself a true ethnography – it involves ‘ethnographically informed fieldwork’.

As the behaviour of the participants in the ‘middle ground’ cannot be divorced from the setting or context (Winograd and Flores, 1986; Hutchins, 1995), the aim is to therefore describe and attempt to understand the way in which participants interpret their own actions. What must be explicated is how the individuals in the ‘middle ground’ contextualise and understand their activities. In relation to this we must consider the particular ‘models of use’ in such spaces. The ‘models of use’ relate to the specific routines and practices which are advocated by the founders of such spaces. There is deviance from these idealised ‘models of use’ so it is vital to understand how users construct their own ‘models of use’; and as such how they are performed and sustained in the ‘middle ground’.

In the activity of tracing out the stories and ‘models of use’ of actors I should remain focused upon the simplifications, the deletion and the selectivity that occur within the (and all) research, I will tell it not ‘the way that it is’ but ‘the way it might possibly be’. I should not be so grandiose to present completion in my accounts, but to hope that I have at least captured some of the complexity and heterogeneity that is lying in the disturbed states that characterise our everyday life.

### 2.5.3 Ethical Considerations

Within my thesis I have a responsibility to the relationships formed and the representations of the data which is the result of such relationships, whether is be representations of an individual or organisation. This responsibility is conventionally realised by granting subjects access to the draft report with a ‘right of reply’ or by granting anonymity for subjects data to be included with the thesis. Practically however deciphering long academic texts is onerous to most people, especially when they are offered in draft from thus this not always an adequate response to the question of ethical responsibility.

Throughout my research I endeavoured to give my interviewees the ‘right to reply’ option where practical, the interview data that has been utilised has been used with the permission of the subjects. The majority of the interviewees requested to be referred to in the thesis by their job titles. except for a few who wanted to be named

to emphasise the fact that the views voiced were his or her own and not necessarily the organisation they represented.

As a practical necessity the 'right to reply' was not offered to the larger scale data sets (i.e. the focus groups and interviews with the users of the Internet café). In this instance all data from these sets has been quoted anonymously to protect the rights of the interviewee or focus group member. All individuals from the large data sets were asked whether they could be quoted in an anonymous fashion, without exception they all agreed to this.

This position does result in a number of complications which must be considered in the reading of my thesis, in that there are individuals who want quotations directly attributed to themselves, quotations connected to only 'job titled' individuals and anonymous quotations from the large data sets. I don't see this complication as creating any further ethical responsibilities; rather it is an explicit consideration in the reading of the text. The reader is used to making sense of multiple sources and attributions when reading texts, synthesising their own meaning from the text, this is nothing new.

On the basis of these theoretical, methodological and ethical reflections, I now want to address the practicalities of exploring the 'middle ground' spaces. In these spaces I shall show how the introduction of ICTs have enabled a number of different possible configurations and possibilities to be realised. The case studies will examine the development of 'middle ground' spaces as part of a larger educational project to deliver learning and training courses across the rural county of Suffolk, and secondly how a 'middle ground' space functions as an Internet café. When examining the case studies I will refer back to the theoretical points made in this chapter at the end of each of the empirical case studies by way of a theoretical section, which will address the major points of theoretical interest arising from the case studies. So now I will leave these theoretical considerations to progress to the examination of the development of 'middle ground' spaces, which forms a critical component of a new educational institution, called Televersity.

## PART 2. Empirical Examination into the Middle Ground

### Chapter 3 Constructing the Virtual: The Televersity Project

#### 3.1 Reflecting upon my Televersity

I first stumbled upon the Televersity project when looking at the research projects that BT were involved with at that time (May 1997). I felt that this project fitted the criteria that I had decided were important for my area of study and that this project would be suitable for the empirical research necessary for my PhD. Four factors were important in deciding upon a suitable empirical research site for my area of study. Firstly I wanted to study and interrogate projects where Information and Communication Technologies were being utilised in (what I felt were) innovative ways and in unconventional spaces (later to become the 'middle ground'). In this project it was not so much the use of ICTs for education, which have been used extensively for many years, but the application and utilisation of these ICTs to establish a new kind of learning institution, the creation of a Televersity, that interested me. Secondly I felt this project was suitable because of the stage it had reached in its development; the model<sup>37</sup> of the Televersity was still under much discussion and set to go through further periods of construction and alteration. Thus I could say that this was an educational institution (or technological assemblage) in the making, not yet rigidly blackboxed, with the separate actors and entities still circulating and ruminating over its exact nature and function. Thirdly the project (from what I could ascertain) was of a manageable size for me as a single PhD student to research. I would be able to interview all the actors, who were mentioned to me during an initial interview with a staff member of Suffolk College. This member of staff also informed me that I would also be able to organise a series of focus groups with the consumers of this new educational institution, which I felt would be essential in considering the users' stories and experiences of using this new educational institution. Finally the Televersity was suitable because BT approved of me using this project as an empirical case study for my research. BT could easily provide me with contacts involved with the project; it was also close to Martlesham

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<sup>37</sup> This term model refers to the future ideas and representations that the Televersity will encapsulate, the roles and responsibilities of the future users and the implications for a future decentralised learning institution.



laboratories which meant I could combine research visits to the Televersity project with visits to Martlesham.

This chapter is divided into four sections, which relate to the development of the Televersity project and the emergence of the ‘middle ground’. The first section relates to my personal analysis of the data collected on the Televersity project. It offers a personal perspective on the project and the relationships that existed between the involved actors. The second section provides a periodization of the important events which occurred during the last ten years. It also introduces the institutions and actors that are connected with the project, and sets the context in which the learning centres and the ‘middle ground’ emerge. The third section relates the stories of the central actors in the Televersity concerning the Televersity project: their reasoning and explanations about how and why the Televersity took the form it has. The final section examines the co-ordination and collaboration of the actors within and around the co-ordinating body, the Task Group. It consider the functioning of this group, the development of the Local Learning Centres (LLCs) as an integral component of the Televersity project and traces the increasing materialisation of the ‘middle ground’.

### 3.1.1 Encountering the Televersity Project and Practicalities

In this initial encounter with the Televersity project I want to narrate a personal history of my relationship with this project. As I previously stated I chose this project as part of my empirical research because I felt it met my selection criteria of an innovative project, a project still in the making and a project with a degree of manageability. Furthermore, through this practice of personal narration, I will outline my own role within the development of the Televersity project, the resources I utilise and the identities and relationships that I am dependent upon.

So I will now return back to the period of time when I first encountered the Televersity project in early 1997. As I stated earlier, during this period I was searching for a suitable project that had connections with BT. I talked with my supervisor within BT about the kind of research that interested me, and that would also complement the ideas and projects that were being developed by BT. He was, I believe more interested in me turning my attention to the application of ICTs to

education and learning rather than ideas concerning tele-work or tele-health. He felt there were already many research projects being conducted in these areas; moreover there was also a closer relationship to his field of expertise, social and environmental policy. He was supportive of my interest towards the project as I could easily combine visits to the Televersity project and Martlesham laboratories (which were based just outside Ipswich) on the same visits.

I first found information on the Televersity project on a number of websites connected with BT and Suffolk College which outlined the nature of the Televersity project. On Suffolk College's website it described the Televersity as a collaborative initiative between BT, Suffolk College and the Confederation of Coastal Schools in Essex. The overall aim of the project was to explore, through a series of case studies, some of the issues and problems of delivering University level courses over a distance. Three case studies were outlined:

- an initial teacher training case study (exploring the deliverance of training in schools rather than colleges)
- a business studies case study (researching the role that telematics could have in increasing training opportunities for SMEs)
- and finally a health case study (the aim was to explore, in partnership with Suffolk College, the issues of delivering Nurse Education remotely).

After receiving further documentation concerning the Televersity project, and talking to Suffolk College and BT about my programme of research, I first went to meet Peter Funnell at Suffolk College. I hoped he would be able to explain to me the substance behind the vision of the Televersity and help me understand the exact relationships behind all the projects<sup>38</sup> that were associated with the Televersity idea. At this stage it was hard to understand actually how the Televersity would be used by the people of Suffolk. The 'how' and the 'where' were, in my mind, unanswered.

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<sup>38</sup> By this I mean that at this stage there seemed to many projects and associations connected with the Televersity vision, including A European Televersity Partnership Project, The Telematic Learning Project, the Confederation of Coastal Schools in Essex Project, the East Anglian Telematics Strategy the East of England Competitiveness Strategy, and the University for Suffolk Project.

Before I introduce the Televersity project, I want briefly to add some background to the feelings and concerns that emerged in the process of investigating the project, and some of the practicalities. For this case study I conducted a total of 24 semi-structured interviews with the important actors associated with the Televersity project. Additionally in collaboration with Suffolk College I conducted a series of eight focus groups that took place at two of the Televersity's Local Learning Centres, further fieldwork included visits to BT Laboratories and other 'middle ground' spaces. My fieldwork visits to BT Laboratories always involved meeting with the Human Factors team and them giving me an update of their work in the various fields they were working in (distance learning, learning platforms, group learning dynamics and many others). Further media research included examination of BT's texts concerning the Televersity development and texts produced by Suffolk College.

Whilst meeting and interviewing the actors involved with the project, I felt that they thought I could offer them an objective 'outsider's' analysis of the project. I had travelled all the way from Lancaster University to a small educational establishment in Suffolk, to offer them my highly considered research opinion on their project. It was novel, I think, for an 'outsider' to be interested in the activities of a small college<sup>39</sup>. Further I felt that I was respected (especially at Suffolk College) and that my comments were of some benefit to them, this was not the case at BT, where I felt more of an observer than an integral component of the research project. BT in this respect always had PhD students based and passing through the laboratories and as such my visits were routine rather than out of the ordinary.

Now I want to return to the initial engagements with the actors and the materials that comprised the Televersity project. I finally met with Peter Funnell in mid 1997 and what follows is my understanding and representations of the Televersity initiative as conveyed to me by Peter. He explained to me that Suffolk College had gone through a major series of structural changes in the last ten years, in response to changes in legislation, changes in the vice-principal and other staff members. He explained to

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<sup>39</sup> There are implications that result from this relationship. Firstly I believe that Suffolk College were more interested in my research because of my external status, they believed that I could give a markedly different approach to the analysis of the LLCs. Secondly I believe they were keen to use me as intermediary, that is, to diffuse the awareness of their research further. Thirdly in the focus groups I was treated with a great deal of respect as an 'outsider', the participants, I thought, really listened very carefully to what I had to say, as if I knew the future implications of the technologies they had been using.

me that there had been significant growth in the number of students in higher education, and also changes in the accreditation process whereby degrees were now accredited by the University of East Anglia (UEA). During this period the institutional status of the college also changed whereby the college became a University College (University College Suffolk, UCS) of the University of East Anglia.

The changes that the college had undergone, he explained, had contributed to the initial interest and investigations into the idea of a University for Suffolk. But I wanted to know more about where the idea came from and how BT was, and became, involved. I thought surely BT must have been important to the nature and development of such a project.

The Televersity, and the interest in the idea of distributed learning, Peter informed me, came from 'recognition amongst principle players in the community'. By this I presume he meant politicians and business people that had had, and continue to have, strong associations with the college through their everyday work activities. The county suffers, I was told on numerous occasions<sup>40</sup>, from the lack of a university; it suffers both economically and socially. To facilitate progress concerning the economic and social future of the county, a Task Group was established to critically examine the idea of a University for the county, and furthermore the possibility of a Televersity. This Task Group would consider both the advantages and disadvantages of an institution of university status for the county.

But I still had many questions concerning what the Televersity was. The material manifestation of the project was closely linked to the Telematic Learning Project, a two year project to establish a distributed pilot model of the Televersity. This distributed model I would find out included the establishment of a number of Local Learning Centres throughout the county, to facilitate this model of a Televersity.

This initial two year pilot project was funded by Suffolk Training and Enterprise Council (TEC) and aimed to enhance access to higher education for employed people throughout Suffolk. It recognised that many people do not have access to the Internet

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<sup>40</sup> These include meetings with BT, other staff members at Suffolk College, Suffolk TEC.

at home or at work so a number of Local Learning Centres were to be set up throughout the county. Learning centres would act as resource centres and access points for higher education within the community. They were to be equipped with computers that provided a live video link to the main campus in Ipswich and high-speed links to the Internet.

These centres would function as a 'middle ground', enabling access to ICTs and facilitating learning and education for the users of the centres. They are considered 'middle ground'<sup>41</sup> spaces as they are located neither in the workplace nor in the home, but in intermediary spaces. These spaces reduce the need to travel to the central campus in Ipswich to undertake programmes of study, they offer a chance of education and training which is both cost effective and local. These spaces as well as being physically 'middle' (between home and work) were more importantly also seen as temporally 'middle' or 'intermediary' in terms of technological and social progress. They would broker<sup>42</sup> both the past and present situations of learning and education, and facilitate future educational paradigms. As we shall see they feature in brokering accounts by other actors (predominantly BT) who present a future paradigm of home based or individualised learning. These spaces are presented as merely temporary phenomenon mediating a home orientated model of the future. Later in the chapter I will expand upon these ideas of mediation and futures, and recall some of the actors' representations and accounts of futures.

I now want to return to the Televersity idea by expanding further upon the practicalities of the centres. The first centre opened in March 1997 at the South Suffolk Business Centre in Sudbury. Sudbury is a market town with a population of about 30,000, and is approximately 22 miles from the main SC campus in Ipswich. The centre is located in the South Suffolk Business Centre, a facility that houses start-up businesses. The Learning Centre used the computing facilities of a small private training organisation Compute-IT. The small training room contained three networked PCs linked to the Internet and a dedicated PC based video conferencing

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<sup>41</sup> The 'middle ground' concept is utilised in the First annual report to the European Commission from the Information Society Forum, *Networks for people and their communities: Making the most of the information society in the European Union*. "Early widespread deployment is not commercially and financially viable. A 'middle ground' approach could envisage fibre deployment to "service centres" or "telecottages" in every community, enabling smaller businesses or residential users to gain access to new services on a cost efficient basis, close to their sites, even if not yet their premises. Extensions to homes and small business premises may become viable at a later stage, depending on demand and on technology development" (p.115)

<sup>42</sup> By this I mean they seem to offer qualities of the past and a pre-determined future simultaneously.

suite. In addition the Business Centre conference room and reception facilities were utilised during the project.

The second centre was based in Haverhill a similar sized town, 40 miles south west of Ipswich, which grew rapidly in the 1950s due to relocation of people from London. The centre opened in April 1997 and is located in Samuel Ward Upper School, a mixed comprehensive for 11-18 year olds. The Learning Centre occupied a dedicated classroom, equipped with six Internet linked PCs and a video conferencing terminal.

The Stowmarket centre was to be based at the Museum of East Anglian Life and occupied the gallery above the Museum shop. This gallery was rarely used and the Museum Director who was keen to develop a joint initiative to promote both the Televersity and the Museum made it available. The Learning Centre, equipped with four PCs was due to open in September 1997.

The final Centre was to be based in Leiston, a small town in the east of the county, characterised by relatively high unemployment as a result of its former economic dependence on the construction of the nearby Sizewell nuclear power stations. The Learning Centre was to be located in a dedicated room at the Leiston Training Centre on the Master Lord Industrial Estate. The Learning Centre forms part of a START initiative (self-employment training at rural televersities) where a range of integrated services for micro-businesses were being provided by Suffolk and Norfolk and Waveney TEC's, IPSENTA and LET, Business Link Suffolk, the Rural Development Commission, Suffolk County Council, and Suffolk College.

There were also proposals for other centres to open in the following few months, it was possible that a network of up to 15 Learning centres would be established over the two years.

Students would be able to use the facilities at the Learning Centre at flexible times and a Learning Advisor would be available for advice and technical support. The Learning Centre was designed to offer a friendly and professional environment where students could meet fellow students as well as use the Telematic resources.

Some students would also have access to the Internet at home or at work and an important part of Suffolk College's research was to assess the relative benefits of studying at home, work or at the Learning Centre.

The technology at each of the centres was deliberately chosen to be low cost so that it would be affordable for small rural communities. Each of the centres would contain up to seven Pentium PCs which were networked together and connected via ISDN lines to the Internet. In the centres the applications available were:

- PC based Video-conferencing. This enabled point-to-point communication between tutors and students and the sharing of applications. For this, both the remote tutor and student need to be online at the same time i.e. the communication is synchronous.
- Internet based conferencing using First Class. This provides electronic mail (email), group conferencing, and access to course notes. Access to the system by students and tutors is possible at flexible times and thus the communication is asynchronous.
- Use of the World Wide Web (WWW) was planned in the initial stages only to be used as a reference library, but in the future plans in was to be used more extensively for teaching and learning.<sup>43</sup>

I have described the context of the development of the Televersity drawing on accounts from sources close to Suffolk College, and outlined some of the sociotechnical features of the project which were represented in their model of a Televersity. The centres which are part of the Telematic Learning Project are the primary material manifestation of the College's initiative and I have sketched how they (should) perform, and what functions they would provide for the users.

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<sup>43</sup> Telematic Learning Project Evaluation Report, October 1998.

I now want to return to the discussions concerning the nature of the Televersity by examining BT's role within the project, and the increasing importance of the Task Group role as an 'amalgam' for the co-ordination of the project.

I began my research at Martlesham Heath, which is BT's largest research and development site, and a major employee in the county of Suffolk. I talked to various people at Martlesham, many of whom had heard of the Televersity project, but again (a little like me) had little idea of its exact nature. Within BT the two people that seemed to me (and mentioned by others at Suffolk College) were the most important in regard of the Televersity project: Chris Fowler, who is responsible for co-ordinating all the education and training research conducted by BT, and Richard Nicol, who is the manager of the Advanced Applications and Technology Division. I talked to these representatives from BT after I had had some initial talks with people at Suffolk College. Suffolk College gave the impression that BT were supplying much of the practical equipment for the centres, and mentioned that they were working on a generic learning platform.

BT's approach (perhaps because of its multiple commitments) towards the Televersity project was to treat it as a learning experience, but also as a research project. They were pleased (I believe) to be seen supporting the local community, but ultimately it was a testbed for larger and grander projects that BT had planned. I say this with some reserve because BT's involvement with the Televersity was highly valued. I was informed by both Eric McCoy and by members of Suffolk College, of the huge contributions that BT made to the model of the Televersity. I am not dismissing this influence, but simply noting the lack of awareness that existed at Martlesham about the project. BT informed me further that they were actually engaged with two pieces of research which came under the umbrella of Televersity, one with Suffolk College and the other called the Northern Colleges Network (NCN).

BT I believe produced the initial and provocative ideas concerning the use of ICTs in a distributive model for university level education. They recognised the reality (perhaps more than others) of the economic situation, and thus suggested a lower cost version of a university, one that didn't involve 50 million pounds worth of



capital investment which Suffolk College was unlikely to receive. This idea of a distributed, networked university was also reliant upon, and complemented, BT's future model and aspiration concerning the future of education in an Information Society. These initial forays into ICT supported and assisted education, brokered, for BT a future. This was a future in which education would be delivered in a more flexible manner, with individuals being able to select when they wanted to learn, where they wanted to learn, how they wanted to learn, and even by whom they wanted to be taught<sup>44</sup>.

BT proposed a future of super-universities which included increasing regionalism and specialism. In this future, Universities and Colleges would only produce educational material in their specialism, in other areas they would simply purchase the courses from other institutions. For example, Suffolk College's (or a super-university of the East of England) expertise may be in the production of mathematical and biological education material, and would thus supply this to other regional universities, whilst purchasing material in their non-specialist areas. It was BT that seemed to be superimposing its views and models of future learning upon the research project; that became the Televersity project.

The Televersity project itself of course involved many actors – indeed, was possible only because of a coalition of actors that comprised the Task Group. This was achieved through coalition between members in the Task Group (a controlling / guiding committee established in September of 1994 to further ideas of University for Suffolk). When this Task Group was first established the man invited to be the chair was Eric McCoy, a former prominent industrialist in the county of Suffolk. Also on this Task Group<sup>45</sup> were representatives from Suffolk College and BT.

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<sup>44</sup> This idea of flexible learning in the future is outlined in an unpublished paper in 1996 Education for Changing Times. Fowler C., Maynes T., Bowles B.

"Telematics can remove the physical distance between teachers and learners with education transported rather than the people going somewhere to be educated. In the future more people will be educated in their own homes."

<sup>45</sup> Members of the University for Suffolk Task Group: Eric McCoy (Chairman and Vice Chairman, Suffolk College Corporation), Mike Bax (Managing Director, Suffolk Training and Enterprise Council), Peter Bye (Chief Executive, Suffolk County Council), Ron Downey (President, Suffolk Chamber of Commerce), Bob Feltwell (Chief Executive, Ipswich and Suffolk Chamber of Commerce), Peter Gardiner (Chairman, Planning and Development Committee, Ipswich Borough Council), James Hehir (Chief Executive, Ipswich Borough Council and member of Suffolk College Corporation), Ivan Howlett (Managing Editor, Radio Suffolk and member of Suffolk College Corporation), Chris Mole (Leader, Suffolk County Council), Derek Mortimer (Principal, Suffolk College, and member of Suffolk College Corporation), Dave Muller (Vice-Principal Suffolk College), Richard Nicol (Manager, Advanced Applications and Technology, British Telecom and member of Suffolk College Corporation), David Peachey (County Education Officer, Suffolk County Council), Andrew Shelley (Chairman, Suffolk Training and Enterprise Council and member of Suffolk College Corporation).

Acknowledgements by both BT and Eric McCoy (the Task Group chairman) confirmed that the model of a distributed model of learning and the idea of utilising LLCs was not an idea that originated from Suffolk College, but was facilitated through BT. Suffolk College's overriding ambition, as relayed in the interviews with the key actors involved, was to achieve a University for Suffolk (perhaps through any means necessary). BT persuaded Suffolk College that it was highly unlikely that the money would be available for a traditional university, and that the innovative and financially attractive model of the Televersity may assist them in achieving some of their goals. I believe it was also felt that this innovative model could also serve Suffolk College academically, in that if they built a reputation for innovative applications and research into ICTs it may attract higher quality academics and researchers to the college, academics who may otherwise perceive the college as indifferent and apathetic in relation to the future of academia.

### **3.2 History and Periodization**

On the basis of my analysis of data collected on the Televersity project (Interviews, documents, focus groups) I want tentatively to draw out a series of events that I see as important in the evolution of the Televersity project. These events and activities will be further exemplified and evaluated on the basis of actors' accounts later in the chapter, as we trace out their stories concerning the development of the Televersity. The aim here is to outline key events which may be thought of as staging points entailed in the Televersity. What can be seen in Table 3.1 is a periodization of the key events and activities that have occurred in the last ten years.

This timetable is, of course, not definitive, but outlines many of the pivotal moments when collaboration between the actors has generated important goals and objectives. On each of these occasions considerable agreement amongst the key actors was necessary, most commonly, agreement concerning locations, funding and appointments. What these events will provide is a framework, enabling these to give points of reference to the stories told by the actors later in this chapter.

**Table 3.1 A Timetable of Televersity Events**

<b>Date</b>	<b>Event</b>
<b>1989</b>	Independent study was franchised from the Polytechnic of East London
<b>1992</b>	Suffolk College became an 'associate college of UEA'
<b>1993, Apr.</b>	Suffolk College became incorporated under the Further and Higher Education Act (1992) on the 1 <sup>st</sup> of April 1993
<b>1994</b>	Eric McCoy retires, due to illness
<b>1994</b>	The College changes control from the County Council to the College Corporation
<b>1994, Sept.</b>	The Task Group is formed
<b>1994, Dec.</b>	The questions of what type of University for Suffolk is decided upon
<b>1995, Jul.</b>	Touche Ross completes its report, Testing the Vision
<b>1996, Aug.</b>	Designated as 'a University College of the University of East Anglia'
<b>1997, Mar.</b>	The first Local Learning Centre (LLC) opens in Sudbury
<b>1997, Sept.</b>	An independent company is set up to further the Televersity Project. Televersity for Suffolk Company Ltd.
<b>1997, Oct.</b>	The LLC a Stowmarket opens
<b>1997, Oct.</b>	£1M from the Suffolk TEC is given to establish the Suffolk Business School
<b>1997, Nov.</b>	The 'Televersity for Suffolk Company Ltd' changes to 'The Project for a University for Suffolk Company Ltd' after privy council approval.
<b>1998, July</b>	The Telematic Learning Project (basically Televersity) completed
<b>1998, Sept.</b>	The Evaluation Report for the Telematic Learning Project is published
<b>1998, Oct.</b>	Peter Funnell appointed as the Executive Manager of 'The Project for a University for Suffolk Company'
<b>1999, Feb.</b>	The University College Suffolk changes its name back to 'Suffolk College'

### 3.2.1 A guide to the actors

What I hope to present in a little more detail in this section is an expanded background to the actors involved with the Televersity. This will comprise a brief overview of the history of each actor, and an elaboration of the nature of the relationship that the actor has with the project.

#### 3.2.1.1 Suffolk College

Suffolk College based at Ipswich is by far the largest of the four higher education colleges offering HE provision in the county of Suffolk. Around ten years ago there began to develop interest surrounding HE that hadn't really existed before. This

growth and interest in HE has been expressed not only in Suffolk, but nation-wide. In the space of 7 years the number of HE students at UCS has increased eleven-fold. Currently Suffolk College relies on the University of East Anglia (of which it was until recently a University College) for accreditation for its modular degree programme. Suffolk College now has a significant profile in the community, similar to that of an old Polytechnic.

In 1994 alongside the developments within the college (greater HE provision), there was a recognition amongst principle players in the community (Councils, BT, Training and Enterprise Councils (TECs), etc) including the college, that the county suffered then and will do so even more in the future because it had no University. A Task Group was formed to look at the possible benefits of a University to the county of Suffolk. The presence of a University in Suffolk, would, it was suggested have huge economic consequences, and also raise the profile of the county and Ipswich through research and science park developments. It would also counter the resentment that was expressed<sup>46</sup> concerning the neighbouring counties (Essex, Cambridgeshire and Norfolk) which have benefited immensely from the development of universities, while Suffolk has been continually bypassed.

During the last ten years, Suffolk College<sup>47</sup> has undergone a series of important structural changes that has affected the nature of the educational services provided by the college. Independent study is a form of education that has now been provided by Suffolk College for ten years. This form of study was originally franchised from the Polytechnic of East London in 1989 (Other franchised providers, Nottingham Trent, City University). These franchised services were subsequently modified and introduced within the Suffolk Modular Degree Programme at Suffolk College as the Individually Negotiated Learning Route (INLR). This type of study was aimed specifically at attracting mature students and returning learners from Suffolk into higher education. Mature students comprised and continue to represent the majority (over 90%) of the intake onto the full and part time INLR programmes (Granville, 1996). INLR students are allocated 15 hours of specialist tutor support for each

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<sup>46</sup> Resentment expressed to me in interviews with members of Suffolk College and Suffolk TEC.

<sup>47</sup> Suffolk College became an 'associate college of the University of East Anglia' in 1992, was redesignated as 'a University College of the University of East Anglia' in August 1996, thus becoming University College Suffolk (UCS), and of February the year (1999) has reverted back to 'Suffolk College'. For the purposes of this chapter I shall constantly refer to the college as Suffolk College.

academic year, the frequency and duration of individual tutorial meetings arranged by negotiation and mutual agreement between student and tutor. These tutorial meetings may in the future be facilitated through the LLCs, via E-mail and Video-Conferencing.

Suffolk College is a relatively new provider of higher education in one of the three English counties without a local Higher Education Institution (HEI). This large (33,000 enrolments) 'mixed economy' (higher, further and adult education) College has developed, in partnership with the University of East Anglia, a range of modular degree and other higher education programmes for some 50,000 students, of which approximately half are part-time. It was also incorporated under the Further and Higher Education Act (1992) in April 1993, furthermore during this year Suffolk College became an independent body with its own College Corporation. (At this time (1994) the University for Suffolk Task Group was established, to provide external support for the county's efforts to establish its own University) Following four years of successful partnership, Suffolk College was designated as 'a University College of the University of East Anglia' in August, 1996 (Suffolk TEC, 1996).

The college now successfully offers vocational, academic and professional courses to students of all ages. It also provides adult community based learning and leisure learning education classes both at colleges and other centres throughout the county.

Within the College the people that were most integrated into the Televersity project are:

- Peter Funnell (Dean of Learner Services and Technologies, Project Director of the European Televersity Project and the Head of the Centre for Research into Educational Applications of Telematics (CREATE))
- Richard Boniface (Televersity Project Manager, Programme Director of Engineering Technologies and the European Televersity Project Case Study Co-ordinator)
- Dave Muller (Vice-Principal of Suffolk College and a member of the Task Group)

We shall hear later in this chapter how these actors and Suffolk College were involved with the development of the Televersity model. What decisions they made concerning the College, the county of Suffolk and the models of learning to be employed. But now I want to turn my attention to explicating the background of the other actors that also contributed their stories concerning the Televersity.

### 3.2.1.2 BT plc.

BT is one of the largest telecommunication companies in the world, and is now a truly global company. Its success is built upon a combination of factors: the monopolistic position that it held until recently in the UK, the strategic alliances it has made throughout the world, and its vast commitment to research and development. The largest of its research and development Laboratories is based in the UK, close to Ipswich.

BT Laboratories, built on the former RAF base at Martlesham Heath in Suffolk, is acknowledged as one of the leading telecommunications research and development facilities in Europe. There is a workforce in excess of 3,500 on the 100 acre site, and it the largest employer in the area additionally it has been calculated that the laboratories are worth annually in excess of £100 million to the local economy<sup>48</sup>.

The company invests some two per cent of its annual turnover in the Labs. research and development activities. This investment is made not only to transfer emerging technologies to the market place faster than the competition, but to also anticipate the developments that will give BT a competitive advantage in future market places.

The current budget for R&D activity is some £280 million of which 85 per cent is allocated to projects in short and medium term development, which focus on communication solutions in direct response to consumer demand. The remainder is utilised for research work which is focused on today's up and coming technologies that may provide the customer solutions in five, ten or fifteen years time.

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<sup>48</sup> <http://www.labs.bt.com/pressoffice/briefing/welcome.htm>

At the Laboratories in the human factors department they employ human-computer interaction (HCI) specialists, psychologists, sociologists and programmers, to evaluate the social implications of their latest technologies and services. In the case of the Televersity project many people were aware of the notion of a Televersity, but few people actually knew much detail about the current Televersity projects being undertaken. As a CASE student I had multiple trips to the Laboratories at Martlesham and had access to individuals and documentation which other individuals or researchers would not have had access to, this shaped the nature of my research and the relationship with those who I interviewed within BT. Within BT there are two people that are closely intertwined with the Televersity project in Suffolk, these are:

- Chris Fowler ( Responsible for co-ordinating all the education and training research)
- Dr. Richard Nicol (Manager of the Advanced Applications and Technology Division)

These two individuals<sup>49</sup> have been pivotal in negotiating and building the relationship between BT, Suffolk, the Task Group and other institutional organisations. It is tentatively suggested by other members of the Task Group that it was these two individuals who facilitated the model of a distributed model of learning for the county of Suffolk. Later in the chapter when we progress on to the actors stories we shall hear from them how they negotiated the model of the Televersity, and what role BT had in the developments of the Televersity project as it materialises further.

### 3.2.1.3 Eric McCoy

When the Task Group was formed in September of 1994, the man invited to be the chair was Eric McCoy. Eric McCoy is as he describes himself an 'industrialist', and up until his retirement in 1994 he ran an international engineering company which had two sites in the UK and others throughout the world. He is a member of the

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<sup>49</sup> Notably others at BT include: Holly Ward and Karina Tracey (who are working on the Northern Colleges Network (NCN)), Joy Van Helvert (who is working with local Suffolk schools on a project called HomeLearn).

Suffolk College Corporation, the governing body that now controls the direction and management of the college since 1994. As well as describing himself as an 'industrialist' he also notes that he is the 'non-academic' in the Task Group. As an industrialist he is primarily concerned with economic success, whether it be an international engineering company, a county college or a county.

He has been involved with engineering for the majority of his working life, and has studied management practices throughout the world, and especially in Japan. In Japan he studied the management that was involved in a motor company. he found that the Japanese success was not based on any mystical culture, but on the application of management science and the intelligence and educational skills of the Japanese. From these experiences he began to recognise the importance of highly educated and skilled employees for the economic success of a company.

Eric continues to play a pivotal role in the economic success of the Televersity project by chairing the Task Group and strengthening relationships between the Task Group and other influential businessmen in the county of Suffolk. We shall hear later his story about how the Televersity project was developed and the role that the project can play in the future success of the county of Suffolk.

#### 3.2.1.4 Suffolk Training and Enterprise Council (TEC)

Suffolk TEC is one of 76 TECs in England and Wales, it is based in Ipswich, and covers the county of Suffolk excluding the local district of Waveney. Their website explains further their role in Suffolk:

'Suffolk TEC is dedicated to the economic growth of the county through training and enterprise. Our aim is the on-going improvement of employment prospects, prosperity and quality of life.

Thousands of Suffolk businesses and organisations are helped by Suffolk Training and Enterprise Council each year. Help with business development, gaining a competitive edge, professional development, attracting and retaining quality staff.



achieving recognition with the prestigious national standard Investors in People – all are available from skilled advisors at the TEC,<sup>50</sup>

Suffolk TEC offers information and advice to people of all ages in the county of Suffolk. It provides information on education and lifelong learning, Small and Medium sized Enterprises (SMEs) and adult training. It liases closely with Suffolk College, Suffolk Chamber of Commerce, and the Borough and County Councils to provide opportunities for both individuals and businesses. Furthermore Suffolk TEC has committed itself to increasing opportunities by recently providing £1 million of funding over three years towards the creation of the Suffolk Business School. Trainline, the TEC's newsletter, explains further how the business school will be created and managed:

‘The school is to be managed through a partnership of the four Suffolk colleges, Lowestoft College, Otley College, University College Suffolk and West Suffolk College, under contract to the Televersity for Suffolk Company Ltd. The latest telecommunications facilities will be used together with conventional delivery approaches and all courses will be geared to the specific needs of SMEs’<sup>51</sup>

Within Suffolk TEC the two people most closely connected to the Suffolk Business School idea and the Televersity project are Mike Bax (Managing Director of Suffolk TEC) and Andrew Shelley (Chairman of Suffolk TEC and member of the Suffolk College Corporation). Later in this chapter, we will consider their accounts of the relationship between Suffolk TEC and the Televersity project, how the TEC is involved, and the consequence of this involvement.

#### 3.2.1.5 Others (Suffolk Chamber of Commerce, Suffolk C.C., Ipswich B.C.)

The Suffolk Chamber of Commerce is a voluntary association of over 1000 business, of all sizes, from the sole trader to the largest employer based in the Suffolk area. It brings a diverse range of tangible benefits to all the members of the association, and

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<sup>50</sup> <http://www.suffolktec.co.uk/suffolktec/company/company.htm>

<sup>51</sup> Trainline, October 1997. The newsletter of the Suffolk Training and Enterprise Council.

also increasingly offers services to non-members, such as telephone and fax services. There are two individuals that are also members of the Task Group: Ron Downey (President) and Bob Feltwell (Chief Executive)

Suffolk County Council (Suffolk C.C.) also has three representatives in the Task Group: Peter Bye (Chief Executive, Suffolk C.C.), David Peachey (County Education Officer, Suffolk C.C.) and Chris Mole (Leader, Suffolk C.C.). The Borough Council has two representatives: Peter Gardiner (Chairman, Planning and Development Committee, Ipswich Borough Council (B.C.)) and James Herir (Chief Executive, Ipswich B.C. and member of Suffolk College Corporation).

Despite the fact that in my empirical research few of the individuals outside of BT, Suffolk College and Suffolk TEC were mentioned to me as influential, this does not exclude them from telling their story about the development of the Televersity. Their accounts are considered not important by other actors because they were not told in forums that are influential. Nevertheless, they can shed a different light on the context and status of the Televersity model.

### **3.3 Actors' Televersity Stories**

This section examines the practical ways in which actors generated and distributed identities to actors and actants throughout the network that becomes the Televersity. This examination, and narration, of the accounts of the various actors will enable me to examine how actors' actions have constituted numerous local identities and roles that 'converge' and stabilise. Thus I will present examples where actors have attempted to define, configure and stabilise 'other' actors' identities, through their stories, with the goal of advancing their particular Televersity model.

The stories that are told by the actors are not always complementary, and in many cases are contradictory, but they serve to illustrate the heterogeneous nature of the Televersity project. As well as demonstrating the diverse composition of the Televersity the stories also yield heterogeneous, and in many accounts confusing explanations, for a series of important developments which were essential for a functioning Televersity project. These important developments included: ideas

concerning the origin of the Televersity concept, the functioning of a Televersity and the establishment of a co-ordinating body (the Task Group).

Of course, these stories are reliant upon my interpretation and representation of the interview data. Through these interpretations I attempt to follow the actions of actors to mobilise heterogeneous materials and persuade certain actors to share the same interest, properties or knowledge. We shall see how actors utilise other networks' resources that include; the ideas of a 'County of Suffolk', a 'future Information Society' and a 'future of Super-Universities'. The same, or similar named identities (the county of Suffolk etc.) may be utilised by different actors, whilst they share the same name they can denote or connote different meanings. These can be utilised and exchanged like a common currency, whilst enabling differences to co-exist.

These apparent differences in actors' stories (i.e. norms, representations, discourses etc.) will be used to demonstrate how the meaning of Televersity is both multiple and malleable. It will furthermore suggest that the LLCs also have multiple meanings for different actors, and, that the LLCs enable a variety of goals to be achieved. What I shall examine further in the subsequent section (3.4 Boundary Identities and Objects) is the exact multiplicity of meanings of a number of the most frequently occurring identities that act as boundary objects that are cited in their stories. The identities that act as boundary objects include the Televersity project itself, the county of Suffolk and Future Information Societies.

### 3.3.1 Suffolk College

I want to start with Suffolk College, as it is arguably the actor which has the closest relationship with the Televersity model. It is the pivotal educational institution that is connected to the project, and is involved with the project at all levels: from conception through to research and development, practical use and eventual evaluation.

Suffolk College and the identity of the Televersity it attempts to construct for itself hinges closely on representations of the desires and needs of the people of Suffolk, and also on the role and formation of the Task Group. The actors that represent

Suffolk College (Peter Funnell, Dave Muller, Richard Boniface, Mark Millar, and Ian Sargen) will predominantly explain the reasoning for a University (note rather than a Televersity), suggesting that it was a necessity for the county as a whole, and for many influential individuals.

The Vice-Principal, Dave Muller, equates the changes in the lives of the people of Suffolk with the need for a University in the Televersity mould. The Televersity would address students' need for more flexible access to education and training, and overcome the severe travel difficulties that Suffolk student's experience. This was explained as follows:

“People no longer have the same kind of freedom to give up a day and a half, it's a real cost.....it is inconceivable until you live and work here of the real difficulties of travel, it's not made for people, it's really difficult”<sup>52</sup>

Here Dave Muller is citing stories of geography and infrastructure problems that have contributed to the development of the distributed Televersity model. He goes on to elaborate further on where the motivations behind the desire for a University originate from:

“Almost certainly from looking at the aspirations that the community has, to have a University....So I'm almost certain in my judgement it (the desire for a university) came from combination of individuals wanting a University and recognising that there's no point saying let's have another campus based University in Suffolk, and recognising we've got a partner, potential partner [BT]”<sup>53</sup>

Thus a 'combination of individuals' are cited here as recognising the need for higher education in Suffolk to take a different form to the conventional University, a Televersity. His colleague Peter Funnell explains the motivation behind the Televersity development in a slightly different manner, utilising again the county of

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<sup>52</sup> Interview with Dave Muller at Suffolk College, 27/11/1997

<sup>53</sup> Ibid. note 52

Suffolk. This time, with a more historical spin on it, he utilises the people located in Suffolk and the College to explain the developments, their needs and potential losses:

“A few years ago along side developments going on in this College, there was a recognition amongst principle players in the community, including this College that the county suffers because it has no university. It suffers in a number of ways, there’s a straightforward economic regeneration issue associated with universities, there’s all the spin offs, there’s the fact that people come and spend money. There’s the research and science park type spin offs, all those have bypassed Ipswich and the county of Suffolk, but can be seen in neighbouring counties, Essex, Cambridge and Norfolk”<sup>54</sup>

He outlines two streams of development which have contributed to the development of the Televersity model: firstly, structural changes within the College, and secondly a growth in the recognition of the value of higher education for economic success. This recognition of the value of higher education, he outlined to me as being discovered and expressed by ‘people in positions of influence’ as ‘informed self interest’<sup>55</sup>. His Colleague Richard Boniface believed that rather than the impetus for a Televersity being generated because of the county’s geography, infrastructure, the ‘people of Suffolk’ or the College, he thought the motivations were political. He explained that the Televersity development was:

“A political development, rather than starting off at the ground and working upward, it was (the idea for a Televersity) very much a top down kind of initiative”<sup>56</sup>

Richard illuminated here a more (authoritarian) version of the idea of a Televersity on the county and Suffolk College, whereas both Peter Funnell and Dave Muller stories rely upon the need from the county and individuals and this being expressed through the Televersity development. Dave Muller did mention political motivations, but these were more concerned with BT’s role in the project, what their objective was, and the wider political agendas of other involved institutional actors:

<sup>54</sup> Interviews with Peter Funnell at Suffolk College. 11/6/1997 and 6/11/1997

<sup>55</sup> Ibid. note 54

<sup>56</sup> Interview with Richard Boniface at Suffolk College. 5/11/1997

“BT’s ultimate ambition, whether it be through us (Suffolk College) or through some of their partners are, and there are a number of them. is of course commercial....I suspect that there is a broader political agenda out there somewhere between very very senior BT, and very very senior government.”<sup>57</sup>

He seemed particularly worried about the balance between commercial exploitation by BT of the new techniques that were being employed in the Televersity model, and the need for Suffolk College to have a project that is not merely a testbed for BT. Thus the Vice-Principal did seem hesitant about BT’s overall objectives concerning the Televersity project. He also has doubts as to whether the drive for a Televersity is now taking the focus away from the primary objective of the College (as he perceives it) that of creating a University for Suffolk.

Returning to Peter, he went on to explain to me that because of the increased recognition of the importance of higher education and a University for Suffolk, that a organisational body was set up:

“A community Task Group, a University Task Group was constructed, it includes people from local authorities, Chief Executive of the Borough Council, County Council and Training and Enterprise Council”<sup>58</sup>

Peter outlined the importance of the Task Group, but he didn’t elaborate on how it actually came into operation. I will leave Dave Muller and Richard Boniface to explain in their own words how the Task Group was established, Dave Muller firstly pointed out that.

“The Task Group was set up through this College, through Eric (McCoy)...It was managed I think and facilitated by the corporation (Suffolk College

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<sup>57</sup> Ibid. note 52

<sup>58</sup> Ibid. note 54

Corporation) it was only in the summer (1997) that it was decided to set up the company (Televersity for Suffolk Company Ltd.) as independent”<sup>59</sup>

Dave Muller suggests here that the College had an important role in the development of the Task Group, and highlighted the important change that occurred in the summer of 1997 when the company (Televersity for Suffolk Ltd.) was established. Richard alternatively dismisses the role played by the College in establishing the Task Group, and focuses his attention on one individual:

“Eric McCoy was obviously the prime mover in that process (the establishment of the Task Group), and I guess he wanted to get things moving, to get a bit of impetus behind the idea of a University, and through his industrial contacts, and whatever, was quite you know, quite a bit of support for it (the Televersity vision)”<sup>60</sup>

In this, albeit vague, account Richard is the first to raise Eric in such a manner, thus making his membership and role intrinsic to the successful operation of the Task Group and the Televersity model. Furthermore he outlines the importance of his network of industrial contacts for the effective working of the Task Group and furtherance of the Televersity project. He also importantly noted the following point about the initial idea of a Televersity:

“One of the participants in the Task Group, Richard Nicol from BT, and I think it was his suggestion, you know, that was fully supported by others, and the other colleges. Was why not think of our new university as a Televersity”<sup>61</sup>

There appears a tension here in the relationship between the College, Eric and BT, concerning the establishment and operation of the Task Group, as to whether it was enabled through the College, through BT or Eric. The separation of motivations and ideas from one another is becoming increasingly difficult and the ideas are getting further blurred and intertwined, there are claims and counter claims made regarding

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<sup>59</sup> Ibid. note 52

<sup>60</sup> Ibid. note 56

<sup>61</sup> Ibid. note 56

the exact role and function that individuals performed or enabled, without any seeming coherency.

Further tensions are raised by Dave Muller concerning the nature of the Televersity. he told me that he thought there was an inherent contradiction built into the Televersity model. If location is the problematic element that Televersity attempts to ameliorate, why limit the project to a strict geographical location, i.e. Suffolk? He goes on to express his other doubts concerning the project:

“I think the other doubt slightly is, is whether it has taken the focus away from being a University. There’s no doubt that we’ve created the most difficult model, we want 16 year olds in it, we want LLCs, we want Televersity delivery, and we want to switch into the HE sector...having said that it has created interest with people like yourself and others”<sup>62</sup>

He is very worried that all the hype concerning ICTs will deflect attention from (what he sees as the main concern) the major objective, a university for Suffolk. He further outlines that “people can overestimate that which technology can deliver”<sup>63</sup> and signals his doubts that as this is a vast research testbed there are many variables which are completely unknown and unpredictable in the Televersity model of delivery.

Finally, I want to bring Suffolk College’s Televersity stories up to date by quickly reviewing the current climate that surrounds the Televersity projects. The Telematic Learning project which was sponsored by Suffolk Training and Enterprise Council completed its evaluation in July 1998, and later in that year the ‘Telematic Learning Project Evaluation Report’ was published. The report highlighted in its executive summary a number of key conclusions, of which I will mention a few of the more pertinent ones:

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<sup>62</sup> Ibid. note 52

<sup>63</sup> Ibid. note 52



- The ability to study locally and at flexible times is attractive both to companies and individuals. The ability to study during unsociable hours is probably more important to individuals than the community location.
- Learning Centres can meet a real need for flexible study. There is no single approach to learning that is most appropriate – each individual has his or her own specific requirements. Technology provides the opportunity to shift the focus of learning towards the needs of the individual.
- Learning Centres provide a number of advantages in addition to access to technology, such as a meeting place, a quiet place to work and a focus for learning support.
- Effective use of technology at the Centres requires dedicated IT support for both technical maintenance and student learning support. In addition to technicians on the main campus adequate resources need to be devoted to local technical support.<sup>64</sup>

And in conclusion the report states that:

The Telematic Learning Project, sponsored by Suffolk Training and Enterprise Council has successfully shown that access to education and training can be enhanced by the use of telematics<sup>65</sup>

The project was deemed a huge success, and it is noted that through the experience gained in evaluating telematic based learning projects, CREATE, the Centre for Research in Educational Applications of Telematics, was established. CREATE's growing reputation for telematic based research has enabled them to achieve significant European funding (£1.46 million) for another telematic based project, CoVETS (Co-ordinated Virtual Education and Training Services in Suffolk). The project has many similarities with the Telematic Learning Project, in that it will also use the existing LLCs across the county to provide training at a distance using information and communication technologies. A key outcome of the project will be a technical infrastructure capable of supporting higher education in the county using the Internet and electronic communications including e-mail and video-conferencing.

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<sup>64</sup> Telematic Learning Project Evaluation Report, October 1998.

<sup>65</sup> Ibid. note 64

The College and CREATE are also involved with a number of other Televersity related projects which are either being conducted at this time, or in the bidding process. They include: the CoVETS project, a SOCRATES proposal: COBALT (Community-Based Learning through Telematics), a Cyber-trade Suffolk project and feasibility study exploring the potential for an Interactive Web Platform for education and training in Suffolk.

### 3.3.2 BT plc.

We have now heard a selection of stories from Suffolk College describing their relationship with the Televersity project, the roles it should perform and the relationships it should foster and enable between both actors and artefacts. The resources they utilise to stabilise those identities and the current projects which are included under the umbrella of Televersity. I want to now turn my attention to the stories told by employees of BT. These stories will be told primarily by two people; Chris Fowler (responsible for co-ordinating all the education and training research conducted by BT) and Richard Nicol (the Manager of the Advanced Applications and Technology Division). In these stories, perhaps more so than with Suffolk College, some bold claims are made concerning the origin of ideas, and the motivations behind those respective ideas. My relationship with BT was different to that with Suffolk College in that they were partially sponsoring my research. BT employees as such did not enter into so many discussions asking my opinion on the Televersity rather they seemed to just prefer to convey information to me for me to include as part of my research. I was aware of the personal 'situatedness' of my research and the reader of my thesis must also be made aware of the different relationships that existed, and how I believe it influenced the data.

I firstly want to start by presenting Chris Fowler's account of some of the motivations and interests behind the project in general. Chris told me about the reasoning behind the need for a University and specifically a Televersity. He identified what he called 'drivers' behind the project. In all there were four, firstly there were commercial drivers:

“The commercial drivers are quite simple in a sense, that BTs’ current relationship with FE/HE is still based on traditional telecoms, phones, faxes. What we can offer above and beyond that, is managed services based on a intranet platform, internet services etc.”<sup>66</sup>

He went on to explain further that there are many institutions that now have good networks in place, but they are not really utilising them. What BT needed to develop was ‘killer applications’ to sit on the networks and provide managed services that would increase BT’s influence in the services market.

The second driver for BT, was a drive that came from the institutions themselves (Suffolk College included), the institutions were beginning to realise that:

“What I (Chris) would call the Oxbridge model does not scale, that the model is extremely effective but will only work with small numbers in very unique situations- and all we’ve done is transfer that model to other institutions and it’s falling apart”<sup>67</sup>

Chris highlights here the defunct nature of the structures for higher education that presently exist, he believes that change is desperately needed and later in his story will shall hear what he believes is the future for universities and the higher education system. The third, economic driver, for a University and specifically the Televersity model of a University, is closely related to the institutional driver in that institutions are:

“under enormous economic pressures, unit costs are being driven down”<sup>68</sup>

and now institutions, as Chris noted, are:

“beginning to wake up to the fact that there are other markets out there”<sup>69</sup>

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<sup>66</sup> Interview with Chris Fowler at BT Labs., 6/11/1997

<sup>67</sup> Ibid. note 66

<sup>68</sup> Ibid. note 66

<sup>69</sup> Ibid. note 66

When Chris talks of other markets he isolates other groups of people that would be prepared to pay to achieve further educational qualifications. He finally noted that there is a fourth global driver that is partly concerned with the idea of an Information Society and the outsourcing of services. He noted that as individuals become more detached from corporations and work more on a self employed, contractual basis, there would be an increased need for institutions able to offer professional courses to update skills and training. This is the fourth global driver that is the result of corporate outsourcing.

Richard Nicol also uses the idea of ‘drivers’ in his story concerning the historical background to the Televersity development:

“Ok, where it all started I think was partly the ambition of the county of Suffolk, to have a University. One of the few counties that doesn’t have a university, our nearest Universities are Essex and University of East Anglia (UEA). There’s also the local situation that there is a very high proportion of the companies in Suffolk are Small and Medium sized Enterprises (SMEs), very small SMEs. Half the jobs of the people in this county work for small companies, there’s only one, we’re [BT] probably about the biggest. There’s also the matter of the Suffolk TEC, that needed a University that would not only do traditional degrees, but would also meet the needs of the local industry. Where there is a university, it creates spin offs in one form or another, and even conservative estimates say that a University brings in 50 million pounds into the local economy every year”<sup>70</sup>

Richard draws upon the identity of the county, in this example, to resource his account concerning where the motivations for a Televersity came from. The county and the local businesses within it need an institution that can not only provide vocational training, but will also generate economic activity and prosperity. Incidentally Richard above is citing consequences of an old campus based university, rather than the new Televersity model.

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<sup>70</sup> Interview with Richard Nicol via Video Conference. 18/11/1997

I want to now return to the Task Group. Chris (Fowler) is not actually a member of the Task Group (unlike Richard Nicol), but he is aware of its co-ordinating role for the Televersity project. He explained that he thought:

“Eric was the leading driver behind that [the Task Group formation], Eric came from a company, an MD”<sup>71</sup> and that Eric “always felt from an economic point of view the region had suffered from a lack of a University”<sup>72</sup>

he also noted that

“Suffolk College had this aspiration to become a University”<sup>73</sup>

Thus Chris outlined his four drivers (commercial, institutional, economic and global) that had driven the idea of a university for Suffolk, and specifically the Televersity model. I want briefly just to say something about the term ‘driver’ especially about its usage by Chris. Chris utilises this term to describe a homogeneous collection of forces, that is the controlling factor of events that occur. It is used by him in an abstracted, perhaps non-human, way to characterise causal influences, whereby there seems to be little human association with these ‘drivers’ and thus have an apparently objective status. These drivers are thus presented as seemingly powerful, definitive and all-inclusive, their status thus implies an inevitable consequence. Another feature of the idea of ‘drivers’ is that they are indeed easily identifiable and definable, in as much as specific actors have an ability to ‘see’ and identify these ‘drivers’.

Although not a member of the Task Group, Chris was well aware of the role that Eric had played in the formation of the Task Group as he outlined and believed that he (Eric) was the leading driver, rather than the ‘fellow industrialists’. He continued further to describe the relationship between the Televersity idea, Eric and BT (himself and Richard Nicol):

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<sup>71</sup> Ibid. note 70

<sup>72</sup> Ibid. note 70

<sup>73</sup> Ibid. note 66

“He (Eric) I think originally saw it as a traditional University. And it was only talking to probably me (CF) rather than Richard Nicol, but both Richard and I started to say well hold on a minute you are very unlikely to get permission anyway to become another traditional University. Why copy something that is possibly going to be doomed anyway?”<sup>74</sup>

He further explains that it was he and Richard that were thinking about what a future Televersity might consist of:

“So I suppose it was Richard Nicol and me. Richard Nicol did the operational aspect, he was on the task force. But I was doing the intellectual aspect of thinking about what one of these (a Televersity) would look like”<sup>75</sup>

Richard further commented that it was he who suggested first that the distributed model would ideally suit Suffolk, thus supporting Chris’ statements:

“It was probably me who suggested it in the first place, I said look here we’ve only got any hope of getting a University if we’re different, what this county needs is to take advantage of the fact that we [BT] are nearby, we can help you with this vision, creating probably one of the first Televersities in the UK”<sup>76</sup>

Here Richard makes the strong claim that it was he who first offered the identity of a distributed University to the Task Group, it was he who offered the vision, and the help. The model is reliant on the idea that Universities in their present form are increasingly defunct. Richard’s model of a Televersity crucially involves the creation of a ‘middle ground’ to be occupied by LLCs. This ‘middle ground’ which is represented by the LLC’s would enable greater access to ICTs, and facilitate the anticipated growth in education and learning.

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<sup>74</sup> Ibid. note 66

<sup>75</sup> Ibid. note 66

<sup>76</sup> Ibid. note 70

Chris's model of the future of education, which he emphasised, complements Richard's ideas of need for a different approach to higher education, and relies upon further specialisation, and the end of traditional Universities:

“Universities in the future, whatever these beasts are called, may well have a number of specialist topics – in which there would be research centres and centres of excellence. Cambridge will be mathematics, and they wouldn't bother with the others (other subjects)”<sup>77</sup>

and further amalgamation into Super-Universities:

“You'll end up with I expect...Super-Universities...these will be regionalised. So there'll be a Super-University of East Anglia. And it actually may still be, that you have bits of Suffolk College and bits of Essex, but from an administrative and organisational perspective it will be one Super-University”<sup>78</sup>

He expressed further that individuals could access these Super-Universities in the home and workplace by using the Internet, and access through regional intranets. What BT is constructing here are examples of future identities and concepts that actors must adopt, if the Televersity is to become a viable model.

BT further elaborates on the learning platform and model, which they feel, is suitable for telematic learning. BT describes the Televersity concept as follows:

“Suffolk College aspires to become a ‘Televersity’ by the turn of the century. Their model, developed jointly with BT, is to provide a community based university which delivers pre-packaged material over the Internet, and provides electronic tutorial support using video-conferencing technology. The staff of the University will be less concerned with preparing lecture material (primary courseware will be bought in from various centres of excellence)

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<sup>77</sup> Ibid. note 66

<sup>78</sup> Ibid. note 66

and will concentrate more on facilitating learning through small and highly interactive tutorials”<sup>79</sup>

We can see in this extract how BT is prescribing an identity for the College, whilst reasoning that the model has been developed jointly. BT allocates new roles for the staff of the University, they will act in their actor-world more as facilitators than information selectors and compilers. It is necessary for Suffolk College to believe and participate in actions towards these identities for BT’s model of Televersity to be realised/stabilised. This model also is coherent with Chris Fowler’s ideas concerning the use of pre-packaged learning materials bought in from regional centres of learning excellence<sup>80</sup>.

Another central feature of Chris Fowler’s model for the future of education in an information based society, is a telematic-based model of learning in which Suffolk College and the Task Group must believe, and take actions towards, if it is to materialised. The model can be summarised as follows (Fowler C., Maynes T., Bowles B., 1996)

**Conceptualisation** refers to the users initial contact with other people’s concepts, through any media.

**Construction** refers to the process of interpreting and combining concepts through their application to some meaningful task such as laboratory work, writing, preparing lectures and presentations etc.

It is in the **Dialogue** phase of learning that the telematics approach come into its own. Dialogue refers to the discussion, debate and conversations that take place between learners and learners with teachers. The role of discussion and reflection is paramount to deep learning, but so is the concept of reification. this literally means “making an object of” and in this learning context refers to the output of reflection and discussion in terms of the construction of a new understanding or conceptualisation.

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<sup>79</sup> BT’s Education & Training Research Programme

<sup>80</sup> Ibid. note 66



From such a model it should be quite clear that the power of any telematics solution increases as one goes from conceptualisation, through construction, to dialogue. The real strength of telematics is therefore through supporting the interactive components of learning<sup>81</sup>

Thus, what we see, is the generation of what Latour (1987) calls ‘immutable mobiles’ a collection of texts, stories and technical papers that circulate and are essential for the success of BT’s identity of the Televersity. These mobiles prescribe and offer roles and identities for Suffolk College, the future of higher education and its replacement by Super-Universities, the replacement in the learning model of lecturers with facilitators, and the essential purchasing, not production of learning materials. Although Latour describes these stories and texts as immutable, in BT’s stories they have needed to be more flexible and malleable, with an ability to be inclusive and exclusive simultaneously. These are utilised in BT’s model for a future representation of education, and in the creation of a Televersity project in which they hope they (that is BT) will be a determining actor.

What I see as significant in BT’s stories concerning the Televersity is the more direct and open claims made by both employees towards the responsibility of ideas that were generated and subsequently adopted. They firmly believe that it was they, in joint association, which were responsible for the ultimate design and functionality of the Televersity and the LLCs. They believe that they are responsible for the materialisation of the both the Televersity and the ‘middle ground’ and as such the College and the Task Group are indebted to them for their guidance and leadership. Their stories are in stark contrast to the more abstracted and ambivalent tales told by Suffolk College concerning the development of Televersity.

Their stories however must be placed in the context of how I understood my relationship with BT to differ from that which I had with the Task Group and Suffolk College. My relationship with the Task Group and Suffolk College was one which involved discussion and enquiry on both sides, as compared to my relationship with

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<sup>81</sup> From an unpublished paper in 1996 *Education for Changing Times*, Fowler C., Maynes T., Bowles B.

BT which felt more one-directional (that is BT simply passing on facts and information for me to process and analyse).

### 3.3.3 Eric McCoy

The penultimate actor whose story concerning the Televersity shall be examined is Eric McCoy, the man who became the chairman of the Task Group. Eric McCoy is, as he describes himself, an ‘industrialist’; he also notes that he is the ‘non-academic’ in the Task Group. Until his retirement in 1994 he ran an international engineering company. Eric starts his story by informing us about the economic and educational climate in the county and the problems he had suffered as an employer. He came to Suffolk via Essex and Hampshire, counties which he noted had local universities, so this was the first time he found himself running a sizeable company in a county derelict, in terms of Universities or, even, higher education. He found himself frustrated by the lack of high quality research graduates, and thus sent his Personal Director to Birmingham, Southampton and Brunel to try and get graduates. He explains the problem of graduate recruitment further by noting:

“I tried growing my own graduates, but constantly found that graduates I sent out to other universities, very often stayed in the area of that university, and didn’t come back to Suffolk”<sup>82</sup>

As he tells us, he was severely frustrated by the lack of a university in Suffolk, he and his fellow ‘industrialists’ made many complaints to the government on this very subject, but with no result. He and his fellow ‘industrialist’ peers knew that many universities hadn’t only been established through direct government actions, but through much pressure from other organised groups as he explained to me:

“We discovered that many universities in England haven’t come about by deliberate government planning. They’ve come about in a whole range of ways, maybe a driving group of people, certainly a driving force in some cases with an individual who said ‘we want a university’”<sup>83</sup>

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<sup>82</sup> Interview with Eric McCoy at Suffolk College, 5/11/1997

<sup>83</sup> Ibid. note 82

Eric, in identifying the ‘fact’, that a driving force was in many cases necessary for the process of establishing a university, is implying that this is what is perhaps needed in Suffolk for progress to be made. This driving force materialised as the Task Group in 1994 and this was also the time Eric retired. According to Eric, his fellow industrialists proposed to him:

“Well, as you’ve retired Eric, and this has been your thing for so long. Would you chair a working group, and that’s how the University for Suffolk Task Group was born”<sup>84</sup>

So the establishment of the Task Group according to Eric was reliant upon his fellow industrialists, not Suffolk College, not BT. He was very much involved with its co-ordination and running though, and as he told me could easily organise a group of influential people as:

“They’re all people I know, so it wasn’t a problem for me to speak to the Chairman and Chief Executive of the County Council, Borough Council, Chambers of Commerce and to enrol a group of industrialists I knew were supportive of the case”<sup>85</sup>

He went on to tell me about the decisions made concerning the nature of the university that he and his industrialists wanted and thought was necessary for the county of Suffolk.

“It became very quickly apparent to me as a businessman that the chances of getting 25 million pounds out of the government to build a campus university wasn’t on. There’s no way the government would do it... So no big sums of money, what we did have was, having BT on our doorstep, we got Richard Nicol and all the other guys thinking about using modern techniques.”

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<sup>84</sup> Ibid. note 82

<sup>85</sup> Ibid. note 82

Eric here tells us that there was no great amount of money available for the development, and cites the use of ‘modern techniques’, on which he elaborates:

“We quickly decided if we wanted a University we better have a modern University, we better have one that is based on today’s technology, that could deliver University education in a way that Suffolk needed it

So the Training and Enterprise Council did some very good work on demographics and very good work of industrial and commercial data in the county. And what we found we needed was, was a distributed centre.”<sup>86</sup>

So, what Eric, and the report by the Training and Enterprise Council,<sup>87</sup> suggested, was a distributed University. He continued by explaining how BT became involved with the development, and what solutions they provided:

“And we decided that we would like ideally to have a community University, that was one that would reach all members of society...and then of course BT came up with the ideal way to do that, it isn’t to bring the students to the University, but bring the University to the students”<sup>88</sup>

So Eric firmly places BT along with the Suffolk TEC as the motivators behind the distributed model, the Televersity. It is BT that is advocating this identity of ‘middle ground’ spaces which enable a distributed idea of education and training and not specifically the Task Group or he as Chairman. Importantly after these ideas were suggested the Task Group:

“Got Touché Ross to come in and validate all of our thoughts, which they did”<sup>89</sup>

A report was published by Touché Ross Management Consultants (Testing the Vision, 1995) which answered the questions of why a University was needed for

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<sup>86</sup> Ibid. note 82

<sup>87</sup> I contacted Suffolk TEC concerning this report but they were reluctant to release this report to me.

<sup>88</sup> Ibid. note 82

<sup>89</sup> Ibid. note 82

Suffolk, how the idea of a community university would work, the economic viability of a Televersity, and established a series of priorities for the Task Group. This report, Eric suggests, was extremely important in, as it were, independently validating the proposals of BT supported through the Task Group. Notably, none of the other actors in their stories note Touché Ross's report as a part of the validation process necessary for progress to be made with the Televersity project.

In sum, then, Eric as the Task Group Chairman knew that the money was not available for a new campus University. BT offered him an alternative identity for a university, that of a distributed Televersity which complemented his ideas concerning access to education and learning, which seemed to have been his overriding priority. As such he gave his support, to this Televersity model. Further the idea of a distributed means of education which entailed the use of the 'middle ground' in the form of the Local Learning Centres was suggested to him, (Eric) he states, by BT. When we consider Eric's account in tandem with BT's there does seem to be a degree of similarity in the explanations given for the origin of the idea of a distributed university. Also it should be noted that the separation of Eric's and the Task Group's actions and expressions is impossible it seems, Eric represents both himself and the Task Group simultaneously in his story of the Televersity – indeed, they are, at points, identical. Eric was interested in my involvement in researching the Televersity. He thought, I believe, that it added kudos to the project as more individuals outside of Suffolk were being drawn to trying to understand what was happening in as part of the project.

#### 3.3.4 Suffolk Training and Enterprise Council

The final actor who will account for the development of the Televersity will be the Suffolk TEC, primarily through Mike Bax (Managing Director of Suffolk TEC). He told me about the relationship that the TEC had with the Televersity project, and how the project developed, from a Suffolk TEC perspective. He began with the impetus behind the development:

“The impetus came from a recognition that Suffolk and its future was in danger of being compromised by not having a university...and from the haemorrhaging of young people from the area”<sup>90</sup>

Furthermore he noted that the development was:

“More a spontaneous combustion rather than a single major orchestration from some particular sector of Suffolk”<sup>91</sup>

Suffolk TEC like other actors is keen on utilising the identity of Suffolk as a reason behind the development of the Televersity project. A recognition came from Suffolk, it is not mentioned who by, but he gives an abstracted sense that the county could be in danger by not having a university. The idea of spontaneity is also introduced as a factor in the historical developments associated with the project. Mike continued by expanding upon his ideas concerning the crucial components that were important in the Televersity project:

“Number one is growth of opportunities, and number two is ease of access and flexibility of delivering, both of which have got a telematic connection... I think one of the issues that goes beyond all this is around the extent to which the learning opportunities are applied, and needing to make sure that one develops a new level of expertise in those support staff”<sup>92</sup>

Mike highlights the possibilities which could be enabled by the use of telematics, and the new identities that the staff using these techniques will need to adopt. The ‘middle ground’ spaces (the LLCs) would be reliant upon telematics, these would which enable individuals to access information for education and learning purposes. Staff using telematics will need to adopt a more facilitatory role in the local learning centres. Mike continues with his story of the Televersity by explaining the manner in which the Task Group was established:

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<sup>90</sup> Interview with Mike Bax at Suffolk TEC. 7/11/1997

<sup>91</sup> Ibid. note 90

<sup>92</sup> Ibid. note 90

“As is often the way of these things I described that it was sort of spontaneous combustion between a number of people who decided it was concept for its time. That led to a gathering of the great and the good at a local hotel, that was chaired by Eric McCoy where the proposition was put to the people – that there was something here that was in Suffolk’s interest. And it received unanimous support at that level”<sup>93</sup>

He qualified these ideas by joking that:

“Has to be said that when he (Eric McCoy) mentioned that it might need 10 million pounds plus to make it happen. The interest became slightly less enthusiastic I think”<sup>94</sup>

Mike here mentions for the first time in his story the meeting of the ‘great and the good’ at the local hotel, and fleshed out further some of the actual negotiations that took place to form the Task Group. The idea of spontaneous combustion perhaps masks the matrix of social interactions that resulted in the decisions that were taken. However, it does hint that decisions, and the surrendering of consent that makes up enrolment, cannot be explained simply through rational means, but rather, also it relies on complementary friendships, informal contacts, common ideas and shared belief systems.

After explaining the developments surrounding the Task Group Mike continues his story by illuminating some of the positive and suitable aspects of telematics, the doubts that Suffolk TEC had concerning the project and the relationship between the actors involved with the project. Mike explained that:

“I’m pretty sure the concept is right, the notion of a community based, flexible technology driven learning system has to be right. It’s right for Suffolk – large geographical county, absolutely sure it’s the right sort of

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<sup>93</sup> Ibid. note 90

<sup>94</sup> Ibid. note 90

concept, the real issue around is that of money ...It's only going to happen if all the partners use all the powers at their disposal for winning bids"<sup>95</sup>

Mike explains here, that he believes the idea of a 'middle ground' or LLCs for local purposes, which utilise the latest technologies in these spaces, is the right idea for the county of Suffolk. The creation of the 'middle ground' for him is an integral part of the eventual success of the Televersity project, combined with, all the partners of the project maintaining their commitment to the Televersity vision. He continues by outlining the plans concerning the aim of establishing a Suffolk Business School:

"To try to develop a Suffolk Business School, which would have an identity of its own, if it provides a successful model, that could be part of the building blocks for establishing a university"<sup>96</sup>

Mike emphasises here that he has faith in the ideas concerning the technology to be utilised in the Televersity, but has some doubts associated with the financing of the project. He believes that the Suffolk Business School project (which Suffolk TEC has invested a million pounds in over 3 years) may be an excellent precursor and testbed for the eventual model of Televersity delivery. He later expressed also that most of the Televersity research would be needed just to equip individuals with basic IT skills, as most individuals have very little experience of using computers, let alone the Internet. Thus Mike expresses an optimistic viewpoint, tempered by his understanding that many individuals and businesses will need a great deal of basic IT training before any grandiose plans of Televersity can be realised.

These actors' stories collectively trace the origins of the Televersity project and the Task Group. The implications of such 'origin stories' is the claiming of the ownership of the Televersity project or the Task group by a specific actor. Whether it be BT laying its claims for the ideas behind the distributed components of Televersity, Suffolk College suggesting a need from the county of Suffolk for Televersity or Eric McCoy's ability to cohere a group of disparate interests to form the Task Group, all the actors have attempted to account for the origins of the

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<sup>95</sup> Ibid. note 90

<sup>96</sup> Ibid. note 90



components of the Televersity project. These actor's stories were told to me (an individual that represented Lancaster University and BT at the same time) and I believe my relationship influenced the exact way in which the stories were told.

From these 'origin' stories a number of flexible and malleable 'boundary objects' are utilised by the actors to support their accounts of the Televersity's origin. These are what I shall examine in the next section of this chapter.

### **3.4 Boundary Identities and Objects**

From the stories that have been told by the actors involved with the Televersity it becomes apparent that the identities and objects utilised by the actors have both commonalities and differences. Through the stories that are told actors generate and use a collection of extremely flexible and heterogeneous objects and identities which enable them to successfully collaborate. These objects and identities include: the County of Suffolk, a future of Super-Universities, a University for Suffolk, a future Information Society and Suffolk Business School. The Televersity, materially represented by the 'middle ground', serves for different actors as bridging or mediating spaces, brokering future scenarios and identities.

The Televersity project and the materialisation of this through the 'middle ground' (the LLCs) is the collective goal that all the actors have at least partial commitment to. The 'middle ground', like the concepts and objects utilised to attain its materialisation, is not singular. In fact there are multiple 'middle grounds' that exist for each of the actors, which have, simultaneously, contradictory and complementary functions and identities.

For BT it is a testbed, a research site where new and innovative delivery techniques can be evaluated before becoming commercial services that they feel they can competently offer to their customers. Also, for BT, it serves as a mediating concept and space brokering a home-based future of education and learning, a space that is neither located in the workplace (which will also be the homeplace in their future visions) or the home, but at intermediary spaces, including the LLCs, which brokers for BT a future Information Society.

For Suffolk College it represents a partial glimpse of a future networked county of Suffolk, a future University of Suffolk which is community based and dedicated. It is a stepping stone which will enable them and the county of Suffolk to realise its potential and at last to escape from economic prejudice and educational underachievement. It mediates and simultaneously enables a future University for Suffolk.

For Suffolk TEC the Televersity project and the 'middle ground' would stop the county of Suffolk's future 'from being compromised'. It would enable SMEs to train their employees to a higher standard and in return support the economic prosperity of the county. It acts as a precursor and research project for the Suffolk Business School which they have a considerable amount of money invested in, and may utilise similar delivery mechanisms as the Televersity project.

For Eric McCoy these 'middle ground' spaces would enable the county of Suffolk to educate its people to a higher level. It would enable Suffolk as a county to prosper economically and would also reduce the amount of young people that leave the county because of the lack of education and employment opportunities. Thus it would broker a future identity of the county of Suffolk and a future identity of its people.

#### 3.4.1 Boundary Objects; Star and Griesemar

What then becomes apparent is that the actors are drawing upon a disparate collections of objects and identities to support their validation of the Televersity, and through this substantiate claims regarding the use of the 'middle ground'. These identities can be analysed in terms of 'boundary objects' which allow us to consider how they help secure stability around the Televersity and subsequently the 'middle ground'. This idea of boundary objects was first developed in the context of Science Studies by Susan Leigh Star and James R. Griesemar (1989) who utilised this concept to account for the tension between divergent viewpoints, and the need for co-operation to secure the existence (temporal stability) of the Museum of Vertebrate

Zoology at the University of California, Berkeley, in its early years. These boundary objects were constructed as:

....scientific objects which inhabit several intersecting social worlds....and satisfy the information requirements of each of them. Boundary objects are objects which are both plastic enough to adapt to local needs and the constraints of the several parties employing them, yet robust enough to maintain a common identity across sites. They are weakly structured in common use, and become strongly structured in individual-site use. These objects may be abstract or concrete. They have different meanings in different social worlds but their structure is common enough to more than one world to make them recognisable, a means of translation. The creation and management of boundary objects is a key process in developing and maintaining coherence across intersecting social worlds.

(ibid.:393)

According to Star and Griesemar, action in the social world was guided by commitments to 'boundary objects' which are temporal in character, patterning the relations between social worlds, yet also being open to different interpretations across social worlds. In other words, boundary objects act in structuring networks because they help bring together actors who are able to appropriate them because of their flexibility.

Star and Griesemar continue by listing some of the objects that help structure the social world. These include:

- Species and subspecies of mammals and birds
- The habitats of collected animal species
- The terrain of the state of California
- Physical factors in California's environment (rainfall, temperature and humidity)

Star and Griesemar argue in their study that 'California' itself forms a 'boundary object' because it can be seen in relation to the actions of actors in the social world.

The same argument applies to the use of the county of Suffolk, the Televersity Project, a future Information Society, a future of Super-Universities and a University of Suffolk. But whereas they state that California as an object is a ‘constraint’ (ibid.:409) there is little sign that as an object it constrains action; more likely it seems it is the inverse whereby actors use the object for their own goals – for example, Grinnell (the Museum curator) using it as a scientific laboratory, or the University authority using it to justify its existence. Thus the actors’ actions are not structured or constrained by their relationship with the object, rather their actions help determine the object – they (re)construct it. In spite of these limitations I still feel that ‘boundary objects’ can be a useful conceptual tool for describing how temporally or spatially extended collaboration between varied individuals can take place. In the next section I tentatively draw out from actors’ stories the use of ‘boundary objects’ that enabled collaboration whilst ensuring difference. I should note that I do not want to strictly designate ‘boundary objects’ as enabling or constraining phenomena, rather they have the qualities to function as both.

### 3.4.2 Actors’ boundary objects

Through re-examining the stories concerning the development of the Televersity and its essential material component, the LLCs (a possible ‘middle ground’), I want to concentrate on the ‘boundary objects’ that are utilised by the actors for the temporary stabilisation of the Televersity and the LLCs. I just wish to briefly note that the Televersity project also acts as a boundary object, that is, its identity has been plastic enough to adapt to local needs, yet robust enough to maintain a common identity across actors’ social worlds. What this illustrates is the heterogeneous nature of the Televersity and the research I have conducted, in that I am (and was) not studying the Televersity project, but Televersity *projects*. From this position I want to interrogate the boundary objects drawn upon in constituting the actors’ stories, primarily: the Televersity project, the county of Suffolk and future Information Societies.

#### 3.4.2.1 The televersity project

I would suggest that this object functions as what Star and Griesemer call an ideal type:

‘..It is abstracted from all domains, and may be fairly vague. However, it is adaptable to a local site precisely because it is fairly vague; it serves as a means of communicating and co-operating symbolically – a ‘good enough’ road map for all parties....They result in the deletion of local contingencies from the common object and have the advantage of adaptability’

(ibid.:410)

This is exactly the situation that we see with the Televersity, there is a common theme or strand of characteristics that define the Televersity project, and all the actors recite these one after another in their stories. The essential elements of the Televersity include:

- its collaborative nature
- its utilisation of ICT for delivery and education
- its ability to increase learning and education for the people of Suffolk
- its association with a future University for Suffolk

As a ‘boundary object’ it performs by deleting and masking the local contingencies which exist for each of the actors, the differences in the functions it will perform and the characteristics it embodies. There are conflicting stories of what the Televersity is, the functions it will and won’t perform, the affordances offered to the users of Televersity, and the futures of its use.

For Suffolk College the Televersity is an extremely important development in that it may enable them to realise many of their ambitions; university status, greater recognition academically and an ability to continue research into the use of telematics for learning. Suffolk College considers the Televersity to be an adaptable idea as outlined by Dave Muller:

“I believe the Televersity is an adaptable idea in that it can help us (the college) to achieve a number of aims, for Suffolk College, the county and Ipswich”<sup>97</sup>

Although there is not complete coherence amongst the views of the college regarding the function of the Televersity, it is seen by all the representatives as crucial in their campaign for university status. Some see the achieving of university status as the ultimate ambition, no matter what becomes of Televersity, whereas others see that by utilising the Televersity idea they can use it as a bridging and mediating device in the drive for a university. Thus the Televersity project is crucial, but even within the college there are conflicts and differences concerning the exact role that it should perform for the college.

BT is like Suffolk College in many respects in that it too is utilising the boundary object Televersity for the purposes of mediating or brokering future scenarios and future research projects. It utilises the Televersity project as a testing ground for its innovative ideas concerning telematic delivery and the future of computer networks. Chris Fowler outlines his thoughts on the Televersity project:

“Televersity is just one project amongst many others...it serves as a testbed for much of the work we are doing here at Martlesham. The work we are doing on Televersity may represent in some form the future for smaller universities”<sup>98</sup>

The object BT utilises is flexible enough to satisfy its own criteria for mediating a future of Super-Universities, an Information Society, home orientated computing and learning and to meet the criteria of the other actors that are involved in the collaborative project. BT cites the development of the Televersity project in environmental and social reports<sup>99</sup> which demonstrates to the other actors the importance that they attach to the project. Importantly for BT, Televersity enabled them to study a research project in the process of stabilisation and to gain valuable insight into how users received this new form of telematic delivery.

<sup>97</sup> Interview with Dave Muller at Suffolk Collge. 27/11/1997

<sup>98</sup> Interview with Chris Fowler at BT Labs. 6/11/1997

<sup>99</sup> A Question of Balance 1997, 1998. A Report on Sustainable Development and Telecommunications

The Televersity project for Suffolk TEC, is one of a number of projects which it is involved with, that is attempting to increase access to the county's teaching and learning resources. Mike Bax at the TEC outlines the benefits of the Televersity project:

“The project is about economic growth for the city and further success for the county of Suffolk...the TEC supports the Televersity as a pre-cursor to a Suffolk Business School...it is a way for us to test the concept”<sup>100</sup>

The Televersity object it utilises enables it to perform its major function; that of economic growth of the county through training and enterprise. Two of the LLCs (Sudbury and Leiston) are located in dedicated business centres, at the South Suffolk Business Centre in Sudbury and at the Leiston Learning Centre. The decision to locate the learning centres in business centres, with which Suffolk TEC already had involvement, increased the ability of the TEC to influence the development of the LLCs and the future potential of the centres.

With the successful use of the Televersity project to establish LLCs in business centres, the TEC has further committed £1 million towards the establishment of a Suffolk Business School which will run courses through to doctorate level in collaboration with the county's colleges. The Televersity idea of collaboration and co-ordination between different institutions and organisations has facilitated for TEC the necessary commitment and enthusiasm for the idea of a business school for the county, possibly located within a new county university.

For Eric McCoy the most important concern is the improvement in education standards; he is very aware of the lack of highly qualified graduates and wants this situation to change:

“Suffolk does not have a university and I know what benefit skilled graduates could bring to the county...amongst many other things my experience has demonstrated to me the value of a skilled workforce”<sup>101</sup>

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<sup>100</sup> Interview with Mike Bax at the Suffolk TEC, 7/11/1997

<sup>101</sup> Interview with Eric McCoy at Suffolk College 5/11/1997

Eric uses the Televersity for the purposes of facilitating progress towards his goals, he realises that by utilising ICTs in his model it will be more attractive to the other actors. The Televersity for Eric brokers a future where there will be adequate supply of highly trained and educated individuals to enabling the county to prosper. The Televersity he utilises is flexible enough to satisfy his criteria (of increased educational standards and economic prosperity), whilst also able to include the goals that other actors have for the project. His goals could be achieved through a new conventional university, the local colleges, the Suffolk Business School, but he supports the Televersity exactly because ‘it serves a means of communicating and co-operating symbolically’ (ibid.:410). It is more than ‘good enough’ to enable progress.

#### 3.4.2.2 The county of Suffolk

The boundary object that is the county of Suffolk functions as what Star and Griesemer call an object which has coincident boundaries:

‘These are common objects which have the same boundaries but different internal contents. They arise in the presence of different means of aggregating data and when work is distributed over a large-scale geographic area. The result is that work in different sites and with different perspectives can be conducted autonomously while co-operating parties share a common referent. The advantage is the resolution of different goals’

(1989: 410)

The county of Suffolk is constituted by the actors involved with the Televersity project as an object which indeed has the same boundaries but different internal contents and meaning. There are conflicting uses of the object by the actors, but, in common, they all create the county in a manner which is appropriate to them in achieving their goals and objectives.

For Suffolk College the county of Suffolk is the geographical area in which it is located, and subsequently focuses the majority of its attention. The college



characterises the county as a homogeneous and coherent body of individuals who will all benefit from the establishment of local learning centres as part of the county-wide educational development Televersity. The county in the colleges' perception is homogeneous in its desire for greater education and training, and the college believes this is best delivered to the county via the latest ICTs.

The college feels a great sense of responsibility for the education and training needs of the people of Suffolk. Suffolk for the college is the entity which supports its own existence and purpose and because of this relationship, the college believes it is essential that it should foster and bolster the association that exists between the actor and the boundary object it constructs and utilises.

The county of Suffolk for BT is the location and social setting in which, through a plethora of coincidence and reasons, their primary research and development establishment is found. The reason why it is located within Suffolk (close to Ipswich) is, without doubt, complicated, and is of little interest here. More important is the creation of the object used by BT for achieving its goals. The object (the county of Suffolk) grounds BT in the everyday activities and routines of the people of Suffolk, by this I mean that many of the employees will employ, share and exchange stories concerning their experiences in the county throughout their time at Martlesham, thus influencing the culture of the research and development centre.

The function that the county offers to BT is the opportunity to test their latest projects and technologies on a group of individuals, in this manner the object functions as a sampling facility for BT. Thus unlike the College, the individuals are less important than the overall function that the county can offer to BT. BT as one of the largest employers in the county also has a responsibility to the social and environmental well-being of the county, it must also be seen to be benefiting not just its shareholders but the local economy. Thus the object BT constructs must be able to afford such a symbiotic relationship.

The county of Suffolk for the Suffolk TEC adopts another role, the county for the TEC is the designated geographical area that they are required to assist. Within the county they are focused on a specific section of the population and the economy. it

aims to assist the small and medium sizes business with their training needs to improve their employment prospects, prosperity and quality of life. Thus the county of Suffolk for the TEC is determined by these aims, although it obviously includes other properties as well.

Suffolk TEC also utilises the boundary object that is the Televersity as a defensive mechanism for the county of Suffolk. By introducing the Televersity county wide it can offer help and defence for its objectives for the county (in this case economic opportunities for SMEs) against increasing economic and social competition from neighbouring cities (Norwich, Cambridge, London) and counties. The county of Suffolk thus has a 'local' use by the Suffolk TEC that again significantly and simultaneously differs from the other actors.

The final boundary interpretation of the county is used by Eric McCoy, which is predominately characterised by the economic success and prosperity of the county. He believes that the county is in desperate need of greater training and education opportunities to enable it to secure the services of highly skilled employees (who are often employed outside the county) and secondly to improve the economic outlook for the future. The county as it is now for Eric is just a temporal state of the region that he hopes to improve dramatically

The county of Suffolk in many ways does not exist for Eric, as the county will only become a reality at a future time for him, when his training and education ideas have been thoroughly implemented. The county as he now conceives of it, is but a glimpse of what he hopes it will become in a not too distant future.

### 3.4.2.3 Future Information Societies

I would suggest that like the Televersity object the representations of future Information Societies object functions as an ideal type (see above).

This is the case with the use of representations of future Information Societies whereby there is a common theme or collection of characteristics that are associated with Information Society in multiple futures that all the key actors use in their

stories. From these stories I have drawn out the recurrent elements of the Information Society:

- the increasing reliance on Information and Communication Technologies (ICTs)
- a society which offers every individual greater access to education
- increasing importance of the role of information management

As a 'boundary object' it performs by ameliorating and masking the differences in the actors' representations of a future Information Society. There are many differences in the use of the object and in the functions that it will perform for the actors, but the object is flexible enough to incorporate the disparate representations together in a coherent manner, that the object is able to exist in an apparently stable form.

For Suffolk College a future Information Society is an extremely important representation utilised as an overarching structure or framework, whereby the College can locate the Televersity project within this structure of the future. The use of the latest ICTs in the Televersity project immediately gives it association with a future Information Society where ICT will be of pivotal importance. Suffolk College is very much concerned with the importance of learning information for their students, and because of the new ICTs the amount of information is growing rapidly, this idea of information management is again crucial to the object that is a future Information Society. Thus for Suffolk College the Information Society is crucial as it offers legitimation for its actions, its drive in using ICTs, its emphasis of information management and its ambition to increase learning opportunities for all the individuals of Suffolk.

BT is a company that is involved, through its research and development laboratories, with making future representations and ideas, in short, reality. It is a company that has the ability (if you like power) to materialise ideas and concepts into being. Thus BT utilises the Information Society as its possession, a representation that it has a great degree of control over, it can decide (BT believes) what shape the representations will ultimately become. The object that BT uses is not open to the contingencies of chance that it does for many of the other key actors, for BT it is

very controllable and thus predictable<sup>102</sup>. The Information Society is a future that BT is able to offer to others, these obviously include the other actors it is involved with concerning the Televersity project. As an integral developer of this Information Society it is able to offer elements of it to others, so that they too can be included in the future Information Society. BT claim to have part ownership of the object that is a future Information Society and can mould and flex it to fit many of the projects that it is involved with, thus facilitating and enabling collaboration and co-ordination across diverse sectors of society. The ownership and control over the future Information Society enables BT to suggest that the increasing regionalisation and specialisation is a crucial component of their Information Society and offer this as part of the Televersity project.

The future Information Society for Suffolk TEC is a future that must include the businesses and enterprises that it is responsible for, if it is too achieve its goals of greater economic prosperity for the county. The methods by which it facilitates and uses a future Information Society is through the justification for investment in new ICTs for its businesses. By this I mean that it actively encourages and helps businesses to apply for governmental and European grants that are allocated for ICT investment, as preparation for, and facilitation of, a future Information Society. This future Information Society has a strong European content with greater collaboration essential for businesses to survive and flourish in the future information-based society. Thus the TEC also supports and facilitates this collaboration as an important component of the future Information Society.

Eric in his use of a future Information Society draws upon the information component that is contained in the initial broad definition. He believes that this future Information Society will involve a large increase in the quantity (not necessarily the quality) of information that individual will have access to, and thus they will need to be competent with using ICTs to manage the information. Eric's future Information Society is one in which this access to information will empower the individuals of Suffolk with greater awareness and skills to enable themselves to

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<sup>102</sup> BT employs Ian Pearson as their futurologist, every year from extrapolation and modelling he produces a technology calendar which gives three future dates (earliest, most likely and latest) for a variety of technological orientated scenarios. E.g. Online voting in the UK (2004, 2007, 2010), Virtual companies dominate (2007, 2010, 2014), Human knowledge exceeded by machine knowledge (2012, 2017, 2022), Learning superseded by transparent interface to smart computer (2020, 2025, 2030). [www.labs.bt.com/library/archive/btl\\_97\\_1/index.htm](http://www.labs.bt.com/library/archive/btl_97_1/index.htm)

compete more successfully in the global marketplace. Eric believes it is essential for the individuals to have the skills necessary to be able to participate in this new Information Society, and for Suffolk not to be bypassed by this pending information revolution.

The representations that the actors use as the ‘boundary object’ that is the future Information Society are thus multiple, but still have an overarching sense of coherence. All the actors draw upon different components of the broad identity that is the Information Society and use it to sustain their actions, and to work towards their goals.

### **3.5 Conclusion: The Task Group and Local Learning Centres**

#### 3.5.1 Affording co-ordination and collaboration

In this chapter I have described how I became involved with the different actors who have been working towards a future educational institution, the Televersity. During my research I worked closely with members of Suffolk College and BT (as my CASE body) and the other actors involved with the Televersity project to gain as extensive an insight as possible into their views, interests, and goals. What this chapter has explicated is the degree to which co-ordination between the actors was essential for the development of the project, their utilisation of flexible boundary objects and the malleable nature of actors’ goals.

I hope to have demonstrated that the identity of the Televersity is not fixed. In fact the project is continually shifting and being reshaped to include new projects and initiatives, for which funding has been successfully won (predominantly through European Union funds). Partly because of the unstable and heterogeneous nature of the Televersity project, the exact components or purpose of the project often seem rather vague. Yet, this is arguably a quality that enables the Televersity to continue to survive and flourish. The specific component of the Televersity project that I have investigated in this chapter is the use of LLCs for decentralised learning and teaching, the interests and goals that the actors have in this component of Televersity

and the conceptualisation of such spaces I have called, drawing on ideas from BT and Information Society literature<sup>103</sup>, the ‘middle ground’.

In this chapter we have engaged with the pivotal actors’ stories, and examined their reasoning for the development of the Televersity. The stories entail economic, political, social and educational arguments for supporting specific elements of the project. But these stories also suggest the fractured and disparate roles of the actors within the decision-making processes, and they draw attention to the conflicting and contradictory elements within the developmental stages of the project. The collaboration necessary for the Televersity project to materialise is only made possible by the use of flexible boundary objects. These boundary objects are most important in the key site of collaboration: The Task Group.

### 3.5.2 The Task Group

The exact nature and function of the Task Group is never fully explicated through the stories that are told by the actors. The Task Group is a fluid ‘ad hoc’ body of individuals and interests that I believe functions as what we might call an ‘amalgam’, which has separate and disparate entities that ‘cohere’ through the diffuse mediums of the stories/metaphors and boundary objects concerned with the LLCs and Televersity. The Task Group membership includes disparate actors, and enables them in an informal and relaxed forum (they first met in a local hotel to establish the Task Group) to express their interests, goals and desires for the future of the institutions and individuals they represent.

The Task Group comprises a mechanism and structure through which future trajectories and models concerning Suffolk and the wider geographical political and social landscapes can be discussed, contested and acted upon. The contest that is played out is between future worlds in which each of the actors brings to bear their own collection of interests, contingencies and representations.

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<sup>103</sup> The “middle ground” concept. Early widespread fibre deployment is not commercially and financially viable. A “middle ground” approach could envisage fibre deployment to “service centres” or “telecottages” in every community, enabling small businesses or residential users to gain access to new services on a cost effective basis, close to their sites, even if not yet their premises. Extensions to homes and small business premises may become viable at a later stage, depending on demand and on technology development. p. 115 *A Networks for People and their Communities, First Annual Report to the European Commission from the Information Society Forum, June 1996.*

One of the results of the Task Groups' collaboration and co-ordination was to facilitate the initial two year pilot project, (the Telematic Learning Project) which was funded through Suffolk TEC, assisted by BT, managed by Suffolk College, promoted by Eric McCoy and vigorously supported by the Suffolk Chamber of Commerce, Suffolk County Council, Ipswich Borough Council and the local MP, Jamie Cann. The Task Group has enabled the multiple desires of the actors to be co-ordinated through the Telematic Learning Project, and these desires and goals can now be materialised in a flexible manner for all the actors through the LLCs. All the actors, as with the Televersity project, are able to utilise the creation of the LLCs to further their interests both institutional and individual. The nature and function of the LLCs is not fixed, and as with the Televersity, the actors will be able to abstract qualities and functions from the LLCs that will serve to bolster their own positions and goals.

### 3.5.3 Using the televersity; local learning centres

In this chapter I have presented the multiple functions that the Televersity performs for individuals and institutions within Suffolk. I have drawn on the accounts of the actors involved with the Televersity to explore the multiple origins of the development of the Televersity and the many reasons for the shape that the project has taken.

My account looks at the 'projected' chapter(s) of the LLCs through an analysis of the actors' stories. But for these to become realised users must also buy into them – that is the accounts of Televersity imply particular models/ roles/ identities of local people. How, in fact, do such local people respond to the LLCs? How do they adopt or adapt the roles with which they are furnished? It is these issues I will concentrate in the next chapter

What is needed now is to proceed to the actual learning centres where these functions and ambitions are to be realised (or at least partially). Do the centres reflect the trajectory suggested by the Televersity of decentralised teaching and learning or do the centres suggest other scenarios that may flow from their use?

The context of use of these centres will be explicated in the next chapter, the background and details of the centres' users will be examined and explored. The examination of the use of the centres will also be placed in a wider context of future identities of education and ideas of an information society.

So in the next chapter I will focus upon the actual users of these 'middle ground' spaces where the functions of the Televersity are to be realised. I will examine how the centres are supposed to function, how they are able to facilitate learning and how the users of the centres contextualise and integrate the use of the centres into their everyday lives. Users will tell us about how they use the centres, and what they perceive are the uses and likely benefits that flow from their establishment. How will the users' experiences and future ideas of use compare/complement with the trajectories imagined by the actors in this chapter? Do the actors' representations accurately capture the complexities of the users' experiences? Or are there large discrepancies? If there are problematic elements between the actors and the users how can these more adequately be accounted for? Is ANT adequate in its ability to capture the complexity that exists?



## Chapter 4. CONSTRUCTING TELEVERSITY USE: LOCAL LEARNING CENTRES (LLCs)

### 4.1 Introduction

In this chapter I will concentrate on the practicalities of using the Televersity, focusing specifically on the use of the Local Learning Centres (LLCs) by the people of Suffolk. Initially the first section of this chapter (4.2) will review and summarise the texts and discourses which have been produced to contextualise the nature and functioning of the centres. Through these I will present a series of representations and scenarios which have been generated by the key actors (Suffolk College, BT, Suffolk TEC and Eric McCoy) to support the development of the Televersity, and more specifically the LLCs. These representations will locate the Televersity and the centres within a larger social and political milieu. I will demonstrate where the actors locate the centres within their broader conceptions and visions concerning future education and training. The actors are the entities that have emerged and come into existence through their performances, their important qualities are what they do (their performance) with their competencies to be deduced through an analysis of their performance<sup>104</sup>. Users are the actual individuals that use the LLCs or any ‘middle ground’ space.

In further analysis I will examine the actors’ representations of how the centres will be utilised by the individuals of Suffolk and how this use connects to the broader visions of the future. Thus I will analyse actors’ constructions of the users’ characteristics, what these users want and how they will use the centres. What I will draw out at the end of this section are representations of the users, the centres and possible futures by the actors as a core set of characteristics that are common to all the actors’ representations. This core set of characteristics will in the section (4.4) be contrasted to the users’ experience of using the centres and their ideas concerning future use of the centres which are explored in section 4.3.

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<sup>104</sup> Latour (1999, p.308) utilises the term ‘Name of Action’: An expression used to describe the strange situation -such as experiments- in which an actor emerges out of its trials. The actor does not yet have an essence. It is defined only as a list of effects -or performances- in a laboratory. Only later does one deduce from these performances a competence, that is, a substance that explains why the actor behaves as it does. The term “name of action” allows one to remember the pragmatic origin of all matters of fact.

The second empirical section of this chapter (4.3), will examine the discourse from a series of focus groups conducted with the users of the LLCs at Haverhill and Sudbury. These groups explored an extensive range of issues relating to the everyday use of the centres, future visions and ideas concerning the use of technology for education, and future Information Societies. In the focus groups users talked about their relationship with the technology within the centres and the significance of the use of it for their everyday lives. This was related to a wider collection of technology based issues, for example the role of more popular technologies in their everyday lives (the Internet etc.), and in the future. These discourses will be further examined by comparing and contrasting them to the core set<sup>105</sup> of characteristics draw out from the actors in the preceding section.

In the third section of the chapter I will examine how the core set of characteristics drawn from the actors' representations, contrasts with the realities of using a LLC. How do the users talk about their own experiences of using the centres as opposed to the versions outlined by the key actors. This analysis will draw upon the idea that the Televersity has multiple representations, functionality and affordances. What I will present are more thorough representations of the development and use of the 'middle ground' by the key policy actors and the active users of the centres. I will further outline the reality of the use of the centres by the users that in many cases starkly contrasts with the representations of use constructed by the actors in the last chapter.

The fourth section of the chapter considers the exchange of information that occurred between the users of the LLCs in Suffolk and the actors which developed and promoted the ideas that led to their materialisation. Furthermore this section considers the role that I played as a conduit for information exchange between the users of the centres and the primary actors, and the information I exchanged between the actors themselves.

In the final section of the chapter I want to add a theoretical veneer to the empirical analysis which has detailed the development of the Televersity project. Through this theoretical enquiry I will demonstrate how actor-network theory can be used to offer a particular schema for the explanation of the Televersity project. Furthermore what I

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<sup>105</sup> It should be noted that I use core set in the non-Collins meaning of the term

will illuminate through applying ANT to the Televersity project are the inadequacies of its vocabulary in appreciating the intricacies of the project. It is because of these inadequacies that I will then attempt to use the idea of fluids and fluid space to perhaps offer an alternative account that better encapsulates the essentials of the project.

## **4.2 Televersity Usage: Actors' Constructions**

In this section of the chapter I will present a selection of the representations that the key actors (associated with the Televersity project) constructed concerning the use of the LLCs. I will present how the actors conceptualise the users of the centres, the desires and hopes that the actors have and the role that the centres will play in different future scenarios.

The process of constructing identities and representations of the users, the centres and the role of the centres in the future will include descriptions of what the users want from the centres, what the centres can afford the users, and the future roles that the centres may play. Although I will attempt to separate the identities and roles of the user, the centre, and the future role of the centres, in the texts they are not always represented in isolation. What the actors suggest in the texts is a flow of implications that are produced when the combination of user and centre function together. That is, the actors represent scenarios of the users and the technology in the centres working together to form a 'package'; from this implications flow.

I now want to trace out these multiple representations and implications that the actors have presented concerning the users and usage of the centres by the people of Suffolk. The major actors will explain what the users of the centres will be like, what the functions the centres will offer to the users and how the centres could be used in the future. What I hope to summarise at the end of this section is a key set of characteristics that the actors assemble and connect to the use of the LLCs presently and in the future. This core set of characteristics will be drawn out from the texts that the actors use to construct their representations of the users, the centres and possible future roles of the centres. Effectively this core set of characteristics is the

representation of the successfully functioning Televersity that the Task Group utilises.

#### 4.2.1 Suffolk College

The College represented by Dave Muller, Peter Funnel and Richard Boniface cite a number of influences that act upon the potential users of the centres and act in constructing the users attitude towards the centres. In particular, Dave Muller, highlights the rural nature of Suffolk and the problems that this causes the people of Suffolk, the problems of travelling in a rural county and the benefit that the centres could perhaps offer:

“It is inconceivable until you live and work here (Suffolk) of the real difficulties of travel, it’s not made for people, it is really difficult. And you know its not like Birmingham or Leeds where you have good transport links”<sup>106</sup>

Thus Dave Muller constructs the user as desiring, in fact needing, local facilities that will enable them to overcome the terrors of Suffolk public transport. The LLCs will provide the local learning facilities that the people of Suffolk need. He continues by expanding upon how the centres will function and what they will offer to the local community:

“It’s a hub here (Suffolk College) – its linked to local learning centres, which will employ teaching and learning techniques which are, which go beyond traditional distance learning.. to some notion of interaction and a changing concept of rather than having to discover knowledge – because it’s easier now – to controlling the knowledge explosion, as a student your task would be different”<sup>107</sup>

What Dave Muller illustrates is that the nature of the learning in the centres will be radically different from the traditional text based distance learning. On the one hand,

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<sup>106</sup> Interview with Dave Muller at Suffolk College. 27/11/1997

<sup>107</sup> Ibid. note 106

he is suggesting that the centres will not be passive learning centres, but on the other that this new form of interactive learning concerns the management not the discovery of educational information. Thus the users here are going to face a new form of learning that will entail information management and selectivity. The users will have to make more judgements in these centres due to the information explosion that Muller describes. Why specifically this will occur in the centres and not elsewhere is neglected by Muller.

Muller expands upon ideas concerning the success of Televersity and his criterion for successful use of the LLCs:

“The idea outcome would be to have established a community university, networked with local learning centres and others...enabling students and people living in Suffolk and the surrounds to be satisfied”<sup>108</sup>

Thus Muller believes that the establishment of the LLCs can satisfy the desire within the community for education and training opportunities. Muller suggests that for correct use of the centres local people will need information management skills in the centres to be able to cope with the information explosion. The users are not passively learning in these centres but will be exposed to a radical and new form of learning facilitated through ICTs.

Peter Funnell of CREATE suggested to me that indeed the centres would be different to classrooms and he told me:

“That with advanced telematics it will be possible to do things differently, that one may not need to revert to a traditional university”<sup>109</sup>

these centres will also:

“allow for individual learners to identify what they want to learn and how they want to learn it”<sup>110</sup>

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<sup>108</sup> Ibid. note 106

<sup>109</sup> Interview with Peter Funnell at Suffolk College. 11/6/1997

Peter thus suggests that the individuals will experience a new dimension to learning unlike classroom-based learning. How it will differ he never really expanded upon, apart from introducing the idea of greater flexibility in the learning options available to the people of Suffolk. This new experience and flexibility in learning will be facilitated through the utilisation of advanced ICTs which will be employed in the centres.

Finally from Suffolk College I want to draw upon a text that is the result of the two year Telematic Learning Project: The Telematic Learning Project Evaluation Report. In this report are outlined the aims of the Televersity are to use the latest computer and communication technology to:

- Provide improved access to Higher Education and continuous professional development
- Allow greater choice and flexibility
- Promote community based learning
- Enhance human communication and interaction

These aims would in the main be achieved through the use of the local learning centres, although initially there was also to be some home-based initiatives. Within the centres the users would be able to communicate with tutors and fellow students using PC based video-conferencing. The centres would also utilise computer mediated conferencing using First Class (a software application), this would provide electronic mail, group conferencing, and access to course notes. This could be used at different times by tutors and students, and hence offers communication that is asynchronous compared to the necessary synchronicity needed for video-conferencing. Users would also be able to access information on the Internet for referencing material.

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<sup>110</sup> Ibid. note 109

The text constructs a user that is comfortable and proficient with using the technology in the centres. This cannot be overstated: the user will be able to use the technology in the centre with ease. The technology in the centre will enable individuals to communicate with other students and tutors in a reliable and convenient manner, the technology is both reliable and easy to use. The technology does not suffer from problems and the availability of access to the Internet and other networks is constantly maintained during the centres' use.

The evaluation report concludes by suggesting some of the future trajectories for telematics and learning centres.

“The home and workplace may well become key learning environments supported by developments in digital interactive television, World Wide Web integration etc. Access to education will be available 24 hours a day, 7 days a week according to personal need..... Many students though will still opt for traditional classes on a University Campus, due to the social environment and more rigid structure of learning. The opportunity to mix these approaches will be common – combining some taught classes with home study through the Internet.

This vision seems to remove the need for Local Learning Centres. However, the globalisation of education may well lead to a growing demand for local support and advice. Learning Centres in the future would not be the primary location for delivering education but would concentrate on course advice, basic skills training and personal programme planning. Ideal locations would be libraries or supermarkets with extended opening hours and personal advisors. The centre would arrange learning packages to suit the needs of individuals and would support students through their learning experience.”<sup>111</sup>

The future user in this text is demanding greater access to education and in a more flexible manner. Whilst the student may opt for traditional education, there will be a number of other options that the student will be able to consider and explore. The student will be able to select a number of different learning mediums to complete

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<sup>111</sup> Telematic Learning Project Evaluation Report, October 1998.

courses and training, with the 'middle ground' being an option that will supply the local element of the learning/training course.

#### 4.2.2 BT plc.

I now intend to trace the configurations that are mapped out by the texts in which BT have outlined their vision of future learning and education. Many of the ideas presented by BT are on a much larger scale than those of Suffolk College, but within these grander plans there are still implications and ideas that resonate with the Local Learning Centres of the Televersity.

BT within its research and development division has a separate department that is concerned with the idea of community networks and the associated benefits that can flow from their establishment. It produces social and environmental reports on the implications of using telecommunication throughout the community for work, education and recreation. BT in one such report describes how these networks can facilitate communication and enable a community to prosper:

The electronic network will not replace 'normal' human interactions but facilitate them and help them to operate more effectively by overcoming barriers to communication such as proximity, mobility and synchronicity. The 'flavour' will be 'of, for and by' the community.

So, a community network is an electronic network linking people with information and people with people. It enables communication, education, trade and empowerment and serves the living needs of communities<sup>112</sup>

In BT's report 'A Question of Balance' (a report on the sustainability issues surrounding telecom usage) it highlights the benefits of working in tele-centres and highlights the environmental, social and economic benefits associated with the University for Suffolk project.

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<sup>112</sup> [Http://www.labs.bt.com/projects/cnet/intropage.htm](http://www.labs.bt.com/projects/cnet/intropage.htm)



Some of the feelings of isolation (of working at home) can be counteracted by working from a tele-centre where resources such as computers and office equipment are shared amongst a number of teleworkers<sup>113</sup>

Concerning the Televersity project it states that:

“The university will employ the most advanced telecommunications and information technologies to provide local education services, especially to more isolated parts of the county”<sup>114</sup>

It continues by outlining that the project will generate a wide range of benefits:

“Environmental Benefits: the university aims to provide services at local centres avoiding the need for any significant travel.

Social Benefits: Making use of existing community buildings to deliver training and education.

Economic Benefits: A study by the management consultants Touche Ross estimated that the university could inject £50 million into the local economy.”<sup>115</sup>

In these texts BT is not so much directly concentrating on the representations of the individual users (tacitly it is constructing the user though), but directing its attention to the successful functioning of the centres. It is constructing a positive set of flows that will be enabled by the individuals in the centres using the ICTs competently and efficiently. Concerning the specifics of using the centres and their role in future educational scenarios Richard Nicol comments that:

“I think it is naïve that a Televersity will replace a traditional university experience, because as you know a typical university experience is not just

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<sup>113</sup> A Question of Balance (A Report on Sustainable Development and Telecommunications), 1998

<sup>114</sup> Ibid. note 113

<sup>115</sup> Ibid. note 113

the learning. So I don't think it's going to replace that (traditional universities), I think it's going to complement that"<sup>116</sup>

A colleague of Richard Nicols, Chris Fowler also commented on the future of education and the role that the Televersity project could play in that future. In an interview with Chris Fowler<sup>117</sup> he presented a future of 'Super-universities' that would be regionalised, and with each of them specialising in the subjects that they had greatest expertise in. This future of 'Super-universities' combines with local learning centre use would enable individuals to educate themselves at any time or place they desired.

In summary I want to clarify some of the pertinent ideas that can be seen to be repeated by BT, these concern the present use of ICTs and their possible future role. A central feature of the use of ICTs in the community is the idea that they will not supplant the communication channels that exist, but will supplement them. The use of ICTs in the LLC will generate new possibilities for education whilst still enabling many of the more traditional methods to flourish alongside. The centres will offer a degree of social interaction to the users which home-based education cannot offer to the users. The successful use of the centres and the establishment of a county wide Televersity will generate a wide range of social, environmental and economic benefits. It will enable a reduction in the need of users to travel within the county, it will reuse existing community buildings in an effective manner, and the university will produce millions of pounds worth of economic spin-offs. The users that BT represents will want to learn in their local village or town and will be happy to be using community based facilities.

Finally from the BT data I want to draw out a future vision that enables connections to be made between BT's future visions and future trajectories for the local learning centres. In a text presented by BT at its community network web pages it describes its vision for the future:

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<sup>116</sup> Interview with Richard Nicol via Video Conference, 18/11/1997

<sup>117</sup> Interview with Chris Fowler at BT Labs., 6/11/1997

Our vision is for universal access, with private connections at people's homes the norm. To ensure universality, public access points should be available from schools, post offices, community centres, libraries, town halls, council run leisure facilities and from public kiosks. In our vision the community network connects all parts of the community including the private and public sectors, individuals, educational establishments and the voluntary sector. It should seek not to replace the human networks that already exist but should enable them to function more efficiently.<sup>118</sup>

Ian Pearson (BT's resident Futurologist) has written extensively on his (and BT's) thoughts and visions concerning a plethora of topics, including the future of telework centres and education. Ian in this extract constructs his vision of an active telework centre, the benefits that flow from its use and outlines possible future trajectories for their existence:

#### Active Telework Centres:

The building would be equipped with adequate networking and facilities, and could have a mixture of hot desks for infrequent occupants, and some permanently allocated desks for regular users. Some may be permanently leased by single companies with a significant local presence. Obviously space could be open plan or office based. Sharing of space and equipment could make such centres cost effective, especially if some of the users are shift or night workers. Using state of the art cordless LANs and cordless phones, equipment and desks could be moved around frequently without the usual problems of rearranging spaghetti wiring.<sup>119</sup>

#### Telework centre benefits:

Firstly, people will have much more contact with more of their neighbours. We think this will have a positive effect on local communities. Secondly, there is more scope for cross fertilisation and education, making a better-

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<sup>118</sup> <http://www.labs.bt.com/projects/cnet/vision.htm>

<sup>119</sup> [http://www.bt.com/innovation/viewpoints/pearson/telework\\_centres.htm](http://www.bt.com/innovation/viewpoints/pearson/telework_centres.htm)

educated and more versatile workforce. Thirdly, people would be able to change employers without having to move geographically. This would gradually make it easier to set up and run virtual companies, where companies can form teams of dispersed people with just the right skills for a particular project, who go their separate ways when the project terminates.<sup>120</sup>

#### Future trajectories:

Large screens that allow life size videoconferencing, photocopying and printing equipment, meeting rooms, and of course computer terminals, could be just as useful for community activities as for work. With immersive virtual reality chambers too, the centres would be very attractive entertainment centres, perhaps greatly enhancing quality of life in rural areas. These telework centres may also make ideal drop-off places for increasingly frequent teleshopping deliveries. All in all, we can expect that these centres will become very commonplace over the coming years, an ideal investment for budding property speculators.<sup>121</sup>

Importantly in the first text (from BT's community network web pages) BT critically affirms its belief that the predominant access point to ICTs will be in the home (Our vision is for universal access, with private connections at people's homes the norm), although supplemented by other access points. A precise linear trajectory is presented by BT which delineates a path from present access points (predominantly in a work or educational place) to a future of home-based access and education. The 'middle ground' options presented by the local learning centres are seen as a temporary phenomenon which will eventually and inevitably be supplanted home-based access.

In context, the texts presented by BT illustrate these telework centres as important future locations for local communities. The telework centres may serve multiple uses, being used for different activities simultaneously through the concept of 'hot desking'. Ian Pearson also suggests a number of the flows that could result from

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<sup>120</sup> Ibid. note 119

<sup>121</sup> Ibid. note 119

continued and expanded use; greater social contact, cross-fertilisation and education, and the ability to change employers but remain in the same location. His future trajectories for the centres are very positive and he foresees that with further investment in technology the centres could significantly enhance the quality of life in rural areas. He also believes that the centres may have a longer term future by expanding the facilities that the centre is able to offer to the local community. He does not present a strict future trajectory of home-based access, but presents ideas that the principal access point will be home orientated, although in some of his more futuristic texts he discusses the ideas of permanent access to information networks via direct brain links.

#### 4.2.3 Eric McCoy

Eric McCoy the chairman of the Task Group is very enthusiastic about how the people of Suffolk will use the LLCs as part of the Televersity . The LLCs in Eric's believes will enhance significantly the opportunities for education in Suffolk, these centres will be places of opportunity. He describes the inclusive qualities that the new university structure would include, and how this structure would suit the geographical nature of Suffolk:

“We decided that we would like ideally to have a community university...and allow all members of society to partake in HE. No age limits, no sex limits... the ideal way to do that isn't by bringing the students to the university, but by bringing the university to the students, and we have the technology to do that.”<sup>122</sup>

The students that Eric represents have few limitations placed upon them; they have many learning opportunities available to them because of the learning centres. They are not limited by their age, sex, or geographical location, the university is able to be brought to any of these prospective students irrespective of their location. The learning centres are non-discriminatory and facilitate use for all individuals in the Suffolk community. The students will be willing to use the resources in their local

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<sup>122</sup> Interview with Eric McCoy at Suffolk College, 5/11/1997

community rather than commute or move outside the county. Eric describes how the students will be educated (in the actual learning centres):

“The way is getting people to learn by enquiring, by interacting not through sitting and having information poured on top of their heads “<sup>123</sup>

So the prospective students that Eric continues to represent will also be adept in communication and social skills – enabling them to ‘interact’ and ‘enquire’. They will have a desire to manage and process information as part of the learning experience, thus being active rather than passive learners. Eric’s representations of the future of the learning centres includes a desire for the county to have a university, that hopefully utilises the latest ICTs and is community based. He prophesies that a great shift will happen in education when the ‘paradigm of education’ is broken – it will include a shift to active learning, and a wider choice of compatible learning options for all members of the community. An important component is the idea of an electronic satchel that:

“will not only be a computer with a database, it will have a visual linking telephone system, it will have an ability to plug into all the university campus points, it’ll do what an old fashioned satchel used to do. That’s keep all your coursework , all of your notes, all of your projects, all of your dialogues with your tutors”<sup>124</sup>

Eric suggest a future that is reliant on new technologies to facilitate his ideas of greater information storage, manipulation and communication. Through his idea (and BTs) of the electronic satchel (just a laptop?) he presents a device which could enable students to follow a path of individualised learning. That is, students with a satchel-like device would be able to learn what they wanted, where and when they wanted, reducing the need in fact for such rigid educational structures, such as a universities.

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<sup>123</sup> Ibid. note 122

<sup>124</sup> Ibid. note 122

In summary Eric represents the future as reliant, indeed dependent on technological developments that will increase our ability to handle (store, manipulate, communicate) information. Eric believes these technological advancements (which are inevitable to him) will allow Suffolk to overcome some of its problems which have been generated through geographical and educational isolation.

#### 4.2.4 Suffolk TEC

The Training and Enterprise Council has written little about the use of the learning centres by the community of Suffolk, and as such there is little that Suffolk TEC has undertaken to represent either the users of the centres or future for the centres. Suffolk TEC is never (and never has been) very clear about its relationship with the Televersity, in the extracts that follow Mike Bax outlines his ideas and concerns that he associated with the use of the local learning centres. He states that:

“I’m pretty sure the concept is right. The notion of a community based, flexible technology driven learning system has to be right.”<sup>125</sup>

He is convinced that the learning system is correctly suited to the people of Suffolk and the opportunities that they require. The learning centres will be able to offer the flexibility of options that the people of Suffolk need to fulfil their learning requirements. Although he is positive about the possible contribution that the learning centres could make to the county, he also has doubt about the style of education that is being offered:

“I am uneasy about the amount of education that is around that is very open and not easily transferable.”<sup>126</sup>

Mike believes that the manner of the education given should be more closely tailored to the needs of local businesses. The products offered by the education institutions should allow the graduates of the programmes to more easily integrate their new skills with the needs of the county.

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<sup>125</sup> Interview with Mike Bax at Suffolk TEC, 7/11/1997

<sup>126</sup> *Ibid.*, note 125

Mike himself does not articulate future trajectories for the learning centres, but instead remain caution about the learning systems that it will employ. Mike maintains a sceptical position as to the users of the centres and the future use of the centres. The only critical comments that are made regarding the centres are the use of such centres possibly for the propagation of the Suffolk Business School idea of which Suffolk TEC is the significant partner.

#### 4.2.5 Summary: user and future representations

The preceding section has focused on the representations of the centres' users, the physical LLCs, their technology and representations of the future role of the centres. In particular I have attempted to draw on extracts from the actors that construct and characterise users in action, the use of the centres and future usage of the centres. As I stated before the various representations are not mutually exclusive, the characteristics of the users, and of use, are closely intertwined and reliant upon each other. The actors have not limited themselves to just describing how users will utilise the centres, but have extended the representations to include the implications of the successful function of the centres, the effects that will flow from their establishment and how these will, further, transform the county of Suffolk.

In the previous extracts from the actors I have presented the abilities and desires that the actors represent for the users, the users will have to possess these qualities for the centres to function in the expected manner. Deviation from the expected use of the centres may result in unforeseen effects flowing from the centres, and impacting on Suffolk, this is obviously not what the actors want, or expect.

So what I now want to assemble to conclude this section is a core set of characteristics, that is the key qualities and components that constitute the representations (the user, the centres, and futures) used by the key Televersity actors. This information appears in the form of a table on the next page.



**Table 4.1 Actors' 'user', 'LLC' and 'future' representations**

Actor	The 'Users'	The 'LLCs' and the 'Future'
<b>Suffolk College</b>	Will utilise the latest teaching and learning techniques Will need greater information handling skills Will want to learn locally and be comfortable with the centre's technology	Will function efficiently Will enhance human interaction and communication Will be one of many learning options that allow greater choice and flexibility Will in the future support traditional education institutions
<b>BT plc</b>	Will be comfortable/competent with using the technology Will be keen to work partial in his/her local community	Will complement existing local networks Will enable individuals to overcome feelings of isolation Will employ the latest ICTs and the Internet Will reduce the need to travel Will support universal access Will be important in the future
<b>Eric McCoy</b>	Will learn by enquiring and interacting Will have non-restricted use of the centres	Will not discriminate against their users Will enhance learning opportunities and enable the breaking of the 'education paradigm' Will in the future be reliant on technological advances The technology will enable Suffolk to prosper
<b>Suffolk TEC</b>	Will need skills more focused on the local economy	Perhaps using the wrong learning model in the centres The future of the centres is ambiguous, but perhaps related to the Suffolk Business School

The information in the table above is but a glimpse of the multiple representations that are suggested by the different actors that constitute the working combinations of both user and centre. What is presented is both similar and heterogeneous roles that the user and the centres will have to perform to maintain the trajectories that the

actors have mapped out for them. Further from these representations and trajectories I want to condense further the core characteristics of the representations. Thus what I present in Table 4.2. is a concentrated representation all of the actors representations and trajectories – that can be called the representation of the LLCs, the material component of the Televersity model. This collective representation is also the representation that best resembles that that the Task Group utilises in its communication with other actors and institutions when characterising the Televersity project, and more specifically the role of the LLCs.

**Table 4.2 The Task Group representation of the users, the LLCs, and the future.**

The ‘Users’	The ‘LLCs’	The ‘Future’
Will be comfortable and competent with the centres’ technology	Will function efficiently using the latest ICTs	Will continue to support traditional educational institutions
Will be keen to learn and work in his/her local community	Will enhance human interaction and communication, and will be non-discriminatory	Will reduce the need to travel, and support universal access to ICTs
Will be able to learn through, and cope with, a greater amount of information	Will complement other flexible learning options	The technology will enable Suffolk to prosper

What needs now to be explicated are the actual roles and functions that characterise the users and centres, this examination of ‘middle ground’ usage will form the primary purpose of the next section in this chapter. The next section will also include an examination of future trajectories that the actors have suggested will flow from ‘middle ground’ usage, and other new technologies.

### 4.3 Using the centres: users, futures and trajectories

In this section I will use the transcripts from the focus groups<sup>127</sup> which were conducted with the actual users of the LLCs. These will help to contextualise further how they use, understand and integrate the centres in their everyday lives. This contextualisation process will broadly cover the three areas of configuration raised by the policy actors in the last section, primarily those of:

- User representations (what are the characteristics of the users?)
- Centre representations (how the centres are used/ understood?)
- Future representations (what is the future for ICT, and the centres?)

The extracts in this section will examine the representations constructed by the actors in the last section. So that instead of a centre-periphery<sup>128</sup> perspective with actors/designers attempting to construct and stabilise their user/centre representations, I will study the strategies of use employed by the users in the centres, in a manner which has a periphery-centre<sup>129</sup> approach. The centres and their contents will be studied not only as artefacts of weekly use, but also as settings and objects that have symbolic meaning for the users.

Thus what in effect I will demonstrate is the ways in which users as consumers actively participate in constructing meaning for the centres. The centres do not come with a fully formed content of meaning, but rather are constantly reshaped:

Meaning is constantly flowing to and from its several locations in the social world, aided by the collective and individual efforts of designers, producers, advertisers, and consumers.

(McCracken, 1988:71)

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<sup>127</sup> The relevant data for the case studies was generated through interviews, focus groups and the fieldwork. For the educational case study (Televersity) I conducted in total 24 semi-structured interviews with the important actors associated with the project and a series of eight, one and half to two hour focus groups which took place at two of the Televersity's Local Learning Centres, further fieldwork included visits to technical laboratories, the 'middle ground' spaces and co-ordinating centre. For the Internet café research in total 12 establishments were visited, and at the selected café a total of 40 hours were spent observing the use of the café and informally interviewing and recording the views of 210 users of the café. Interviews were conducted at the café with 2 members of staff and further interview with 2 members of the corporate group.

<sup>128</sup> By centre-periphery I mean the approach which is typified by a policy or design focused perspective, with the policy makers or designers constructing roles for the users, including the use of generalised models, that simplify and objectify the users, and how they use the new technologies.

<sup>129</sup> A periphery-centre approach, reverses the study of use by following closely the complex and varied ways in which the technology (in this case the LLCs) is utilised by the users in its context of use (Aune, 1996)

The users of the centres will not only negotiate and attribute meaning to the use of the centres in the present, but will be asked through the focus groups to attribute meaning for the future use of the centres and ICTs.

This section serves as an introduction to the four parts that follow which will examine in turn the process whereby users are initially attracted to the centres, the characteristics of the users, the use of the centres and the future use of the LLCs and ICTs. Through the focus groups I will examine the characteristics of the users (4.3.2) asking why they have embarked on the education courses, and what they think about the courses they are undertaking. The following section (4.3.3) concentrates on the actual LLCs, what the users thought about them as learning spaces, their ideas about the technology in the centres and the integration of the centres/technology into their everyday lives. The final section of the three (4.3.4) concludes by asking the users about the future of the centres and ICT usage, will the centres be used /needed in the future, what ramifications will flow from increased ICT usage etc.?

A final note is added to this introduction about the nature of the discourses which have emerged from my analysis of the focus groups. The discourses which arise from the focus groups are not as specifically focused upon the representations that the actors construct. By this I mean that the users in the focus groups don't actively discuss their own characteristics and identity to the degree that the actors did in the previous section. Nor do they attempt to describe and represent the identity of the learning centres with the same degree of specificity that the actors have. Thus the representations that the focus groups will illuminate are of a more local nature, and relate to the actual use of the centre in situ. They draw on a wider selection of personal resources and relations, that the actors have largely ignored in constructing their representations of use and the users.

#### 4.3.1 Attracting the users

An important feature of establishing a Televersity and the LLCs was the methods by which the key actors actually attracted the users to the centres. These methods fill the gap between the actors' 'models of use' and the use of the centres by the people of

Suffolk. These methods of attraction (enrolment in ANT terms) had to persuade the users that the centres would offer them education in manner that would be beneficial and viable for them. Thus the methods of attraction had to create or enable synergy between the users desires and the affordances of the centres.

In the focus groups the process of how they found out about the existence of the centres was discussed one of the participants was particularly knowledgeable about this process. This participant explained the problems that Suffolk College had with attracting people to the centres:

“They (Suffolk College) sent some 200 letters out to local businesses offering them degree type courses. I think the response was one, a mailshot catastrophe. But when they went to Haverhill and opened the second one (LLC), they targeted schools and immediately filled about eight nights up” (S1p4)<sup>130</sup>

Another participant explained how she came to learn about the centre:

“They sent letters to all the students at the school, that’s how I saw it, but I don’t think I actually saw it through my son’s copy. I saw it lying around somewhere at the school” (S1p4)

What the participants suggest is that the correct procedure for attracting people to the centres is through appropriate social networks, that in many cases already exist. In the given example of Haverhill, Suffolk College utilised the schools network to attract parents to the centres. This successful process of attraction has an important dual property. Firstly, it enables Suffolk College easy access to a relatively homogeneous body of people. Secondly, by utilising the schools network the attempted attraction (interestment) has seemingly more authority. By this I mean that you will pay more attention to material brought home from your child’s school than material simply posted through the door. This observation highlights the importance

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<sup>130</sup> This is a standardised referencing system used for the focus group data. The first letter denotes the place of the focus group, either Sudbury (S) or Haverhill (H), the following number denotes the number of the focus group, finally the letter number combination refers to the page number of the focus group transcript.

of the channel that the information takes and the social networks that are associated with the channel.

#### 4.3.2 Characterising the users

The users of the LLCs that were questioned by Suffolk College had a wide range of social backgrounds. The gender balance of the users was very equal with only a slight majority of the users being male. The age range of the users varied (fairly uniformly) from early twenties to mid sixties (Boniface, 1988) However it is worth noting a high proportion came from a professional background with many of the users already having a first degree (30% of those enrolling on a degree level module).

In the preceding section the key actors constructed representations of users that would feel comfortable with the centres' technology, have a desire for educational opportunities especially in their local community and would need greater information handling techniques sited to the form a education that would be offered in the LLCs. I now want to utilise the discourses from the users to present a selection of the representations of themselves (the users), the characteristics of the users, their needs and desires.

The first prominent idea that was suggested by the actors previously was that there existed a great desire for greater learning opportunities within the county of Suffolk. In context, one of the users cited his motivations for completing the courses, which was not for his own education needs, but to give him the skills to be able to help his young children in the future. He talked about a time in the future when:

“...they [his children] get it [a PC] they're going to know more about it than me. Basically I just touched computers at school, and there's three of them at primary school at the moment and the computers are in there and they're saying this does this and this does that and saying it's really good. So that was the main purpose of my going on the course” (S1p2)

This was a common motivation that users gave for using the centres. Rather than their own drive to complete such courses the motivation was facilitated through the need of their children, a desire to ‘not be left behind’. Many users partly contradicted this by expressing that they were already heavily involved with computers so this wasn’t a pivotal factor in them taking part in the courses. Another of the driving motivators raised by the actors was the need for local educational opportunities, in another discussion I asked the focus group participants about the local role that the centres could play. I was told that:

“One of the beauties of it (LLCs) is that you don’t have to travel to Ipswich or Bury”(S3p23)

However this was tempered by the understanding of how users currently tackle the rural difficulties of Suffolk, they accept that travel is part of their lives, particularly in rural areas:

“Living in this sort of area we are all used to clocking up thousands of miles anyway, we don’t think twice about travelling, when people in towns do. They wouldn’t travel twenty miles” (S1p20)

Car use is taken for granted and accepted by the people of Suffolk as the norm. It is hard to package something seen as less normal as an attractive offer, even in terms of environmental benefit. Thus users understand the benefits of local centres, but at present are still prepared to travel large distances to other education institutions.

#### 4.3.3 Using the centres

The users’ accounts in this section are based upon the use of two specific centres at Sudbury and Haverhill. The Sudbury centre is based in the South Suffolk Business Centre, a facility that houses start-up businesses. The Learning Centre used the computing facilities of a small private training organisation Compute-IT. The small training room contained three networked PC’s linked to the Internet and a dedicated PC based video conferencing suite. The centre at Haverhill is located in Samuel Ward Upper School, a mixed comprehensive for 11-18 year olds. The Learning

Centre occupies a dedicated classroom, equipped with six Internet linked PCs and a video conferencing terminal. Importantly the difference in location of the LLCs will in this section explain many of the feelings that the users had about their initial use and perception of the centres.

In this section I will examine two issues surrounding the use of the LLCs by the users. Firstly I will consider and examine the discourses that the users employ in the physical descriptions of the LLCs. This will include initial first impressions of the centres, and users feelings towards returning in some cases to the school environment for the first time in 15 years. Secondly I will consider the LLCs as learning spaces, that is the relationship between the users and the form of education and learning methods employed in the centres. This section will also consider the use of the technology in the centres, that is what the users think of using the Internet and ICT in the centre as a learning medium. The use of these technologies will result in a number of outcomes that will effect the users, there are large and profound ramifications that such usage will generate.

#### 4.3.3.1 Users describing the centres

The users through the focus group were asked to describe the centres, in an attempt to capture their first impressions of the centres. The actors previously outlined representations of centres which would be non-discriminatory, easy for the users to use and employ the latest ICTs in the centres. In this extract a user describes his initial thought about the centre at Haverhill, which was located in Samuel Ward Upper School:

“Lonely, because it was in the evening you got this sensation of being miles from anywhere. It was cold I seem to remember... There were only about half a dozen people on the site, so it was a bit strange. The room was a bit cramped, but I suppose all schools are the same, a bit run down” (H3tp19)

other users also noted that:

“It was very small and dull.



It was small and cramped, there was no space to really do the work” (H2p11)

The centre that the users describes bears little resemblance to the dynamic and welcoming spaces that the actors described in the previous section. The centre in the school was seen by the majority of its users as a lonely place and by another user he felt that:

“It is intimidating to go into a school if you have not been to a school for 15 years and you’re suddenly back there and there’s diddy chairs and all the rest of it” (H3p19)

The centres were meant to be non-discriminatory spaces where users would instantly feel comfortable in the learning environment. But as the user details there was a degree of apprehension and intimidation that accompanied the return to a school environment, users did not feel completely at ease with the centres location in the school. These ideas contrasted with the ideas that the Sudbury LLC users (the centre based in the South Suffolk Business Centre) had, in short they were more impressed with their learning centre. One user noted that the centre was:

“...professional because it looks smart and whenever I spoke to people on the phone they knew what they were talking about” (S1p28)

Other users also commented that the centre:

“...was very professional looking” (S2p11)

And that:

“when I first saw the centre I thought it was small on the outside but when I came in I thought it was clean, bright and business like” (S2p11)

The approach that the users have towards the centre in Sudbury is very different to the feelings that users had concerning the centre at Haverhill. The users felt that the centre was a more professional environment for learning and there was generally less

apprehension about entering the business centre. The importance of the location of the learning centres cannot be underestimated, the environment in which the centre is set forms the crucially important initial impressions that will affect the interaction between the users and centre in the future. The relationship that the users initially form with the centre will influence their approach to how they use the technology in the centres, in that if they are uncomfortable with the setting of the centre, then this will not help them in feeling at ease with the relatively alien technology. In reality you cannot easily separate the feeling that users express about the centre from the technology, but this is what I attempted to draw out from the focus groups in the next section. In this second issue concerning the users descriptions of the centres, these will be expanded to interrogate the relationship that the users have formed with the technology, software and functions that the centre affords users.

#### 4.3.3.2 Technology in the centres

In this section the users comment on the relationship that they form with the technology in the LLCs. This relationship is formed through interaction with the technology, and the characteristics cannot be assumed prior to the interaction of the users with the technology. That is, the assumed *á priori* ideas concerning the use of the technology by the actors will inevitably be altered and generate unforeseen and heterogeneous effects from the actual interaction with users of the centres. The technology (and the functions they perform for the users) have been represented by the actors previously in a manner which constructs visions of ideal use – whereby the representations only allow a limited set of functions which include convenient, smooth and easy operational use of the technology.

The users will encounter these ‘ideal representations’ of use by explaining their experiences of how the technology ‘worked for them’, the functions it afforded them, and the ramifications that flowed from the use of such technologies. This will include their specific experiences of using the Internet for the first time in the LLCs, the use of E-mail, Video-Conferencing and a combination of these technologies for learning in the centres.

The users commented first about theirs and other users' experiences of using the computers in the centres for the first time. One user commented that:

“I think it might have been beneficial to have had perhaps the first session without touching the computer” (S1p8)

I believe this would enable the users to understand what they would be facing in the centre, and would allow the tutor to reassure them that they couldn't cause damage to the computer by simply pressing the wrong button. There were also mild complaints about the lack of computing facilities in the centres, and the necessity to 'double up' on the computers:

“In an ideal world we would have a machine each as well, but I realise that would have been greedy” (S1p7)

Another user agreed with this comment and added:

“I don't know what the economics are, but I share that point because we were sort of doubled up most of the time and I think that's fine for a taster, but I think people would pay a little bit more on coming and knowing that they were going to get their two hours themselves on a machine” (S1p8)

Thus the users were happy with the computers that were available in the LLCs, but on reflection noted that the ability to have sole use of a computer for the sessions would have been beneficial. They were reflexive in attitude towards the extra costs that this desire to increase the computer user ratio would require, and stated that they would be prepared to pay for this increase. These comments relate specifically to the hardware components and access to them, but the majority of the focus group texts relate to the use and functioning of the computers, the Internet, E-mail, Video-Conferencing and the effects of using these combinations of software and hardware.

The discussion concerning the technologies started with the users discussing their first impressions of the Internet, and what they thought of the phenomena that is so widely publicised and heralded in the media. The debate polarised around the

quality, quantity and accessibility of information that was available on the Internet. In this section users talk about their first experience of using the Internet in the centres, and the surprising aspects of its character:

“When I first used the Internet I thought that it was more accessible than I expected but sometimes slow” (S2p11)

Another user commented that:

“I thought it was absolutely wonderful. There’s so much information waiting to be tapped” (S2p11)

Other users added about their initial impressions that:

“I thought it was a lot easier than I imagined.

I thought it was a great potential to gather and communicate with others.

I thought how vast it was and how many international known websites there were.

When I first used the Internet I thought “wow”, then it’s rather slow” (S2p12)

This collection of first impressions is very positive regarding the use of the Internet, and the users note the vast potential of the Internet for communication and the huge amount of information that can be accessed. The users express little apprehension about using the Internet and express a sense of amazement about the ease with which they could use the technology involved. The users continued to discuss using the Internet in the centres, and turned their attention to the aspects of the Internet that had surprised them:

“I was surprised that the Internet contained ordinary topics and such a broad range of information” (S2p12)

Other users elaborated on the information range on the Internet:

“I was surprised it was so specific in definition to what you wanted to get

I was extremely sceptical when I first went on it, but I was just amazed that I was able to find what I was looking for funnily enough” (S2p12)

Not all the users were surprised by the Internet in such a positive way other users commented that:

“It had so much junk available.

It had so much useless information on it (the Internet)” (H2p12)

The status of the information is of crucial importance for the users, their decisions of whether the information is useful or useless forms a critical component in them making a judgement about the Internet. If the user has had a successful or unsuccessful search for information on the Internet during their initial attempts this will reinforce their opinions either towards a useful or useless classification of the Internet. Thus there is an element of chance in the outcome of a novice users first attempts to utilise the Internet. This element of chance and usefulness of the information on the Internet was discussed by the users when they debated the problems that existed with the Internet. One user noted that:

“One problem with the Internet is information overload, many websites are irrelevant even though they might contain the search terms being used” (S2p12)

This comment regarding information overload, and the difficulty in finding the exact information that a user required was common. Users also talked about the problems of download speeds and access times:

“It’s slow at busy times” (H2p12)

and also that:

“One problem is trying to log in at various times during the day and when there are a lot of people it goes a lot slower” (S2p13)

The users also took a critical stance towards all the hype that surrounds the use of the Internet, they didn't really understand many of the revolutionary claims that were made about the Internet, as one user claims he was not surprised at all:

“I was just surprised at the apparent mystique or perceived mystique which wasn't really there” (S2p13)

In summary the centres were received in a markedly different way, with many of the participants disliking the centre in the school, but finding the business centre a more suitable learning environment. In the actual centres the reception to the technology was also mixed, with the participants wanting more computers in the centres, faster access speeds on the Internet and greater reliability from the hardware.

The ability to access vast quantity of information did not lead to a feeling of empowerment, rather participants suffered confusion and disillusionment with the technology. This disappointment led to claims that the Internet was 'useless' and caused frustration due the speed at which information was able to be downloaded.

#### 4.3.4 Users' future representations

In this final section which utilises the focus group data I will examine the future ideas that users had concerning the use of the centres, and its technology in the future. This section will interrogate the relationship that the users believe they will have with technology in the future, the affordances it will offer, and the limitations that it will impose upon them. Furthermore this section will illuminate many of the worries that the users have concerning the increasing use and dependence upon technology and technological systems. These worries will counter many of the representations of the future that the actors presented previously in the chapter. The actors presented representations of the technology in the LLCs functioning efficiently, the centres reducing the need to travel, the technology enabling Suffolk to prosper and future users being adept in using the centres' technology.

This section considers the users future representations of the centres and the technology. I will examine firstly the worries that users have concerning the use of

the centres' technology, secondly an examination of how the relationship between the technology and users may develop in the future.

The use of the Internet in the centres by the users generated a number of problems and worries concerning the information that could be accessed. Information reliability, and quantity are just two of the concerns that the users had about the centres technology and its use in the future. The loss in the quality of information was a common topic of discussion in the focus groups, one participant highlighted the problem of finding the desired quality information through the vast quantity of information:

“There seems to be so much there (on the Internet) that it’s hard to find. When we were messing around down here, it was the first time I had used it and you put a key word in and you get a thousand, two thousand or three thousand sites back...Unless you’re really into it and know what the keyword is going to be, you drift around until you find something” (H2p7)

This participant outlines the importance of having the necessary skills to be able to find the quality information amongst the vast quantity of information available on the Internet. This vast amount of information, for the next participant creates a helplessness state, whereby they are lost without the means to find what they are looking for:

“I was rather cynical about the Internet in respect that you can very easily get dragged off into something irrelevant, so that you can let yourself disappear into some irrelevant byway and easily get distracted from what you are trying to do” (H1p5)

Another participant orientated his comments towards the future implications of using the Internet. The participant noted that:

“There are social problems. If you’re not careful in terms of marketing there will be a lot of people who are incapable of controlling themselves, a thing will come up flashing and it’s so easy to press this button and I can see a lot

of people getting into financial difficulties. And it's open to fraud as well"  
(S1p34)

Thus participants are foreseeing problems that arise from the ease of use of the technology, specifically the ability to purchase goods, stocks and services with the simple click of a mouse. Whilst all these technological advances enable us to spend our money with increasing ease, the continued reliance on computer monitors to display the information worried one of the participants:

"The physical concerns are that my eyes are deteriorating. Perhaps it's my age. But I have been concerned about the deterioration in eyesight, scrutinising the screen and possible radiation" (S1p33)

Continuing the theme of the importance of computer screens for displaying information another participant worried about the screens from a different perspective:

"The whole thing (technology) is about being totally disciplined and unfortunately I think it's something to do with screens isn't it? They become addictive, people become addicted to screens. I don't know why, but there is something in that, and to get the most out of it (technology, specifically computers) you've got to be disciplined" (S2p31)

The problems that users believe will arise from future use of the technologies, have now been expanded to include physical and mental deterioration of the body as well as social problems. During the course of the focus groups, the participants discussed further the use of the centres' technology in the future, and the participants turned their attention to the use of the technology for learning in the future. A participant comments here on the loss of skills that accompanies the increased use of computers:

"There is a danger of a student thinking they've found what they need because they see the heading and they print it off, they don't read it first, they have no skills of scanning...If you ask them (students) to go and use the paper



encyclopaedia because somebody is on the machine (computer), they actually leave the library” (S1p33)

Another participant commented upon this idea and described it as:

“It’s sort of a cut and paste society. Just cutting out what you need” (S1p33)

The participants in these extracts describe a transformation in the manner in which students can now examine and collate information. The ease with which students can now access vast quantities of information, and ‘cut and paste’ them together enables students to produce reports and coursework without the need to thoroughly read through the text first. This worries the participants that the students are rapidly losing essential skills of comparing and contrasting information, instead just compiling information from multiple sources without any form of interrogation.

In this second section I want to examine the issues that concern the users about the future relationship between technology and the users. Thus users contemplate in the following extracts the ways in which the relationship between technology and humans will develop, that is, they consider elements of technological and social determinism. Users discussed the pervasive expansion of technology into everyday life, with some regret, lamenting about our reliance on technology. In this extract a participant suggests that technology adds order and structure to our lives, and that their lives would be severely disrupted if the technology disappeared:

“Sometimes I wish it would all go away. It’s a shame that we are so dependent on technology and if the unthinkable happened, we’ve all forgotten how to cope with real life” (S2p13)

This idea was explained further through this story:

“We had a power cut at the school that lasted about three or four hours last year, and it was wonderful, it was absolutely wonderful, no computers, no photocopiers, wonderful.

It's strange when you have a power cut that lasts more than five minutes, people don't know what to do or what they should do" (S2p13)

When the participant talked about this idea of a power cut the participant expressed these ideas in a way that was positive (to be released from technology's grasp) and at the same time frightening (about the thought of a society devoid of technology's help). Thus it is ambiguous to the participant the degree to which he/she has control in their relationship with the technology.

In perceiving technology in a more neutral manner, it was suggested by this participant that you need discipline to structure a successful relationship with technology, and if this discipline wanes it can be the technology that can discipline the user. The worry of discipline concerned the use of computers by children, especially in the future for entertainment and learning:

"I don't let my children play games on it (the computer)" (S1p31)

"The learning side of it (computers) is wonderful. It would be alright if you kept it all to learning. I wouldn't want any games" (S1p39)

"I see my youngest playing the games and he gets so frustrated and occasionally I just go up and switch it off. It's the same problem as too much television. I think it's a beast and you have to control it and control the use either within the work environment or home, so it's not running you" (S1p39)

The participants in these extracts are extremely worried about the degree to which computers can control their children, they, as parents have to monitor the relationship to maintain a sense of balance. Although attempts are being made by the participants to patrol the use of technology, the advance of future technology was perceived by many of the participants as inevitable and logical, thus there is no use in resisting the changes that are happening. This patrolling of technology is exemplified in this extract, whereby the tension concerning the idea of successfully functioning technology is debated by two of the participants, here the problems in the technology / human relationship were being negotiated:

“For example I was doing something last week which on the face of it should have taken me about half an hour to do, but by the time I had done it I must have spent about three hours doing it because I printed it out and I didn’t like the typeface and then I printed it another way and then I did something else and then I altered it and then I spell checked it and double checked it and I messed about with it and if I had someone in the office and I had just dictated the thing...

Why not just dictate it straight into the computer using Voicepad and it will just come up and it is wonderful, once it gets use to your voice.

I’m sure but I think this may be a bit of an anomaly this thing about saving you time

That’s because you’re not skilled in using it yet” (S1p35)

In this small debate the dichotomy concerning the issue of control and success in the relationship between technology and the users is played out. The debate highlights the issue of the successful functioning of technology, and to whether the problems in the relationship can be allocated purely to the need for better technology, or better skilled humans. It highlights the issue of where responsibility relies in the relationship, and how this can be allocated to enable the successful functioning of the combination of user and technology.

In this extract, technology is seen as both inevitable and neutral, you have to make the best of the situation that you can. Thus the responsibility of the outcome lies firmly with the technology:

“I think my view is that I must go with the flow and take advantage of it. It’s no good fighting it (technology). I can’t be Canute, so it’s no good arguing against it. There is good in it (technology), we must make the best of the good” (S2p31)

This extract isolates an extreme viewpoint that technology is self-perpetuating and that it can continue to revolutionise society independent of any input from society. Another participant supports this viewpoint by commenting on the areas where many technologies are now found and the areas of life where there seem to be little input from technology:

“The computers are very good at working out things but they (computers and technology) still don’t as yet seem to be very mechanical, they don’t seem to sweep floors or put things in ovens or that sort of thing. They are all very well or sending letters and that sort of thing but they don’t seem to be at the moment, they don’t dig holes or anything like that, they seem to be, at the moment, signing up for the easy jobs. They don’t seem to be interested in the hard physical jobs. They’re avoiding those” (H1p26)

In this extract the participant outlines a technologically deterministic position, in that they believe technologies have the ability to decide which tasks it (the technology) actively engages with. The only explanation given by the participant to why technology is not found at some of the locations is that it is the technology that makes the decision independent of its users or designers. This worry concerning the avoidance of specific activities by technology, has resonance with another participant’s ultimate future vision of the implication of increasing use of technology:

“With over computerisation there will be so few people working and there is going to be a bigger disparity of wealth and then you’re going to get into problems of civil commotion and society could actually completely break up and become totally anarchic...computers could finish off our civilisation” (H1p26)

For this participant this is the ultimate destination of the relationship between technology and its users, a descent into total anarchy and decay. Although such visions are not uncommon, most of the other participants took a more moderate view of technological futures, with both ‘goods’ and ‘bads’ being generated in the future. These futures include notions of an Information Society which the participants

discussed, one participant questioned the idea of a great shift in society towards information:

“We’ve always been dependent on information. There’s no difference in that now. But if you are listening to Mr Gates and other people involved in the computer business, and in technology, then the whole thing is being whipped up into an information revolution. Whether or not it is a revolution is another point, but I would question it. Information has always been important and it’s from information that we progress” (S2p19)

This was tempered by what another participant saw as the actual changes in information structures:

“I suppose what is different is the information is laid out so that you can read it. I think it’s now much more accessible if your want it, whereas even if you wanted it a hundred years ago, it was much harder to get access to it, any information” (S2p19)

Thus the participants’ ideas of a future Information Society are not grandiose representations, but rather simple alterations to the present day where access to information is easier. The participants do not articulate the ideas of grand information revolution, but rather small incremental changes which are the result of increased technology usage.

In conclusion, the participants perceived the future role of the centres and the technology to be very ambiguous. The comments made by the participants suggest that they believe to a certain extent the idea of inevitable progress through technology, which continues unabated by human factors. The future will create a change in the skills needed and enabled by the increasing use of technology, this was most apparent in the debate concerning future learning. The technology was likely (in the view of the participants) to reinforce old social problem (indebtedness, addiction), and continue to reinforce an unequal balance in society, between those with and those without access. There was little discussion that concerned the ability of the technology to enable individuals to enhance their standard of living. The idea

of an information revolution and an Information Society was firmly disputed, participants believed that it was largely the creation of multinational companies.

#### **4.4 Conclusion: revision, comparison and the actor-user relationship**

As a form of revision and conclusion in this section, and to bring an element of closure to this and the previous chapter I want to review the stories that have been presented concerning the Televersity and the LLCs. I want to reflect upon the relationship that exists between the actors and the ‘amalgam’ that is the Task Group. The review will also take the form of a reflection upon the stories told about the development of the Televersity and the associated LLCs, upon the key set of characteristics that cohere to form the LLCs and upon the users’ experiences of the LLCs. Finally in this review I will consider the relationship that exists between the users and the actors. I will specifically focus on the interactions that are made possible by the existence of the LLCs, how these spaces enable interaction between the actors’ representations of use and the users, and the actual users and their experiences.

##### **4.4.1 Actor relationships and objectives and the task group**

The previous chapter outlined the key actors’ approach towards, and explanations for, the development of the Televersity model. What flowed from the multiple accounts of the development of the Televersity were a series of objects that all the actors used to support their ideas concerning, and representations of, the composition of the Televersity. These boundary objects (the county of Suffolk, Future Information Societies, and the Televersity project) were utilised in a range of ways such that actors’ could draw out specific identities and roles from these objects to suit their own goals and objectives. The actors used these boundary objects and their association with the Task Group to achieve their goals, one of which was realised through the establishment of the LLCs. The LLCs functioned for many of the actors as a ‘middle ground’, that is a temporary, interim or mediating phase, that assisted the actors to achieve their ultimate future objectives.

The specific nature and purpose of the Task group was never fully explicated through the actors' stories. Importantly though the Task Group had an identity which was coherent enough for it to act (or be thought to act) as the controlling body. The stories told by the actors illuminated the flexible and heterogeneous nature of the identity of the Televersity. This ability of Televersity to maintain its identity was a key factor in its continued success and longevity. The ambivalence concerning the exact composition and function of the Televersity has enabled the actors involved with the project to successfully bid for a variety of European funds; to develop ideas loosely associated with the Televersity vision.

#### 4.4.2 Actors' representations and users' experiences

In this chapter I have focused my attention on the representations of the users, the centres and multiple future scenarios of technology use that the actors utilise and the focus group data which illuminates the users' experience of use. Through examining the discourse from the key actors and the focus group data which explicate the users' experience of use I will now attempt to succinctly compare the actors representations and the users experiences.

##### 4.4.2.1 Examining the users

The users that would be likely to use the centres would (so the actors contented) have three key components or characteristics to them:

- firstly be comfortable and competent with the centres' technology
- secondly have a desire to learn locally
- and thirdly would be able to learn through, and cope with, a greater amount of information

When I examined the focus group data I found that these three characteristics bore little resemblance to the actual users and their experiences of the centres. The users were not by any means comfortable with the technology in the centres, in many cases it was their first experience of using a computer. in fact many were worried about

damaging the computers. The users noted that learning experience was hindered because they often had to share one computer between two people.

The users idea of local was clearly different to the actors, the users talked of being used to travelling large distance, and thus the idea of local learning did seem somewhat alien to them. They did express a desire to reduce their necessity to travel, but did not note this as extremely important to their everyday lives. The increase in information available to the users in the centres was a great worry to many of the users, this increase (facilitated by Internet access) overwhelmed and frustrated users, many simply didn't know how to cope. This vast increase in information was of some concern for the users, especially regarding the quality of the information (especially on the Internet); that is its origins and validation. The increase in available information also led the users to worry about the distractive nature of the Internet, and the seemingly easy ability with which users could just 'drift' from website to website. Thus the users' experiences contrast markedly with the actors' representations, there are few parallels that can be made between them.

#### 4.4.2.2 Examining the centres

The functions that the LLCs would afford the users were described in detail by the actors. The LLCs would:

- function efficiently using the latest ICTs
- enhance human interaction and communication
- enhance local learning
- also be non-discriminatory

Again when I examined the focus group data I found that there were large discrepancies between the actors' representations and the users' experiences. The idea that the centres would function efficiently for the users was not the case in many of the users experiences, the centres technology was often troublesome, and using the Internet was often time consuming. The users complained about the lack of accessibility to the technology, with the users often having to 'double up' on



computers, which wasn't efficient use of the limited time. The centres were meant to have the ability to enhance human interaction and communication, but the users at the centres did not make any lasting friendships through the courses, and did not have time to use the facilities in a casual manner to e-mail friends and family. Many of the users did not feel comfortable in the centres where they undertook their courses, especially the users that used the LLC based in the school at Haverhill. Thus the centres were not perceived as welcoming and users would not wish to return to the centre. The actors presented representations of local use, with users having a desire to learn in their local community. The users did appreciate the idea of learning in their local community, but because the users were so used to travelling large distances as part of their everyday lives, they didn't really consider the travel issue as extremely important to them. The actors believed that there would be a greater need for local learning, in reality, the users expressed little desire for education and learning facilities closer to their community, and thus the actors' ideas had little resonance with the potential LLC users. The centres would, the actors outlined, function in a non-discriminatory fashion. I would not say that the centres were discriminatory towards the users, but the construction of the centres enabled only certain kinds of people to use the centres, the centres would struggle to offer learning facilities to people who have a physical or mental disability (i.e. centres would need the addition of some specialist physical aids (ramps, specialised keyboards etc.) for the physically disabled).

#### 4.4.2.3 Examining futures

The actors believed that in the future a number of ramifications would flow from the establishment of the LLCs as part of the Televersity model, and the continued use of ICTs. The prominent ideas expressed by the actors concerning the future of the LLCs and ICTs included that:

- the LLCs will support universal access to the Internet
- the LLCs will support traditional education establishments
- the users will become increasingly comfortable with new ICTs
- ICTs will enable Suffolk to prosper in the future

When I examined the focus group data I found that to a large extent the first two issues raised about the future use of the LLCs and their technology by the actors was not discussed at any length. The users did not discuss the issue that the LLCs could be used to widen access to the Internet for the people of Suffolk, nor did they discuss how the LLCs would compliment and function in tandem with the traditional education establishments – although they did discuss the role of the centres for learning. They did not consider the role that the LLCs would play in the wider educational context. Only the third and fourth issues concerning ICT proficiency and ICTs role in future prosperity were considered.

The users, although uncomfortable with the Internet at present, believed that this was a generational effect. The users believed that future use of ICTs would pose few problems for the present generations young people, and in the future the technology would become so easy to use that even they (the older generation) would be able to competently use the ICTs. Although the users largely agreed about their ability to become competent with the ICTs, they still expressed some cynicism about the dangers that ICTs, especially the Internet, could have for the weak willed in the future. They were again very worried about users in the future being constantly distracted by the lure of the Internet, and the future social problems that Internet could enable, particularly the ease with which individuals could spend and/or gamble their money via the Internet. Thus users in the future may well be comfortable with using ICT, but should still be aware of the potential dangers of the Internet. The final issue raised by the actors concerned the ability of ICTs to enable Suffolk to prosper in the future, the users at an individual level thought that ICT would increase physical deterioration of the eyes, and the body and would not help individuals to realise their possible potential. At a societal level many of the users discussed the idea of over computerisation, particularly the possibility of greater disparity of wealth, social unrest and eventually an anarchic state.

Thus when I reflect upon the similarity between the actors' future representations and the users' actual experiences, there seems to be little. The only issue concerning future use of ICTs and the LLCs where a sense of overlap is apparent is the idea that individuals will have greater competency with technology in the future, where it is

appreciated that the young people of today will have the necessary skills to use ICTs and the older individuals of today will be able to gain competency as the technology hopefully becomes easier to use.

#### **4.5 The Actor-User Relationship**

From the previous section it is clear that there are large discrepancies between the representations of use suggested by the actors and the users' experiences which have been expressed in the focus groups. It is not surprising that these differences exist, considering the complex nature of the Televersity model that is being integrated into the present education system. The Televersity model is a complex entity which for its correct functioning requires changes in the economic, social and political structures of the Suffolk, and the behaviour of the people of Suffolk.

The actors have involved themselves with the Televersity model because they believe they can achieve their objectives through the establishment of this model of learning, which crucially includes the development of the LLCs. The actors have constructed specific models of the user, the use of the centres and future use of the centres which will enable them to achieve their own specific objectives. I have suggested that the LLCs function for some, but not all, as a 'middle ground' which has two rhetorical components. Firstly the 'middle ground' has a spatial component; that is it represents a place between two or more 'others' these typically being the home and workplace. Secondly the spaces represent a specific juncture in the development of ICTs, that is they are represented as only a temporary or mediating phase before final progression into an alternative future<sup>131</sup> of ICT use; the temporal component.

The principal actor who has the majority of the contact with the users of the LLCs is Suffolk College. The flows between the actors and the users take the form of information gathered and collated from questionnaires conducted with the users.

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<sup>131</sup> The predominant future ideas that concern the actors include home orientated futures, whereby homes are being incorporated into more and more networks on increasingly global scales. Thus we are presented with home-based futures whereby shopping, social, political and educational services are available via ICT networks direct to the home, we live as a terminal citizen (Virilio, 1993). This is but one future that existed in this particular time frame, more recently with the growth of mobile telephony, the emphasis has shifted towards accessing the Internet in a wireless manner, thus perhaps reducing the importance of the homeplace as a space for access ICT networks.

These questionnaires are co-ordinated by Suffolk College, who is also responsible for the daily operation of the centres. The information that reaches the Task Group is that which simply outlines the latest data concerning the use of the centres. In this relationship between the actors and the users there is little direct contact, the majority is mediated via Suffolk College.

It is from a simple understanding of the very basic relationship that exists between the actors and the users that I now proceed to examine the more important theoretical issues that flow from this largely empirical enquiry.

#### **4.6 Theoretical Considerations**

This section of the chapter will consist of three elements that will provide a theoretical underpinning to the empirical work of this, and the last chapter. Firstly I will apply the basic theoretical tenets and ideas of actor-network theory to give a classical ANT account of the case study of the Televersity project and the development of the ‘middle ground’, the LLCs. What I will trace is the processes whereby Suffolk College as the spokesperson for the project, attempts to enrol a heterogeneous collection of actors to support, and become assimilated within, the Televersity network. I stress that the account will be in the classical ANT style, with the account following the efforts of a spokesperson to stabilise a network, which constitutes the Televersity. The second section will highlight the ways in which this account falls short of the case study material, I will do this in three different ways. Firstly I will examine the multiplicity of the actors involved in the construction of the Televersity project (and will offer multiple narratives). Secondly I will examine the previously neglected ways in which boundary objects and personal relations serve in allowing these actors to collaborate. Finally in this second section I will draw upon the actual ways in which the LLCs are used, and how they act to simultaneously subvert the actors’ ideas (which include Suffolk College and BT) and facilitate the continuity of the Televersity project. In the final section of this theoretical annex I will consider the possibilities for further theorization of these points, and signal what form this additional elaboration may take. So from this position of introduction I want to move to an ANT account of the Televersity project.

#### 4.6.1 ANT and Televersity

What this section of the chapter will focus on is the application of actor-network theory to the empirical case study of the Televersity project. I have detailed extensively in chapter two and briefly in this chapter the key strengths of ANT: its ability to map out the heterogeneous range of elements and actors that scientists utilise to sustain their positions and the manner in which ANT can cross the human/non-human boundary to include an array of texts, objects and hybrids to enable networks to become increasingly obdurate. In this particular application of ANT it is not a prominent scientist or a large multinational that is organising, coercing, persuading a collection of actors and entities to ‘play’ their role in an actor-network, rather we are confronted by an educational institution. In my account a local county college is the spokesperson that must do the co-ordinating, broker the deals and persuade the entities to adopt specific role and identities, a great deal of effort and commitment is needed for the network to be realised. So now I take you to the field where a local college aims to become more than a college, a college where the employees want a greater status and where the college is becoming embroiled in the complicated and complex networks of local politics and persuasion.

Suffolk College (SC) is the largest further and higher education provider in the county of Suffolk, the county doesn’t have a university, although the college has ambitions to gain university status. By achieving university status SC would be able to: attract better students to the county, raise the regional and national profile of the institution and staff, provide a greater variety of degree courses and produce more highly skilled graduate for local businesses. Just on this assumed basis it can be seen why a university for Suffolk would be beneficial to a wide variety of interests. For the college to progress further with its ambition it needs to create partnerships and alliances with other interested parties, to persuade others of the need for a university. In short the college must construct an actor-network in which they can narrate and negotiate the roles of ‘other’ actors.

Within the county there are many important actors that SC has identified and needs to define and prescribe roles for, if their actor-network is to be realised. SC identifies that support from the local community is essential if the actor-network is to succeed.

especially from the local borough and county councils, the local Training and Enterprise Council (TEC), local politicians, the largest employer in the county (BT), prominent local businessmen (including Eric McCoy) and other actors. The college has to engage with these actors and be active in interessement, that is, 'actions by which an entity attempts to impose and stabilise the identity of actors it defines through problematization' (Callon, 1986, pp.207-208). The college has problematised the status of education in the county, and suggests that the county desperately needs a university. For its actor-network to be realised it must raise issues about the identity of actors, and further define the other actors role in the actor-network. The college must translate its will into the desire of the other actors. So the college reaches out to the other actors and says to each of them in turn. BT, you are a world leader in telecommunications with your R&D laboratory in Suffolk, but you require higher skilled graduates and need improve your perception within the local community. It next turns to Suffolk TEC and states, you are committed to improving the economic prosperity of the county's businesses, but you need a better skilled workforce. Finally SC suggests to Eric McCoy (a prominent local businessman), you are committed to raising the educational standards of the county, but you lack the organisation to achieve your goal.

The college can be seen to raising problems with the identity of the other actors, and allocating them a role which they are ambitious to perform. The answer to the identity problems that the actors are suffering can (so the college believes) be ameliorated by them supporting the idea of a university for Suffolk. Unfortunately the relationship between the actors does not follow the college's script to the letter and in turn (in an ANT struggle) one actor problematises the college's identity. BT does believe in a university for Suffolk, but believes that the college should follow a more radical approach to becoming a university. This idea, interests SC. 'explain further' it says. BT tells SC that 'In this current economic climate you are very unlikely to gain the capital funding you need for a new campus development, or funding to redevelop your institution at Ipswich. What you need is something new, something imaginative, something 21<sup>st</sup> century. So we believe a Televersity would meet your needs and be considerably more cost effective (cheaper). A Televersity would be a distributed university with a network of decentralised local learning

centres utilising the latest ICTs (that we would only be too helpful to assist you with) to provide degree standard courses)'.

The college likes the ideas of BT and thinks that this more imaginative approach may be a way to gain further support for its slightly altered actor-network. So now we have a dual track. The college pursuing a goal to become a university and to develop a Televersity (perhaps a precursor to a traditional university) By gaining the support of BT, the college had to slightly alter its goals, its identity, but it still feels confident that where it is heading will enable it to realise its ambitions. The ambition now of the spokesperson is assimilated into another goal of furthering the idea of a Televersity for Suffolk. Through this process a translation occurs which facilitates an exchange of roles and identities between the college and BT. This exchange is not only the adoption of new specified identities but also the surrendering of more established identities, for example the college had to relax its position of having a campus based university.

SC co-operates with its partners to create conditions whereby the actor-network of a university for Suffolk and a Televersity can both be realised. With the introduction of ICTs into the actor-network the project is more dynamic and attractive to other actors. The college approaches the Suffolk TEC and BT about funding some research into the Televersity idea, the TEC agrees to this identity (partly because it will help it further its own ambition to have a Suffolk business school) and provides funding for the 'Telematic Learning Project' a two year pilot study to study the possibilities of decentralised education via ICTs. The college needs funding for its pilot studies so it can accumulate a collection of information and resources that will support its attempts to make the Televersity actor-network more durable. The accumulation of such information and resources (which is completed in partnership with the task group) enables the college to simplify and demonstrate the inputs and outputs from the pilot study, the college is able to 'black box' the Televersity model and the functions that the LLCs perform.

In tandem with the agreements made with BT to investigate the possibilities of a Televersity, the college and the other actors agree to establish a task group to coordinate and promote the development of Televersity. The task group is to be chaired

by Eric McCoy who agrees to this as it will enable him to be involved with an organisation that is committed to improving the educational standards of the county. The task group takes on a co-ordinating role in the project, and is a centre of co-ordination and calculation as it collates and compiles information concerning the project, rendering invisible the sleights of hand that make decisions possible. That is the complex decision making processes and agreements that are embodied in the report are presented as unproblematic and unitary, whereby these mask the differences in opinion that really exist. The management consultants Touche Ross produced a report (*Testing the Vision*); this report investigated the viability of local learning centres and the broader Televersity idea to deliver education and training across the county. The report was extremely positive and validated the ideas that Televersity rested upon. It was because the Touche Ross report validated the task groups and the colleges' ideas that the Suffolk TEC agreed to finance some research into the practical implementation of the Televersity (the pilot study).

The report, in validating the Televersity model, also supported specific representations of how the learning centres would be used by individuals. In the centres the users would become competent with the centres technology and would feel comfortable in using the latest ICTs for learning courses. The users would have a desire to learn locally in their community, and would be able to cope with the differing demands that ICT based learning would place upon them. The centres will offer individuals an efficient and smooth learning experience, and will enhance the opportunities for community interaction. Through the Touche Ross report this model of Televersity has been validated, and the users have been prescribed the roles and identities that they will perform in the centres.

A pivotal issue for the Televersity project, was how the financing of the project was to be achieved. The financing of the 'Televersity Learning Project' was secured by the acceptance of the Televersity model by the Suffolk TEC, furthermore the finance is secured because the model will also be a testbed for the TECs' idea of a Suffolk business school. The college (and later on the task group) secures the consent of the TEC in the financing of the Televersity because it will also enable the TEC to maintain close links with the actors who may also be able to help them (the TEC) with their business school plans. The support for the Televersity project by BT is



secured through the college allowing them to contribute to the identity of the project and for them to have a pivotal role in the actual implementation of the technology in the LLCs. BT has, through its co-operation with the college, a 'ready made' testbed for its latest educational technologies. The involvement of BT in this local project also enables it to reinforce its position and status in the community, BT is seen to be putting something back into the local community.

The college initially had an ambition to gain university status for itself; it never let this ambition diminish, but the college also adopted another role, another pursuit, and the Televersity project. The adoption of the Televersity project (to complement their initial university ambition) was made possible by BT. BT offered the college another identity and role that included utilising the latest ICT to deliver education to the people of Suffolk, because the college deemed BT important for their actor-network they accepted the identity and the dual ambition track was initiated. The important note is that because of this dual track the identity of Televersity was incredibly ambiguous and subject to episodes of change. The continual question was whether the goal was to have a university or to provide LLCs as part of the Televersity project, and the changing answer was simultaneously both, either and neither. This ambiguity though is a key strength of the college (which ANT in its classical form neglects) in that the college and project was malleable enough to include many diverse actors and ultimately gave it the ability to morph if necessary.

In summary then, the college has had success in furthering its ambitions to develop a university for Suffolk. It can be said that the college (and similarly the task group) has successfully enrolled other actors and entities into its actor-network. The college has successfully offered a collection of potentially attractive and lucrative identities to the other actors, they have all been keen to be involved with the Televersity project and the collaborative co-ordinating body the task group. The enrolment of the actors is, as always, temporary and its durability relies on the complex heterogeneity of the network. But there are inadequacies with the account that need to be explicated; firstly there are problems that arise from the use of a single narrative. Secondly the account partially ignores some of the case study material which suggests alternative methods for securing consensus between the different actors. Finally the next section will again consider the case study material and highlight the

possibility that the ANT accounts have neglected testimonies that suggest that the LLCs act as spaces for difference and the possibility of 'side-stepping'.

#### 4.6.2 Shortcomings of ANT

The previous ANT analysis was concerned with the activity of network tracing and the fleshing out of the heterogeneous ways in which the college constructed an actor-network that later became Televersity. The account documented the relationship that the college needed to foster with an array of actors and entities and the ways in which it prescribed identities and roles for these actors. Furthermore it also recognised that the college also reciprocated in an exchange, accepting new identities and roles from actors previously targeted. What I will explain in this section (albeit briefly) are the ways in which this classical ANT account was inadequate, and unable to capture the complexity and ambiguities of the case study.

The theoretical basis of ANT was useful in capturing the variety of ways in which actors could be enrolled in the actor-network but some of its inadequacies begin to show when I consider three specific shortcomings. Firstly I want to draw attention to the neglected idea of multiplicity, specifically the possibility of multiple narratives, and the possibility of allowing multiple spokespeople to adopt the co-ordinating role within the actor-network. Secondly I want to consider the ways in which collaboration was aided by the use of boundary objects and by the personal relations that existed between the actors involved with the Televersity project. Furthermore I want to examine how the maintenance of these relationships aids in the circulation of representations of the project. The third shortcoming illuminated by the case study material was the manner in which people used the LLCs; these 'middle ground' spaces became subversion spaces, whereby users utilised the LLCs for unforeseen tasks and reasons. But whilst subversion takes place in the LLCs, the presence of users in the LLCs still serves in the continuation of the Televersity project.

Firstly then I shall turn the focus on to the possibility of multiple narratives. The ANT account, which I have just completed, focuses on the attempts by Suffolk College to construct an actor-network in which the college attempted to achieve university status. It was shown how other actors ultimately influenced SC and

persuaded them to focus their efforts on creating a countywide Televersity which would rely heavily on the use of ICTs. Through the analysis it was clear that the majority of actors felt that they were achieving their goals through the establishment of the Televersity. I will expand upon this ability to achieve collaboration and multiple goals as part of the next section. But as an illustration of the possibility of multiple narratives I now want to present a selection of alternative narratives that in turn present a different actor as the spokesperson.

If we consider BT as the spokesperson, the account considers how BT was able to co-ordinate a collection of actors to support its ideas for a distributed learning platform, which would utilise LLCs. BT is the major employer in Suffolk, and as such it wants to maintain its local profile and to be seen to be supporting local projects. It has a learning paradigm (which relies on LLCs) and needs a testbed for it to be tested and subsequently validated upon. It approaches Suffolk College and suggests that for it to achieve its ambition of university status it should be innovative and support the use of LLCs to provide countywide educational opportunities. Suffolk College agrees to this arrangement and supports the development of a Televersity for Suffolk. BT doesn't want to become too embroiled with the practicalities of the project and allows SC to maintain operational control over the project, whilst suggesting that Eric McCoy should head up a Task Group. Eric agrees to head up the task group as this enables him to achieve his ambition of raising the educational standards and prosperity of the county. BT also approaches Suffolk TEC about its role in Televersity (it is aware of the TECs ambition to create a countywide business school) BT suggests that the TEC can share in the insights produced by Televersity if they provide some of the funding. The TEC agrees and provides funding for a two-year project into the benefits of telematic learning. Thus through this narrative BT has secured a funded testbed for its learning ICTs and the development of the Televersity.

We can further consider Eric McCoy as the spokesperson. Eric knows many of the important people within the county of Suffolk (chairpersons of local borough and county councils, the TEC, managers within BT, and influential people within SC) and he utilises these contacts to achieve his ambition of heading up a task group to increase the economic prosperity of the county. Eric believes that an educational

institution that can produce graduates of a higher technical standard is required to enable the county to prosper. Eric approaches SC and tells them that he will help them realise their ambition of achieving university status by co-ordinating a task group, SC agrees to this proposition. Eric then turns to BT and suggests to them that they should become involved with the educational project, specifically by collaborating with the technology aspects of the project. Eric believes that BT needs a testbed to trial its latest ICTs and his project would be ideal. BT complies with the approach and supports Eric's planned educational institution. Eric finally approaches Suffolk TEC and suggests that the project that he is managing would be an ideal precursor to their planned business school, the TEC also agrees and additionally contributes some funding towards the project. Eric through this narrative has secured the support of the important actors in his ambition to create an educational institution that will enable the county to prosper.

Finally I consider how Suffolk TEC attempts to construct an important testbed which is a precursor to its ultimate goal of establishing a Suffolk business school. Suffolk TEC approaches SC (their ambition being to achieve university status) and suggests that they incorporate in their plans to achieve university status, a number of LLCs, which the TEC will partially fund for two years. The college agrees to the proposal and supports the development of the LLCs. Suffolk TEC also approaches BT (as they believe BT are always looking for local opportunities to test out their latest technologies) about becoming involved with the LLCs and utilising them to test out their ICTs, BT agrees to the TECs' proposal and supports the development of the LLCs. The TEC also realises the importance of Eric McCoy being involved with the project (as a very prominent local businessman) and offer him the prospect of co-ordinating the day-to-day management of the project via a task group, he is delighted at the opportunity and agrees to be involved with the project. Through this brief account the TEC has secured the support of the other actors in its ambition to construct a testbed for its future business school plans.

Thus what is illuminated are the crosscutting of stories and the difference and overlap that exists across and between these accounts. Furthermore they begin to demonstrate the amount of effort that is needed for the Televersity project to function. The 'working' Televersity project is a network of different performances

joined in multiple and complex relations, that are partially connected<sup>132</sup>. These different, yet partially connected performances, explicate that what appears to be one thing (an ‘object’, a ‘Televersity’) may be understood in greater detail as a set of related performances. These connected performances, which are related in complex and multiple ways, act together to calibrate the actor-network (Law, 1994). As part of examining the multiple accounts the act of calibration is achieved. The act of calibration involves appreciating multiplicity, the conflicting and complementary accounts that are produced, recognising the status of the observer, the ethnographer, the researcher and accepting that things don’t come to rest in a single form, but linger in a disturbed state<sup>133</sup>.

A second area, which was partially neglected through the ANT account was the manner in which collaboration was facilitated between the different actors. Through this section I want to focus on two methods by which this collaboration was enabled. The first method concerns the use of boundary objects to enable the actors to ‘work’ towards a common or shared goal. The idea of boundary objects was first developed in the context of Science Studies by Susan Leigh Star and James R. Griesemer (1989) who utilised this concept to account for the tension between divergent viewpoints, and the need for co-operation to secure the existence of the Museum of Vertebrate Zoology at the University of California, Berkeley. These boundary objects were constructed as:

...scientific objects which inhabit several intersecting worlds....and satisfy the information requirements of each of them. Boundary objects are objects which are both plastic enough to adapt to local needs and the constraints of the several parties employing them, yet robust enough to maintain a common identity across sites. They are weakly structured in common use, and become strongly structured in individual-site use

(ibid.:393)

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<sup>132</sup> Marilyn Strathern (1993) addresses the idea of partial connections.

<sup>133</sup> This point is made in slightly different terms by Vicky Singleton and Mike Michael, where the argument is that a working programme (the UK Cervical Screening Programme) is not a single structure, but rather contains inconsistencies and ambivalences. (1993)

In the previous chapter I outlined how a series of boundary objects (the Televersity Project, the County of Suffolk and Future Information Societies) enabled the actors to use the identity of each of these objects in a different manner, but still facilitated successful collaboration between the actors. In the classical ANT the ability for shared goals and shared success was limited, it was constructed as the goal of the spokesperson to coerce, persuade and enrol actors into the actor-network. In this account collaboration between the actors was portrayed as the surrendering of consent to the idea of new roles and identities. Rather what the use of boundary objects suggest is that it is possible for co-operation and collaboration amongst the actors to be achieved through the use of flexible objects that may incorporate both divergent and conflicting viewpoints

The use of the three boundary objects that I examined in chapter three relied on the ability of the objects to be flexible enough to satisfy the local demands of each of the actors. The boundary objects as such, encapsulate the idea of multiplicity, by offering diversity to each of the actors whilst maintaining a sense of continuity for the identity of the project. Thus the use of boundary objects must be seen as a tool which can complement multiple narratives. I believe that divergent, conflicting and complementary viewpoints and goals can be resolved by the use of boundary objects, and that understanding this aligns the use of boundary objects with the acceptance of multiple narratives. Thus the use of boundary objects can aid in the calibration of the network, which I suggested previously was a possible outcome of multiple narratives.

I want to continue the theme of aiding collaboration between actors, by examining another obscured element, that of friendship and personal relations amongst actors. This element is critically important in the process of creating agreement and collaboration between actors. In short what I am suggesting is that the idea of friendship between actors has been neglected as a way in which actors secure consensus and agreement. The friendships between actors in an ANT account do not exist before they are traced and mapped out through the actor's stories. Elements such as size, status and importance do not exist a priori to the account of Televersity. But what importantly emerges through the process of mapping out the actor-network are the friendships that bond and bind the actors. There are multiple friendships

which exist and are reinforced by the actors' involvement in the activities (meetings, production of texts etc.) of developing the Televersity, but these friendships also exist outside of, and separate to, the context of Televersity.

So there are many elements to the contribution and constitution of friendship, in the context of the Televersity project. There are old friendships, prior to Televersity, there are friendships reinforced by the activities involved with the development of the project, at meetings, conferences and at presentations, and there are friendships that cross the boundary of Televersity and involve other projects. Friendship is something that requires time, commitment and reciprocal exchange of information and trust, because my classical account is somewhat of a 'snapshot' these elements are obscured, extricated from the picture. What needs to be explicated through the account is how the nuances and complexities of personal relations can aid in the processes of building consensus and agreement, whilst retaining a focus on the importance of these for ANT.

Studies concerning the communication patterns of scientists have repeatedly demonstrated the role of informal personal networks (or friendships) in science (Menzel, 1962; Wolek and Griffith 1974). Despite widespread recognition that personal relations are crucial for information exchange, Freeman (1991: 502) contends that they have received little attention from researchers: 'informal networks are extremely important, but are very hard to classify and measure'. The analysis of the context in which friendships are made is crucially important. The dominance of formal organisations is taken as synonymous with a decline in the importance of informal ties, though, as Silver (1990) has shown, the evidence for such a view is anything but convincing.

The context of friendships is seen as crucially important in how relations develop (Adams and Allan, 1998) and can be delineated into four connected levels. By 'level of context' I mean how near to the individual the boundaries of the context in question are. Firstly there is the 'personal environment' that will include the immediate features of a person's life which profoundly affects the character and pattern of the friendships which they develop and sustain. This will include, *inter alia*, their economic circumstances, their domestic responsibilities, their work

commitments, their leisure preferences and the like. The second level of context, the network level is linked closely to the personal environment level. This includes their involvement in social networks and the configurations of larger social collectives, such as work groups or communities, in which no particular individual is seen as central. Adams and Allan (1998, p. 7) indicate that 'Friendship behaviour can be influenced by the overall patterning of the network as well as by the specific obligations embodied in particular personal relationships'. This certainly seems appropriate for the Televersity project whereby the patterning of the social network has been extremely influential in the personal relationships that have developed. The next level of context details the community level, that is, the social lives of the inhabitants of specific places. The finally level of the context of friendship is at the societal level, these are the most removed from the individual and in particular concentrate on the economic and social structures that dominate at any time have an impact on the forms which different personal relationships take (Silver, 1990).

Thus we in the light of this important consideration of the context of friendship we can return to the Televersity and reconsider the role of Eric McCoy. He has many friendships across a wide range of people, some of which were critical to the development of the project. In the task group he has constructed a theatre, a stage, where he can perform and facilitate co-operation amongst the task group actors, whether it is towards furthering the Televersity project or other collaborative ventures. The task group affords a meeting opportunity to create new, support old or further fragile friendships, the task group allows many of the most important people in Ipswich to meet, renew acquaintances and prosper from such meetings. Eric McCoy is able to call upon an array of people in important positions within the county to contribute to, and help him with, the development of Televersity.

The nature of friendship is very precarious, it relies upon knowledge of the other and the predictability that comes from such knowledge. It further relies upon the actors having some form of common agreement between themselves and other actors and trusting in that agreement. Personal relations and friendship is about knowing and understanding the ways in which other actors will react to certain situations, and the ability to share in common beliefs and understandings (sense of humour, political persuasion, ethical stance etc.). I am not stating that Eric understands all the



complexities of all the actors, but he understands enough about their commitments, their character so that he can call upon their services with some certainty.

Thus ANT ignores one of the most basic processes for creating collaboration and consensus that of friendship. In the ANT literatures few accounts actually comment on the role of friendship and personal relations in the process of network building. To understand and approach the tracing of networks, we must be able to get closer to the characteristics of the actors and be able to capture these in accounts to enable a richer analysis of how actors interact. We all have people who mean more to us than strangers, friends, acquaintances and colleagues and we relate to these (obviously) in a different way to which we would a stranger. But when ANT accounts are constructed they are located within a vacuum where friendships and acquaintances (because they rely on continuity) are removed from the accounts. The absence of friendship as an important quality may also be absent from ANT accounts because perhaps this vocabulary favours human actors, is it possible to be friends in the sense that I have commented upon with a computer? Because I can anticipate/understand the likely reaction of a computer when I do certain things, does this deem a friendship between us. Obviously not.

What must be appreciated is that friendships influence the way in which networks are constructed, they must not be ignored. This idea is apparent through the case study material, which I used to construct the Televersity account. In terms of ANT and its terminology, friendships can effect the specific roles and identities which are prescribed for actors, if they know them as friends they may be able to understand why certain identities will or will not be acceptable. Friends may be able to understand in greater depth their reasoning for accepting certain roles and rejecting others. Also because of this understanding they may be aware of how long actors may accept specific roles, and what is exactly needed for them to be enrolled within a network. Friends can be aware of the warning signs, when roles and identities are no longer acceptable, and what may need to change for friends to remain committed to the network.

Personal relations, friendships are then crucial to the establishment and maintenance of some (and maybe all) networks, and the appreciation of friendship must be

included in attempts to examine the emergence of actor networks. Eric because of his circle of friends is able to influence and interact with actors in a way in which a stranger would not. He sustains a circle of friends and circulates the malleable boundary objects that facilitate collaboration amongst the actors in the task group. Other actors are also given the opportunity via the task group and Eric to circulate their representations of the Televersity project. Eric and the task group now have an arena in which to meet, exchange, and test representations of the Televersity, which can in turn be relayed back to the parent organisations of the actors. This task group and the actors which are members can be seen to be active in the fine tuning, the calibration of a number of representations of the Televersity project.

The final way in which the classical account fell short of the case study material was the large discrepancies that existed between the idealised use of the LLCs and the manner in which individuals experienced the centres. The LLCs were heralded as innovative spaces, where individuals would feel comfortable with using the latest ICTs for learning and education. The individuals who would use the LLCs would have a desire to learn locally and the centres would function smoothly and efficiently for the users. These representations of the users and of how the centres were to be used are idealised, in the users accounts the centres were used for different reasons and purposes. What I am suggesting is that the account has overlooked that the LLCs act as spaces for, what we might tentatively call, 'side-stepping'.

By 'side-stepping' I mean that the individuals in the centres do not appear to have conformed to the roles and identities which the actors have constructed for them. In the act of 'side-stepping' you can see the object that approaches you with some clarity, and may even make some kind of contact, before sometimes swiftly, and other times in a more relaxed manner, just stepping out of the way. In 'side-stepping' actors are able to get close enough to the object, or routine to gain an understanding, whilst refusing to engage with it fully and deciding to 'side-step'. In the centres the users didn't always feel comfortable with the technology, they were apprehensive of the Internet and frustrated by the necessity to share computers with others. Whilst some of the users' motivations tallied with the actors' representations of them, at times the centres were used for reasons and purposes that had no connection with the actors' representations.

An example of this ‘side-stepping’ is the motivations behind the use of the centres by the users. The centres are meant to be attractive to potential users (according to the actors’ representations) because they are locally based, the centres will fulfil their desire for further education and learning and will enhance human interaction between the users. When we consult how individuals actually experienced this particular model of the ‘working’ Televersity we uncover discrepancies. The motivation for using the centres are very personal and form part of the users broader approach to using new technologies. One of the most important reasons that individuals cited for their use of the centres was to ‘skill up on the Internet’. This idea of ‘skilling up’ was linked to a desire to understand how these new technologies worked so that the users would not be isolated from their children:

“Basically I just touched computers at school and there’s three of them at the primary school at the moment....computers are in there (the school) and they’re (his children) saying this does this and this does that and saying it’s really good. So that was the main purpose of my going on the course”. (S1p2)

As noted in the users’ quote computers and the Internet now form such a crucial learning tool in all educational institutions, users therefore felt it was extremely important that they had a certain level of computer competency.

The users subverted the roles that were prescribed for them by the actors; they were, in the majority, not interested in undertaking learning courses but were seeking to educate themselves in the use of the computers and the Internet. The users have then personalised the use of the centres in a manner which more closely reflects the usage which is important to them, the spaces are flexible and malleable and the users have drawn out from the spaces functionality which suits their needs and desires. So there is ‘side-stepping’ in the spaces, but also there is continuity.

Despite the acts of ‘side-stepping’ that are undertaken in the centres by users the representations of the LLCs still persist, they still circulate amongst the actors and the users. The individuals by their use of the centres also serve in preserving the continuity of the spaces: they still attend courses at the centres despite individuals

expressing indifference towards the content of such courses. The representations of the centres are supported by the individuals utilising the centres, then persist in a relatively unchanged form. The lack of change, the lack of recognition of difference, can partially be traced to the poor information flows that exist between the centres and the task group; previously I identified myself as the one major flow between the centres and the task group. So in summary the third point which the ANT account neglects to appreciate from the case study material is the idea of ‘sidestepping’ in the LLCs, but that this ‘side-stepping’ still enables and generates a continuity between the use of the centres and the representation of the centres that circulate amongst the actors and others. There are differences and ‘side-stepping’ of use, but also continuities.

#### 4.6.3 Further theoretical issues: fluidity

Finally as a form of conclusion to this theoretical veneer and to promote some further theoretical enquiry, I want to review the theoretical suggestions that have been put forward and explicate briefly an alternative theoretical stance which may capture some of the neglected intricacies of the Televersity project. I have suggested that the ANT account, which I have presented, has fallen short of the case study material in three different ways. Firstly it relied on a single narrative and centre of co-ordination to account for the development of the Televersity project, I suggested that it ignored the multiple accounts and ‘work’ that was necessary to construct the project. Secondly some of the complexities of creating collaboration was obscured, that is the use of boundary objects were neglected and the more personalised issue of friendship between actors. Finally the ANT account failed to capture the differences which existed in the idealised representations of the LLCs, and how users realised particular models of the LLCs. I suggested that the LLCs became subversion spaces, allowing personalisation and flexibility within the centres, whilst at the same time a form of continuity of representation still circulated and endured amongst actors and users alike.

In examining the ways in which the ANT account fell short of the case study material I want to add a further point to this list, the issue of movement between amalgamation and separation. This point concerns the processes whereby two actors

are involved in a process of amalgamation, in the case study this is apparent when the motivations of the task group and the college become virtually inseparable at times. In the account it is difficult at times to trace differences between the actors when they co-operate together, then at other times it is easier as they dissolve and act as separate actors. The problematic that the account displays is the difficulty that ANT has with the movement between amalgamation and separation. There is fluid movement and exchange between the two states. The rigidity of the account portrays only two possibilities they are either amalgamated or they are separate, with little alternative for partial separation or states of amalgamation, this is one issue which an alternative theoretical stance should attempt to ameliorate.

The possibility of an alternative theoretical framework with which to examine the development of the Televersity project must offer greater flexibility to the movement of actors. This new theoretical framework then should address the need for greater flexibility of movement of the actors, which enables new forms of collaboration and offer new characterisation of relationships. It needs to be able to include flexible and malleable arrangements between the actors and entities within this new framework; subsequently my attention has turned towards the spatial form of fluids, and fluidity.

Mol and Law (1994) attempt to draw out four defining points of fluid spaces in connection with their research on anaemia. Firstly, they suggest that 'in fluid spaces there are often, perhaps usually, no clear boundaries. Typically, the objects generated inside them – the objects generate them – aren't well defined', furthermore 'in a fluid space normality is a gradient rather than a cut-off point'. This is what we find with the Televersity project whereby the exact boundary where the project begins and where it ends, and what it contains, is ambiguous. This ambiguity, this fluidity makes it impossible to determine identities in a strict and concise fashion. It is hard to differentiate between inside and outside, what is and what isn't Televersity, where one actor starts and another finishes, the remit is fluid. As Mol and Law state 'similarity and difference aren't like identity and non-identity. They come, as it were, in varying shades and colours.

Thus the idea of fluidity may help to remedy the difficulties that the ANT analysis had with the difficulties of collaboration. By thinking in terms of fluids it is not

problematic to deal with the collaboration issues which I drew attention to previously, actors are more viscous, they can at times be resolved into their component parts, at other times they cannot. Change is not defined by boundaries and strict delineation but by movement on a gradient of difference. Actors and entities are able to spread themselves over a wider area, and the use of fluids enables actors to have multiple interests and for these relations to be structured in a less formal and rigid fashion. As identities of actors and entities become more malleable, more flexible, the use of boundary objects (fluid objects) which can incorporate difference and conflict, may be more suited to a fluid environment.

Finally, in brief, I want to consider the issue of subversion and continuity that I drew attention to previously, and examine how fluid spaces would treat such activities. The idea of continuity despite difference is one which de Laet and Mol (2000) considered in their examination of the use of a bush pump in Zimbabwe. There are a number of parallels, which I wish to draw. Firstly there is difference between the actors' representations and the models of use that individuals experience in the centres, there is variation between the two collections of accounts. There are mutable representations of the centres which circulate and are used in a personalised manner by the actors. The centres, as such, are all different (located in a business centre, a school and a museum) and are used by individuals in ways which 'side-step' the actors' representations, the centres are changing, malleable spaces. Furthermore the co-ordinating task group isn't alarmed about the difference that exists, and as such performs fluidity itself.

The fluidity that persists allows the variations and difference to exist, whereas ANT relies on the breakdown and destabilisation of networks, in fluid spaces variation and difference may enable actors and entities to gain further strength.

This point is addressed by Mol and Law (1994) who note that 'In fluid spaces objects don't collapse easily. But why? Maybe because it's because there is no single strongpoint to be defended in order to preserve continuity' (p.663). This ability to maintain its shape, to be robust then is a function of the adaptable and multiple characteristics of the entity. This is certainly what we find with Televersity where the project encapsulates so many different ideas and themes, if part of the project is

absorbed it just spreads to cover others areas and ideas. The multiple and fluid notions then that the Televersity includes enables it to be obdurate, to last, to respond to the changing local conditions. Recognition must further be paid to the ability of actors and entities to participate in many different spatial arrangements, and to draw from each of these differing qualities and to form multiple relationships.

So, in summary, we find that fluid spaces (in collaboration with other topologies) offer us flexibility and the possibility of obduracy simultaneously, a quality that the Televersity project seems to possess. In fluid spaces multiplicity is a possibility, a reality, and a necessity, it is an essential component that aids obduracy. Another facet of obduracy in fluid spaces is movement and change, the topology of fluidity is always changing, morphing, but not by creating boundaries and ruptures, but through flowing and gentle adjustments. When the movement, the change, is halted by attempts to maintain and confine relationships the continuity that fluids provide is disrupted. With this recognition in mind I now want to progress to a further site of enquiry, where ICTs are again being introduced into social spaces, and constructing further 'middle grounds'. In the next case study of 'middle ground' construction the awareness of fluidity and fluid possibilities must be kept firmly in perspective and allowed to contribute to the enquiry.

## Chapter 5. INTERNET CAFÉS: ANOTHER ‘MIDDLE GROUND’?

### 5.1 Introduction

This chapter, similarly to the previous two empirical chapters, again focuses on the emergence and use of ICTs in a new social space, in this instance an Internet café. The growth in ICTs, particularly PCs<sup>134</sup>, has led to their introduction into many established spaces, such as the home, work and school place, but importantly have also contributed to a number of new spaces whereby their use is of pivotal importance for the space. This was certainly the situation with the LLCs in the last chapters, where the introduction of PCs providing Internet access, enabled disused school buildings, a business centre and even a local museum to become part of the Televersity project; facilitating decentralised learning and education for the people of Suffolk. Likewise in this chapter I will show how the introduction of ICTs into the conventional space of the café has revolutionised the functionality and expressive capability of the space. An Internet café can now offer all the functions of a modern office (email, fax, desktop publishing facilities etc.) whilst blending these with the functions of a traditional café (sociable atmosphere, light refreshments, a local meeting space etc.). The data utilised in this and the next chapter is reliant upon the 12 visits I made to a variety of Internet cafés, and upon the 40 hours that I spent at the selected case study Internet café observing the use of the café and informally interviewing and recording the views of 210 users of the café. Additionally I conducted two interviews with members of the café staff and a further two interviews with members of the corporate group. Further documentary data utilised in this and the next chapter originates from the national press and details interviews with the founders of the selected case study Internet café.

I now briefly want to return to the idea of the ‘middle ground’, to examine how the Internet café rests with the overarching elements of these new spaces. Internet cafés can certainly be classed as new spaces, as they have only been in existence for just over seven years. The spaces are again found to be located neither at the work or home place, but somewhere ‘in between’ mediating these established spaces.

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<sup>134</sup> The British General Household Survey from 1988 to 1998 indicated that PC ownership in the home doubled from 17% in 1988 to 34% in 1998.



Primarily they are found in urban centres, although variations along the genre can be found in more rural locations, such as in post offices and libraries etc. The primary focus of the cafés is to offer Internet access, to enable wider access to the Internet and to complement spaces where individuals can already access the Internet. Another important feature of the cafes is the assumed temporary nature of such spaces, once Internet access is more widely available the demise of such spaces is taken for granted. Thus again we find the ‘middle ground’ spaces rhetorically brokering a past of limited Internet access and a future of home orientated and ultimately permanent Internet access. The ‘middle ground’ space that is the Internet café, perhaps more so than the LLCs, also seems to offer greater potential for the realisation of new cyber-identities and attitudes. Through the chapter I will present how the café is associated with a burgeoning cyberculture and how this juxtaposition has facilitated possibilities for expression of new identities.

Furthermore to complicate the issue there are new spaces and possibilities that are afforded by the growth and use of ICTs, witness for example the growth of so called ‘Live/Work’ apartments, and the growth of mobile telephony that mobilises Internet access. Thus the ‘middle ground’ that the Internet café represents is presented as a shifting and rapidly changing space that facilitates not only greater Internet access, but also a diverse and new range of identities. What these changes suggest is that there are a growing number of spaces that can be termed the ‘middle ground’.

In sum, I have suggested how the Internet café functions as a ‘middle ground’ and outlined the similarities between them and the LLCs: in providing Internet access, acting as mediating spaces, re-invigorating conventional spaces and affording potential for new identities. I now want to consider the broad aims of this specific chapter. Firstly, this chapter aims to explicate the development of a specific Internet café by exploring the actions of its founders. Secondly, I want to examine and explain how the Internet café is part of a larger cultural development of a cyber or Internet related culture, and the importance of this cultural development. Thirdly, with reference to cyberculture, I want to examine the relationship that the café (i.e. the founders) has developed with the media to promote and develop a successful Internet café business. In short the aim of the chapter is, to understand the Internet

café model that the founders develop, its association with cyberculture and the role that the media plays in promoting and making the café a success.

This chapter will consist of four major sections. The first section will provide a history and context to the development of Internet cafés and will also consider the diverse collection of activities which can be considered elements of cyberculture. Cyberculture embodies a plethora of activities that are afforded by the growth in ICTs, ranging from utopian ideals of cyberspace to new webcasting possibilities. The importance of this section is to illustrate how Internet cafés are immersed within a broad and complex culture which offers individuals new possibilities for expression.

Secondly this chapter will interrogate the model of a specific Internet café, Cyberia. In this section I will follow the broad rubric of ANT to examine how roles and identities are allocated in the model of the Internet café. In terms of ANT, this correlates with the notion of translation; that is, the means by which roles and purposes are attributed and distributed throughout the network.

In the third section I will examine the representations of the users and of use that the founders and others utilise to construct a model of the Internet café, these encompasses the identities of the users and the activities that they will undertake. The focus will be wider than just strict functionality and will attempt to draw out the implied attitudes and beliefs that model users will have in using the café. This section will also detail some of the typical events which take place in the café, and how these contribute to the overall model of the café.

Finally this chapter will attempt (albeit partially) to comment upon the relationship that exists between the café, cyberculture and its promotion and profile within the media, additionally detailing how promotional material can be ‘read’ differently.

## **5.2 History and Cyberculture**

In this section of the chapter I will summarise the history of the development of Internet cafés to date, and consider some of the effects that may result from changes in the pricing and availability of ICTs in the near future. Secondly in this section I

want to outline some of the features of a cyberculture and examine the possible role that Internet cafés perform in this culture.

### 5.2.1 Internet café history

The first Internet cafés started to appear in the mid 1990s and can be seen to have grown in popularity in conjunction with a resurgent café culture<sup>135</sup> and increased ICT usage. It was said according to a report that as early as August 1995 that there was at least one cyber café, pub or bookshop for every major city in the UK<sup>136</sup>. The increase in the profile of Internet cafés can also be seen to have increased in conjunction with the popularisation of the Internet, and the unprecedented growth in the awareness of the Internet which has increased at a phenomenal rate over the past 5 years. The latest statistics on spaces of this type outline that there are over 3700 of such spaces in 138 countries throughout the world<sup>137</sup>. The Internet as a method of communication, as a way of doing business and as a method of information exchange has seemingly altered the way most activities and services now function. Technology and technological systems have now become indispensable to daily life (witness the growth of PDAs and mobile phones) their growth is not questioned, although to trace their exact influence is more complex. Thus in the midst of this technological upsurge we find the Internet café, perhaps symbolic of the time, when we romanticise about past notions of community, yet continue to place faith in technology and its ability (rather than our own) to eliminate the ills of society.

In returning to the Internet café we see that the basic components are simple: fast and efficient access to the Internet, a friendly and relaxed café environment, the availability of simple drinks and snacks to consume whilst using or waiting for a computer, and knowledgeable employees to create a seamless experience in the café. Whilst the generic components remain constant, the spaces are not completely homogeneous: whilst some stick to the successful coffee and computers formula, others have expanded to include different features and services. Thus we find cafés

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<sup>135</sup> This resurgent culture is typified by the growth of national and international café chains, the growth in popularity of the book again and in new spaces where coffee bars are being introduced (supermarkets, banks and book shops). The growth of 'branded' coffee shops is predicted to continue growing Allegra ([www.allegra.co.uk](http://www.allegra.co.uk)), a market research company, revised upwards its forecast for the number of branded outlets in Britain by the end of 2003 from 1850 to 2500. That compares with around 1300 currently, of which only about 1000 are specialist coffee bars.

<sup>136</sup> The Times 25th August 1995.

<sup>137</sup> [www.netcafes.com](http://www.netcafes.com)

of the Internet genre exclusively devoted to game playing<sup>138</sup>, publishing services<sup>139</sup> or cafes orientated towards more artistic uses<sup>140</sup>.

As well as the diversification of Internet café activities, their role within many of the initial companies has changed, with the café in many cases now a peripheral aspect of the original managements' activities. For example, the Cyberia chain of Internet cafés is now positioning itself as a provider of comprehensive Internet strategies for companies that require help from the 'experts'. In this extract from their publicity material Cyberia are suggesting to potential customers that it is crucial for them to come to Cyberia for unparalleled service and understanding of the Internet:

Through an unparalleled network of partnerships, Cyberia is now able to offer a one-stop best-fit solution for all your services requirements.<sup>141</sup>

Cyberia in this respect (in providing Internet strategies for business) is not unique within the UK. Today, the cafés are but one of a plethora of spaces which offer Internet access, with access now possible in libraries, community centres, workplaces, in the home, shops<sup>142</sup>, and even supermarkets<sup>143</sup>. The necessity for a physical space has now also been eradicated by the development of mobile access (through the simple act of connecting a mobile phone to a lap or palmtop, or by using one of the latest generations of mobile phone). These developments may render redundant some of the functions that the Internet cafés perform. The ability to access the Internet with increasing ease is the result of many factors: the growth of mobile computing, decreasing PC prices, growth in access through televisions, Internet Service Providers (ISPs) offering free Internet access, and the development of unmetered access. These factors may have profound implications for Internet cafés, specifically the cafés have to consider the particularly strong competition from the increase in home access. This suggests that they are becoming an endangered commercial enterprise. And yet, these cafés may still be able to provide a function

<sup>138</sup> For example, Internet Café Shoot 'n' Surf which specialises in game playing.

<sup>139</sup> For example Declare Publishing Studios, which is more orientated towards professional publishing and design.

<sup>140</sup> For example, Backspace, a public Internet access space dedicated to the artistic use of new technologies and multimedia.

<sup>141</sup> From Cyberia's leaflets available in their cafés

<sup>142</sup> This includes the latest chain of easyeverything Internet shops. [www.easyeverything.com](http://www.easyeverything.com)

<sup>143</sup> <http://news6.thdo.bbc.co.uk/hi/english/..mpany%5Ffile/newsid%5F427000/427848.stm>, and, [www.the-times.co.uk](http://www.the-times.co.uk) September 20th 1999.

that Internet users may want. For example, this may be a dematerialised function whereby the users use their own hardware, and the cafés provide high speed infrastructure for connection to the Internet, with employees facilitating and helping smooth Internet use.

The latest turn in the access competition, has seen the Cyberia Internet café in London offering free Internet access in the summer of 2000 for 3 months, which was sponsored by the free ISP Zoom, Easynet and interactive music company eJay, partly in response to the growth in cheap Internet access offered by the Easyeverything chain of Internet shops. The future is uncertain for Internet cafés, but their future success relies on more than beating competition from other access spaces and technologies, the social component is also vitally important.

### 5.2.2 Cyberculture

In this section I want to engage with some of the elements that contribute to the complex idea of a ‘cyberculture’ and the inclusion of Internet cafés in this culture. The collection of elements that I will cover is by no means extensive, this reflects the broad and changing nature of this emergent culture, what we call cyberculture today may not exist tomorrow. Cyberculture is in a constant state of flux. It is much easier to put forward a number of dimensions of cyberculture than a single definition of it. Often the term is used predominantly to describe contemporary cultures and/or cultural products that have a relationship with technology. Dery (1996) exemplifies this by conflating cyberculture with “computer-age subcultures”. But while Dery equates computer-age subcultures to cyberculture I believe this approach is too restrictive and neglects the important role of the Internet. Lévy (1997), provides one of the most coherent and persuasive expressions of the contemporary technocultural vision. Lévy’s concern is with the potential inherent in new ICTs to both expand and enhance human cognition. He argues that cyberculture is typified by the emergence of a new ‘knowledge space’ that is in stark contrast to an older knowledge space that was characterised by its linearity, hierarchy and rigidity of structure. This new space, is the space of the Internet, and is distinguished by its open, fluid and dynamic qualities: it is a space of creative profusion and disorder. But rather than concentrating on the underlying logic that implies that this new space is ‘better’ than

the older knowledge space which Lévy advocates I want to utilise a more inclusive definition of a cyberculture. Thus I prefer the definition suggested by Silver that offers a more inclusive and flexible definition of cyberculture:

Cyberculture is a collection of cultures and cultural products that exist on and/or are made possible by the Internet, along with the stories told about these cultures and cultural products.<sup>144</sup>

But even this attempt to include the diverse elements of cyberculture fails to include the wider connections and association that are made between technologies which rely not specifically on the Internet, such as virtual reality technologies. Thus in reflection the best way to understand cyberculture is to return as I initially suggested to examine its many dimensions. These dimensions include the broad notions of cyberspace, cyberia, virtual reality, virtual communities, cyberdemocracy and other activities under the anthem of 'cyber'.

The prefix 'cyber' coming from cybernetics suggests the illusion of control, movement and access. The word cyberspace was first coined by William Gibson in his science fiction novel *Neuromancer* (1984), in which the hero connects a computer directly to his brain.

Cyberspace. A consensual hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts...A graphical representation of data abstracted from the banks of every computer in the human system. Unthinkable complexity. Lines of light ranged in the non-space of the mind, clusters and constellations of data. Like city lights, receding.

(Gibson, 1984, p. 67)

As ICTs have advanced towards the scenario presented by Gibson, the word cyberspace has come increasingly into common usage, generating more varied definitions and meanings.

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<sup>144</sup> 'Introducing Cyberculture'. [Http://www.otal.umd.edu/~rccs/intro.html](http://www.otal.umd.edu/~rccs/intro.html)

Cyberspace is best considered as a generic term which refers to a cluster of different technologies, some familiar, some only recently available, some being developed and some still fictional, all of which have in common the ability to simulate environments within which humans can interact.

(Featherstone & Burrows 1995: 5)

The term cyberspace nowadays is synonymous with the interconnected computer and telecommunication networks, which constitute the infrastructure of the Internet. So cyberspace is a blurred fuzzy space which is thought to be located in a dream-like space, which is concurrently fed by science fiction and computer culture. The discourses that are used to describe cyberspace have much in common with the 19<sup>th</sup> century wild west, portraying it as a vast, unmapped, culturally and legally ambiguous vacuum which has vast potential for territorialisation. What I can take from these expressions is an understanding that cyberspace as part of cyberculture is the multi-dimensional space where exchanges and experiences are facilitated and realised, be it the simple task of sending and receiving email, exchanging music over the Internet or the process of video-conferencing. The ability to connect, experience and realise cyberspace is then an activity which individuals can experience in Internet cafés because of the interaction with the vast telecommunication networks. Individuals through their actions within the café can thus experience and live within cyberspace, contributing towards this element of cyberculture.

The unimaginable qualities of cyberspace which I have previously tried to capture can also adopt a more spiritual dimension when I focus on the second element of cyberculture, that of Cyberia. There is a sense of fantasy and mystery associated with the idea of Cyberia, coupled with utopian possibilities.

Cyberia is the place alluded to by the mystical teachings of every religion, the theoretical tangents of every science, and the wildest speculations of every imagination. Now, however, unlike any other time in history, Cyberia is thought to be within our reach. The technological strides of our postmodern culture, coupled with the rebirth of ancient spiritual ideas, have convinced a growing number of people that Cyberia is the dimensional plane in which humanity will soon find itself.

(Rushkoff 1994: 17)

The term 'cyberia' is less technological than the idea of cyberspace, although Rushkoff claims that there is a more spiritual aspect to cyberspace that is sometimes neglected.

Cyberspace can be accessed through drugs, dance, spiritual techniques, chaos, math and pagan rituals.

(ibid.:14)

Thus the confusion and boundaries between cyberspace and cyberia, in common with the nature of cyberculture, are extremely ambiguous. The ambiguities of cyberculture include another common term, that of virtual reality (VR). The term was first used by the Techno DJ, computer artist and hardware developer Jaron Lanier in 1986. The use of 'virtual' in computer terminology is used to represent something that represents a substitute e.g. a virtual community. VR has been defined as 'a real or simulated environment in which the perceiver experiences telepresence' (Steur, 1992). Just as the term cyberspace is considered unscientific it is the same with the term VR, scientists and researchers therefore often try to substitute 'virtual reality' with terms like 'virtual environments', 'virtual worlds' or 'possible worlds'.

A further strand of cyberculture concerns the idea that social interactions that are enabled by electronic networks can mimic or even improve a declining sense of community<sup>145</sup>, this is strongly advocated by many popular theorists in the cyber field (Rheingold 1993, Jones 1995, Stoll 1995). The theorist Howard Rheingold has advanced his own particular notion of 'virtual community' as follows.

Social aggregation that emerge from the [Internet] when enough people carry on those public discussions long enough, with sufficient human feelings, to form webs of personal relationships in cyberspace.

(Rheingold 1993)

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<sup>145</sup> Maurice Steins's book 'The Eclipse of Community' (1960) outlines the demise of community autonomy due to increasing urbanisation, industrialisation and bureaucratisation. Also Marshall Berman (1988) and Richard Sennett (1977) consider the disfunctionality of community.



Rheingold advocates an idea of 'virtual community' which has romantic connotations whereby his virtual community is a friendly place where anyone can drop in, have a chat, discuss a problem or difficulty with people considered friends. The notion of a 'virtual community' is one which can supplement and foster the growth of communities and groups which have a common interest, be it sports, music, computers or politics, there is a community online to discuss an unimaginable plethora of issues. This form of cyber-sociality is seen as the basis for developing and nurturing new and compensatory forms of community and conviviality. It must be noted though that virtual communities exist in relation to real communities and the real world, and not in some abstracted space. As Stone (1992) says we code 'virtual' reality through categories of 'normal' reality. This interaction, this boundary of 'virtual' and 'real' is where the Internet café is located, it is a space whereby individuals are simultaneously involved in the virtual and the everyday 'real'. There is a relationship then, that exists between these states which the Internet café mediates, the café has an active role in facilitating this relationship. This is the juncture whereby virtual communities and the cafés' communities map onto one another. This space, this junction facilitates the exchange of properties where 'real' events and vice versa stimulate reactions in the other. This separation, this division of 'virtual' and 'real' may be taking the divisions too far, as Stone (1992) suggests. Rather we should see these activities as simply supplementing existing forms of community rather than supplanting them. We should resist what Otto Imken (1999), calls 'cyberbole' that is, an overdrawn opposition of the real and the virtual, and instead subject such developments to careful conceptual and empirical scrutiny.

The growth in the amount of information available to individuals via the Internet, has led to theorists (Rheingold, 1994; Negroponte, 1995; Dyson, 1997; Turkle, 1994) suggesting that the Internet could supplement traditional forms of democracy and promote the idea of cyberdemocracy. The Internet has the potential to re-invigorate citizen participation in the decision making process, furthermore the Internet can aid in the deliverance of government and community services online<sup>146</sup>. The Internet can increase the access to information for ordinary citizens, enabling them to make more informed choices about their own lives and vote with a greater amount of information to support their choices. Governments are committed to the use of ICTs

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<sup>146</sup> For example see the UK Government Online Site: <http://www.ukonline.gov.uk/>

for the provision and delivery of public services: national and local government information online, health and education information available via ICTs and further in the future, democracy enabled through ICTs with remote and online voting. As an obvious caveat to these prophetic claims, these advances in information access, informed choice and remote voting can only be realised if all individuals have access to adequate ICTs and at an affordable cost. If this is not the case then these new ICTs may contribute to further accentuate the real differences that already exist within society.

This amalgamation of elements under the banner of cyberculture is by no means comprehensive, under the same term could be included:

- cyberwarfare/cybercrime: the use of ICTs to paralyse other nations infrastructure and essential services, or to acquire money or goods under false pretences.
- cyberlearning/cybereducation: the use ICTs to enable learning and education at a distance, or just the use of ICTs to enhance the learning process.
- cybervibe/cybercool/cyberfashion: the attitude of using ICTs in a slick, controlled, flash manner, the wearing of new fabrics with small ICT devices built into the design.
- cybersex/cyberqueer: the use of ICTs for sexual stimulation via VR suits, text or visual based systems, the playful use and exploration of identity.
- cybersociety: an incorporation of all the elements of cyberculture into everyday society.

What is clear is that the idea of cyberculture can potentially be related to most spheres of everyday life, if they have a potential interaction with ICTs. The diverse collection of elements that compose cyberculture can thus be seen to overlap and intersect at many points with the space of Internet cafés. This intersection occurs not only because of their use of ICTs in the café, but more expansively because the space offers the opportunity for identities to be performed and experimented with (witness the diverse events facilitated by the Internet café, Cyberia).

### 5.3 Constructing an Internet café

In this section I intend to interrogate the development of a specific Internet café. I will re-introduce the actor-network idea of translation, that is, the means by which roles and purposes are attributed and distributed throughout the network. I will introduce the founders of the Internet café, and examine the methods that are used to translate other actors and entities. In the literature on ANT (Latour 1988, 1993, Law 1987, Callon et. al. 1986) it has been repeatedly argued that a range of heterogeneous materials, actors, intermediaries (Callon 1987) and immutable mobiles (Latour 1987) need to be carefully and skilfully arranged, manipulated and managed to forge alliances and associations that ‘converge’ or ‘stabilise’ in a network, working together, despite their heterogeneity. Thus where innovators, managers, PR people, computers, networks, physical spaces, and others, have complementary identities that are aligned, the network can function as an actor in its own right, in this example the network coalesces to function as an Internet café.

#### 5.3.1 Translation within the internet café

Actors within the network of the Internet café are all involved in maintaining the roles and identities of ‘others’; appropriate activity by all is essential for sustaining a seamless experience. By a seamless experience I mean the successful functioning of the different activities that can take place in the café (eating, drinking, reading, booking, email, surfing etc.), which constitutes the ‘working’ Internet café.

Successful translation (a contingent quality) is only achieved if these roles and identities are maintained and reinforced, this can be achieved through the utilisation of: obligatory passage points (essential gateways or commodities that must be used); intermediaries ‘anything that passes between actors which define the relationship between them’ (p.134 Callon, 1991) and through displacement (the organising of supporting materials and information). Early ANT uses the idea of a translator-spokesman (Callon, Law, Rip 1986). a singular entity or actor which seeks to impose their preferred identities upon other network members. In the theoretical section in chapter 4 it was noted how more fluid conceptualisation of relationships may be useful in examining the interconnections that exist between different actors and

entities. More recently there has been a shift away from this heroic or managerial approach, to one which suggests a more varied and distributed concept of agency (Martin, 1998: Michael 1998: Callon & Law 1995). This distributed and fractured approach to agency distribution offers a more acceptable explication of the role of all network actors (both human and non-human) in the stabilisation of a network. Further, agreement between network members concerning identity and roles can be achieved without the roles/identities being exactly the same, or by other means (i.e. Star's idea of boundary objects which was utilised to explain the coordination the Televersity actors).

Thus what I will explicate is the multiple and overlapping nature of the Internet café's component actors while at the same time remaining within the broad rubric of conventional ANT. In the next section the story of the development of the first Internet café unfolds, and we follow the founders of the café as they attempt to problematise, interesse, enrol, displace, and translate others into their network. We watch as they utilise all the information, materials, resources and networks possible to create alliances and agreements resulting in the realisation of a new space for Internet use.

In the process of problematisation the roles which actors perform are scrutinised by the dominant spokesperson. It is through the process of translation by which the solutions offered/imposed becomes seemingly indispensable to the actor. In the domain of science or technology this usually includes a detour via a specific research institution. The problematisation in this case study originates from the founders initial understanding of the social and economic climate at a specific moment in time. I chart from this understanding the development (and problematisation) of the first Internet café.

The process of problematisation includes the defining of the actors' roles and identities. The problematisation raises questions about what it will mean culturally and socially to be an Internet café user. What qualities will an Internet café user need in this space? How will these spaces complement existing spaces and cultures? The founder's role is to provide answers to these types of questions and offer solutions which will increase the usage of the café.

The two people responsible for Cyberia's development were Eva Pascoe (a Polish student turned entrepreneur) and her friend Gene Teare (a Canadian working in a publishing company at the time). Ms. Pascoe after gaining a degree in linguistics in Warsaw came to University College, London 13 years ago to study how communicative psychology could be applied to computers. Ms. Pascoe soon discovered the Internet, at a time when it was only used for sending messages and files to others computers within the same local office, she soon realised that "the Internet was ideal for making complex systems easy for people with no computing background and that's what I wanted to do"<sup>147</sup> She went on to spend the next 7 years working on interface design for the Internet, but found the academic environment frustrating because "We could see what needed to be done and presented plans, but nothing happened. We were becoming masters of proposals rather than masters of research" she lamented in an interview in 1996<sup>148</sup>.

Eva together with her friend Gene Teare, and with 50,000 pounds borrowed from friends and relatives and a plan drawn up on Teares' kitchen table, started Cyberia café. "The science fiction writer William Gibson coined the phrase Cyberia and our café was the first specific Internet café in the world" stated Pascoe. The café was planned as a women only space, partly in protest at the small number of female 'surfers' that Eva and Gene had encountered whilst using the Internet. This door policy was eventually dropped and the café opened 6 weeks later, but still with the aim of encouraging those people who didn't traditionally use computers, especially women, to gain access to the Internet. That was over 8 years ago, now Cyberia has ten outlets<sup>149</sup> including London, Manchester, Edinburgh, Rotterdam (where Cyberia is located in a Virgin Megastore), Paris, Tokyo, Bangkok and Manilla.

The solution that the Internet café represents, is in response to the problematisation of the social, economic and cultural situation in the mid 1990s as understood by Eva and Gene. By late 1994 when Cyberia first opened its doors, the Internet had already been under development in one form or another<sup>150</sup> for over 20 years. This included

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<sup>147</sup> Eva Pascoe, *The Times*, 11/9/1996

<sup>148</sup> *Ibid.* note 147

<sup>149</sup> For further information see [www.cyberiacafe.com](http://www.cyberiacafe.com)

<sup>150</sup> Ideas on a Victorian Internet are developed by Tom Standage 1998

the first computer network of the 1970s ARPANET (Advanced Research Projects Agency Network) and more recently hobbyists interconnecting their personal computers via telephone lines to construct bulletin board systems (BBSs)<sup>151</sup>.

The Internet in 1994 had reached a stage in its development that could now accommodate the use and manipulation of different media forms (sound, text, and video), giving new impetus to the idea of true multimedia. Browsers were now able actively to search through the millions of pages of information held at remote sites, and respond with answers matching keywords, phrases and images with the data held on the Internet. The early years of purely text based BBS had truly been surpassed with it now possible to place music, video, and live pictures on or embedded within web pages and systems, accessible and able to be manipulated from anywhere in the world. Also at this time the use of email (especially in academia & business) was becoming increasingly popular (Rheingold, 1994) with students and staff utilising this new medium to communicate with friends and colleagues and also to share and access information at remote sites. In 1994 then, we find that the information available via the Internet is increasing at a phenomenal rate whilst access to this information is limited to a few sections of society (academia, innovative businesses & computer hobbyists), and in a few private/institutionalised spaces (universities, business premises).

Gene and Eva considered these factors (the developmental stage on the Internet, the exclusivity of the Internet's users and the lack of public Internet access spaces) and believed that it was the right time for the development of a public Internet access space. This new public access space would enable any individual to 'drop in' and 'surf the net' for information and send 'e-mail' to other connected individuals. The space would enable greater Internet access; enabling individuals to search for information and the ability to communicate with others via e-mail. The space would also question the self-identity of any individual using this new space, by this I mean that the users in the space will be involved in the active process of constructing an

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<sup>151</sup> As Rheingold 1994 notes "A BBS is the simplest, cheapest infrastructure for computer mediated communication (CMC): you run special software, often available free, on a PC, and use a modem to plug the PC into your telephone line. The modem converts computer-readable information into audible beeps and boops that can travel over the same telephone lines that carry your voice; another modem at the other end decodes the beeps and boops into computer-readable bits and bytes. The BBS turns the bits and bytes into human-readable text. Other people use their computers to call your BBS. Leave and retrieve messages stored in your PC, and you have a virtual community growing in your bedroom."

identity for these new ‘middle ground’ spaces. Individuals will be in a new space which could potentially offer them room for expression and playfulness.

The Internet café offers a new space for social interaction, such a space offers flexibility in terms of behaviour because the routine practices have yet to be rigidly established, there is potential for error and difference. The identity of the café will be constructed through the actions of the café users and staff, and only limited by the affordances that the café offers potential users. Thus unlike the identity of ICTs in the home or workplace, the identity of this new space is perhaps open to a greater degree of flexibility because of its short, but rapid development.

One important characteristic of Cyberia’s identity is its ability to appeal to businesses. As noted previously Cyberia has promoted itself as an expert in the Internet field:

Through an unparalleled network of partnerships, Cyberia is now to offer a one-stop best-fit solution for all your services requirements. This compliments our proven and acclaimed core businesses of public access, Internet training, consultancy and location hire<sup>152</sup>

The role and identity of Cyberia as an expert in the Internet field is one which the founders hope to successfully convey to individuals and businesses. Cyberia is attempting to make themselves indispensable, and to become the space through which businesses and individuals must pass through. Cyberia has ambitions to become the ‘one-stop’ space for any Internet related problem or initiative not only for ambitious businesses, but individuals too.

The problematisation of Internet usage in the mid 1990s and the relationships and identities that were distributed were, of course not limited to human entities; the nonhumans needed to be enrolled and translated too. The nonhuman entities, primarily the technology, also had to be persuaded to participate, their identities and roles needed to be constructed and allocated within the network. The computers had to be able to access the information, the supporting networks had to be able to do this

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<sup>152</sup> Ibid. note 141

quickly and reliably, and other non-humans (coffee machines, music systems, booking systems etc.) had to perform their functions to render the Internet café network seamless, that is, ‘working’.

### 5.3.2 Defining the actors

The networks that sustain and compose the Internet café are complex and heterogeneous. The objective of the founders is to manage and manoeuvre this heterogeneity to enable the Internet café to be a successful business. It is important to remember that the Internet café is composed of different actors, which can exercise their own free will to prescribe and translate others; there is always a continuous tension between actors. Although this tension exists between and within actors, what I want to explicate now are the identities and roles of the essential actors that needed to have their roles and identities prescribed for them.

I will trace out the network and defining the important actors which sustain the Internet café. I will utilise evidence from the founders<sup>153</sup> to support these definitions and roles. As I develop the roles of the actor I have to elaborate on these in greater detail – to prescribe the actions, ideals and roles of the network members.

To demarcate the café network boundaries have to be drawn; the café is only a small segment of a larger network that exists. The identity of the café is constructed by the interactions and exchanges that occur between five different actors, and their associated representations; these include the cafés computers, the computer networks, the café staff, the café users and the founders of the café.

It is from the multiple representations and identities that are present within the café that I will concentrate on five of the actors which need to have their roles and identities prescribed for them.

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<sup>153</sup> As regards the evidence that I utilise to support the representations of the five actors that I will outline, this evidence is taken from interviews given by the founders to newspapers and magazines and through articles written by the founders in which they outline how the actors should perform. Unfortunately I was unable to directly interview either of the founders: one was not in the UK at the time and the other stated that they had too many other important work commitments. Their published statements however were much more important insofar as they comprised the texts that circulated and thus served in the production of the Cyberia network.



**The Internet Café Users:** They will want to utilise the Internet facilities in the café that are provided. They want to find information using the Internet (as opposed to other ‘outdated’ methods) and also want to use the emailing facilities to communicate with their rapidly growing population of friends that use email – they want to be part of the digital revolution that they see is happening around them. The majority of the users will have some computer literacy, but others may benefit from some assistance with the technology. When they are in the café they will enjoy a coffee and relax with friends whilst waiting for a computer to become available. They will be willing to pay the cost of the service as it will offer them information advantages over ‘others’ and kudos benefits (social status).

Further the computer users will have an attitude towards the café which can be described as ‘cyber-cool’<sup>154</sup> that is the users will demonstrate that they are in control of the technology, and it will function for them in a slick and unproblematic manner. This attitude of ‘cyber-cool’ is one articulation of cyberculture within the café.

**The CyberHosts:** These individuals will aid the users of the café, ensuring a smooth cyber-experience, and will create a trouble free transition from the physical café to the electronic world of the Internet. They will achieve this by assisting the user with any problems or queries that they may have concerning their computer usage. Problems will be explained to the users as common phenomenon that all users experience, thus normalising their experiences and reassuring them concerning their computer use. These individuals will perform limited training functions, only giving casual and minor help with any queries, other ‘experts’ will facilitate training courses in the training suites.

As well as assisting users they will also contribute to the functioning of the refreshment, information and booking systems (using another computer). The CyberHosts will provide help as part of the product, emphasising the idea that this is a place of expert knowledge

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<sup>154</sup> In an interview with a Cyberia employee, they outlined that some individuals displayed a confident sometime flamboyant attitude towards their use of the café’s technology: ‘a coolness, perhaps you could call it cyber-cool’.

**The Café Computers:** These computers will facilitate the access to the information on the Internet. They are easy to use, reliable and efficient, subsequently users will feel (quickly) that they can master this piece of technology. The computers will be considerably faster than the machines that individuals can afford for home use, this will justify the price associated with using the computers in the café. The computers will be utilising software that the users will be familiar with, because of this users will not be intimidated by using the machines in the cafe, this familiarity will act to comfort and reassure the café users. The actual computers used in the café will mostly be PCs running Windows, although there will also be a Macintosh for individuals who prefer these machines. For searching the Internet the most widely available and used browsers will be running of the café's computers (NCSA Mosaic in 1994, later on Microsoft Explorer and Netscape).

**The Networks:** These will provide the connections between the computers in the café and the information stored upon servers at remote sites. These will be fast, and reliable (no breakdowns) and will offer an instantaneous medium for the travelling bits and bytes to use.

Crucial to the success of the café the identity and roles of the founders have to be defined and constructed.

**Founders:** The founders have constructed themselves as friendly ordinary individuals, who want to provide a valuable service for the public; in increasing wider access to the Internet in a familiar public space. They are aiming to be non-discriminatory, as regards the users of the space as is mentioned by Teare:

“We want to introduce all kinds of people to the Internet in an atmosphere that they know – a café”<sup>155</sup>

As well as making the space suitable for ‘all kinds of people’, they also want to make the use of the Internet easy and accessible by anyone who walks into the café, as Teare continues:

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<sup>155</sup> Gene Teare, Guardian 17 Nov '94

“The Internet was ideal for making complex systems easy for people with no computing background and that’s what I wanted to do ”<sup>156</sup>

Thus we are presented with the identity of two young women who together with their partners want to offer easy and affordable Internet access. They are constructed as concerned individuals who are worried about the lack of access for certain ‘kinds of people’ (initially they were concerned about the lack of a female presence on the Internet). By increasing access to individuals they are supplementing the identity of the ‘cyber-learners’ who are individuals that will be able to come into the café for educational purposes. The ‘cyber-learner’ will be intertwined with the overlapping dimensions of cyberculture, and will be a pivotal character within the promotion of the café.

In the following statement the justification and the essential detours are outlined for the stabilisation of the Internet café as a network, with all the identities and roles aligned towards the rigidity of the Internet café:

The well-being of the users is assured through their use of the Internet café, the networks have a purpose that justifies and fulfils their existence, the computers can do what they do best – help individuals to access information and communication networks, the Internet can be constructed at the local level through the café use, the cyberhosts can help in fulfilling this access in a relaxed and enjoyable atmosphere. The founders of the café will feel fulfilment in enabling wider access to the Internet. All this can be achieved through the collaboration that constitutes the Internet café

### 5.3.3 Interestment: Obligatory Passage Points (OPPs)

In the development of the Internet café so far, the necessary circumstances for the actual realisation and practical usage of the café have been outlined. What I want to develop further now are the interestment devices and mechanisms which have been utilised to persuade the actors to remain committed to the network; the Obligatory Passage Points (OPPs) that are developed, the detour pathways and other persuasive mechanisms. Interestment is the generic term for ‘shaping’ or ‘capturing’ the

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<sup>156</sup> Gene Teare, Guardian 17 Nov ’94

interests that lie between an actor and their goal or ambition. This does not have to be a singularity – in fact there are likely to be a multiplicity of goals and or alternatives that an actor pursues. In a practical sense for the interestment of potential Internet café users, the Internet café and all it represents must persuade potential users away from their usual activities. Devices and mechanisms must be placed before the potential users to ensure that a detour (via the Internet café) is taken. This process of interestment involves increasing and decreasing the viability and attractiveness of specific roles and pathways, using intermediaries to deflect and attract the actors. The process can be seductive, persuasive, forceful or contain elements of chance.

The problematisation constructs specific pathways or obligatory passage points that have to be utilised if the identities and roles are to be realised. These pathways are heterogeneous and need not be physical, but may be belief or value systems that actors need to subscribe to, to further their goals (which have to be translated). In the Internet café network – there are certain beliefs and ideas that all potential users have to share to realise the stabilisation of the Internet café network. They have to believe in a collection of interconnected ideas, which can be summarised as a belief in the use of computers as a viable tool for information retrieval and communication.

One idea that potential users have to continue to believe in is the idea that Cyberia offers expertise for both individuals and businesses. The idea that Cyberia is a ‘one-stop’ shop is an idea that Cyberia needs to propagate successfully to become indispensable to its users. It attempts to maintain this belief by the distribution of texts, which can be described *as immutable mobiles* (Latour, 1990), ‘a network of elements that holds its shape as it moves’. The crucial factor here, is the manner in which the texts are ‘read’; is Cyberia able to command the same degree of authority as texts that originate from scientists? Do the rules of engagement and the idea of scientific rigour and method translate to the domain of Internet cafés? I will answer the questions concerning Cyberia’s authority later in the chapter, and offer ways of thinking about Cyberia’s authority and its relationship with the media.

A note must be added here that successful interestment and subsequent enrolment is never assured, entities may receive more lucrative offers and may forge alliances with others more readily. It includes trials of strength and character, and is always

built upon 'shifting sands'. If the café is to be a success, the users must want to use the Internet, and the computers and networks must be able to work together to provide this service.

#### 5.3.4 Displacement

The development and success of the Internet café idea will demonstrate the reliance on the assimilation of the usage of an Internet café into our everyday consumer culture. The interressement process draws upon existing cultural ideas and artefacts, and reconstitutes them to (re)construct linkages between the familiar and the unfamiliar. This familiarisation is achieved through another device for enrolment, that of displacement: which refers to the ways in which actors marshal and coordinate the circulation of information and resources. The act of displacement in the case of the Internet café involves generating contacts with complementary identities and lifestyles, promotion of the café in the media and an attempt to black box<sup>157</sup> the idea of an Internet café.

The activity of displacement implies the need to organise resources and information to depict the Internet café as an essential actor within the network of cyberculture. The supporting arrangements need to be rendered invisible and unproblematic; there needs to be movement towards opacity of the network. In short, there is a need for the construction of 'black boxes' whereby 'no matter how controversial their history, how complex their inner workings, how large the commercial or academic networks that hold them in place, only their inputs and outputs count' (Latour 1987, p.3; also see Callon & Latour, 1981). The ability to construct 'black boxes' acts to simplify and increase the opacity of the Internet café.

If prospective users are to be enrolled, they must be willing and able to enter the Internet café and use the computers. This will not be easy, especially in London where there are so many other people and places after their money and time, these are the enemies of the network, the potential destabilising influences. The alternatives, the cinemas, bars, cafes and restaurants are the other destinations for the

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<sup>157</sup> To black box is to achieve 'no matter how controversial their history, how complex their inner workings, how large the commercial or academic networks that hold them in place, only their input and output count' (Latour, 1987, p. 3; Callon and Latour, 1981).

potential Internet café user. The other establishments are not passive in their pursuit of potential customers and utilise the same devices and interestment mechanisms to displace customers into their own network. They will use the same media (newspapers, magazines, radio, TV and the Internet) to attract customers to their network, just as the Internet café attempts to do so.

#### **5.4 Constructing Users and Usage**

To understand the use of the Internet café, its relationship with the media, and its role in displacement I will inspect the media texts and interviews that have been produced (over a period of nearly seven years) concerning the Internet café. These texts will be subdivided into two sections. The first concerns reports and interviews that contain the representations of potential users, actual users or individuals connected to the Internet café, these texts enable a typical user to be defined and presented to the public (enabling familiarisation).

The second section of texts and interviews include representations of the different types of activities that users can undertake in the café and it will detail the information that users will be able to access via the café. This section will also outline the special events and activities which have been held in the Internet café. What I will tentatively suggest is that the utilisation of the café by prominent individuals and for popular events supports efforts to legitimise the café as a place of authority.

##### **5.4.1 Representations of internet café users**

The first of the reports<sup>158</sup> and texts typically begin with a brief personal description of the founders of Cyberia, Gene and Eva. This gives a personal background of the two women, and also allows either Gene or Eva to give their opinions on potential users by describing a typical, or type of, Internet café user. They attempt to interest users by describing individual with whom they think potential users will identify

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<sup>158</sup> The reports selected to support the representations of internet café users and café activities are the ones that are central to understanding the use of the café. These reports and interviews are the ones that circulate amongst the important actors and easily accessible by many different groups; these were the reports that I was able to utilise.

with. They present scenarios of such individuals utilising the café without any difficulties.

The following extracts follow the media structure of personal background then an opportunity to define and interesse:

‘Pascoe, a former psychologist, maintains that some of the planned training seminars will still carry a women-only tag. “From my teaching experiences, I learnt that you can train women far more quickly than men, you just need to take a different approach. But I’m confident we can get anyone up to speed on the Internet within two days”<sup>159</sup>

This extract follows a particular narrative structure: a personal background, followed by a description of the users’ identities and capabilities. But this shouldn’t exclude potential ‘enrolees’ use of the Internet, and is clarified at the end of the quote with Eva saying that they can get anyone up to speed.

“This is not for nerds”, pronounces Gene firmly, well aware of the danger.

“People come here who are interested in communication. All kinds of people will come here but they are mainly young and interested in finding out everything they can about the world. People will come in looking for something and prepared to communicate to find it. It is very exciting working here, whether you are on the coffee machine or teaching people to surf the web. All the staff are trained in coffee and computers. If you feel lost on the Internet or if you feel like you’ve taken a mind altering substance with your espresso (and you haven’t), then they (the staff) are there to guide you through what can be a daunting mass of information, sounds and images”.<sup>160</sup>

This extract from the print media, goes further in the defining of the user – ‘young and interested’ this is reinforcing a typical stereotype that only the young can master the latest ICTs. As well as describing and defining the identity and particulars of

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<sup>159</sup>The Times, 11/9/1995.

<sup>160</sup>The Guardian, 17/11/1994

potential Internet café users, many interviews were conducted with famous politicians, artists and media celebrities utilising the Internet café space, furthering the connection between the identity of these people and the new Internet café space.

Gene has, in many different media reports, talked openly about the type of people that would use the café. In this extract Gene further elaborates the type of people that use the café, and how these users actually use the Internet café space, and the help that is given to them by the cyberhosts. Gene suggests users span all age and social groups:

“We get people who have dreadlocks, all the way through to businessmen. We get families over the weekend, people bringing their kids in, it is very much a young people’s medium. First-timers are given as much help as they need by staff, called cyberhosts, and that is included in the £2.50 per half-hour fee”<sup>161</sup>

And continued by further outlining the social component of using the café:

“People often come in groups to show off or demonstrate the technology to their friends, and I think the social side is likely to grow”<sup>162</sup>

In these media extracts Gene presents representations of users which are very broad and will not limit the appeal of the café. She also outlines the help that the users will receive in the café. As outlined earlier in the chapter the initial emphasis behind the development of the Internet café was to widen access for women’s to technology and the Internet, this theme continues in many of the media extracts that I have researched. Here Karen, a spokesperson for Cyberia, continues this theme by expanding on the female users of the Internet café:

“We felt women were disenfranchised so we began women-only sessions. We found that the net is very much an empowering tool for women because we’re better communicators and we like using things like electronic mail”<sup>163</sup>

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<sup>161</sup> The Times, 11/9/1995

<sup>162</sup> Ibid, note 161



Thus here the spokesperson suggests that women needed a little extra help to overcome a feeling of isolation, she also noted that an a priori harmony possibly existed between the technologies in the café and the female users. She continued in this interview by examining the specifics of the female users:

“We’ve had a group of hairdressers in for a training course – a lot of hairdressing shows are now on the net – and even a group of pensioners. We couldn’t get them out, they were having such a good time. The oldest member of the group was a woman of 92!”<sup>164</sup>

The training manager, Zoe Camper, continued in another interview by noting that:

‘Our whole aim is to get ordinary people using the new technology in a friendly and supportive atmosphere’<sup>165</sup>

The Internet has a wide appeal to women of all ages and women have found that the net plays to their particular strength in personal communications, it is a sociable activity, and users often, as it was noted, came in the café in groups.

#### 5.4.1.1 Collating key representations of cyberia users

As a component of reviewing the representations and identities of the potential and actual users of Cyberia, and for the purpose of further analysis in the next chapter, I want to draw out the key representations that have been used to characterise Cyberia users. Another form of generalisation constructed solely by myself. Thus in reviewing the major texts and interviews concerning Cyberia I want to suggest that the representations of the users are constructed with three key qualities or characteristics in mind.

Firstly users can be anyone, by this I mean that founders and others have told of the varied individuals that will, or do, use the café. We are told that businessmen,

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<sup>163</sup> Ibid. note 161

<sup>164</sup> Ibid. note 161

<sup>165</sup> The Guardian. 20/7/1996

dreadlocked individuals, families, travellers and many women will, or do, comfortably use the technology in the café.

Secondly it is acceptable if the users are apprehensive about using the technology in the café, users who are apprehensive are not problematic, in fact, the café is ideally suited for such individuals.

Thirdly women will find the technology particularly suited to them, they will be comfortable with the café space, and will be able to use the technology for the purpose of empowerment.

In conclusion the representations of Cyberia users can be summarised as:

- *can be anyone (whatever their occupation or background)*
- *can be technophobic*
- *if they are women they may particularly find certain elements of the cafés' technology empowering*

#### 5.4.2 Representations of internet café activity

In the previous section I detailed how the founders and others constructed ideal representations of the characteristics that the users of Cyberia would embody. These characteristics of the user now have ramifications for the representations of use that the media and the founders have utilised to promote the café. In typifying the kind of individual that will use the café, some steps have already been taken in constructing the kinds of activities that individuals will undertake in the café. Thus the representations that I am examining in this section are not mutually exclusive, there is dependence between representations of the users and usage.

So what I will expand upon in this section of the chapter are the representations that the founders and others have used to characterise the usage of the café. This expansion will cover two aspects of how the café is to be used. Firstly founders will illuminate how the actual café will be used by its users, it will outline the typical activities that users will be involved with and the experiences that users can look

forward to in the café. Secondly I will look at a collection of events and activities that have taken place in the café, and the role of these in creating associations between the café, prominent individuals and aspects of cyberculture, which includes the identities of cyber-cool and the cyber-learner.

#### 5.4.2.1 Representations of café usage

Cyberia utilises the media to represent an unproblematic ‘working’ Internet café; a successful business venture that is increasing Internet access options. As well as presenting representations of users of the Internet café space, the media extracts also present how current and future users can utilise the facilities available in the café. In the media, fractured collections of identities are presented; these disparate identities can be integrated to form a way of life, a lifestyle. In the following extracts the media allows the café to convey the activities that users can undertake in the café, and furthermore they expand upon the atmosphere within the café.

Nigel Foster of Cyberia expands upon the activities undertaken and atmosphere that exists within the café:

‘We wanted to create a place where people could come to a sociable atmosphere and get formal or informal training on the Internet. Somewhere where people could enjoy themselves’<sup>166</sup>

In this extract the importance of the social component within the café is noted, the attraction of the café is not purely technical, but the ability to relax and enjoy yourself is an important quality of the café. The founders further expand upon the idea of the sociality, the café is not all about computers as the founders note:

‘Cyberia offers more than just net access and coffee unlike many of the new cafes’<sup>167</sup>

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<sup>166</sup> The Observer, 25/9/1994

<sup>167</sup> Interview with Karen Durham-Diggins, The Times 7/3/1996

Users will be involved in activities in the café then which will offer to the users something more than just access to the Internet. What these additional services or features will be in the café, and what would be involved with using them is never really explained by the founders. Gene Teare in another interview continues this theme of the sociality of the café space, by expanding on the affordances of the café:

“Though Cyberia’s cafes were quite basic at first, they succeeded because they gave people ‘the UK cyber community’ a space to meet and make things happen. We hope it will create a little industry in creative production for the Internet. If it works, we’ll be at the middle of something that is quite exciting for lots of people”<sup>168</sup>

Here in this extract, Teare illustrates the idea that I raised earlier, the idea of the Internet café as part of a lifestyle. As part of this new lifestyle the following media report outlines the activity of CD burning, that is, the ability for users to pick and mix their own compilation of music and have it burned on to a CD within ten minutes. The Observer reported this phenomenon as follows:

Visitors to the growing number of ‘cybercafes’ are used to surfing the Net as they sip their cappuccinos, but from last week customers at Cyberia in central London have also been able to listen to music from a website catalogue, choose tracks and running order and leave the shop with their unique collection, albeit boringly packaged with a track list printed on white card.

‘We’re not a new record, we’re a new kind of distribution system,’ said Gary Corben of Cerberus Central, the company pioneering the DIY CD revolution.

‘If consumers can burn their own CD compilation then it could destroy the existing paradigm of the album’<sup>169</sup>

The Internet café is offering a space for like-minded individuals that have creative ideas that they want to share and develop. The Internet café will be at the centre of

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<sup>168</sup> The Observer, 5/5/1996

<sup>169</sup> The Observer, 1/2/1998

many of the new media developments and dot com start ups that are based in London. The café is also involved with other innovative projects that are not physically dependent on the café space, but are still connected to the Cyberia brand, one such innovation is Channel Cyberia<sup>170</sup>. In this extract from we are told how Cyberia had the ability to recognise the importance of producing content with distinct interest groups in mind, prior to Microsoft.

MSN's televisual approach is important to prevent users being overwhelmed by the volume of content provided. A fan of Friends doesn't feel compelled to watch all of Channel 4's output, and similarly a viewer of Mungo Park on MSN should not be concerned that they may not watch any other shows. This concept was recognised early on by the Internet café chain Cyberia, which launched Channel Cyberia in May 1996, with shows on interests from football (back of the Net) to film (Cyber Cinema).

Through its relationship with the new media industry the café is striving to create a tenuous association between the café and the new generation of technology companies. With Cerberus (CD Burning) the café is associated with pioneering technology, with the launch of Channel Cyberia the brand of Cyberia becomes associated with pioneering advances in lifestyle information and services. This association, this linkage contributes towards the attitude of 'cyber-cool', a fast, slick, unproblematic approach to using technology in the café. An attitude where an individual will be comfortable with using CD Burning technology and believe that they are a part of Channel Cyberia and all that it represents.

The café is also marketed as a training centre, a centre where the 'cyber-learner' can flourish and educate themselves using the latest ICTs. In the café there are training rooms for 'brainstorming sessions, meetings and market research/focus groups, as well as training'<sup>171</sup> where individuals and companies can learn about the Internet and associated topics of interest. Users also come into the café to use the Internet to learn about employment opportunities and the latest financial information. Internet cafés

<sup>170</sup> <http://www.spy.co.uk/writing/blueprint-03-97.html>

<sup>171</sup> From the Cyberia promotional material, 'Events & Promotion'

have been heralded as offered a boost to learning,<sup>172</sup> David Blunkett (the former education secretary) spoke of their role in the digital revolution, and the increased opportunities that they will offer.

The digital revolution is here to stay and the UK online centres (of which the Internet cafés are a part) will ensue that anyone who wants to can gain access to technology<sup>173</sup>

The Internet café is being given the status of a learning centre of sorts where individuals will be able to drop in and search for information and undertake learning courses. In many directories that are now available on the Internet, Internet cafes are being classified under learning or educational sections. In one such directory, London & Quadrant, they list Cyber cafés in their learning zone section, and suggest that.

These are very useful for people who don't have Internet access at home. Why not use them to write and email your CV to some different job agencies, or email your relatives all over the country and the world.<sup>174</sup>

Through this collection of accounts I want to suggest that another identity is being associated with Internet cafes, and Cyberia, the cyber-learner. These are individuals that may not have home Internet access, but still want to use the Internet for searching for information on employment, public services and other, more personal interests. They may formalise their learning by undertaking a course at the café, or may just be building up their knowledge in a specific area, perhaps web design or a programming language. Thus I want to suggest that the identities of 'cyber-cool' and of the 'cyber-learner' are important to the broader identity and role that Cyberia will perform and afford its users.

The attempt to associate the café with a collection of new activities (collectively known as cyberculture) is an active process that the founders of Cyberia are engaged in. In the last section I have demonstrated how Cyberia in a specific, and the media

<sup>172</sup> 'Cyber cafes to boost learning' [http://news.bbc.co.uk/1/hi/english/education/newsid\\_1207000/12077684.stm](http://news.bbc.co.uk/1/hi/english/education/newsid_1207000/12077684.stm)

<sup>173</sup> *ibid.* note 172

<sup>174</sup> <http://www.residentsonline.org.uk/learning/data/cc.htm>

in a more general form, has aided in the construction of representations of Cyberia users. Not only were potential users described, but a broader attitude was drawn out from the texts, that of 'cyber-cool'<sup>175</sup>. The association between the café and a collection of activities is fostering a collection of reports that I will now examine, which describe various events in the café and attempt to position the café as an important and pivotal actor in the emerging melee that is cyberculture.

#### 5.4.2.2 Representations of activities in Cyberia

These descriptions include a collection of activities that take place in the café and individuals involved with the events. In the extracts from the print media that I have examined the Internet café space is used within the texts in two different ways. Firstly the space is used purely as a setting for an interview or a product launch; examples that I will present include interviews with writers, debates on moral issues and political comment. This use of the Internet café space in this way enables links to be made between popular and acclaimed individuals and the Internet café. Thus when readers recall a specific individual or activity they associate part of the individual's identity (authority, popularity) with the café. Secondly the texts highlight cyber related activities which are undertaken in the café (game playing, live webcasts, training courses, specialist web applications). Again what the texts aim to trigger are links and associations between these specific activities and the Internet café. Thus when individuals think about a specific activity it is hoped that they will continue to associate that activity with the café.

In this first extract Cyberia is used as the setting for conducting interviews with individuals to ask them their opinions on a live webcast given by the Prime Minister and the leader of the opposition:

Expert surfers at the London branch of the Cyberia Internet Café were unimpressed by both leaders' efforts. Spokeswoman Sarah Woodbridge had been unable to download the Blair interview, despite being a '24-hour-a-day

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<sup>175</sup> This idea of cyber-cool in the café was first suggested to me in an interview with an employee of the café, who noticed a confident flamboyant approach adopted by some of its users.

Internet user'. She said 'It is not at all user-friendly, considering this is supposed to be going out to the masses.

The arrangement by which Mr Blair answered questions previously e-mailed by the public, together with a few mailed during the broadcast, also met disapproval. 'If you are going to read out e-mailed questions people might as well just send him a postcard' said Ms. Woodbridge. 'It is not making use of the technology'<sup>176</sup>

Cyberia in this report is connecting itself with an extremely famous individual, the Prime Minister, Tony Blair, through this it is increasing the likelihood that it will secure coverage in the national media. In this text the comments by the Cyberia spokeswoman are critical of the manner in which the interview is conducted, thus presenting Cyberia in a position of authority in respect to the use of the Internet. Cyberia is positioned through this text as a source of authority, and the linking of the Prime Minister to the café can only help to enhance the reputation of the café. This is but one instance when the café is used as the backdrop for political comment and policy launches, in the next extract the café is utilised as the setting for the launch of a new government initiative<sup>177</sup>. The launch concerns:

A new drive to give Britain a world class Internet presence that will help unlock the door to Government for thousands, Cabinet Office Minister Ian McCartney announced today. Speaking at the Cyberia Internet café in London, Mr McCartney was launching a raft of new initiatives to transform Government services on the web.<sup>178</sup>

In this comment we are presented with a drive for world class standards in the delivery of Government services via the Internet. The launch is conducted in Cyberia, again this may, for some potential users, increase the awareness of the café. The launch also provides further evidence to potential users of the important status of the café, if the Government is content to be associated with the café so perhaps

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<sup>176</sup> The Guardian, 30/4/1998

<sup>177</sup> 'Net gain for Britain's Public Services', [http://www.cabinet-office.gov.uk/1999/news/991209\\_services.htm](http://www.cabinet-office.gov.uk/1999/news/991209_services.htm)

<sup>178</sup> [http://www.cabinet-office.gov.uk/1999/news/991209\\_services.htm](http://www.cabinet-office.gov.uk/1999/news/991209_services.htm)



potential users will. The use of the café for policy launches legitimises the space for potential users.

In this extract the newspaper article tells of the co-operation between Cyberia and a company that makes processors, to find the best player of a phenomenally successful multi-player game, Quake II:

The world's most popular multi-player game is still Quake II. Now California-based processor-maker AMD is behind a nationwide competition to find the UK's best player.

Open to all gamers aged 18 and over, for the event AMD has teamed up with Wireplay's Quakeadelica website (<http://www.quakeadelica.com>). You can either take part over the Internet or participate in live regional heats being held in three of the country's Cyberia cafés in Edinburgh, Manchester and London.<sup>179</sup>

This event is typical of the type of event and activity that is associated with the café. It is made possible because of the collaboration of a number of commercial businesses, which need such a space to hold an event or series of events. Another example of the type of activity which finds its way into the newspaper texts was described, albeit briefly, earlier in the chapter, the activity of CD burning. This activity can certainly be classified as 'new' and 'innovative', as previously there has not been the public facilities available for individuals to select their own favourite musical tracks, and have these burned on to their own CD compilation. Thus again we find Cyberia associating itself with innovative and exciting projects that they believe will attract users to the café, and will importantly generate publicity. What we confront here is the association that Cyberia is attempting to construct between itself and innovative and 'cool' activities, promoting an attitude, an awareness. The café through these activities is steadily reinforcing the notion of 'cyber-cool', and a space for the 'cyber-learner', whilst continually seeking to have activities within the

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<sup>179</sup> The Times, 24/4/1997

café that legitimise it as a critical and discerning space<sup>180</sup>. Furthermore, in terms of interessement, Cyberia are acutely aware of the types of activities and individuals that will be considered ‘newsworthy’, i.e. Government policy initiatives and interviews with famous individuals.

The next text associates the café with an individual called Q, the urban wordsmith. Q in this text has come to Cyberia to discuss his latest novel, *Deadmeat*. The paper in the text tries to elaborate on his unique qualities:

‘This word cool is so played up now.’ So says Q, serious Internet surfer and artist – ‘writer’s too small a word for me’ – who is being hounded by journalists from as far a field as America and Japan because they think he is one of the coolest dudes on the planet.<sup>181</sup>

(The Times, 12/6/1996)

Thus the text presents an individual who is at the cutting edge of youth and cyberculture, he is a man in demand, and where does he decide that he wants to conduct the interview about his new novel, *Cyberia*:

“We are meeting to discuss his novel, *Deadmeat*, and Q has requested that the interview take place at his home from home, the Cyberia Café in the West End”<sup>182</sup>

The association with Cyberia continues in the text as Q tells the interviewer about his future plans:

He is also setting up a club, called Chameleon like the one in *Deadmeat*, at the Cyberia Café. So readers can meet Q ‘and interact with characters who appear in the book like Oswald Boateng and (DJ) Portobello Dave’<sup>183</sup>

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<sup>180</sup> By critical space I suggest that the café has built itself on the reputation of being at the cutting end of cyberculture, and as such are able to comment critically on ‘others’ attempts to utilise the latest ICTs.

<sup>181</sup> The Times, 12/6/1996

<sup>182</sup> The Times, 12/6/1996

<sup>183</sup> The Times, 12/6/1996

Through this text the association between an individual who is considered by many to be ‘cool, and the café is clearly constructed. Additionally the identity of the café, appropriates through the media texts, some of the qualities of the individuals that associate themselves with the café. The owners of the café are aware of the importance of the media in promoting the identity of the café to potential users and businesses. In 1996 the café was the overall winner of the Sunday Times/ BT Superhighway Awards. For its owners, Gene Teare and Eva Pascoe, winning the prize was the ultimate accolade for their hard work in bringing the Internet to the cappuccino-sipping mass market. Since winning the award Gene and Eva have commented on the benefit of winning such a prize:

“...it was like winning the oscars for information technology” says Teare.

“It meant a hell of a lot to us because it made the corporates stand up and take notice of us. It made them look up and see that we are very serious about what we are doing.”<sup>184</sup>

In this extract the owners acknowledge the vital role that the media can make for their business, and continue in the next extract by outlining the increased legitimacy that such awards and publicity can generate for the café.

“The award has been particularly useful as a means of introducing ourselves to people abroad who aren’t always aware of what we do in Britain’ says Teare.

It’s a useful thing to be able to put at the front of every press pack you send out. It has helped to give us instant legitimacy”<sup>185</sup>

This comment made about legitimacy by Gene Teare in the last extract is exactly the point that I have been alluding to, that of the need to generate authority and legitimacy for Cyberia, as a way of extending the network. What these texts assemble is a collection of people and artefacts in a manner that locates Cyberia as a

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<sup>184</sup>The Times, 24/5/1996

<sup>185</sup>The Times, 23/4/1996

space of authority and interest. This generation of authority (through association) enables Cyberia to construct itself as *the* space and *the* business to provide comprehensive IT training and Internet solutions. As the founders attempt to associate the café with influential people, there is, permeating the use of the café the idea of ‘cyber-cool’, that is the attitude of the café. Whether it be the association of Q, the urban wordsmith, with the café, or the attitude that users need to adopt in relation to the café, this element of coolness, of being at the cutting edge is important to the café. The café aims to achieve a stylised identity which enables attitudes such as ‘cyber-cool’ and likewise the identity of the ‘cyber-learner’ to flourish. The ‘cyber-learner’ is supported by the opportunities that the café affords them, training rooms, seminars and learning courses, and by the activities of the voluntary sector and the government. The government in its desire to achieve wider Internet access and higher educational standards champion Internet cafés as spaces that can deliver both of these aims. Through many organisations we see that Internet cafés are being represented as vital learning spaces, where keen ‘cyber-learners’ will come to take advantage of the learning facilities. Through these representations not only are the essential elements of ‘cyber-cool’ being circulated but also they support and assist the identity of the ‘cyber-learner’.

In this section it has become very apparent that the media plays a pivotal role in the success of Cyberia, it is this role which I intend to examine further in the next section. I want to examine the relationship that exists between the media and cyberculture, and some of the limiting factors that are important in the success of the café.

### **5.5 The Media and Enrolment**

It has become apparent that the role that the media played in promoting the café was very important. Many of the accounts which were used to construct representations of café users and of café usage were texts that appeared in national newspapers or were based on radio interviews. The media is used as an interressement device to persuade potential customers of the uniqueness and exclusivity of the café. The founders use the conventional press media to further the idea that the Internet café is

an integral component of any ‘digital lifestyle’, and that in the café you will find the attitude of ‘cyber-cool’ and individual ‘cyber-learners’.

In this section I want examine the relationship that exists between the café and the media. I will not be concentrating my attention towards the minutiae of new media theory and marketing, rather I will concentrate on the practical steps that Cyberia has taken to further its appeal to the media. In tandem with this practical examination of Cyberia’s media profile I will consider how specific elements of media promotion can be thought through in terms of ANT.

### 5.5.1 Intersement and the media

In the previous section (5.4) a variety of information pertaining to Cyberia (its users, activities in the café, promotional events, interview settings and policy launches) was used to demonstrate the types of representations of users and usage that circulate within the media. These examples were extracted from a range of media (newspapers, websites, magazines, radio, television and press releases), which illuminates the success that Cyberia has achieved in promoting its activities. The reports were, in the majority, from newspapers or websites where the texts predominantly reported interviews with the founders (or other employees) or contained reports on forthcoming events in the café. It is apparent that Cyberia are very successful in achieving media coverage, but how is such a successful relationship with the media accomplished.

The media is a heterogeneous collection of reports, interviews and features which are distributed by multiple channels and mediums; they are distributed to an active audience who engage with the information at multiple levels (Couldry, 2000, p. 9). Thus I will strive to avoid any oversimplification of this complex process.

The rules for what counts as ‘newsworthy’ are obviously dependent upon the relationship between the media and its audience. Drawing on the work of (Gregory and Miller, 1998) who outline the news values that may enable certain science to appear in the media, I will briefly outline three features of an event at Cyberia which seem to be important in increasing the likelihood of generating media coverage.

- Firstly articles appear if they are reporting a new or innovative product, like the example of CD burning. These can be descriptive or engage with users to ask them their opinion of the new product or innovation.
- Secondly articles appear that are based purely on interviews with the founders of the café (who are now quite well known), the article can include promotion for the latest event to be held at the café or just to question the founder about a new innovation.
- Thirdly articles appear (in common with the second collection of articles) that associate the café with well known or perceived to be ‘cutting edge’ individuals or institutions. The examples from the chapter include interviews with Q (the urban wordsmith) and the use of the café by the government for a policy launch.

These three features which commonly appear in media stories pertaining to Cyberia are the type of stories which seem to count as ‘newsworthy’. Media coverage cannot be guaranteed simply because a story embodies one of these features, rather inclusion (of these type of elements) increases the probability of media coverage.

The founders then have an insight into what may be considered ‘newsworthy’ and subsequently gain coverage in the media. Cyberia though is limited in controlling the way in which the information is structured and presented<sup>186</sup> to the target audience. Thus the information may be structured in a manner that Cyberia finds offensive or unhelpful in their attempts to interesse individuals to the café. A setting whereby the café can completely control the structure of the text that is circulated to individuals is only possible in their promotional literature and on their website. In these texts the café can personally structure the information, it can use its own statistics and research to support its claims and can assemble information, pictures and graphics to create a collage all of their own.

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<sup>186</sup>Limited changes may be exercised if they are given copy control of the text.

What I must state here though is that I am not constructing the individual (the consumer) of the text as passive, that is I am not representing the individuals by some kind of deficit model<sup>187</sup>. But rather individuals are active who will choose between different medias, and understand them in different ways, individuals have multiple levels of engagement (Buckingham (1987, 1993), Liebes and Katz (1990)) with the information presented to them. I have suggested that the café has a greater degree of control over the text in their promotional literature and on their website, but this is not to say (by utilising the deficit model) that the café has a greater degree of control over how the texts will be interpreted. All the café can hope to do is to create and facilitate events that fulfil their idea of what different media organisations deem ‘newsworthy’.

If there is difficulty with the process of simply getting information to appear in the media then the task of conveying the desired meanings and ideas from the texts would appear to be an even more perilous task. I believe that an important element in persuading individuals to ‘read’ the text in the desired manner (even in the media) is the authority which the text has, whether it originates from an internationally renowned research centre, scientist or lay person<sup>188</sup>.

Different people will not interpret the same text in the same manner, but the café hopes to be able to convey the essential elements of the text (representations of users and of usage), no matter who the receiver may be. What the café in terms of ANT is hoping to achieve is the translation of others into its network by means of what Latour (1990) terms *immutable mobiles, which are a network of elements that holds its shape as it moves*. A text or device must retain its shape, its configuration, for it to be treated in the same manner at its destination, if this relationship maintains its consistency then the immutable mobile may be successful. If immutable mobiles are able to circulate, then facts can emerge out of this movement. The mobility and

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<sup>187</sup> This model is derived from the ideas within the Public Understanding of Science whereby the model adopts a one-way, top-down communication process, in which scientists – with all the required information – filled the knowledge vacuum in the scientifically-illiterate general public as they saw fit. There was a flow of knowledge, from the “pure” source of science in the laboratory to a (somewhat tainted) Bowdlerised variety that was fit for public consumption, and usually disseminated through the mass media. Miller 2000.

<sup>188</sup> Lewenstein in his work advocates a contextual model of science communication (1995). His model contrasts with the traditional diffusion model of scientific popularisation, one of ‘dissemination’ and ‘translation’. A more contextual model of scientific communication is the situational model where the writer/journalist attempts to present only material necessary to serve the specific needs of the audience or writer. Lewenstein urges a view of science that cultural researchers would admire, a continuum of communication occurring in various contexts with no science/non-science boundary.

durability of immutable mobiles are properties not given by nature, but are themselves relational effects.

I want to suggest that Cyberia is attempting to construct a number of immutable mobiles which are then circulated amongst the media to promote the café. These mobiles include the texts which are produced from interviews with famous and authoritative individuals and which promote the launch of new innovative products or initiatives. If the network metaphor of immutable mobiles is to be relevant then the reading of such texts must have a degree of consistency for the facts to emerge out of the circulation of the mobiles.

The network metaphor of immutable mobiles when applied to the understanding of the relationship which exists between the café, the media and potential customers is clearly problematic. As I stated earlier individuals have multiple and complex levels of engagement with the texts they encounter as part of their everyday lives. The possibility that through the circulation of a number of immutable mobiles facts about Cyberia will be conveyed is highly contentious. How individuals understand and make sense of texts is complex, and the argument is further complicated by the saturation<sup>189</sup> which individuals now have to withstand from a plethora of media sources. Determining the specific impacts of any particular media text is a formidable task in its own right. Not only are we confronted with a large number of media texts everyday, but there are a myriad of interconnections between them<sup>190</sup>. As John Fiske (1987: 117) has argued, a particular media text such as a soap opera episode, does not exist in isolation: it is commented upon, anticipated, celebrated or developed in countless other media texts (press columns, news stories, celebrity magazines, and so on). I do not wish to labour this point but just to state that because of the complexities of the flows that exist within and between the media and the café

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<sup>189</sup> This extreme saturation of the self is captured in the conditions of postmodernism as Gergen (1991) describes: Emerging technologies saturate us with the voices of humankind — both harmonious and alien. As we absorb their varied rhymes and reasons, they become part of us and we of them. Social saturation furnishes us with a multiplicity of incoherent and unrelated languages of the self. For everything we “know to be true” about ourselves, other voices within respond with doubt and even derision. This fragmentation of self conceptions corresponds to a multiplicity of incoherent and disconnected relationships. These relationships pull us in myriad directions, inviting us to play such a variety of roles that the very concept of an “authentic self” with knowable characteristics recedes from view. The fully saturated self becomes no self at all.

<sup>190</sup> Herbert Blumner argued that the American ‘mass media effects’ tradition underestimated ‘the interdependent connection of all forms of communication’ (1969:184)



and potential users, the immutable mobile as a metaphor for this relationship is in this example unsuitable<sup>191</sup>.

I have already touched upon the issue of the media and how complex it is to understand the relationship that exists between the media, the café and potential users, whilst noting the inability of the actor-network idea of immutable mobiles to capture this complexity. A further issue that I wish to examine is how the character of a targeted individual or group may effect how that individual or group may react to the interressement by the media texts. A text is constructed with an audience in mind, whether it is a group of teenagers, highly computer literate individuals, or middle class housewives, generalisations of imagined groups or communities are utilised. Texts are constructed with specific imagined communities (Anderson, 1983) in mind, it is hoped that the imagined community will ‘read’ the text in the manner which the author desires. I have already noted that we should accept that multiple and different readings of texts occur, and that to assume some homogeneous message can be conveyed to a heterogeneous audience is in this case questionable.

From this position of reflecting upon the suitability of ANT to capture the complexities of the relationship that exist between the media, the café and potential customers I want to progress to address the practicalities of café usage. So it is that I move from this chapter to the practical use of the café which I will examine in the next chapter.

## **5.6 Conclusion: Moving into the café**

From this chapter I want to move to a practical examination of the Internet café, to discover how users experience particular ‘models of use’. What the next chapter has to consider (to add some depth to the examination of Cyberia) is a detailed examination of the particular routines and practices which are attempting to be stabilised by the founders to produce viable ‘models of use’. Further the chapter will need to actually get closer to the actual users of the café. I need to understand exactly what individuals are doing in the café and their motivation for choosing to utilise this

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<sup>191</sup> In some more simplistic cases where a single text is created then circulated within the media then perhaps the idea of immutable mobiles may be more fitting. In this case the texts circulated are not created by Cyberia, in that they have a limited control over the content and presentation of information which is presented in a interview style text.

MG space. Then as I begin to grasp how individuals are using the café it will become possible for me to conduct a detailed examination of the differences that exist between the generic 'model of use' initiated by the founders and the actual performances of individuals in the café. Finally to mirror the theoretical section that detailed the problematic elements of the Televersity project, a theoretical enquiry will be necessary to consider the ramifications of utilising ANT to examine the development of an Internet café.

## Chapter 6. CONSTRUCTING INTERNET CAFÉ USE: CYBERIA

In this chapter I will mirror the structure of the previous Televersity chapters, and continue with the analysis of how a specific Internet café (Cyberia) was developed, promoted and more importantly used by individuals. In a similar manner to the chapters concerning the development of the Televersity and the use of the Local Learning Centres, this empirically orientated chapter will detail the users' accounts and compare how they experienced the Internet café as compared to the founders' representations of the café.

In the previous chapter I outlined the processes which were involved in the developmental stages of Cyberia. Through the chapter I demonstrated how the founders of the Internet cafe attempted to associate the café with the varied identities and activities of cyberculture. In the chapter we saw how the founders collated a number of representations of the potential users and their use of Cyberia; these were the processes and activities of configuring the identities of the users, and of café usage. Furthermore through the chapter I attempted to demonstrate how Cyberia engaged in a process of circulating immutable mobiles through the media.

In the previous chapter what was presented was not only representations of the users and of Internet cafe use, but identities which would be performed in the cafe space by the potential users. What was drawn together by the founders was a collection of ready packaged identities that were facilitated by a specific set of arrangements that constituted these identities. Through the activity of delineating representations of potential users and of use the founders outlined the types of activities which could flourish in the café. When these representations, identities, arrangements, affordances, are amalgamated they can be considered as 'models of use' and it is the realisation of these that this chapter broadly examines.

These 'models of use' include not only the representations of the users of the café that the founders outlined, but also the routines and practices which are deemed acceptable in the café space. The 'models of use' are idealised; they include the typical and very generalised practices and identities which the founders expected users to both engage with and perform.

I now want to describe the contents of this chapter. This chapter will consist of four main sections. Firstly I will introduce the space that Cyberia occupies, the physical and cultural qualities of the space, the 'feel' of the space, and the functions and facilities that the cafe affords individuals. Through this section I will attempt not only to describe the Internet cafe, but to give a richer description of the aspects of the café which resonate with the previous ideas of cyberculture. As well as considering some of the qualitative aspects of the café in this section I will also be considering the routines and practices which are grounded in the café.

This analysis will revisit the representations from the previous chapter and will detail how the founders envisage the café. As such, I examine the necessary practices and compartments which construct the 'working' cafe. What these descriptions will do is locate the formally abstract representations in a wider context of café use and practices. It is through these descriptions of the practices and routines in the café, that I will tentatively illuminate the identities of 'cybercool' and of the 'cyberlearner'.

The second section of this chapter will examine, in short, how individuals actually use the Internet café. This will detail their accounts of how they realise particular models of use: how they use the technology and furthermore how it 'works' for them. It will detail what activities they undertake in the cafe, whether it be emailing friends, or seeking out information on extreme sports. This section will initiate an examination of the discrepancies between founders' representations and users' experiences, which concludes in the subsequent section.

The third section of the chapter will, like the Televersity chapters, enable some comparisons to be made between the founders' representations of the users and of café use (which compose the models of use) and the users' realisation of using the café. The founders described users who could be anyone, could be technophobic, and could be empowered if they were female. The use of the café, according to the founders, was about more than just 'coffee and computers'. using the cafe would be easy, efficient and trouble free and would be complemented by knowledgeable and reassuring cyberhosts. To examine the differences between the founders'

representations and the users' experience I will utilise the two ideas of privacy and immediacy to frame the emerging discrepancies.

Finally in line with the chapters on Televersity I want again to add a theoretical analysis to this largely empirical examination that has been conducted in this and the last chapter. In this section I will consider the neglected ideas of multiplicity, secondly the role of boundary objects and friendship which act to aid collaboration and thirdly the a broad examination of the idea that 'models of use' exist within Cyberia.

## **6.1 Introducing Cyberia**

In this section I will introduce the space that is Cyberia, this will include a physical description of the café and outline the café's routines and practices. Through this account I will outline the layout of the café space, examining some of the design features and the practices and routines which have been established within the café. As well as dealing with the design and 'feel' of the space I will also examine the range of facilities that are made available to users in the café. This examination will also focus upon the founders' representations of the users and of use, this will include details of the routines and practices which act to formalise how users behave in the cafe. Furthermore I want to draw attention to aspects of these routines which resonate with the ideas of 'cyber-cool' and the 'cyber-learner'.

### **6.1.1 Cyberia: description and experience**

The café is located in central London, very close to an underground station and close to an area which contains a plethora of new media businesses and so called 'dot com' start-ups. The area is not particularly know for its 'artistic' or 'cool' residents, bars or galleries (like Hoxton or Shoreditch), but rather the area is renowned for the wide and competitive range of electronic and technology outlets. If you are after a particular electronic device or component this is one of the obligatory places to seek out the best deal.

The Internet café is found, like many of the traditional cafes, on the corner of two streets. As you enter the café you notice that the decor is not particularly innovative or radical, rather it is decorated in a basic fashion, with stripped wooden floors and the walls painted in a single light green shade. There are no complicated colours, patterns or symbols on the walls, perhaps this reflects the unimportance of the look of the café and accentuates the important of the online experience.

Within the café two wooden benches run the length of the two external walls, upon the two long benches the 12 computers are found, high metallic stools accompany the benches. This positioning of the computers enables all the users, because they are facing outwards from the café, to see through the windows of the café and out onto the streets. This facilitates contact to be made by the users of the café and the passers by on the streets outside; the peering eyes of passers-by can meet the users cocooned in a strange computer world.

In the café, music plays, usually some techno orientated style or a popular chart based radio station, the music is quite loud, but not so loud as to drown out conversations between the users and the cyberhosts. In the centre of the café are four metallic circular tables, where waiting users are ushered to; they provide uncomfortable seating for around 12 expectant users. On each table is the obligatory ashtray, a sugarbowl (to complement the endless flow of coffee) and an artificial flower placed in a tall thin neon coloured vase (with the type of flowers that make no attempt to look real). Behind the tables is a high counter where the employees (cyberhosts) stand and serve the users as they enter the café. At one end is a computer used for booking time on the computers and at the other end is a cash register for collecting the money for the computer bookings and for the café's refreshments.

The café has 11 PCs and 1 Macintosh for Internet access, where users seek out information on the web, check their email (predominantly using the free email service Hotmail) and also using the computers for basic desktop publishing. The computers are grouped upon the benches in two clusters of six, with the single Macintosh located in the corner space of the cafe. The cafe provides a series of introductory courses on different aspect of computer and Internet use (Introduction to

the Web, Multimedia, HTML etc.), these are conducted in Sub-Cyberia (a training room located downstairs). The cost of such courses range from £30 to £650 for customised corporate training package - part of an expert identity which Cyberia hopes to generate and propagate for itself. Few people seemed to enquire about such courses whilst I was in the café, although their training manager told me that they were growing in popularity with local businesses. Cyberia as a company has now expanded into providing consultancy to other businesses, advising them how they can optimise their use of the Internet and computing facilities. Cyberia also helps companies by providing assisted Internet planning strategy meetings, which is a process driven meeting chaired by a Cyberia consultant. It is through such consultancy services that Cyberia is extending its presence within the business sphere.

The employees at the café are there to facilitate the easy use of the computer for the paying customer. They are qualified to give assistance to the complete novice computer user so that he/she can browse the Net or successfully set up their free email account and send their first email. They are also able to assist more competent computer users with more advanced problems and queries.

The café is open seven days a week, Mon-Fri 10am -8pm, Sat. 11am-7pm, and Sunday 12-6pm. This reflects the nature of the location of the café a busy area during work hours but quieter at the weekends. The PCs and the Mac cost 3 pounds per half hour, and 2 pounds forty pence for concessions. Also they have an incentive scheme whereby you get a free half-hours use once you have paid for five half-hour sessions.

The café (as is now the norm) sells the usual array of caffeine combinations (cappuccino, mocha, latte, espresso etc.) and other soft drinks (bottled waters, herbal teas, coke etc.) and also a small selection of light snacks and refreshments (sandwiches, toasted sandwiches etc.). The café at one time did have an alcohol license and did sell a wide variety of spirits and beers but these seemed to disappear one day. Thus I presume the cafe lost its licence, was in the renewal process, or simply didn't bother renewing its license. Although during my time at the café I saw

few people that actually ordered an alcoholic drink, the popular choice was a coffee of some description.

The café does have a certain lively atmosphere when there are lots of people in the space, there is noise from the tapping keyboards, booming bass from the speakers. This is overlaid with chattering groups of people waiting to get on to computers and calls from the cyberhosts to organise the users on the computers. The groups of friends often congregate round a computer taking it in turns to use it, or alternatively each one of the group takes their turn at the computer whilst the others remain at the tables, chatting, reading or drinking coffee. But when the café is quiet, it is very quiet, lone users are found typing away, people at the tables are making a coffee last all day, people sit and read and stare into space, cyberhosts wander around, trying to look busy. When the café is not busy the atmosphere, the 'feel' of the cafe can be very flat, monotonous, very individualised.

Located close to the service counter is another counter where other employees of Cyberia are normally seated, they seem to help out with technical problems associated with the computers rather than assisting actual users in the café. These employees are usually typing away frantically, talking on the telephones or dashing to the upper levels of Cyberia. This is also the space where cyberhosts take users' disks to print out saved information (this idea is rather antiquated, whereby individuals first have to save information on a floppy disk before it can be printed out in this area). Curiously because of the height of this counter they are virtually out of sight to the users of the café, they are the unseen employees that occupy the café space.

### 6.1.2 Routines and practices

I now want to elaborate on the café as a site of consumption. I will illustrate how users (by expanding upon the founders' representations) are managed in the café space, how their bodies must 'behave' and comply with the routines of use which are established in the café. The accounts that follow are idealised notions of how the café will be consumed by the users, but also elaborate on how the arrangements within the café deal with activities that deviate from the idealised use. It details how a complex



collection of technical systems, routines, café practices, and bodies must be managed and coerced to construct the café experience. There must be discipline and obedience in the café if it is to 'function' as the founders intended.

In order to maintain the desired consumption experience in the café, the founders have introduced design features, routines and procedures which will discipline the users in the café. Thus the examination of the relations between the cyberhosts and users, as well as between users and the technology, become crucial to understanding the functioning of the café.

The consumption of an Internet café follows a strict routine or procedure prescribed for users by the founders. These routines are in part orchestrated by the founders of the café, and maintained by the arrangements that exist between the cyberhosts, the users and the technology. This arrangement between a collection of heterogeneous actors, systems and artifacts lays before users an array of processes and steps that users have to comply with in order to experience the founders 'working' Internet café.

The café experience then follows a generalised pattern. When an individual enters the café, they are immediately confronted with an array of technology, this may be baffling for some, but for others it may be a common sight. Many users will know that the physical space they have entered allows entry to other, virtual or electronic spaces. Where it is suggested, information and identities can transcend physical and social boundaries (Stone, 1991; Rheingold 1993, Turkle, 1993), some users understand these possibilities whilst others only know of the vast and diverse amount of information that can be accessed via the Internet.

When a potential user enters the café, firstly they must walk up to the counter where they will book time on a specific computer, this normally runs smoothly but often there can be a queue, obviously in the founders' representations these would be kept to a minimum. The user then pays for their time and waits to be either escorted to, or gestured towards their computer. If the arrangements work smoothly, and a computer is available a user can be on a computer within 5 minutes of entering the café. If all the computers are busy then users can take a seat at one of the tables, or wait at

another free space in the cafe. On the café floor users can have a drink or some food whilst waiting to 'get on' a computer.

Often when customers enter the café they drift instantly towards the computers and not the booking/payment counter, it is at these moments that the bodies in the café space need disciplining and realigning with the said arrangements of use. If users make these detours then cyberhosts will swiftly guide them to the booking/payment counter. When the café was busy customers would have to wait for 15-30 minutes, queues built up around the booking/payment counter. These queues would be countered with action to disperse the users to the tables or other free areas (to allow other potential users access to the booking counter). Furthermore large queues were not part of the founders' representations of use (efficient, fast and unproblematic), as such they are part of the consumption process and have to be managed and if possible disguised.

Whilst waiting, users can relax, sit back enjoy their drink, read some cyber-literature and perhaps, more importantly, observe other users on the computers. The activity of watching other users acts to reinforce the practices which are acceptable in the cafe. Waiting users can see, albeit partially, the activities which users are engaged with, e-mailing, information searching and the use of chat lines. Unacceptable practices (attempting to reconfigure the computers, excessively loud music sites etc.) are met with a quiet word by the cyberhosts, this routines can be observed by the waiting users.

When a computer is available the users name (christian name) is often called out, then the user can proceed on to the computer or is escorted. If users ask for assistance then the cyberhosts are able to help, these are known as 'intros', and are normally limited to no more than five minutes. The cyberhosts stands with the user and guides them through the basics of email, the WWW, and IRCs. The activities which users can undertake on the computers is limited. The set-up of the computers is preconfigured, as stated previously, and cannot be changed by users; there is little necessity or impetus for downloading new software for the casual user of the café.

In the 'intro' cyberhosts are beginning to pass on their knowledge to the novice users, they are teaching users the ways in which they can seek out information for themselves, communicate with other and produce their own texts. The cyberhosts are performing part of the arrangements that are necessary for the 'cyber-learner' to flourish in the café. Further the 'cyber-learner' can accomplish information seeking tasks on their own in the café or they may wish to enrol on one of the cafés' learning courses to further their knowledge of a specific aspect of the internet or a more general aspect of computing.

The restriction on what users can do on the computers is partially restricted by the time limits (i.e. in busy times it would not be possible to use a computer for consecutive hours). Also because of the open plan design of the café there are privacy issues for the users, I will consider this in more depth later in the chapter. Time periods on the machines are often extended if there have been problems, and users are not always found at the exact computer at which cyberhosts believe they should be, causing further confusion. When on the computers users can relax, check their email, become absorbed by the screen in front of them, there is little need to communicate with the next door user, this next door communication only really occurs if and when a problem arises. To notify users that the period of purchased time has ended, the name of the user is again called out, and the user is asked to vacate the computer. After, what is hoped is an enjoyable experience online, users stay on in the café for a drink, return to the counter to purchase some more time or leave the café.

When the routines within the café work and are co-ordinated together in a seamless manner the user can experience the café in a manner which mimics the representations that the founders constructed in the previous chapter. The café experience is represented as being about more than 'coffee and computers'; it is easy, efficient and trouble free and an experience which is complemented by knowledgeable and reassuring cyberhosts. This seamless experience relates to the idea of 'cyber-cool'<sup>192</sup>, the 'in control' attitude that users sometimes display in the café. Whether users associate themselves with cool icons such as Q (the urban

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<sup>192</sup> The idea of a 'cyber-cool' approach was outlined in an interview with an employee of Cyberia. It was articulated as an approach which emphasised that users were in control of the technology, and displayed this with a sense of flamboyance.

wordsmith) or being able to use cutting edge innovative technologies, such as CD burners, they are performing an attitude that resonates with 'cyber-cool'.

I briefly want to summarise what this section has illuminated. The use of the café and the construction of its meaning are achieved through the interaction of the customers, the employees and the technology that is found in the café space. The daily activities at Cyberia involve both interaction in both online (virtual) and offline spaces (physical, I hesitate to use real), through the combined involvement of online and offline spaces, customers, employees and the computers, the café as a product is conceived and consumed. The café is located within a specific cultural context, which is created through the elements that users bring to the space, and the affordances that the cafe offers. These technology and the routines which govern them enable users the possibility to perform an array of different and unrelated identities, such as the 'cyber-learner', and an attitude such as 'cyber-cool'. The café which the founders have previously represented is not then, just enabled by representations of potential users, it has needed a number of routines and practices for a café (not unlike the founders' representations) to be experienced.

In this section I have examined a small selection of the routines and practices which contribute towards the functioning of the café. We have seen how such routines and practices also give space for the performance of different 'cyber' identities. These strict routines and practices have to be 'worked through' by the users. It is from 'working through' these routines that I want to proceed to the users' accounts of how they actually constructed and negotiated their use/experience of the cafe.

## **6.2 Users' Accounts: Cyberia in Focus**

Through this second section I will draw on the users' accounts of how they used and consumed the Internet café. It will cover a broad range of issues from how users found their way to Cyberia, what kind of users they actually were and what feelings they had about the 'middle ground' space that is Cyberia. It will detail the activities that the users were involved with in the café, and include comment about how the café 'worked' for them, what functions it afforded the individuals and what it couldn't deliver.

### 6.2.1 Finding Cyberia

Attracting individuals to new ventures or products is one of the most difficult aspects of starting a new business as I have detailed. This act of interessement includes attempts to associate the cafe with elements of cyberculture, whilst remaining connected to some of the ideal of a traditional cafe. The successful attraction may be achieved through simultaneous immersing the café in cyberculture, whilst creating a distinct space which would enable the growth of new and specific possibilities and identities.

Many of the users that I spoke to in the café commented that they came into Cyberia by chance, others had heard about the cafe through the media (especially Eva Pascoe) or through friends. It has been noted before that the cafe is located in an area which contains many new media and telecommunication companies. This location has contributed towards the cross-section of the users that can be found in the cafe. Users told me that they were 'just passing through', others told me about the convenient location of the cafe, as many worked 'just around the corner'.

Jez was typical in his explanation of how he came to be in Cyberia:

"I have only been in the UK for a couple of weeks, but I needed to send some email back home (Australia), so I checked out a couple of the city guides for London. TNT, Timeout. They basically told me about this place, that about it really"<sup>193</sup>

Another user, Jennifer, a young American woman told me that she was in the UK on holiday, staying with some friends in London. One of these friends had used Cyberia in Manchester and had recommended that she try the café in London, which she obviously did.

The media has been mentioned as a crucial tool in the interessement of people to the café, but in the interviews I conducted few people mentioned that they had come to

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<sup>193</sup> Interview conducted in Cyberia. 24/6/1998.

know about the café through the media. Although some users believed that they had read something somewhere about the founders Gene and Eva. Other users in the cafe noted that they had used Internet cafés all over the world, and as such they were very adept in seeking out Internet access in large cosmopolitan cities.

Thus the role that the media plays in the interestment of people to the cafe seems not to have been illustrated through the interview data. In other words the role of the media, if it has an influence upon the usage of the café, is performed in a complex manner.

### 6.2.2 The Cyberia experience

The cafe experience has been represented by the founders as an enjoyable and exciting activity. It will present to the users more than just a 'coffee and computers' experience, it will be easy, efficient and will be aided by the knowledgeable and reassuring cyberhosts. The experiences that the users had in the cafe were, as anticipated, described in a variety of ways. What I want to draw upon now are some of the users' accounts to illustrate what in a general sense they thought of the cafe.

Jennifer, an outgoing American from the west coast thought that Cyberia was an 'OK place', nothing special and described it as a bit 'dull', she found the staff to be 'a bit snappy'. She recalls with some anger that the last time she came into the cafe she had to 'wait quite a time for a free terminal'.

Mark, a young media worker details his use and experience of Cyberia. He comes into Cyberia about once or twice a week just to 'chill out' before getting on the tube to head home. He likes the café, and tells me that 'I find it relaxing, just surfing with a coffee and a cigarette'.

John, a young accountant who works in a local office explains his Cyberia usage. At the moment he is supposed to be running an errand, but has just popped in to email a couple of friends. He explains to me that Cyberia is a 'friendly place' but it can get 'a little too busy at times'. He goes on to tell me that 'I've got a computer at home, but

it's not online, and they limit my access at work'. He considers himself 'a regular' and as such has got to know the staff quite well.

Taka, a young Japanese man, has just popped in to download some freeware, it is a lot quicker to do this in the café than at home, he tells me. He is working in London for 6 months on a placement, he finds that London, as a city, is 'technologically slow'. But in spite of this belief he likes the café because it offers him the opportunity for some social contact.

From the interview data there is no single or unified experience that seems to permeate the individuals' accounts. Perhaps one of the broad uniting features seems to be the ad hoc nature of the use which seems to typify the users; their use is often not planned but just occurs on the spur of the moment. These snapshots of the users and their feelings are only glimpses of the broader experiences of users and their consumption of the café which I now intend to expand upon.

The representations of use that have been utilised by the founders have laid before users a wide range of facilities and possibilities. The café will not simply enable access to the Internet and computing facilities, but will offer access to a future Information society. The accessing of the Internet in the café will enable greater learning and education possibilities for a wider section of society, and will increase the prosperity of the individual users, community and country. So elaborating on the brief accounts we have already examined, where users tell of a relaxed and a hoc approach to the consumption of the café, I now want to inspect some of the specifics of café usage.

#### 6.2.2.1 Cafe use and communication

The most popular activity that users undertook in the café was the use of email for communication with friends and family. The common description of email use was just to 'stay in touch' with friends who were in many cases either away studying at university or travelling. The issue of travel was a central one to the use of email for the users of Cyberia, whether it was their attempts to contact others that were away from home, or whether it was users who are maintaining contact with their home.

The majority of the users who I spoke to who were travelling came either from the USA, Australia, New Zealand or from European countries. Email was used by one particular user to receive the latest pictures of her newly born niece, whilst another was waiting for information on a job offer from San Francisco. Individuals that were away from their home, often mentioned that they used email for financial reasons, with there being no comparison between the cost of a 30 minute phone call to Australia and 30 minutes of Internet café use.

In the café users told me how they often visited the café on the spur of the moment, to send emails to friends or check out websites that they had seen advertised or had been told about by friends. The use of the café for email (predominantly personal) was a major factor why individuals used the café. Users told me how their use was either restricted in their business place by their employer, or how they personally restricted their use because they knew that their use was monitored. This idea was supported by one of the users:

"I come in here (Cyberia) because I can use it for personal stuff which I cannot in my work place. We are only meant to use it for business related activities at work"<sup>194</sup>

this point was also mentioned by another Cyberia user:

"There is no privacy at work, and if you get caught you can get into trouble"<sup>195</sup>

the café is a good space, another user told me, because:

"...increases access, which can only be a good thing"<sup>196</sup>

Thus the restrictions that are placed upon users at work can be alleviated by the café. In the café then, unlike their work spaces, users are free to use the technology for any purpose within the limits with which they feel comfortable.<sup>197</sup>

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<sup>194</sup> Interview conducted in Cyberia 3/7/1998

<sup>195</sup> Interview conducted in Cyberia 3/7/1998

<sup>196</sup> Interview conducted in Cyberia 1/7/1998



For many of the users the primary use of the café was to have access to email facilities, even novice users said that their initial motivation often was to email a friend who had given them their email address. This desire to reply to friends, often led individuals to sign up for one of the free email services (provided by Hotmail, Yahoo, or Mail.com) widely available on the Internet. The users that I talked to found that email was a useful communication tool for relaying the basic events of a week back to friends or family. They tended to write just short pieces of text back to their friends (200-300 words), and if any important event happened to them whilst abroad they would nearly always revert to the telephone for communication wherever possible.

The use of email was outlined by the users as just one of a plethora of communication channels which they could employ. The communication medium which users chose for specific means, was in part, determined by cost as mentioned above, and additionally what users wish to convey and how they are 'feeling'. This point was illustrated well by Jonathan, a young man who is an occasional user of the café. He explained to me that he liked to use email 'because you can be very direct', and you are 'not forced to talk like you are on the phone'. Johnathan also mentioned that he considered writing and posting letters as a very slow and complicated process, he wondered who had the time to spend on such a lengthy process.

Thus the primary use of the café is for emailing friends, family and others. The use of email isn't seen as a revolutionary effect of the café, but just another communication medium which anybody can use. But there are problems which arise from the idealised notions of the use of the café, particularly the issue of privacy, and acceptability. In any area of everyday life it is deemed socially unacceptable to pry, to read over another's shoulder, to listen in to others' conversations. In the café it is unacceptable to stare at others' screens, which can make users feel uncomfortable. this is a possible outcome of the arrangements within the café. The possibility of uneasy and disturbed café use, is in part then, enabled by the disruption in the

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<sup>197</sup> Users may still not feel comfortable undertaking certain activities in the café, the writing of intimate emails to a close friend or lover, or the viewing of, for example, pornographic material etc.

arrangements of use. I will expand upon the issue of privacy later in this chapter when further disruptions will be examined.

#### 6.2.2.2 Searching online for information, goods and services

In the café the second activity which users utilised the computers for was to search for, retrieve and manipulate information. The range of information that individuals were searching for and receiving via the Internet was extremely diverse, it ranged from photographs to music, distributing CVs to searching for employment information and opportunities. Additionally, users would be in the cafe to seek out the latest price information, or to receive information concerning specific interests or hobbies which they have regularly sent to them via email.

The limits on which type of activities individuals can use the Internet for in their workplaces, meant that the use of the Internet in the cafe for searching for information relating to employment was a common story. Mike told me about his experiences:

"I use the net to look for employment agencies, they simply take your CV and place it on their database, and then match you up to a job"<sup>198</sup>

Jean told me that she was using the cafe to search for information, regarding possible new employment, one of the primary reasons for her using the cafe was because:

"It is not possible to look at employment information at work, there is no privacy, although there isn't much privacy here (Cyberia) either"<sup>199</sup>

Thus the café for many of the users offered them a flexibility of access that didn't exist for them at their workplace. The arrangements in the café in this instance definitely offered users flexibility and freedom of access that didn't exist for them at other Internet access spaces.

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<sup>198</sup> Interview conducted in Cyberia, 23/6/1998

<sup>199</sup> Interview conducted in Cyberia, 27/6/1998

As well as searching for information of an employment nature, users also told of their use of the Internet for leisure related information. One young man told that he was using the Internet to seek out the latest information on 'snowboarding and mountain biking' whilst another user was using the Internet to find information for an up and coming holiday to the Gambia.

The Internet was ideal for users to obtain up to date information on subjects which could otherwise be hard. Attempting to find information, for example, about the Gambia would involve many telephone calls and many days of waiting for information to be posted to an individual. Thus the reduction in time that the Internet affords individuals can be of great benefit to individuals for a wide variety of uses. This ability to always be up to date was expanded upon by one of the users:

"Cyberia offers a great service, especially for me. Because it allows me to always be up to date with the latest technological developments, whilst allowing me to relax as well"<sup>200</sup>

But another user talked about the problems of having to deal with such huge amounts of information that can be accessed by using the Internet:

"Sometimes I find the amount of information on the Net overwhelming and I don't have the time or money to look at everything"<sup>201</sup>

There is then a need for information, but in a form and quantity that is appropriate for the individual user. Another concern was the issue of technological failure (I will address this further later in this section) and the requirement for immediacy. When the computers suffered technical problems (as they frequently did, and do) this subsequently delayed information searching, it was at times like these that users felt that perhaps our reliance on technology was becoming very worrying.

It is difficult to describe with a great degree of accuracy the specifics of the information which the café users were searching for, and utilising in the café. But

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<sup>200</sup> Interview conducted in Cyberia, 1/7/1998

<sup>201</sup> Interview conducted in Cyberia, 24/6/1998

what these accounts suggest is that the users are searching out information that, in many cases can be found in other places, magazines, books or telephone helplines. The advantage that the Internet offers to users is that they are able to draw on a wider range of information sources with greater speed, and efficiency (so we are told by the founders), and at one single location. Additionally with the development of comparison sites<sup>202</sup>, users are able to seek out the best price or deal on the same item but through a wide variety of suppliers.

Accessing the Internet (as the users see it) via the café then can, and does offer users a greater access to information, and if the arrangements co-operate then the café can be of benefit to users in many ways. But as detailed in earlier sections, the users also detail problems, annoyances, distractions to their use of the café, the arrangements the discretions of use are can be disrupted. The issue of privacy troubles the users, the quality of the information of the Internet troubles users and they find the quantity of information overwhelming, where in the founders' representations where these concerns to be found?

### 6.2.2.3 Other café activities

The third collection of activities that users undertook in the café included interaction on chat lines, in chat rooms, in virtual communities, and downloading software. The users most likely to engage in chat facilities were individuals that had been using the Internet for some significant period of time<sup>203</sup>. The chat lines are easy to find on the Internet and many users told me of their engagement in chat rooms connected to large Internet companies (e.g. Yahoo and AOL). Other users were involved in specialist chat rooms for specific interests (sports, music, dating etc.). Individuals that use chat facilities are often to be involved in the processes of what Slater (1998) calls 'progressive embodiment'; that is seeking to see an other's picture on their webpage or by use of a webcam, hearing the others' voice, getting their address, phone number etc. Individuals are involved with a progression towards constructing a more real image of the other, and these details serve as anchorage for the others'

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<sup>202</sup> These comparison sites include shopsmart.com and kelkoo.com whereby these sites will enable the user to view the inclusive price (of P&P) of the same item (a CD, Book etc.) at a range of stores, and then taking you directly to that particular online retailer.

<sup>203</sup> In the interviews with the individuals it was the more frequent users that said that they had used chat facilities

real actions and identity. One user Rachel spoke about this exact point, when she talked of her experience of using a chat room:

"One thing that always happens (in chat rooms) is that they (other users) always want to know more about you, the truth, photos and stuff"<sup>204</sup>

Many of the users I spoke to in the cafe were not convinced of the 'normality' of chat lines with many of them describing them as 'weird', whilst one user told me that they were 'usually a good laugh'. The trivial manner in which they appeared to treat chat rooms suggested that they used them only as a form of entertainment, or indeed, to play identity games and contests.

One of the more revolutionary aspects of using the latest ICTs has been the suggestion that the technology can be used for the creation of virtual communities (VCs). Regular communication with others is a feature of all communities and it is no different in VCs, only the method of communication has altered. In VCs the communication is generally facilitated in an asynchronous manner, that is messages are posted on to a bulletin board and the communication is not conducted in a simultaneous fashion. VCs have the ability to supplement traditional forms of communication (face to face) and support the growth of new social networks.

When asked about the idea of virtual communities the response from the café's users was mixed. One user stated that:

"...who's got time for community, let alone virtual community, must be quite geekish, online all the time"<sup>205</sup>

This comment echoes the populist idea that community in general terms is in decline, and that individuals do not feel they are part of a community, let alone a VC. Again, these ideas are exemplified by another user who states that he can't understand:

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<sup>204</sup> Interview conducted in Cyberia, 5/7/1988

<sup>205</sup> Interview conducted in Cyberia, 19/6/1988

"...why people would want to be involved with one (a VC). its easier and more fulfilling to have a real relationship"<sup>206</sup>

Thus again if users have the time for relationships they believe that the time would be best spent on what they call real relationships, that is, a physical relationship. Amongst the users though there were some individuals that thought that VCs had their merits:

"Virtual communities are good for meeting people who have the same interests, the chat facility is also good, but you don't know if the other person will be online"<sup>207</sup>

another user believed that VCs may be good for the:

"...the old and the disabled"<sup>208</sup>

In the data we can see then that users prioritise physical over online interactions. The users doubt that any individuals have the spare time for participating in virtual communities. There was little evidence that users in the café were taking part in what would be termed 'virtual communities' although many said they had tried using chat rooms.

Through this section the users have detailed how they have experienced the café, what kinds of people used the café and what their expectation were. The café was used predominantly for email and for searching for information, there were few accounts of chat rooms, IRC or other activities being undertaken in the café. Users talked about the characteristics of the technology they were using, commenting about the 'direct' and 'lazy' qualities of email. Users also commented upon the limits that existed to their use, the unacceptability to stare at others screens or to view pornographic material, and alternatively the freedom that the café provided in

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<sup>206</sup> Interview conducted in Cyberia, 17/6/1998

<sup>207</sup> Interview conducted in Cyberia, 18/6/1998

<sup>208</sup> Interview conducted in Cyberia, 17/6/1998

towards conventional ideas of community. The users have expressed how they believe that such communities may be of interest to specific individuals in society. Inclusion in such VCs though may increase and become more acceptable, just like the increased usage of email. VCs are then not something that many users are likely to be involved with through the café

contrast to their workplace. In the users experiences it was difficult to specifically identify the attitude of 'cyber-cool' although the 'cyber-learner' was evident at times when users told us about how they used the information to seek out employment opportunities. In this section the tracing of such identities has been initiated, but in the next I want to expand upon these, and further to this, examine the discrepancies that exist between the founders' representations (their 'models of use') and how users experience these particular models.

### **6.3 Disruption in the Café: comparisons**

I have detailed in the previous section how individuals actually used the Internet café, and drew attention to some of the specifics of use. This acted partly as a comparison to the founders' representations of use, and also to integrate the use of the cafe with the routines and practices which were outlined previously. Furthermore through the explication of the users' stories what they began to illuminate were specific instances whereby the complex routines within the cafe seemed to be disrupted. The disruptions in the routines and practices, which are intrinsic to the founders' representation of the experience, have led to complaint and concern about the use of the cafe.

The founders' representations and arrangements which have to be 'worked through' by users so they can experience the fully functioning café, are strictly defined and delineated. The representations use strict divisions in the café to define the human roles, the technical functions of the cafe, the social roles of the cyberhost and of the users.

In this section I want to examine two specific examples of where the functioning café has experienced some disruptions. By disruptions I mean that there have been complaints and difficulties concerning the operation of the café. What these examples illuminate are the disruptions to the arrangements within the café, and the possibilities that such awareness generates, these disruptions in short open up space for new meanings. The recognition of such disturbances brings into relief the complex work that is necessary to maintain the café.

### 6.3.1 Privacy

The use of the café is meant to be an enjoyable and efficient experience. The other bodies in the café should, especially when using the computers, not interfere with the users' experience of the café. In the café space users should feel comfortable in their use of the Internet, and with the other affordances of the café. In such accounts of use the relationships in the café are simple. Other users will be interesting and entertaining when users are waiting with them, and unseen and unheard whilst on the computer.

Yet in many cases the arrangements do not work in this prescribed fashion. Sometimes other users cause annoyance and frustration. So what I want to draw out now is a collection of disturbances which congregate around the notion of privacy. These disturbances can take multiple forms as the users will detail in their accounts.

Some users may persist in talking to either friends that they have left at a table, or using their mobile phone whilst on a computer, for some users who are trying to concentrate this causes annoyance. The annoyance can be a feature of the way that a user continues to use their mobile phone, their tone of speech, their language, the loudness with which they conduct their conversations. Users, in short, can be forced to listen to other users' conversations. Other users' demeanour, their approach to the use of the café can cause annoyance. The insistence on mixing their medias (phone, pager, computer), or the simple fact that they may be a smoker (there are no areas where smoking is restricted) can cause dismay and frustration for users. What may be an annoyance, a disruption for some users may actually encompass many of the components of the attitude of 'cyber-cool'. These instances, these fractures are enabled not through any unusual circumstances, but purely through the congregation of multiple bodies with diverse and distinguishable characteristics in a co-ordinated space and time.

Thus we begin to see fractures in the arrangements within the cafe, which leads to the generation of outcomes and possibilities unforeseen by the founders. One issue that begins to be fleshed out through these disruptions is differing notions of privacy in the café. As noted the proximity of users can create frustration, users feel a lack of



privacy, they feel they are being watched, or at least the possibility for such watching exists. Whilst on the computer users can be watched by other users, waiting users at tables and other spaces, and by the cyberhosts. One user noted that 'People are always trying to get a peek at what you are writing'. This user does feel that their privacy is being intruded upon. Users feel that they are being watched, it makes them nervous, somewhat concerned about other users. The users' experience is then interrupted by human others because of their proximity, and the necessary co-ordination in space and time which is essential for the café to 'function'. The physical space which a body occupies highlight the importance of the material amongst all the cafes functionality it affords its users.

There is also another element to the disruption which is associated with the notion of privacy. This element concerns the idea that not only do users feel annoyance and frustration with other users, but because of privacy concerns users restrict their use of the cafe. This reinforces the idea of acceptable routines and practices which are implicit in users' actions. What users can do in the cafe is patrolled and maintained by other users. In this comment one user stated about the ramifications of privacy:

'I think as well that the amount of privacy determines what people may do, in private they may look at pornography online'<sup>209</sup>

The user states that because of the limits on privacy, certain activities will be prohibited, the example given is not particular relevant perhaps, as the viewing of pornography is only socially acceptable in very limited public circumstances, and not in any sort of café. But what the comment illuminates is that the arrangements in the café have been disrupted, users are aware of the limits that exist in their use of the café, and believe that their use can be limited. What emerges through this specific example is that the arrangements in the café have been disturbed and this has led to the unforeseen limits being placed upon the users.

The arrangements in the café are not simply restrictive, they can be enabling: another user commented about their experiences of privacy in relation to computer use: 'I come in here (Cyberia) because I can use it for personal stuff which I cannot in my

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<sup>209</sup> Interview conducted in Cyberia. 21/6/1998

work place'. Thus in this extract the user states that the arrangements within the café allows them to achieve something which is not possible in their work place because of worries over privacy. Thus the intervention by other human bodies and practices for this particular user are not of importance, what is important is the arrangements within the café that allows them to achieve something in this space which they cannot in their work space. Users are able to counter disruptions to the arrangements in the café by simply continuing with what they came into the cafe to achieve, thus ignoring or dismissing attempts to disrupt their café experience. This involves users believing in different configurations of privacy, and acceptance to 'work through' these new arrangements.

The arrangements that exist within the café are in place to be 'worked through' by the users so that they experience the founders' ideal representation of the café, but as I have detailed these arrangements can be disrupted. I have detailed how interventions are made possible, by materiality (mobile phones), other bodies (human monitoring) and heterogeneous mixes of human and technologies which disrupt the arrangements within the cafe. What these disruption throw into relief in the ongoing fragility of the complex arrangement that exist in the café.

### 6.3.2 Reliability and immediacy

In the use of the café humans and actants intervene within the arrangements to cause disruptions (to the founders' representations), and illuminate concerns that hinge around differing configurations of privacy. These disruptions, these fractures weave new meanings into the practices of sustaining configurations of privacy that would otherwise be ignored. Further, in this section I want to examine the relationship that exists between the computers in the cafe, which mediate and enable the experiences, and the café users. That is I want to examine the founders' representations of a pure and homogeneous relationship that they represent between the cafés' technology and the human users.

The founders have detailed how the users will behave in the café, what routines and practices they will adhere to, and the necessary steps that have to be worked through by all the users. In the café users will be able to access the Internet at anytime when

the café is open, the connection will be fast, efficient and reliable. Thus users will easily be able to access information and services in the café via the Internet, facilitating the identity of the ‘cyber-learner’. The founders’ representations illustrate technology that completes specified and compartmentalised tasks for their human users, and humans that are removed, abstracted, from a relationship with the technology they use in the café; a broadly modernist position.

There are attempts by the founders to standardise the experience that users have in the café. By enforcing particular routines and practices it is hoped that the humans and the technology in the space will adhere to their specified roles. But through detailing the users’ experiences it is clear that users frequently experience disruptions in the café. As well as detailing the fractured nature of the users’ experiences I will detail how the technology is heterogeneous in its character and distributed across a wide range of humans and technology. The experience utilises a network of heterogeneous relations, these relations concern the users’ body, the design of the café space, the technological networks and the actions of the cyberhosts.

The complex activity of using the computer was always a key component in the users’ experiences of the café, obviously there are others, for example relaxing and socializing in the café, drinking and eating in the café etc. When we get the opportunity to review what the users felt about the technology in the café, there are again tales of disruption that appear. The disruptions in these extracts concentrate on two qualities which, according to the founders, are implicit in the design of the café, those of reliability and immediacy.

These qualities according to the founders reside solely with the technological component of the café, although what users’ tales flesh out are accounts of distributed technology, and expressive qualities to the use of the technology.

“Technology is made out to be easy and trouble free, but something, and I mean always lets you down, but we still seem to rely on it so much”<sup>210</sup>

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<sup>210</sup> Interview conducted in Cyberia, 23/7/98

Here the user does not experience the smooth seamless experience of the café that they were expecting, but rather a troublesome and frustrating activity which seemed to be beyond the control of the user. The pure relationship which the founders construct between the technology and its user is fractured, the relations do not hold together and the users feel annoyance and frustration about their usage. What the users demand and require is reliability:

“I get annoyed when the technology lets me down, I wish it would be more reliable”<sup>211</sup>

Reliability is constructed by the founders as a quality which is unitary and resides purely with the technology in the café, reliability does of course have a material component and this is often highlighted by the café users. But the notion of reliability is distributed between a network of relations in the cafe space, at different times in what is then different spaces. Reliability is a quality which can be composed then, of many users’ approaches to the use of the technology, not just the functioning of the technology per se. The technology for instance can be made to be ‘reliable’ by lowering the expectations of users, persuading them to accept slight alterations in the functioning of the technology. If expectations are altered, reconfigured, it allows the defining of the notion of reliability to be multiple, to be distributed amongst a network of relations.

If for example users have their Internet access expectations lowered they may accept that ‘reliable’ technology is performed and constituted by having an uninterrupted Internet experience, say 90% of the time. Rather than expecting ‘reliable’ to mean an uninterrupted Internet experience 98% of the time.

The problem with the idea of reliability though is linked I believe with the notion of unseen technology and humans. By this I mean that we expect and believe that the unknown elements that enable the Internet to work are very new and efficient like the character of the Internet, but they are not. The Internet relies on systems and technologies which can be tens of years old, most notably the copper telephone wires which compose the vital connections between the telecommunications backbone and

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<sup>211</sup> Interview conducted in Cyberia, 25/7/98

the home, work or 'middle' ground spaces. Reliability then, is not just something that is 'out there' rather it is a quality which must be performed across a distributed network of relations. It is not just expectations that are involved with the idea of reliability but other elements as well. The unseen technological networks that support and sustain the vast information networks, with their huge complexity must all perform in a structured manner. The humans embroiled in these networks must also be reliable, mustn't have accidents, mustn't make mistakes they must perform their duty, their roles, with accuracy. Furthermore within these networks the support systems stretch far and wide, fibre optic cabling that encircles the globe, satellite communication that relays the information from continent to continent, with all the systems powered by electricity generated through unrenewable sources. Reliability then is performed across and through these vast networks, whilst the founders singularly associate reliability with the computers, the technology, in the café.

An associated characteristic which is important to the users of the cafés' computers, is the speed and immediacy with which they can access information and services. Speed is represented by the founders as a function of the computers in the café, and like the function of reliability it is seen to originate from the technology, there are no other entities or actors involved. Speed is singular in its origin. The associated characteristic of immediacy, hints at an expressive element to the function of speed, whatever the connotations, users found the issue of speed extremely important:

“I find the technology hard to use, and the waiting really annoys me”<sup>212</sup>

Another user commented on the speed of the downloading:

“The computers here are so slow. I hate having to wait for (web)pages to download, it is really annoying”<sup>213</sup>

Again I want to illustrate the idea that speed is not a unitary function, but one which is distributed amongst many different relationships. Speed as a function is represented as a feature of the technology alone, it contains no other entities or

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<sup>212</sup> Ibid. note 210

<sup>213</sup> Ibid. note 211

actors, but as we have noted before the alteration of expectations can result in new definitions of the notion of speed. Speed is a quality which can be composed of many users' approaches to, and use of technology, speed is not generated by the technology in isolation. Speed is composed then of what users deem acceptable.

What the quotes from the users illustrate is the disruptions to the use of the technology in the café that can easily happen to any of the users. Importantly in the quotes the users reinforce the founders' ideas of speed, that is that the origin of the disruption (the breakdown in speed and immediacy) lies with the technology. The network of relations that I suggest composes and enables speed to exist is invisible to the users, they cannot see their own roles; their purpose within the network. The users acceptance of certain levels of speed, of service, is then pivotal in the acceptance of the working nature of the café. The issue of acceptability is bound up with the ability to compare and contrast speed as a function, as one user notes:

“Compared to my university, the computers here are very slow, the screens are small and the last time I was in here the network was down”<sup>214</sup>

So speed is relational, it is constructed of comparisons by individuals of different experiences in different spaces at different times. Without this referencing, the notion of speed is abstract and left for users to make assessments by comparing less similar experiences.

The notion of speed is one which is mediated by the cafés' technology. the technology is an intermediary between the information that is available via the information networks and the human users. But the technology is more than a conduit for information exchange, it enables the possibility of expressive actions and behaviours which are bound up with the use of the technology. The technology doesn't simply 'work', rather it affords individuals an array of options which enables them to express themselves. Individuals can express themselves through this array of options, where it is possible to become annoyed with the lack of privacy or frustrated by the unreliability of the computers in the café. But these qualities are not intrinsic

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<sup>214</sup> Ibid. note 210

to the technology but are rather constituted in relation with the technology as has been detailed.

I have suggested the idea that the technology has a singular aim, that it just offers functionality is too simplistic. I have additionally charted in this section of the chapter that the computers, like the use of them, is heterogeneous constructed and intertwined with a diverse network of relations that constitute and enable them to function. It is with this initial illumination of these theoretical ideas in place that I now proceed to examine the theoretical ramifications in greater detail in the final section of this chapter.

#### **6.4 Theoretical Considerations**

In this theoretical section of the chapter I aim to complete two tasks. Firstly I will review the case study material in relation to the theoretical shortcomings that were highlighted in the Televersity chapters. Secondly I will consider additional areas of the case study material and the accounts concerning the Internet café development to theorize further the use of ANT to examine this development, highlighting additional shortcomings and different theoretical positions which may prove useful

This section of the chapter will consider some of the theoretical issues which have been thrown into relief by the work of the previous and present chapter. Theoretically I have already touched upon a number of issues; a brief actor-network theory account of translation in relation to the development of Cyberia (5.3), some theorization of the role of the media in the interressement of users (5.5) and an initial enquiry into instances where some disruptions in the use of the café illuminated discrepancies between the founders' representations and users particular 'models of use' (6.3).

In relation to the theoretical discussion in this and the last chapter (concerning the development of a specific Internet cafe) I want to consider this in relation to the theoretical points that I raised at the end of chapter 4. As a form of conclusion in chapter 4 I produced what I termed a 'classical' ANT account of the development of the Televersity project, and the 'middle ground' spaces upon which it relied. In this

section I will also include a classical ANT account of the development of Cyberia to serve as a reminder as to how the actors are associated with the café.

In the previous theoretical section I went on to draw attention to a number of shortcomings which I felt needed to be addressed. Firstly I considered the neglect that the idea of multiplicity has suffered. Secondly the ways in which collaboration was aided by the use of boundary objects and by personal friendships. The third shortcoming illuminated by the case study material was the manner in which individuals used the LLCs; I introduced the idea of ‘side-stepping’, whilst insisting that continuity in terms of the representations and use of the centres was still possible. In this section whilst I will again engage with these issues I will endeavour to consider further theoretical points that flow from the empirical case study data.

#### 6.4.1 ANT and Cyberia

As I have just stated, the theoretical section to the Televersity chapters included what I termed a ‘classical’ ANT account of the development of the Televersity project. Through this and the last chapter I have attempted rather than to produce the accounts of the development of Cyberia in a theoretical vacuum (like the Televersity chapters) to integrate elements of ANT and other theoretical positions where it seemed most appropriate. Through the Cyberia chapters then I have already given an ANT account of the development of Cyberia (5.3) and considered the role of the media in interressement (5.5). I now want to present a summarised ANT account to act as a reminder to the developments surrounding Cyberia.

The founders of the café (Gene Teare and Eva Pascoe) had the idea to establish a space which would give the general public access to the Internet. The founders who had backgrounds in publishing and academia came to London for different reasons, but united together in establishing the first Internet café in the world. The founders of the space needed to organise, coerce and persuade a heterogeneous collection of actors and artefacts to align themselves with the founder’s ideas. The space was originally conceived as providing greater access to the Internet for women; this idea after a period of time diminished and the café was marketed at all sectors of society



(although there was still a focus in attracting people who were marginalized from computer technology).

The founders recognised that it was important for the café to be associated with the new cyber and Internet culture which was growing around the fusion of telecommunications, computing and so-called 'new media'. The positioning of the café within this emerging cyberculture would help the café to retain its 'cutting edge' image and also to draw upon familiar aspects of computing to ground the representations of the café. The addition of computing facilities to a traditional café, would also enable users to feel at home in a space which they recognised and already felt comfortable in, albeit with the addition of computer equipment.

In promoting the café through the media, the founders constructed amongst many others, representations of users and usage of the café. These were representations of individual users and the different activities that they would undertake in the café. Two of these representations were explicated in the previous sections, those of the 'cyber-learner' and the attitude of 'cyber-cool'. The 'cyber-learner' may be an individual that has home Internet access, but who uses the café to supplement their access. They may formalise their learning via a learning course or just learn a programming language on more of an ad hoc basis. 'Cyber-cool' alternatively draws upon the 'cool' aspects of cyberculture to sustain itself. This 'cyber-cool' is an attitude, an approach towards the use of the technology in the café, to be 'cyber-cool' is to be in control of the cafes' technology and to exhibit this control through a stylised approach to café use.

The relationship that the founders and other employees develop with the media is very important for maintaining the network that sustains the Internet café. This relationship with the media is critical in the interestment process of attracting people to the café, rather than using alternative spaces. The media is also important in propagating the idea that the café is an important space in the context of cyberculture; that is the café is able to offer expertise concerning the utilisation of the Internet. The café needs to be considered as being at the 'cutting edge' of the all things cyber and crucially an ideal space to host interviews or have launches for Internet related services, ideas or policies.

The café is established and the network that sustains its existence remains aligned towards the founders' ideas. The café seems to be attracting many product launches (software, hardware etc.) and interviews (Q the urban wordsmith, comment upon the Prime Ministers webcast) that are broadly related to the use of the Internet in the café. The café is well established within London and its founders are well known within the new media and Internet sectors<sup>215</sup>.

The use of ANT to conceptualise the establishment of Cyberia has highlighted the ability of the theory to describe how it is necessary for the founders to enrol a heterogeneous array of actors and artefacts, which in terms of classical ANT is quite straightforward. Further it has illuminated the important role that the media performs in propagating the representations of the café users and use. Although ANT has been useful in explicating the network activity of the founders and others, it is less successful in capturing the role of the media. The attempt to use the ANT concept of immutable mobiles failed to address fully the complexities that exist in the relationship between the founders and the media. ANT is adequate in describing the use of the representations of the café users and use, although the disruptions which I use to describe the breakdown of such representations are harder to encapsulate within the framework of ANT. What is needed are representations that are able to embody the differences which exist whilst retaining a semblance of continuity. The ability of the café to continue to function despite such disruptions point to the existence of alternative 'models of use' that enable continuity despite the differences that exist between the users and the founders. It furthermore points the idea that many different cafés and 'models of use' exist that are partially connected, the interference between these different cafes and models could be thought of as the disruptions<sup>216</sup>. I will expand upon this idea in the next section of this theoretical section, which will consider in more detail the inadequacies of ANT.

#### 6.4.2 Thinking through ANT

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<sup>215</sup> Searches on [www.google.co.uk](http://www.google.co.uk) produced 629 results for the search 'London Internet Café Cyberia', whereas rivals 'London Internet Café Webshack' produced 62 results, 'London Internet Café Easyeverything' produced 229 results and 'London Internet Café Declare Publishing Studios' produced 14 results. Whilst searches on the BBC website produce Cyberia (44 Results), Easyeverything (58 Results), Webshack (2 Results) and Declare Publishing Studios (0 Results).

<sup>216</sup> This idea outlines the principle that there are many different 'models of use' which relate to the use of the café, when the routines and practices which these 'models' encompass are not the same, then there will be difference and apparent disruptions. I will expand upon this idea later in the next section to detail how difference and partial connections can co-exist.

In the last section I presented a brief ANT-like account of the important elements which contributed to a classical ANT account of the development of Cyberia. The account is a simplification of the more intricate strategies and activities which the founders and others undertook to establish the café. Furthermore this simplified account also highlighted some of the areas where ANT was unable to adequately capture the complexities and alterity which existed. What I will expand upon in this section are the ideas with which I feel ANT has difficulties, these will draw upon the previously mentioned shortcomings noted in Chapter 4, and expand upon these by utilising the data from the Cyberia case study.

Firstly there is the issue of sufficient multiplicity when considering the network; that is, there will always be neglected accounts which are never considered in the light of the analysis. Secondly I want, in conjunction with an evaluation of the co-ordinating roles, to consider the privileged position that scientists and technologists are still afforded through the analysis. Thirdly I want to consider the collaboration and personal relations (friendships) which exist and enable the relationship between the café and media to flourish. Finally I want to return to the idea of alternative ‘models of use’ and how the interference between them can possibly be identified as the source of ‘disruptions’. The tentative interpretation is that there are different Cyberias, inhabiting the same world, but in a manner which relate to one another in uncertain ways.

#### 6.4.2.1 Multiple narratives

Firstly then I shall turn my focus to the possibility of multiple narratives and co-ordinating roles. What became apparent in the Televersity case study was that it was easy to consider and to map out the different actors’ stories. The spokesperson position rotated from actor to actor, and the accounts allowed each actor to act as a central figure. In appreciating this element of the case study material what I suggested was that these stories highlighted the amount of effort that was needed to sustain the project. It further showed that the ‘working’ Televersity project is a network of different performances joined in multiple and complex relations, that are

partially connected<sup>217</sup>. These multiple stories, explicate that what appears to be one thing, (one entity) may be understood in a more complex manner as a set of related performances. When considering these performances, I suggested that they act together to calibrate the various parts of an actor-network, and that to understand calibration is to appreciate multiplicity and recognise that things don't congeal in a single form but linger in disturbed states<sup>218</sup>.

I now want to consider multiplicity in relation to the development of another 'middle ground' space, that of Cyberia. In terms of the analysis which has preceded this theoretical enquiry this was limited to an examination of the roles of the founders in the development of the café. The account neglected to include other potential actors who may have been influential in the developmental stages of the café, it was constructed as a project singularly led by the founders. I am not doubting that the founders were, in the main, responsible for the idea of an Internet cafe, just that other actors contributed to the development as well, and that this multiplicity is missing from the account so far. The other contributions that we know of were made by the founders' male partners (who in some accounts are partially credited with the development of the café), and family and friends who helped Teare and Pascoe to raise the money to fund the café. What I am suggesting is that there may be other performances, other traces, of which we are unaware that relate to the account but will never be fully explicated. These 'other' stories could be tales of friends who gave either Gene or Eva the confidence to pursue their idea of an Internet café (or these friends could tell stories of how it was they who actually came up with the idea of providing the public with an Internet access space). The 'others' involved may have been critical in the location of the café, there are stories of how and why the location was chosen that have not surfaced. These 'other' stories may have surfaced when different but connected cafés were traced by following a different selection of actors and their activities which associated them with Cyberia. A number of questions which relate to the development of the café could highlight other performances which overlap and cross-cut the account. How exactly was the money raised and what effect did the manner in which it was raised have on the

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<sup>217</sup> Marilyn Strathern (1991) addresses the idea of partial connections.

<sup>218</sup> This point is made in slightly different terms by Vicky Singleton and Mike Michael, where the argument is that a working programme (the UK Cervical Screening Programme) is not a single structure, but rather contains inconsistencies and ambivalences. (1993)

development of the café? Who supplied the computers for the café and did they have a role in the design of the café? Does a supplier of computer hardware and networking have an input, a story to tell? What these questions illuminate is that there are many 'other' possible contributions to the partially connected performance that constitute the café, and that the 'classical' ANT approach is unable to capture this multiplicity. This classical approach relies upon a very strict mapping of the network, and a delineation of the network boundaries. I appreciate that by acknowledging and attempting to trace the 'others' contributions and partially connected performances this has consequences, in that a careful decision has to be made where it is appropriate to stop tracing the network. This element of any ANT analysis should not be seen to enforce demarcations, but rather to embrace the fluid and complex nature of objects; we should be content with not neat packaged entities and networks, but disturbed and fractured states.

The point of delineation resonates with the concerns of Nick Lee and Steve Brown (1994) in relation to the position of 'Otherness'. Their worries concern the apparent claim that within ANT everything is capable of being part of the networked performance of agency whether it be scallops, electrons, door closers or light transit systems. They suggest that ANT gives little room for space and agency outside of the network metaphor, and that in its approach was colonial and leads to the creation of another grand narrative. What is needed to escape such all encompassing theorising is an exploration of different metaphors and topologies.

The idea of multiplicity that I have drawn from the case study data relies upon the belief that there are 'other' stories and performances that are essential to the functioning café. But multiplicity can also be considered in the context of the numerous and diverse ways in which the café affords its users the ability to perform a number of functions and expressive capabilities. Many of these functions and possibilities are the direct result of the design of the café and can be considered part of the 'models of use' which are supported by routines, practices and discourses. Other activities are more spurious and their existence are bought about by users undertaking different routines and the playful exploration of the café. It is an exploration of the nature of these different 'models of use' (scripts of use) that I consider in the finally part of this section.

#### 6.4.2.2 Privileging science and technology

Moving from this examination of the missing ‘others’ and the difficulties of multiplicity, what I also note is that the account I presented privileges the role of the technologist (which the founders undoubtedly were) over other actors. In the account the domain of science and technology is constructed as the sole source of invention and innovation. It is not the actions of designers, architects or builders which are pivotal in the development of the café, but the actions of technologists (at least in my account). ANT sets out to trace the heterogeneous resources and actors that collaborate together in the formation of artefacts and systems, but seems to fall back on the continual tracing of scientists’ or technologists’ accounts.

This point has been developed by Emily Martin (1998), who challenges the idea that ‘what sets the sciences apart is they claim to construct reality but not to be themselves constructed’ (Martin, 1998, p. 26). The metaphor of the citadel is central here. Science and technology are seen to operate within this citadel; knowledge is produced within the citadel and filters out from this centre. ANT is to some extent permeated with the metaphor of the citadel, evidenced in it explicating the heterogeneous resources that scientists utilise in the production and stabilisation of facts, although this has been achieved by a Latourian scientist who is often overtly aggressive and accumulating in their pursuit of necessary resources. Martin, like others (Amsterdamska 1990; Collins and Yearley 1992; Fujimara 1992) continues to question whether ANTs reliance on this aggressive, heroic figure is necessary for the production of knowledge, and has made alternative attempts to explain the role of science as part of culture. Rather Martin claims that ‘both “science” and “society” as categories are produced inside the heterogeneous matrix of culture, the missing term in ANT’ (Martin, 1998, p. 30) As an alternative to the citadel, Martin draws upon the rhizome form and the string figure.

The rhizome as an alternative is represented by numerous protrusions that increase connectivity, they can solidify as bulbs or tubers, can be torn apart and distributed, only for them to re-establish themselves, this rhizomic characterisation claims to capture the disjointed, fractured and complex relationships that exist between science

and different cultures. It enables differences and fractures to co-exist in the relationship between science and society, whilst placing these in an environment which draws upon the heterogeneous matrix of culture. The string figure is a more collaborative form, as it constructs complex patterns through rotation and partnership. One particular configuration of the string figure, is the cat's cradle, 'one does not "win" at cat's cradle; the goal is more interesting and open ended than that. It is not always possible to repeat patterns, and figuring out what happened to result in intriguing patterns is an embodied analytical skill.....Cat's cradle is both local and global, distributed and knotted together' (Haraway, 1994, p. 70). Although disaster and disruption can still occur in cat's cradle whether the result is a string unable to be unknotted, or the upset that occurs at the inevitable end of the game when a pass is incomplete. The idea that collaboration and partnership is an important element in the development of the café will be explored later in this section, and further that the idea of 'cat's cradle' may be useful as a metaphor for appreciating the relationship that is constructed between the café and the media.

In my account of the development of an Internet café the emphasis was placed upon the activities of the founders, the missing 'others' were not given a chance to present their accounts. The continual privileging of the founders also presents an account that suggests that the founders were responding not simply to the demands of the potential users, but that they were in part responsible for that demand. This idea suggests that the founders were, through their actions, able to generate demand for their café, rather than responding to demand for Internet access. In reality it is not this simple, with the relationship between consumer supply and demand constructed within and through a complex set of cultural and economic circumstances.

In another response to the problems of the antagonistic network metaphor I have already in the theoretical section in chapter 4 used the metaphor of fluids and fluidity (Mol and Law, 1994) to resolve the changing meanings and setting through which Televersity traversed its path. I will return to the metaphor of fluids later in this theoretical discussion. For now I will proceed to the third theoretical theme of this section to examine how collaboration was aided by the use of boundary objects and by personal friendships.

### 6.4.2.3 Collaboration and personal relations

In the theoretical section for the Televersity chapters I suggested that the different ways in which collaboration was facilitated between the different actors was neglected somewhat. To this end I re-introduced the idea of boundary objects as tools which could complement multiple narratives and could be used to resolve the divergent, conflicting and complementary viewpoints. The use of boundary objects could aid in the calibration of the network which I suggested previously was a possible outcome of multiple narratives.

In the previous section I have just addressed the issue of the lack of multiple narratives. As there are few discrepancies or conflicts in the accounts that I presented there is little use in discussing the suitability of boundary objects as tools which can resolve differing viewpoints. An area where I believe that the idea of boundary objects may be useful is in the context of the relationship between the café and the media. I tried in chapter 5 to conceptualise the information that the café wanted to distribute to potential café users using the network metaphor of the *immutable mobile*, but as I stated then the complexities of the relationship were unsuitable for its use. Alternatively the idea of promotional texts being considered as boundary objects, may be more worthwhile because boundary objects ‘are objects which are both plastic enough to adapt to local needs and the constraints of the several parties employing them, yet robust enough to maintain a common identity across sites (read people). They are weakly structured in common use, and become strongly structured in individual-site use’ (Star and Griesemer, 1989, p.393)

A boundary object (or text) will contain elements that the founders will have contributed, but the manner in which the complete object is presented is outside of the founders’ control. The interpretation of the text, can be thought of like the relationship between an actor and a boundary object. Actors (read potential café user) are able to draw out from the object (text) ideas and roles which they feel will complement their goals and ambitions. A text like a boundary object has the ability to work on many different levels, and attract a variety of actors, what potential café users are able to do is to draw out from the text their own interpretation of the text, which is the result of their belief system. The interpretation of the text may have a



general interpretation which is served for common use (i.e. like a boundary object) but also enable an individual interpretation. Thus the text can aid a general feeling of unity, but at an individual basis the interpretation is extremely complex, and reliant upon the individual.

A further issue that was associated with the idea of collaboration (and was noted upon in the previous theoretical annex) is the notion of personal relations, specifically the inability of ANT to include this idea because of its reliance on continuity<sup>219</sup>. In this section I have already noted that the accounts which I have presented concerning my data offer little space for the examination of personal relations. Thus I feel that it is not necessary to repeat the ground that I already covered concerning the possible influences of friendship. All I would like to re-iterate is that friendship can influence the way in which networks are constructed, they must not be replaced in the analysis. Friends are able to anticipate and understand in greater depth why certain (human) actors may be willing to adopt certain roles and identities over others, an understanding of friendships more generally can serve as a powerful tool in understanding the construction of actor-networks. In elaborating the role of friendships I do not fall back on some kind of imperialism, where friendships are the sole determinant of networks, they also emerge out of networks.

It is not difficult to trace instances from the case study data which exemplify the importance of personal relations. Firstly there is the importance of the relationship that exists between Teare and Pascoe. The two founders of Cyberia have needed a very good working relationship so that they are able to work together in a partnership to agree upon the design and purpose of the café, and furthermore the management and promotion of the café. The personal relations that operate between the two have to allow a degree of compromise to be reached over many aspects of the café (design, pricing, marketing, management). If the relationship that exists between the two founders didn't enable compromise and agreement to be reached, then the café as we know it may not have been developed. The founders were good friends, the plans for Cyberia were famously drawn up on Teare's kitchen table and had been

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<sup>219</sup> By continuity I mean that ANT relies upon an analysis which assumes that a priori relations don't exist between actors, and this is exactly what friendship relies upon.

friends for a number of years before Cyberia opened to the public. The case study also pointed to the contribution of family and friends who lent them 50,000 pounds to enable the first café to open in London. There is no doubting then that the personal relations that exist between the founders and others have been crucial in the development of the café. This is not to advance the idea that compromise and friendship is always necessary for developments and systems to operate and exist, the example of the bush pump previously highlighted the idea that continuity can still be achieved in spite of difference, although personal relations are generally excluded from the types of analysis that ANT produces.

The second example of the importance of personal relations that is drawn from the case study data concentrates on the experiences of some of the users of the café. The café is designed, and practices are employed, to make users who enter the café feel at ease with the space, at home with the technology. The cyberhosts when directing users to their computers do so in an informal manner (normally using their first name), they are dressed in a relaxed fashion, with black trousers and a simply t-shirt bearing the Cyberia logo. The cyberhosts are always prepared to give a five-minute 'intro' for free, whereby novice users are introduced to the basics of email and use of the Internet. The tables where users sit before starting their session on the computer, often see groups of friends chatting, relaxing and enjoying each others company. The café has regulars, such as Mark, who comes into the café because they 'find it relaxing, just surfing with a coffee and a cigarette' and John who tells how he has got to know the staff quite well through his regular café use. Although I have previous portrayed the café use as momentary and quite often done on the spur of the moment there are then regulars that have made connections with the café and the cyberhosts. Users that have found their way to the café have often been directed their by friends or relatives that have recommended the café to them, like Jennifer who recalls that 'a good girl friend of mine told me about the place, if not I would never of found it'. Thus personal relations whether they be between the cyberhost and new users, regulars or between friends who have no direct association with the café, they are crucially important in users firstly feeling comfortable in the café, secondly in making return visits to the café and thirdly in users actually getting to the café in the first instance.

The third example of the importance of personal relations is the most difficult to trace and relies upon the examination of the relationship that exists between the café and the media. There is a relationship that exists between the journalists and reporters that comment on the use of the café for product launches, reviews and interviews and the café but the exact nature of it is hard to capture. Cyberia has been very successful in securing media coverage for the café in the media, and it might be expected that some of the journalists may actually know the founders through their continued contact. There is a relationship that exists between the media and the café, and this relationship is important in the determining the success of the café. I think that this example of personal relations has not received the attention necessary for a vigorous examination, but should be considered as an area for possible future research.

#### 6.4.2.4 Multiple and fluid Cyberia

My concern in this final theoretical addition to this chapter is to examine the idea that different ‘models of use’ (as previously outlined in this chapter) co-exist and that the disruptions that have occurred are the result of both difference and connection between such models. Further I want to explicate this idea of different ‘models of use’ by utilising the idea of fractionality; more than one but less than many. The ‘models of use’ which have been utilised throughout this chapter have been an amalgam of the acceptable routines and practices, founders’ representations of the café and its users; and as such patrol the use of the café.

In thinking about the interference that could exist between different models of use I want to return to a statement I made previously in the theoretical sections pertaining to the Televersity, concisely that:

‘The working Televersity project is a network of different performances joined in multiple and complex relations, that are partially connected’

If the Televersity can be considered a network of performances, does Cyberia also display some of these attributes to suggest this? In short I think that the performances in relation to Cyberia have not been explicated in such details as for me to be able to

make a similar statement. Rather what has become apparent is that there have been difficulties and differences between the founders' representations and the users' experience of the café. I believe I can however reliably state that different individuals have encountered and remarked upon different Cyberias, and that they have utilised differing 'models of use'; in that respect there is some similitude with the Televersity project.

It is apparent that a single 'model of use' is inadequate for describing Cyberia, individuals experience multiple Cyberias. It needs to be described in multiple ways, such possibilities have been utilised by Annamarie Mol and John Law (1994) in the case of anaemia, Morgan (1986) for organisational structure and in the case of Arteriosclerosis again by Annamarie Mol (1995,1997; Mol and Elsmann 1996).

So I am saying that Cyberia may be described in a number of different ways; but it is more than pure description. It is not that I am simply presenting different portraits of Cyberia, different 'models of use', different users' experiences. It is that we have different Cyberias and different 'models of use' that exist, a series of them that co-exist. This means that we have a multiple reality, not one that portrays to be singular. Additionally when we talk of multiple Cyberias is not simply a matter of epistemology but also with ontology; not just different knowledges but different realities<sup>220</sup>.

The second point of this understanding is that what I previously portrayed as a single organisation, is really a series of quite distinct parallel organisations. There are a number of parallel Cyberias that exist, they do not occupy separate worlds, rather they co-exist in complex and speculative ways. They are partial connected<sup>221</sup> in a similar way to the multiple Televersity performances.

To account for this multiplicity Law (1997) draws upon the idea of 'fractionality'. This idea derives from mathematics where a fractal is a line that inhabits more than one dimension but less than two. In applying this to the study of Cyberia, a fractal organisation is one that is more than one and less than many. This idea is not a

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<sup>220</sup> There are further elements to this argument relating to the performative nature of narratives and other forms of representations, Law (2002) and Mol (2002) forthcoming.

<sup>221</sup> *Ibid.* Strathern 1991

simple point to consider; the single Cyberia that we once thought existed doesn't, nor are their multiple Cyberias, rather Cyberia is characterised by more than a singularity but is less than a multiplicity. As Law (1997) notes 'It is a fractionality of complex and partially connected space/times'.

By explaining difference (or heterogeneity) in terms of fractionality the competing 'models of use' can be thought of as partially connected, rather than distinct. So I would like to think of the 'disruptions' that occur in the café as specifics of where partially connected 'models of use' connect rather than simply agitate one another. When for example it seemed that there were issues regarding privacy, it could be thought that different *multiple* 'models of use' were competing, clashing. In reflection<sup>222</sup> (considering the use of the café in terms of fractionality) I would state that such 'disruptions' illuminate points not only of difference but also of partial connection.

So, in summary this theoretical section has outlined the following. We find that ANT is unable to cope with the strains placed upon by the attempts to include multiple positions of agency. There will always be accounts that are excluded from any analysis and we must be comfortable with this rather than having blind faith in the strict delineation of networks. Further the position of technology in relation to network building needs additional explanation and challenges to its privileged position. Supplementary to these explanations social networks of personal relations should not be excluded from any analysis and how these emerge from networks should be seriously examined. Finally in this section I have explained how the Cyberia that I have been trying to capture utilising ANT is not singular, nor multiple rather it is fractal in character. The different 'models of use' that exist do so in complex and partially connected ways which may offer explanation to the apparent disruptions that I have examined as a feature of Cyberia usage.

As I have attended to the predominant theoretical complexities that have arisen in this case study it is time to move from this position of empirical enquiry and proceed to gain some type of closure in the final concluding chapter.

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<sup>222</sup> It is also entirely possible that the idea of fluid spaces may offer the necessary flexibility to capture the complexities of Cyberia. Although through the data I would cautiously suggest that there is (in contrast to the ideas of fluid spaces) a strongpoint to be defended as compared to the Televersity project.

## **PART 3 Concluding Elements**

### **Chapter 7. CONCLUSION**

In this conclusion I intend to draw together the significant strands of the six preceding chapters that have extensively detailed the emergence of two new social spaces, which I have termed ‘middle ground’ (MG) spaces. The first of these two sections presents a summary of the main findings of the thesis. The second section identifies some of the limitations upon my research together with a consideration of how future strands of research may be developed.

#### **7.1 Summary of Findings**

In this section I intend to resist being too expansive in respect of the findings which have arisen from this thesis, but rather I want to persist with the modesty that I hope has been central to the tracing of the activities in and around the MG. This thesis has traced with great detail the manner in which two different MG spaces have been developed and how the founders’ representations have contrasted with the users’ experiences. I have traced the complex negotiations which have seen the coordinating task group body (Section 3.5.2) in the Televersity case study, and the founders in the Cyberia case study, attempt to stabilise each of the MG spaces. The thesis has not only been an empirical study focusing on the development of new MG spaces, but has also illuminated a number of theoretical positions (Sections 4.6 & 6.5) which either confront the existing theory or posit alternatives. It is from a position of general discussion that I want to outline six specific findings which this thesis has illuminated, these do not relate to one another in a hierarchical fashion rather they should be appreciated as a collage of images, each one adding an element of difference to the composition.

##### **7.1.1 Examination of the new MG spaces: Televersity**

This thesis has traced how individuals and companies have become involved with the development of two very distinct MG spaces. Further I have interrogated the actors that have been of pivotal importance in the construction, negotiation and promotion

of two different types of MG spaces. In the Televersity project I have showed different actors utilised different ‘boundary objects’ (e.g. The County of Suffolk. The Televersity project and Future Information Societies). These various actors utilised those objects to achieve their own aims. Further I have demonstrated how BT (Section 3.3.2) has constructed a number of future representations of learning and super-universities to further its’ ambitions to shape the future of the Televersity project. The Televersity enquiry has also illuminated the different ways in which individuals can utilise ICTs, there is a great degree of specificity in the use of, and approach towards the technology located in the MG. In the light of the diversity demonstrated by my thesis, the generalities that result from a technologically deterministic position (Pascal, 1987) seem very distant (Section 1.2). The introduction of ICTs into the Televersity’s LLCs has resulted in different experiences by different users; ranging from great enthusiasm to dark pessimism. I still fondly remember the LLC user who raged at me during one focus group:

“The computers are very good at working out things but they [computers and technology] still don’t as yet seem to be very mechanical, they don’t seem to sweep floors or put things in ovens or that sort of thing. They are all very well at sending letters and that sort of thing...they don’t dig holes or anything like that, they seem to be, at the moment, signing up for the easy jobs. They don’t seem to be interested in the hard physical jobs. They’re avoiding those”  
(H1p26)

In this thesis I adopted an approach that followed the actors in their pursuit to achieve their aims, explicating not just the use of technology by the user but the heterogeneous resources that they utilised. I demonstrated how computers, learning paradigms, local spaces, computer networks and users needed to be co-ordinated for the project to function as the ‘working’ Televersity. Furthermore I illuminated how it was possible for the task group to act as a co-ordinating amalgam despite the differences that were all too obvious.

### 7.1.2 Examination of the new MG spaces: Cyberia

In the Cyberia case study I again concentrated on the practicalities of using ICTs and described in detail how users' experienced the café and as such what constituted their 'working café'. The users' accounts of how they worked through the technology and dealt with the routines and practices that were established in the café gave me an insight into some of the realities of using an Internet café. I illuminated how users were confronted not simply by technology in the café but by a heterogeneous network of actors and actants that constituted the working café. This network became all the more apparent when there were disruptions to the idealised 'models of use', at such times the materiality which was vital to the café was brought into sharp focus. The disruptions that occurred in the café illuminated that the 'models of use' embodied not singular ideas of technology, but rather distributed ones and that the materiality, the 'bits and pieces' are vitally important in the network. This distributed aspect was illustrated by the necessary co-ordination of a plethora of actors and actants that was critical to the successful function of the success. Additionally I showed (Section 6.4.2) how aspects of the café's functionality should be appreciated as relational. Firstly, this was achieved by demonstrating that ideas of privacy do not reside solely with individuals and secondly, through the idea that immediacy and reliability does not solely depend upon the cafes' technology, but relies upon the relational effects of the actor-network.

### 7.1.3 The inadequacies of Actor-Network Theory

In this thesis I utilised the broad rubric of ANT to capture the intricacies of the emerging MG spaces. I presented classical ANT accounts of how actors attempted to interesse other actors and actants into their networks, by using obligatory passage points, immutable mobiles and through displacement techniques. In the main, I consider that ANT was very suitable for tracing out the complexities of the exchanges and activities that were pertinent to the development of the MG spaces. however, perhaps inevitably there were occasions when I did feel that ANT was inadequate.



Through the two empirical case studies I drew attention to occasions when I felt that the vocabulary and abilities of ANT were being compromised (Sections 4.6.2 & 6.5.1). Specific points arose in connection with how ANT approached the issue of multiplicity, the privileged position of science and technology, the neglected role of personal relations and the relationship that existed between the founders of such MG spaces and the media.

#### 7.1.4 The importance of friendship (Sections 4.6.2 & 6.4.2.3)

An element that the case study material highlighted was the critical role that personal relations may perform in the construction of networks, and further the inadequacy of ANT to sufficiently cater for such relations. I noted quite explicitly in the Televersity case study, the important role that friendships performed in facilitating the enrolment of specific actors. The personal relations that exist allow the co-ordinating body, the task group, to coalesce and function as it did. I doubt that without such friendships the task group would have been able to attract such widespread support as it did. Additionally the personal relations that I established as a BT CASE student with BT and with the other task group members (as an external PhD student) were critical in this thesis being assembled in its current form.

The problematic for ANT being that friendship relies upon continuity and ANT assumes no continuity; no a priori assessments are to be made. In using ANT I suggest that one should be aware of the effect that personal relations can have on the establishment of actor-networks. Practically, this means two things, firstly being alert to the friendships that ANT traces and that emerge from following the actors. Secondly, this means, to understand that personal relations may well give clues to why one rather than another role is acceptable for an actor; no a priori judgements should be made rather, one should adopt a heightened sensitivity to the data in question.

#### 7.1.5 The introduction of ‘side-stepping’ (Section 4.6.2)

The introduction of the term ‘side-stepping’ was utilised to capture the discrepancies that existed between the idealised use of the MG spaces and the actual manner in

which the users experienced the spaces. In the act of ‘side-stepping’ I noted that you can see the object as it approaches with some clarity, and suggested that contact may be made, before sometimes swiftly, and other times in a more relaxed manner, just stepping out of the way. This was a valuable tool in attempting to understand how users in the Televersity project engaged with the learning courses that were offered to them. It was felt (by the task group) that users would be keen to complete learning courses in the LLCs, in fact what materialised was a desire to ‘skill up’ on the basics of computer use. The users wanted to personalise their interaction with the centres. This ‘side-stepping’ occurs because users are aware of the intended uses of the centres, but subvert the strict roles prescribed for them. An important additional feature was illustrated through the tracing of the subversion and ‘side-stepping’, that is a degree of continuity was still possible. Despite the acts of ‘side-stepping’ that are undertaken in the centres by the users the representations of the LLCs still persist, they still circulate amongst the actors and the users. Thus differences are accepted, whilst there are also continuities.

#### 7.1.6 Multiple performances and fractionality (Sections 4.6.2 & 6.4.2.4)

In this thesis I have frequently drawn upon the idea of fluidity (Mol and Law, 1994; Morgan, 1986; Mol 1995, 1997; Mol and Elsmann, 1996). The idea of a fluid topology has provided me with a conceptual tool for telling stories of both amalgamation/separation and difference/continuity. In the Televersity case study I was unable to sufficiently encapsulate the amalgamation and separation of actors within the existing ANT framework, and thus turned to a fluid topological explanation for assistance. Within a fluid topology the change between the two states was not defined by a boundary but by movement on a gradient of difference. In such a framework the effects of the relations that exist can still be traced as they emerge, this is the essential facet of any approach. In another example of the flexible approach (which I adopted in the Televersity case study) I illuminated how the stories wove with one another to create differences across and between accounts. This exposed the Televersity project as a network of different performances joined in multiple and complex relations that were partially connected. The ‘working’ Televersity that was conceptualised as a singular object, was to be better understood

as a set of related performances. I stated that we should strive to accept that things do not come to rest in a single form, however linger in a disturbed state.

The appreciation of multiplicity also had a role to play in the case study detailing the development of Cyberia. I noted in this study that again what at first appeared to be a singular organisation was indeed multiple. This multiple reality explained how the disruptions that occurred were not solely the result of agitation between different ‘models of use’. Rather I suggested that these disruptions could be seen as occasion when partially connected ‘models of use’ overlapped. Cyberia exists within a state of fractionality, that is, it inhabits more than one dimension but less than two. This fractionality explains how the ‘models of use’ can be thought of to be partially connected but similarly exhibit elements of difference.

Through the thesis I have illustrated situations when the idea of singular objects or orders have not been able to capture the activities and diverse uses of the MG spaces. There is fractionality and there are also ‘related performances’ which do fit with the simplifications of a single order or object. We are faced with a growing complexity. The stories have illustrated the practices and detailed co-ordination which are necessary to consider and respect this complexity. Further, these stories illuminate how complexity ‘holds together’ in the face of pressures for simplification. Furthermore, when complexity ‘holds together’ this does not happen because coherence precedes the knowledge gathered, but because the co-ordination procedures are successful in reconfiguring multiple orders of reality.

## **7.2 Directions for Future Research**

In this section I turn to reflect upon the body of research that I have produced. I intend to illuminate those elements with which I do not feel completely at ease and address new research horizons.

### **7.2.1 Research Limitations**

When I turn to reflect upon the body of research that I have produced I am satisfied that I have answered the large majority of questions which I set out to examine, there

are, of course, still some irritations. The majority of the practical irritations arise from the scale of my field research. I was aware from the outset that as a single PhD student it would be difficult to capture sufficient data from my chosen case studies to substantiate my claims for the MG. In reflection this concern (of insufficient data) is one that I believe all lone researchers should feel, this fact may be an indication that as a single researcher I was very critical of my position. I believe this led to a greater degree of introspection than may otherwise have occurred, and is possible advantage of lone research. I believe that to recognise this position of uncertainty is useful for the researcher, as it creates a sensitivity to claims, that things come to rest in fractured rather than neat packages.

Specifically, I would liked to have been in the position to conduct a greater number of interviews with the actors involved with the Televersity project, as from the series of interviews which I conducted I felt that the Televersity project was just one of many that were being implemented by a dominant group of people<sup>223</sup> in the county. I would like to have infiltrated this group further. In respect of the LLCs I thought that further focus groups with the individuals may have further crystallised the findings that the groups generated I doubt whether I would have been able to conduct any more focus groups in the time that I had. In any event, it was difficult to persuade existing users of the centres to attend the focus groups. Suffolk College provided great assistance in undertaking the necessary administrative work for my focus groups.

In the study of an Internet café I initially contemplated similar concerns as a single researcher. In preliminary work I visited a number of other MG spaces, some of which broadly resembled Internet cafés other did not. I aimed to conduct additional research, similar to that which I conducted in Cyberia, however I was restricted by but time limits. At Cyberia I had planned to interview at least one of the founders of the café to discuss with them firsthand, their motivations for developing the café. The interview with one of the founders never materialised, for one founder was continually abroad on business and the other refused to be interviewed. I found this frustrating, but nonetheless coped with this, not least because I believe that the

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<sup>223</sup> Two members of the task group alluded to this idea by identifying a number of people that were simultaneously involved with a number of large projects in Suffolk. They identified two other networks, which most members of the task group also belonged to.

answers to the majority of my questions had already received answers in the many interviews that the founders had given. Suffice to say, I was content that these existing interviews would be suitable for the purposes of my research.

In the theoretical sections of any thesis limitations are placed upon the research however I felt, in spite of these I adequately developed the significant elements that arose from the MG data. I am content that my use of ANT tentatively suggests new avenues of research that I feel should add further depth to the body of the theory. Although at ease, with hindsight and deeper reflection, I may have approached two areas of theoretical enquiry differently. Firstly further empirical research seeking to clarify the character of cyberculture and how it was performed in relation to the Internet café. The different dimensions of cyberculture are extremely diverse if I could have achieved clarification of the nature of the relationship that existed between the café and cyberculture and it may have provided further interesting avenues of enquiry. Secondly, I would like to have been able to interrogate how the media became involved, and then functioned, within the networks of promotion, that were important for the success of Cyberia. To examine this relationship in detail would have been a very intricate and time consuming process and I believe may have shifted the focus of research to the detriment of the actual ethnographical study of the café. So now I move from a position of contentment (but inevitably not complete satisfaction) to consider further avenues of research that flow from this study.

### 7.2.2 Future directions

Although I do not assume a bold position, in relation to my thesis, and am modest in what I have achieved I still want to combine this with optimism for future avenues of research.

In terms of practical research proposals, it would be interesting to revisit some of the preliminary MG spaces that I have identified, after a period of time, to see if they are still operational, if not, why have these spaces disappeared or disintegrated? If they are still operating, has their remit changed? Of particular note in my Internet café study was that the idea that Internet access facilitated by the café supplemented rather than supplanted many users access. An important question arises from this

latter point. If this is a continuing trend, how is this affecting the profile of users utilising the cafés. Is there in reality an under class who now rely upon the Internet café as their sole Internet access space? This research should continue the work by Liff (1998) by detailing if such spaces are actually offering 'gateways to the virtual society' for the less disadvantaged in society. As well as considering the profile of café users a further approach should acknowledge and consider Wakeford's (1998) recommendations for examining not only how old stereotypes interrupt new alliances for gender but also how such old stereotypes disrupt and configure the practical use of the café.

As access patterns change, in the light of new mobile technologies, it would seem essential to understand some of the characteristics of these new technologies and explicate the 'anytime, anywhere' mantra associated with such technologies. Further research to unpack such rhetoric claims have already been conducted by Lamming et al. (2000) which examines the different contexts of mobile workers. Further, Kristofferson and Ljungberg (1999) who reveal the heterogeneity of the contextual constraints within which mobile work takes place, and others (Churchill and Wakeford, 2001) argue that such rhetorical constructs (i.e. 'anytime', 'anywhere') 'contribute to a common discourse of mobility' which exaggerates features of mobility and embodies a series of assumptions about the nature of mobility. I suggest further real world observations of mobile technology use, such as Luff and Heath's (1998) are needed in order to reduce the influence that such rhetoric-based narratives have in shaping designs, decisions and justifications. Researchers need an awareness of the nuances that contexts create in relation to the use of mobile technologies in the conduct of their research.<sup>224</sup> In this instance, such work draws parallels with my thesis's findings, in that, the qualities of the technology are relational, and rely on the context of use. In short, access may be potentially 'anytime, anywhere', but may not be always acceptable.

Whilst I suggest that the qualities of technology that I consider to be relational deserve additional real world examination, I also believe that elements of ANT would benefit from some further attention. In my thesis there were specific junctures

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<sup>224</sup> For example, those conducting research need to be aware that the kind of conversation that one may have in a public place surrounded by others is different from the kind of conversation one may have in a different place with no one else around (Churchill and Wakeford, 2001).

at which I thought ANT appeared to be too rigid, too reliant on demarcating boundaries to deal with the complexities that resulted from my enquiry into the MGs. I have discussed a number of issues, specifically, partially connected performances in relation to Televersity, and fractionality in relation to Cyberia. I used these ideas to ameliorate the difficulties that arose when the complexity which I was tracing began to emerge; multiple rather than single orders, organisations and objects.

Additional complexity stories also circulate around the problematic element of friendship that I have highlighted on numerous occasions throughout this thesis. I noted that because friendship relies on continuity and history, the ability of ANT to provide for, or take this into account was problematic. If stories of the role of friendship are to emerge from future actor-networks, then greater attention and sensitivity should be paid to the instances when such friendships are beginning to form. In terms of future research I would suggest that emerging friendships should be followed with just as much commitment as the circulation of immutable mobiles. The circumstances and processes involved in the emergence of friendships and their maintenance, is as complex as, and therefore requires the same degree of examination, as required for tracing how the task group 'holds together'. In summary, it is essential in order to appreciate the complexity involved in personal relations, for extensive future work to be conducted into how friendships are initiated and maintained.

Secondly, I have already initiated some preliminary discussion pertaining to the role of the media in the promotion of specific places and activities, as a result of the important role it performed in the context of Cyberia<sup>225</sup>. I feel that my analysis of the relationship between the media and Cyberia leaves significant areas for research for two reasons in particular. Firstly, once I began to appreciate the complexity involved in the relationship I felt that I was unable to allocate this analysis the necessary time it demands whilst staying within the remit of my research. Secondly, it became apparent that the exchanges between the media and the café were difficult to conceptualise using ANT's idea of immutable mobiles. Future approaches should consider that the mobiles that circulate will have a certain mutable quality: the ability

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<sup>225</sup> Although the media was important in terms of promotion, less certainty surrounds its effectiveness in actually attracting individuals to the café.

to capture change is then best encapsulated using a fluid topology. When the object is to describe the diverse reactions that different individuals have to the media I suggest that a fluid topology is more appropriate because it considers difference in terms of a gradient and shades, rather than distinct boundaries. Similarly, the media should not be considered as homogeneous, it is not *the media* which would be under analysis, rather, the different (and interrelated) medias that exist. If such a study proceeds it would require extensive research with both the consumers and creators of the different media messages before it would be possible to detail with any certainty the gradient of differences which exist.

Turning from Televersity, the ambitious twenty first century vision of learning for the county of Suffolk and ‘switch to standby’ the users’ experiences of Cyberia. In what is my final reflection in this thesis on the future of the MG I want to consider how MG spaces are able to develop meaning and longevity within everyday life where (as Henderson and Castells observed) ‘the space of flows... supersedes the space of places’? (1987, p.7). In the everyday life of flows, do places simply vanish, rendered invisible by the frenetic circulation of capital, images, ideas, technologies and bodies? Do individuals as Meyrowitz suggests:

No longer seem to ‘know their place’ because the traditionally interlocking components of ‘place’ have been split apart by electronic media

And is it true that:

Our world may suddenly seem senseless to many people because, for the first time in modern history, it is relatively placelessness

(1985: 309)

Instead of this apparent chaotic appearance of an everyday life in which individuals grapple for meaning amongst the frantic flow of images, capital etc. I posit that in terms of places, and specifically MG spaces, they are continually remade and reconfigured to attract specific flows, whether they are businessmen or students. The novelty is not in the reconfiguration of places, but the apparent rapidity with which such changes occur. The modern meaning and development of places results from



the attraction of more differentiated flows; which is likely to increase as this ability advances. The re-making of MG spaces is a continual process (flow). In a modern world in which sociologists talk of the 'dis-embedding', the 'lifting out' of everyday life I consider it essential to acknowledge that the possibility exists for simultaneous practices which emphasise the 're-embedding' of the social and the importance of place such as MGs.

## Appendix A Televersity Interview list and sample questions

List of people interviewed for the Televersity case study (some people's names have been removed to preserve their anonymity, as requested).

Organisation	Name	Job Title	Date
Suffolk College	Derek Mortimer	Director	13/10/97 and 11/5/97
Suffolk College	Dave Muller	Vice-Principal	13/10/97 and 11/5/97
Suffolk College	Peter Funnell	Dean Learner Services	12/10/97 and 11/5/97
Suffolk College	Marianne Mackay	Researcher	11/5/97
Suffolk College	Ian Sargen	Seconded Officer	12/5/97
Suffolk College	Mark Miller	Researcher	12/5/97
Suffolk College	Richard Boniface	Research Manager	11/5/97 and 18/12/97
BT Laboratories	Holly Ward	Human Factors Researcher	2/9/97
BT Laboratories	Richard Nicol	Director of Human Factors	18/11/97 video conference and 6/11/97
BT Laboratories	Chris Fowler	Manager Human Factors	6/11/97
BT Laboratories	Phil Smythe	Human Factors Researcher	2/9/97
BT Laboratories	Joy Van Helvert	Human Factors	2/9/97

		Researcher	
BT Laboratories	Karina Tracey	Human Factors Researcher	2/9/97
BT	Chris Tuppen	Environmental Analyst	12/10/97
Ipswich Borough Council	James Hehir	Chief Executive	22/9/97
Ipswich Borough Council	Peter Gardiner	Chairman	23/9/97 telephone conversation
Suffolk Training and Enterprise Council	Mike Bax	Managing Director	7/11/97
Suffolk College Corporation	Eric McCoy	Chairman	18/12/97
Suffolk Training and Enterprise Council	Andrew Shelley	Chairman	17/12/97 telephone conversation
Warwick University	Sonia Liff	Senior Lecturer	12/1/98 telephone conversation
Lancaster University	Karyn Valley	Lecturer	14/5/97
Tallis Consultancy	Neil Barton	Director	27/7/97
Essex University	Don Pearson	Lecturer	16/12/97
Eastern Regional Government	John Lambert	Manager	29/10/97
Suffolk County Council	David Peachey	Education Officer	18/12/97

## Notes on the interviews

The interview agenda varied according to the person interviewed. Usually, the participants were asked questions about the Televersity project (its aims, how it was established, the important stakeholders, evaluation practices, problems encountered and results). They were also invited to discuss the themes of the Information Society and Lifelong Learning. The majority of the interviews were semi-structured but many participants, after the answering the initial questions, gave long accounts of their experience. The majority of the participants requested to be referred to in the thesis by their job titles, except for a few who wanted to be named to emphasise the fact that the views voiced were his or her own and not necessarily the organisation they represented.

<b>Televersity Semi-Structured Interview Questions</b>
First - Introduction about myself and an invite to the interviewee
1. Do you know where the idea and impetus for a Televersity came from? -When did the idea arise? How did the issue arise? -Who were the key promoters, drivers?
2. How are you/ your body involved with the project? -What authority do you have to advise, direct the project?
3. What are the main components that constitute a 'Televersity'?
4. How was the University Task Group set up? -What are the objectives of the task group? -Why has the Task group become the University for Suffolk Company Ltd.?
5. Why do you think a University (Of this type) is necessary? -What is wrong with a conventional university? - Is there anything special about Suffolk which lends itself to this project?
6. How do you think this type of learning (community orientated at a distance) will effect the individual? (+ve, -ve) 6a. Is this kind of project the future for education? (Rural communities, specific areas).
7. What do you see as the major impact of the Televersity project and pilots? (increased skills base, IT competency, sense of community, reduced migration etc.) 7a. What would be your criterion for success or failure?
8. Do you have any doubts about the Televersity project? -Concerning funding, technology, BT's role?

9. What is BT's role in the development of the Televersity project? - What does BT bring to the project?
10. Have you heard of the Information Society?
11. What does it mean to you (the Information Society)?
12. Where does this idea come from (the Information Society)?
13. Have you heard of the idea of lifelong learning?
14. Does the Televersity project contribute to the concept of lifelong learning?
15. Is there anyone else you think I should speak to?

## Appendix B Focus Group Details

Locations and dates of focus groups

<b>Location &amp; Group</b>	<b>Date</b>	<b>Time</b>	<b>Moderators</b>
Haverhill: H1	2/2/98	7.30-9pm	Marianne Mackay & David Hiller
Haverhill: H1	9/2/98	7.30-9pm	Marianne Mackay & David Hiller
Haverhill: H2	16/2/98	7.30-9pm	Marianne Mackay & David Hiller
Haverhill: H2	23/2/98	7.30-9pm	Marianne Mackay & David Hiller
Sudbury: S1	3/2/98	7.30-9pm	Marianne Mackay & David Hiller
Sudbury: S1	10/2/98	7.30-9pm	Marianne Mackay & David Hiller
Sudbury: S2	17/2/98	7.30-9pm	Marianne Mackay & David Hiller
Sudbury: S2	24/2/98	7.30-9pm	Marianne Mackay & David Hiller

Each of the four groups attended two focus group sessions at their respective local learning centre.

The outline of the discussion material for each session is as follows, these formed the basis of the discussions, but obviously the groups did discuss other subjects connected to the initial discussion points. The discussion material included important areas that Suffolk College wanted to cover as part of their evaluation of the centre.

<b>Focus Group Session 1 (Evaluation of the Centre &amp; Human Computer Interaction)</b>
1. How did you find out about the courses being run here at Sudbury/Haverhill?
2. What did you think the course would be like?
3. Why did you decide to do this course?
4. Prior to this course, had you completed any other similar course, since leaving formal education?
5. As a result of doing the course has anyone enrolled in any other courses of an educational nature?
6. Would you like to / choose to study using telematics again in the future?
7. Would you have completed this course if the centre didn't exist?
8. If the centre were running a course you were interested in, how would you prefer the course/study times and centre to be organised?
9. How often would you expect to see the centre open if you were studying from here?
10. How important is it for you to see the tutor?
11. If you could have made any recommendations to the person setting up the centre or course, what would that have been?
12. How did everyone feel about using the computers on this course?
13. Does anyone have a computer at home? For what use?
14. Does anyone use computers as part of their work?
15. Do you have any concerns about the increasing use of computers?
16. Do you think that computers / technology are able to replace humans in some areas of day-to-day life?
17. How do you think we will use computers / technology in the future?
18. Of all the future application of technology, which one do you think will be most relevant / important to you?

<b>Focus Group Session 2 (Relationship with technology &amp; Representations of the Information Society)</b>
1. What did you think when you first learnt about the centre being set up?
2. When you heard about the centre, did you think it would be of use to the people of Haverhill / Sudbury?
3. Had you heard of telematics before you completed the course at the centre?

4. We presume that you had heard of the Internet before you completed this course?
5. Was using the Internet different to how you thought it would be?
6. Has the course changed your views (in any ways) about the use of computers or the internet?
7. How do you feel about the increasing use of computers for learning and education?
8. Do you have any hopes or fears concerning the use of technology in the future?
9. Where do you get your ideas about the future from?
10. What sorts of things will technology enable us to do in the future, that we cannot do now?
11. Some people suggest that with the advances in technology, society is changing; Society is becoming more dependent on information. These they say suggest movement towards an 'Information Society'. What do you think about these ideas?
12. Is what you did on your course part of the 'Information Society'?
13. For this question I want you to split into groups and rank the six areas of life (from 1 to 6) in order of the impact that technology will have upon them. 1 being the most impact technology will have upon that area and 6 being the least.
<p>The categories are:</p> <p>Influence of public services</p> <p>Education, training &amp; learning in the Information Society</p> <p>Impact on the economy and employment</p> <p>The cultural dimension &amp; future of the media</p> <p>Sustainable development, technology &amp; infrastructure</p> <p>Basic social and democratic values</p>
14. Is it possible for you to summarise or condense what single idea or thought you will take away from completing the course, here in the centre?
15. Lastly in the next few weeks I shall be conducting some more sessions like the ones you have attended over the last 2 weeks. Do you have any advice for me?



## Appendix C Internet café interview list and sample questions

List of people interviewed for the Televersity case study (some people's names have been removed to preserve their anonymity, as requested).

Organisation	Name	Job Title	Date
Cyberia café	Anonymous	Manager	1/9/98
Cyberia café	Anonymous	Manager	1/9/98
Cyberia café	Anonymous	Systems Analyst	2/9/98
Cyberia café	Anonymous	Marketing Executive	3/9/98
Cyberia café	Gene Teare	Founder	Out of the county
Cyberia café	Eva Pascoe	Founder	Not possible due to work commitments

### Cyberia Employee Questions

First - Introduction about myself and an invite to the interviewee

1. Can you tell me about Cyberia as a company?

2. What is your position with the company?

3. What are the main services that Cyberia provides?

4. What is the future direction for Cyberia?

5. What is the future for internet cafes in general?

6. What research does Cyberia undertake?

7. Do you record / monitor what users in the café are doing?

8. How would you characterise your users?

- How have the user groups changed since the café started?

9. Does Cyberia use the internet for communication / video conferencing / business?

10. What do you personally use the internet for?

11. When problems arise with the computers / network what is done for the users?

12. Does the café have a preference between Microsoft explorer and netscape?

13. Does Cyberia monitor its competition?

14. What is your reputation built on?

15. How do you see computers / technology being used in the future? - What do you think about the idea of an Information Society?
16. What ideas do you have about the future use of virtual communities / chatrooms etc?
17. Do you have any questions for me about my research or this interview?

**Notes on the café user interviews**

The interview agenda varied according to the person interviewed. Usually, the users were asked questions about Cyberia (why they used Cyberia, what they liked about it, the future use of technology etc.). They were also invited to discuss the themes of the Information Society and Lifelong Learning. The majority of the interviews were semi-structured but many users, after the answering the initial questions, gave long accounts of their experience, I really tried to let the users contextualise their answers as much as possible to record the richness of their explanations. The majority of the users requested to be referred to in the thesis anonymously, except for a few who wanted to be named who did not consider their views on such a subject to be very important.

<b>Cyberia Users Questions</b>
First - Introduction about myself and an invite to the user
1. How did you hear about Cyberia?
2. What do you think about the café? - Its environment, layout, services, technology
3. What do you think about the cafes' technology?
4. Do you frequently use internet cafes?
5. How do you normally access the internet?
6. Why do you use Cyberia?
7. How do you think our use of computers / technology will develop in the future? - What do you think about the idea of an Information Society?
8. Do you plan to use Cyberia or another internet café again?
9. Do you have any questions for me about my research or this interview?

**Demographics of internet café users**

Age / Sex	Male	Female
Under 20	16	7
21-30	56	34
31-40	31	17
41-50	19	9
51-60	8	5
61 +	6	2
Total	136	74

These statistics are only indicative and are approximate ages of the users of the café as estimated by me during my time in the café.

**Timings of Cyberia interviews**

Time of Day	Number of interviews
0900-1100	24
1100-1300	55
1300-1500	64
1500-1700	21
1700-1900	46
Total	210

These statistics are based on my own timings of the interviews I conducted with café users.

## Appendix D Cyberia Media Sources

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